The Joint Commission

Specifications Manual for Joint Commission National Quality Measures

Version 2018B

Specifications Manual for Joint Commission National Quality Measures

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Release Notes

- Release Notes for Manual v2018B - August 1, 2018

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Notes

- Please note that earlier versions of Microsoft Internet Explorer do not clearly display some graphics images. If you have difficulty viewing measure algorithms, please upgrade your browser. This problem has not been reported with other web browsers.
    - Download MS Internet Explorer
- If you have difficulty viewing PDF documents on the site, please download the latest Adobe Reader application:
    - Download Adobe Reader

Acknowledgement

No royalty or use fee is required for copying or reprinting this manual, but the following are required as a condition of usage: 1) disclosure that the *Specifications Manual* is periodically updated, and that the version being copied or reprinted may not be up-to-date when used unless the copier or printer has verified the version to be up-to-date and affirms that, and 2) users participating in Joint Commission accreditation, including ORYX® vendors, are required to update their software and associated documentation based on the published manual production timelines.

Example Acknowledgement: The *Specifications Manual for Joint Commission National Quality Measures* [Version XX, Month, Year] is periodically updated by The Joint Commission. Users of the *Specifications Manual for Joint Commission National Quality Measures* must update their software and associated documentation based on the published manual production timelines.

Introduction and Background

The Joint Commission Quality Initiative

In 1987, The Joint Commission announced its *Agenda for Change*, which outlined a series of major steps designed to modernize the accreditation process. A key component of the *Agenda for Change* was the eventual introduction of standardized core performance measures into the accreditation process. As the vision to integrate performance measurement into accreditation became more focused, the name ORYX® was chosen for the entire initiative. ORYX® is The Joint Commission's performance measurement and improvement initiative, which integrates outcomes and other performance measure data into the accreditation process.

The ORYX® initiative became operational in March of 1999, when performance measurement systems began transmitting data to The Joint Commission on behalf of accredited hospitals. ORYX® measurement requirements are intended to support Joint Commission accredited organizations in their quality improvement efforts.

The initial phase of the ORYX® initiative provided healthcare organizations a great degree of flexibility in terms of the measures that could be reported. Over time, the ORYX® measures have evolved into standardized valid, reliable, and evidence-based quality measures

The initial CMS/Joint Commission alignment efforts addressed chart-abstracted measures and subsequently both organizations have worked on aligning as closely as possible the electronic clinical quality measures (eCQMs).

Related Joint Commission Activities

Accreditation Process

In January 2000, Joint Commission surveyors began using organization-specific ORYX® *Pre-Survey Reports*, effectively commencing the use of performance measure data in the survey process.

In 2004, the survey process was substantially modified to be more data-driven and patient-centered thus enhancing its value, relevance, and credibility. Many of the key components of the survey process utilize data derived from the national hospital inpatient quality measures. The survey process now has a greater focus on evaluating actual care processes because patients are traced through the care, treatment and/or services they receive. In addition, surveyors conduct “systems tracers” to analyze key operational systems that directly impact the quality and safety of patient care.

In June 2010 The Joint Commission categorized its process core performance measures into accountability and non-accountability measures. This approach placed more emphasis on an organization's performance on accountability measures — quality measures that meet four criteria designed to identify measures that produce the greatest positive impact on patient outcomes when hospitals demonstrate improvement:

- **Research**: Strong scientific evidence demonstrates that performing the evidence-based care process improves health outcomes (either directly or by reducing risk of adverse outcomes).
- **Proximity**: Performing the care process is closely connected to the patient outcome; there are relatively few clinical processes that occur after the one that is measured and before the improved outcome occurs.
- **Accuracy**: The measure accurately assesses whether or not the care process has actually been provided. That is, the measure should be capable of indicating whether the process has been delivered with sufficient effectiveness to make improved outcomes likely.
- **Adverse Effects**: Implementing the measure has little or no chance of inducing unintended adverse consequences.

Data Analysis

The Joint Commission has developed a target measure range approach (target analysis) as a basis to evaluate Joint Commission accredited organizations' rating for the performance measures.

The use of target analysis in addition to a control chart is a key feature of the Joint Commission's analytic methods in the ORYX® initiative. The two analyses are alike in that an organization's actual (or observed) performance level is evaluated against a comparative norm, but are fundamentally different as to how such a norm is established. In control chart analysis, the norm is determined from an organization's own historic data so that one may assess the organization's internal process stability. In target analysis, the norm is obtained based on multiple organizations' performance data to evaluate an organization's relative performance level. Therefore, the two analyses evaluate an organization's performance in two distinct perspectives and, as a result, can provide a more comprehensive framework to assess an organization's overall performance level.

ORYX® Performance Measure Report

The ORYX® Performance Measure Report, available quarterly, is designed to support and help guide Joint Commission-accredited hospitals in their performance assessment and improvement activities through the use of summary dashboards and comprehensive measure details depicting the organization's performance on each measure for which The Joint Commission receives data from the organization. Joint Commission surveyors receive an identical copy of the report prior to an onsite survey. Surveyors use the report as a guide to understanding how the organization uses and responds to performance measure data.

Certification Process

The Joint Commission uses two methodologies for performance measurement for disease-specific care programs. Each certified program collects either standardized or nonstandardized measures, as directed by The Joint Commission. During the certification review the program will demonstrate that it has established a data history that supports quality improvement. Selected standardized measure sets have been incorporated in this specification manual to centralize the measures used for Joint Commission programs into one

manual. For more information on the certification process refer to The Joint Commission website and the specific certification program of interest.

Quality Check™

Quality Check is a directory of the more than 20,000 Joint Commission–accredited and certified health care organizations and programs throughout the United States. The Joint Commission Quality Report differentiates health care organizations based on accreditation decision categories and other related information. While the accreditation decision reflects the process for assessing an organization's commitment to achieving continuous improvement in key areas of safety and quality, the Quality Report also reflects information about a hospital's performance on National Patient Safety Goals, National Quality Improvement Goals for those hospitals reporting ORYX® chart abstracted performance measure data through a vendor, as well as certain special recognitions and achievements. Quality Check displays hospital performance on the National Quality Improvement Goal using individual measures which are updated quarterly, for the most recent rolling four quarters (12 months) of chart-abstracted data. Hospital performance at the individual measure level is displayed. The display includes that hospital's observed rate of performance on each reported chart-abstracted measure through the use of various comparative symbols (plus, minus, check, or star), a display of the hospital's performance against a target range of performance established using data received from all hospitals reporting on each measure, and a comparison of the hospital's performance on each measure both on a nationwide and statewide level.

Quality Check™ can be accessed at http://www.qualitycheck.org to search for healthcare organizations by name, type, and/or location. Interactive links to information are designed to help individuals better understand how to use and interpret the information presented.

Annual Report

Improving America's Hospitals: The Joint Commission's Annual Report on Quality and Safety has been released annually since 2008. This comprehensive report summarizes the performance of all Joint Commission-accredited hospitals on ORYX® accountability measures.

Pioneers in Quality

Pioneers in Quality™ is a Joint Commission program started in 2016 to assist hospitals on their journey toward electronic clinical quality measure (eCQM) adoption and reporting. Hospitals collect eCQM information through electronic health records (EHRs) and transmit the data to The Joint Commission (as part of its ORYX® performance measurement requirements) and to the Centers for Medicare & Medicaid Services (CMS). The Pioneers in Quality™ program provides resources to aid hospitals in the transition from chart-abstracted measures to eCQMs. Key components of the Pioneers in Quality™ program include regular educational webinars focused on eCQM adoption, Expert-to-Expert series webinars, a comprehensive eCQM resource portal and recognition for eCQM pioneers in *America's Hospitals: Improving Quality and Safety – The Joint Commission's Annual Report.*

Direct Data Submission Platform

The Joint Commission began accepting direct data submission of electronic clinical quality measure (eCQM) data from hospitals with the submission of calendar year (CY) 2017 eCQM data. The Direct Data Submission Platform enables an ORYX eCQM process that simplifies operations and reduces the burden for our accredited hospitals while ensuring regulatory compliance and security.

Related National Activities

National Quality Forum

The NQF has approved a set of national voluntary consensus standards for measuring the quality of hospital care. These measures will permit consumers, providers, purchasers, and quality improvement professionals to evaluate and compare the quality of care in general acute care hospitals across the nation using a standard set of measures.

CMS Hospital Inpatient Quality Reporting Program

The Hospital Inpatient Quality Reporting Program was originally mandated by Section 501(b) of the Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003. This section of the MMA authorized CMS to pay hospitals that successfully report designated quality measures a higher annual update to their payment rates. Initially, the MMA provided for a 0.4 percentage point reduction in the annual market basket (the measure of inflation in costs of goods and services used by hospitals in treating Medicare patients) update for hospitals that did not successfully report. The Deficit Reduction Act of 2005 increased that reduction to 2.0 percentage points. This was modified by the American Recovery and Reinvestment Act of 2009 and the Affordable Care Act of 2010, which provided that beginning in fiscal year (FY) 2015, the reduction would be by one-quarter of such applicable annual payment rate update if all Hospital Inpatient Quality Reporting Program requirements are not met. Under the Hospital Inpatient Quality Reporting Program, CMS collects quality data from hospitals paid under the Inpatient Prospective Payment System, with the goal of driving quality improvement through measurement and transparency by publicly displaying data to help consumers make more informed decisions about their health care. It is also intended to encourage hospitals and clinicians to improve the quality and cost of inpatient care provided to all patients. The data collected through the program are available to consumers and providers on the Hospital Compare website at: https://www.medicare.gov/hospitalcompare/search.html. Data for selected measures are also used for paying a portion of hospitals based on the quality and efficiency of care, including the Hospital Value-Based Purchasing Program, Hospital-Acquired Condition Reduction Program, and Hospital Readmissions Reduction Program.

Hospital Value-Based Purchasing Program

Congress authorized the Inpatient Hospital VBP in Section 3001(a) of the Affordable Care Act. The program uses the hospital quality data reporting infrastructure that was developed for the Hospital Inpatient Quality

Reporting (IQR) Program. The Hospital Value-Based Purchasing (VBP) program is part of CMS's ongoing effort to structure Medicare's payment system to reward providers for the quality of care they provide. This program adjusts payments to hospitals under the Inpatient Prospective Payment System (IPPS), based on the quality of care they deliver not just the quantity of services they provide. How hospitals perform on quality and resource use measures is linked to the IPPS. The IPPS makes up the largest share of Medicare spending, affecting payment for inpatient stays in approximately 3,000 hospitals across the country. The Hospital VBP Program is funded by reducing participating hospitals' base operating Medicare severity diagnosis-related group (MS-DRG) payments by 2%. Any leftover funds are redistributed to hospitals based on their Total Performance Scores (TPS). What hospitals earn depends on the range and distribution of all eligible/participating hospitals' TPS scores for a FY. It's possible for a hospital to earn back a value-based incentive payment percentage that is less than, equal to, or more than the applicable reduction for that FY. The Hospital VBP Program is designed to promote better clinical outcomes for hospital patients, as well as improve their experience of care during hospital stays. Specifically, Hospital VBP seeks to encourage hospitals to improve the quality and safety of care that Medicare beneficiaries and all patients receive during acute-care inpatient stays by:

- Eliminating or reducing the occurrence of adverse events (healthcare errors resulting in patient harm).
- Adopting evidence-based care standards and protocols that result in the best outcomes for the most patients.
- Re-engineering hospital processes that improve patients' experience of care.
- Increasing the transparency of care for consumers.
- Recognizing hospitals that are involved in the provision of high-quality care at a lower cost to Medicare.

Electronic Clinical Quality Measures (eCQMs) Overview

Effective CY 2016, hospitals are required to electronically report clinical quality measures as a portion of the Hospital Inpatient Quality Reporting (IQR) and the Medicare EHR Incentive Programs. These quality measures were developed specifically to allow an electronic health record (EHR) system certified to the Office of the National Coordinator (ONC) standards to capture, export, calculate, and report the measure data. The CQMs required for reporting are electronically specified, using industry standards for the measure logic (Health Quality Measures Format [HQMF]) and the data transmission (Quality Reporting Document Architecture [QRDA]: Category I – patient-level data). As the industry updates these standards, CMS and ONC expect to reflect those updates in their respective requirements. Hospitals that successfully submit eCQM data to meet Hospital IQR Program requirements will also fulfill the Medicare EHR Incentive Program requirement for electronic reporting of CQMs with one submission. Eligible hospitals (EHs) are required to report eCQMs to the Hospital IQR Program. EHs and Critical Access Hospitals (CAHs) are required to electronically report to the Medicare EHR Incentive Program.

Using The Specifications Manual for Joint Commission National Quality Measures

This portion of *The Specifications Manual* provides a brief overview of the information contained within each section of the manual. It is intended for use as a quick reference to assist in the implementation of the Joint Commission national quality measures. The sections of this manual are interrelated and are most useful when considered together.

Measures listed in this manual are Chart-Abstracted Measures. Chart abstraction is the review of medical record documentation from the current episode of care for the purposes of data collection and submission.

In addition, some of the measures in this manual have been retooled as eMeasures and are eligible for voluntary electronic submission for ORYX performance measure reporting requirements or the Hospital Inpatient Quality Reporting (IQR) program). For information about the requirements and technical specifications of the Quality Reporting Document Architecture (QRDA) specifications and data submission, see the resources located on QualityNet, [Hospitals-Inpatient], Electronically Specified Clinical Quality Measures (eCQM) Reporting. The Joint Commission ORYX performance measure reporting requirements are available on the Joint Commission website under the Measurement tab and on Performance Measurement System Extranet track site (PET) under Manuals and Guides, eCQM Documentation.

Selected standardized measure sets used in the Joint Commission Certification programs have been incorporated in this specification manual. This is being done to centralize the measures used for Joint Commission programs into one manual. Note: the Stroke (STK) measures data for certification can be submitted through an ORYX vendor, however the Advanced Certification Heart Failure (ACHF) measures data **cannot** be submitted through an ORYX vendor and may only be submitted through the Certification Measure Information Process (CMIP).

This manual contains references to CMS and QIO programs that, while not applicable to the Joint Commission, have been retained to remain consistent with the CMS and Joint Commission aligned *Specifications Manual for National Hospital Inpatient Quality Measures*.

Section 1: Data Dictionary

The Data Dictionary describes the patient-level and facility-level data elements required to capture and calculate individual measurements. It specifies those data elements that must be collected for each patient that falls into the selected measure population and the data elements needed for a specific measure.

Section 2: Measurement Information

The measure set sections contain specific measure information forms for each measure. This is followed by a data element list for the measures, including the general data elements, algorithm output data elements, and the specific measure data elements. Next is a document that describes the initial patient population and sample size requirements for each measure set. Also included are subsections for each specific measure. These contain a Measure Information Form (MIF) and the Performance Measure Algorithm.

The algorithms and data elements needed to calculate each of the Joint Commission national quality measures are identified in the MIF. Each algorithm provides the logical steps, data element evaluation, arithmetic calculations, and data manipulation steps that are required to calculate a given measure.

Section 3: Missing and Invalid Data

This section addresses the Joint Commission's approach to missing and invalid data. Missing data refers to data elements that have no values present for one or more episodes of care and invalid data refers to data element values that fall outside the range of the allowable values. Information and examples are provided on how the "Unable to Determine" (UTD) value is utilized within the measure algorithm and on submission into the Joint Commission's Data Warehouse. This section also describes the general and measure specific data elements that are required for submission and how missing and/or invalid data will be handled.

Section 4: Population and Sampling Methods

Sampling is an available option for all Joint Commission national quality measures if certain requirements are met. This section provides guidance on defining the hospital's Initial Patient Population and information and examples on the order of data flow, sample size requirements, sampling approaches and the transmission of Initial Patient Population and sample data elements to the Joint Commission's Data Warehouse. Specific measure set sample size requirements tables are located in the Measure Information section.

Section 5: Joint Commission National Quality Measure Verification Process

This section has been moved to the *ORYX Technical Implementation Guide* and is available to ORYX Vendors via the Joint Commission's extranet site for measurement systems (PET).

Section 6: Joint Commission National Quality Measures Data Transmission

This section of the manual is provided to highlight the unique data transmission specifications for Joint Commission national quality measure data. This section is divided into four parts: Joint Commission National Quality Measure Data Transmission, Guidelines for Submission of Data, Transmission Data Element List, and Transmission Data Processing Flow.

The Joint Commission Data Transmission section provides information related to the transmission of Joint Commission national quality measure data to the Joint Commission's Data Warehouse. The Guidelines for Submission of Data includes an overview of the data required to be submitted to the Joint Commission's Data Warehouse, as well as the Hospital Clinical Data XML file layout and the Hospital Initial Patient Population Data XML file Layout.

The Transmission Data Element List describes the data elements that are either used to identify the hospital and measure set associated to the transmitted data or are calculated by the vendor using the hospital's

patient-level data and measure results. These data elements are not used in the Initial Patient Population Algorithms or Measure Algorithms. The Transmission Data Processing Flows contains information regarding the order in which the Joint Commission's Data Warehouse evaluates the Joint Commission national quality measures and the population and sampling data.

Appendix A: ICD-10 Code Tables

For many of the measures, eligibility for inclusion or exclusion in the Initial Patient Population of interest is defined by the presence of certain ICD-10-CM diagnosis and ICD-10-PCS procedure codes within the patient-level record. Appendix A contains the ICD-10 code tables that define these indicator populations for all measures within each measure set. There is a description of the code as defined in a coding manual and a shortened description that may be used in a data abstraction tool. The Measure Information Section also refers to the codes or tables provided in this section. ICD-10 codes are modified by the National Center for Health Statistics (NCHS) and the Centers for Medicare & Medicaid Services (CMS). The code tables in this Appendix are evaluated semiannually and modified based on these changes. Potential changes become effective beginning with either April 1st or October 1st discharges. Updates will be provided as indicated.

Appendix C: Medication Tables

Some of the Joint Commission national quality measures address the use of certain medications. This Appendix contains tables with the specific names of medications that may be associated with medication categories (e.g., trade names). For example, Haloperidol may also be documented as Haldol. These tables are provided to facilitate appropriate data collection of applicable medications. These tables are not meant to be an inclusive list of all available therapeutic agents; rather they represent current information available at the time of publication. Approved medication tables will be updated regularly. Discrepancies must be reported. See the Resource Section of this manual for contact information.

Appendix D: Glossary of General Terms

Appendix E: Overview of Measure Information Form and Flowchart Formats

Each measure has an associated Measure Information Form and Flowchart (calculation algorithm). This Appendix explains each of the terms used on the Measure Information Form and provides a brief introduction to flowcharting, including an explanation of flowchart symbols.

Appendix G: Resources

This section lists resources that are available to assist with the Joint Commission measures.

Appendix H: Miscellaneous Tables

The tables in this Appendix contain clinical information to supplement the data element dictionary and provide additional details for data abstraction. They are referenced under the data dictionary under the Notes for Abstraction or the Guidelines for Abstraction.

Appendix P. Preview Section

The preview section is intended to provide an overview of future updates. The information provided in this section **is not** to be programmed or submitted. Placement in this appendix does not assume that the information listed will be implemented in a future manual.

Hospital Based Inpatient Psychiatric Services (HBIPS)

Set Measures

Set Measure ID	Measure Short Name
HBIPS-1	Admission Screening for Violence Risk, Substance Use, Psychological Trauma History and Patient Strengths completed
HBIPS-2	Hours of physical restraint use
HBIPS-3	Hours of seclusion use
HBIPS-5	Patients discharged on multiple antipsychotic medications with appropriate justification

General Data Elements

Element Name	Collected For
Admission Date	All Records,
Birthdate	All Records,
CMS Certification Number	Transmission, Hospital Clinical Data File, Optional for All Records,
Discharge Date	All Records, Not collected for HBIPS-2 and HBIPS-3
Health Care Organization Identifier	All Records, Patient Population Data File, Hospital Clinical Data File,
Hispanic Ethnicity	All Records,
ICD-10-CM Other Diagnosis Codes	All Records, Optional for HBIPS-2, HBIPS-3
ICD-10-CM Principal Diagnosis Code	All Records, Optional for HBIPS-2, HBIPS-3
ICD-10-PCS Other Procedure Codes	All Records, Optional for All HBIPS Records
ICD-10-PCS Other Procedure Dates	All Records, Optional for All HBIPS Records
ICD-10-PCS Principal Procedure Code	All Records, Optional for All HBIPS Records
ICD-10-PCS Principal Procedure Date	All Records, Optional for All HBIPS Records

Element Name	Collected For
Measure Category Assignment	All Records, Calculation, Transmission, Hospital Clinical Data File, Used in calculation of the Joint Commission's aggregate data and in the transmission of the Hospital Clinical Data file.
Payment Source	All Records, Optional for HBIPS-2 and HBIPS-3
Psychiatric Care Setting	All Records, HBIPS
Race	All Records,
Sex	All Records,
Vendor Tracking Identifier	All Records, Transmission, Hospital Clinical Data File,

Algorithm Output Data Elements

Element Name	Collected For
Measure Category Assignment	All Records, Calculation, Transmission, Hospital Clinical Data File
Measurement Value	Calculation, Transmission, Hospital Clinical Data File

Measure Set Specific Data Elements

Element Name	Collected For
Appropriate Justification for Multiple Antipsychotic Medications	HBIPS-5
Discharge Disposition	HBIPS-5
Event Date	HBIPS-2, HBIPS-3
Event Type	HBIPS-2, HBIPS-3
Minutes of Physical Restraint	HBIPS-2
Minutes of Seclusion	HBIPS-3
Number of Antipsychotic Medications Prescribed at Discharge	HBIPS-5
Patient Status at Discharge	HBIPS-5
Patient Strengths	HBIPS-1

Element Name	Collected For
Psychiatric Inpatient Days - Medicare Only	HBIPS-2, HBIPS-3
Psychiatric Inpatient Days-Non-Medicare Only	HBIPS-2, HBIPS-3
Psychological Trauma History	HBIPS-1
Substance Use	HBIPS-1
Total Leave Days - Medicare Only	HBIPS-2, HBIPS-3
Total Leave Days-Non-Medicare Only	HBIPS-2, HBIPS-3
Violence Risk to Others	HBIPS-1
Violence Risk to Self	HBIPS-1

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Hospital-Based Inpatient Psychiatric Services (HBIPS) Measure Set Initial Patient Population

The HBIPS measure set is unique in that there are two distinct Initial Patient Populations within the measure set, one for the discharge measures (HBIPS-1, HBIPS-5) and the other for event measures (HBIPS-2 and HBIPS-3).

Initial Patient Population for Discharge Measures (HBIPS-1, HBIPS-5)
The general population of the HBIPS discharge measures can be identified by using four data elements that are common to the discharge performance measures in the HBIPS set:

- ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes
- *Discharge Date*
- *Birthdate*
- *Psychiatric Care Setting*

The HBIPS Discharge Topic Population is defined as patients discharged from the Psychiatric Care Setting with an ICD-10-CM Principal or Other Diagnosis Code for Mental Disorders as defined in Appendix A, Table 10.01 and a Patient Age at Discharge (*Discharge Date* -— *Birthdate*) >= 1 year.

There are four distinct strata within the HBIPS Discharge Topic Population; each is identified by a specific age range. The patients in each stratum are counted in the HBIPS Initial Patient Population for discharge measures of multiple measures.

Discharge Measures	Age Strata	Initial Patient Population definition
HBIPS-1a and 5a (overall measures)	Age greater than and equal to 1 year	The count of all patients in strata 1, 2, 3, and 4
HBIPS-1b and 5b	Age 1 year through 12 years	The count of all patients in stratum 1
HBIPS-1c and 5c	Age 13 years through 17 years	The count of all patients in stratum 2
HBIPS-1d and 5d	Age 18 years through 64 years	The count of all patients in stratum 3

Discharge Measures	Age Strata	Initial Patient Population definition
HBIPS-1e and 5e	Age greater than and equal to 65 years	The count of all patients in stratum 4

Patients discharged from the hospital with an ICD-10-CM Principal or Other Diagnosis Code for Mental Disorders as defined in Appendix A, Table 10.01 are included in one of the HBIPS Strata Initial Populations for discharge measures and are eligible to be sampled if they have:

Discharge Stratum 1 — Age 1 year through 12 years stratum — A Patient Age at Discharge (*Discharge Date* -— *Birthdate*) >= 1 year and < 13 years

Discharge Stratum 2 - Age 13 years through 17 years stratum — A Patient Age at Discharge (*Discharge Date* - — *Birthdate*) >= 13 years and < 18 years

Discharge Stratum 3 - Age 18 years through 64 years stratum — A Patient Age at Discharge (*Discharge Date* - — *Birthdate*) >= 18 years and < 65 years

Discharge Stratum 4 - Age greater than and equal to 65 years stratum — A Patient Age at Discharge (*Discharge Date* -— *Birthdate*) >= 65 years

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Initial Patient Population for Event Measures (HBIPS-2 and HBIPS-3)
The population of the HBIPS event measures can be identified by using two data elements that are common to the event performance measures in the HBIPS set:

- Event Date
- Psychiatric Care Setting

The HBIPS Event Topic Population (common to all HBIPS event measures) is defined as patients with an event (Event Date exists) while they are in the hospital with a Patient Age at Time of Event (Event Date -— *Birthdate*) >= 1 year and the patient was in a Psychiatric Care Setting (='Y') when the event occurred. There are four distinct strata or sub-populations within the HBIPS Event Topic Population, each identified by a specific age range. The patients in each stratum are counted in the HBIPS Initial Patient Population for event measures of multiple measures.

Event Measures	Age Strata	Initial Patient Population definition
HBIPS-2a and 3a (overall measures)	Age greater than and equal to 1 year	The count of all patients in strata 1, 2, 3, and 4
HBIPS-2b and 3b	Age 1 year through 12 years	The count of all patients in stratum 1
HBIPS-2c and 3c	Age 13 years through 17 years	The count of all patients in stratum 2
HBIPS-2d and 3d	Age 18 years through 64 years	The count of all patients in stratum 3

Event Measures	Age Strata	Initial Patient Population definition
HBIPS-2e and 3e	Age greater than and equal to 65 years	The count of all patients in stratum 4

Patients for which an event occurs (Event Date exists) while in a Psychiatric Care Setting (='Y') in the hospital are included in one of the Strata Initial Populations for the event measures. There is no sampling for the HBIPS event measures. All patients in the Initial Population for HBIPS event measures are automatically sampled.

Event Stratum 1 — Age 1 year through 12 years stratum — A Patient Age at Time of Event (Event Date -— *Birthdate*) >= 1 year and < 13 years

Event Stratum 2 - Age 13 years through 17 years stratum — A Patient Age at Time of Event (Event Date —- *Birthdate*) >= 13 years and < 18 years

Event Stratum 3 - Age 18 years through 64 years stratum — A Patient Age at Time of Event (Event Date -— *Birthdate*) >= 18 years and < 65 years

Event Stratum 4 - Age greater than and equal to 65 years stratum — A Patient Age at Time of Event (Event Date —- *Birthdate*) >= 65 years

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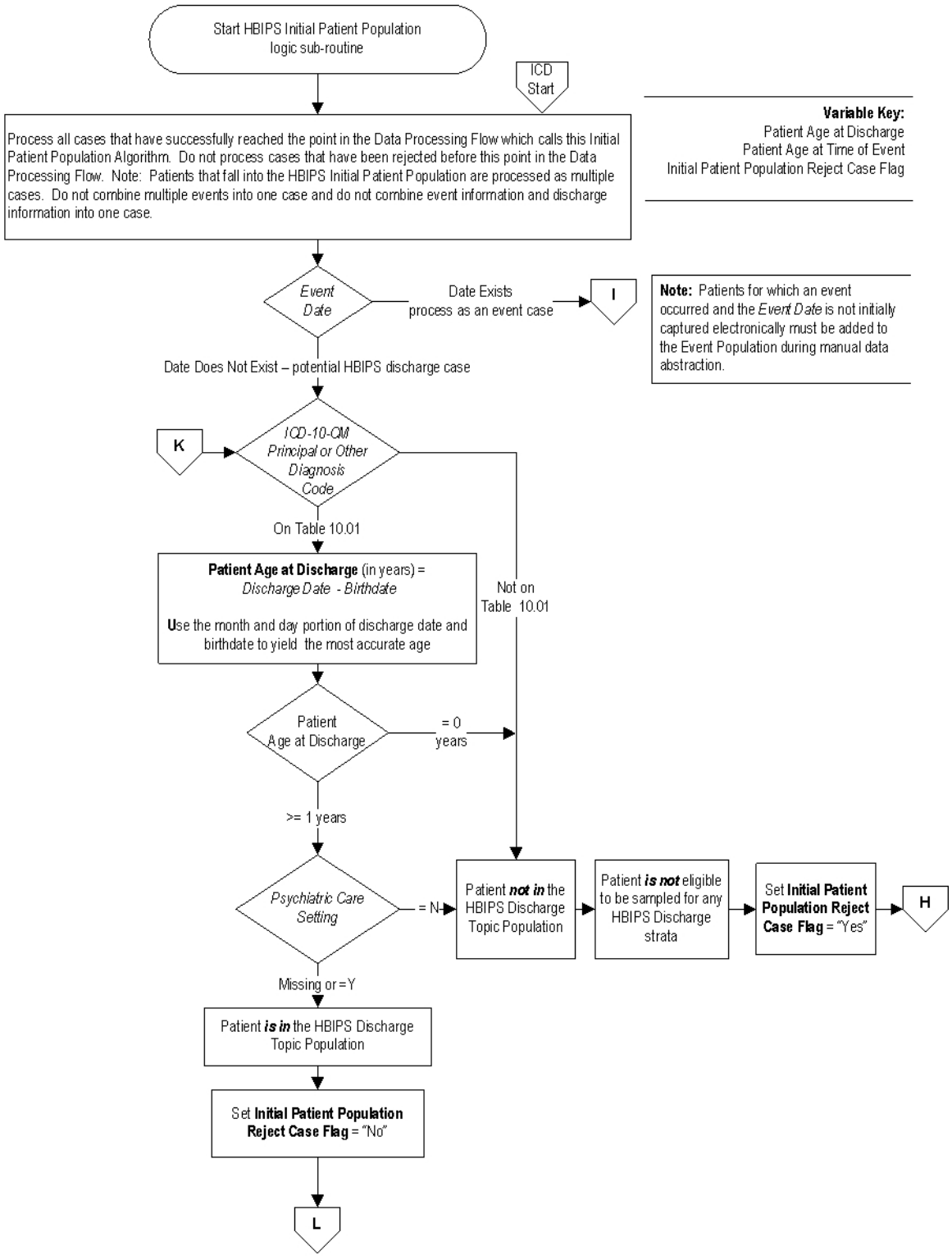
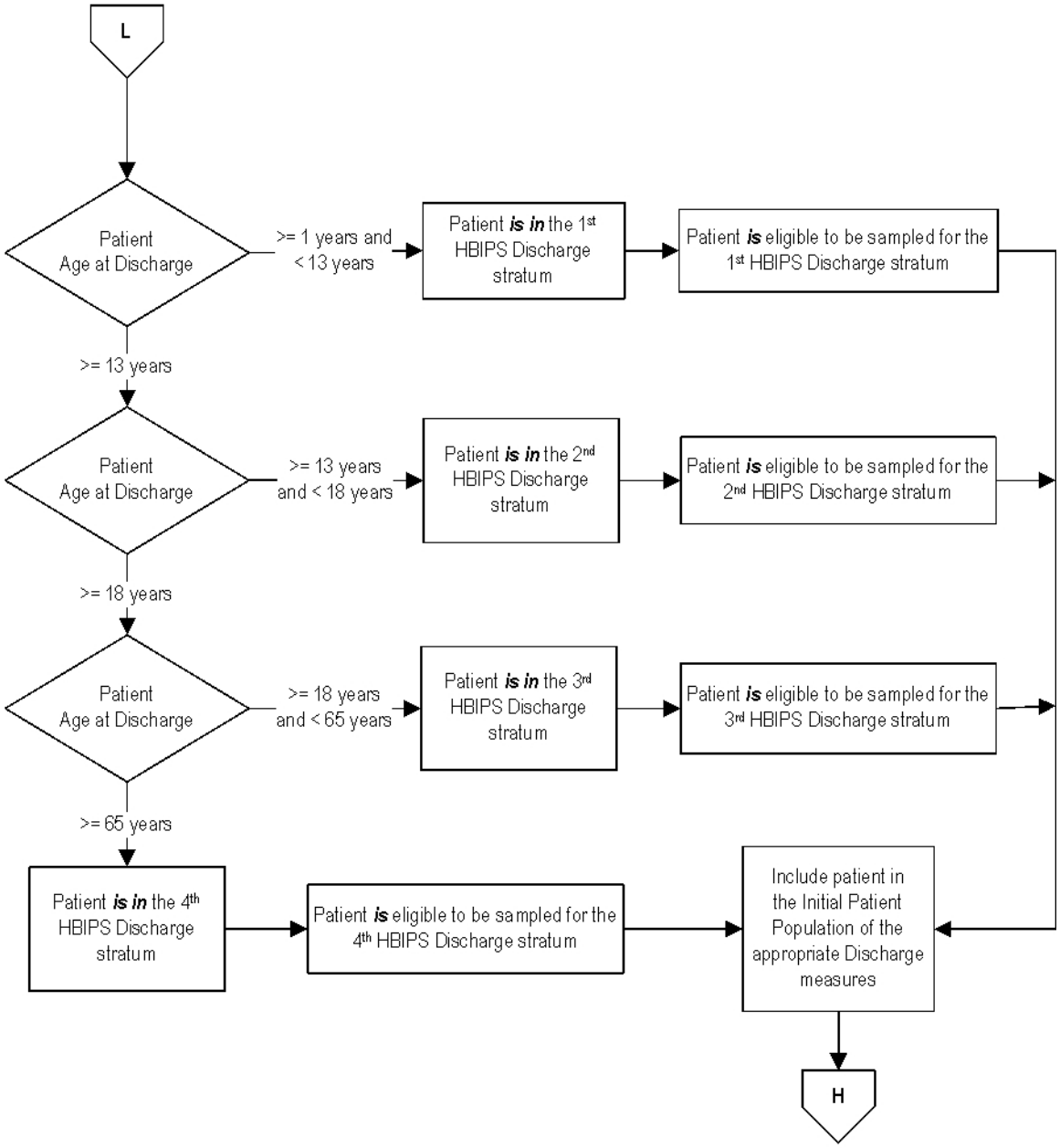
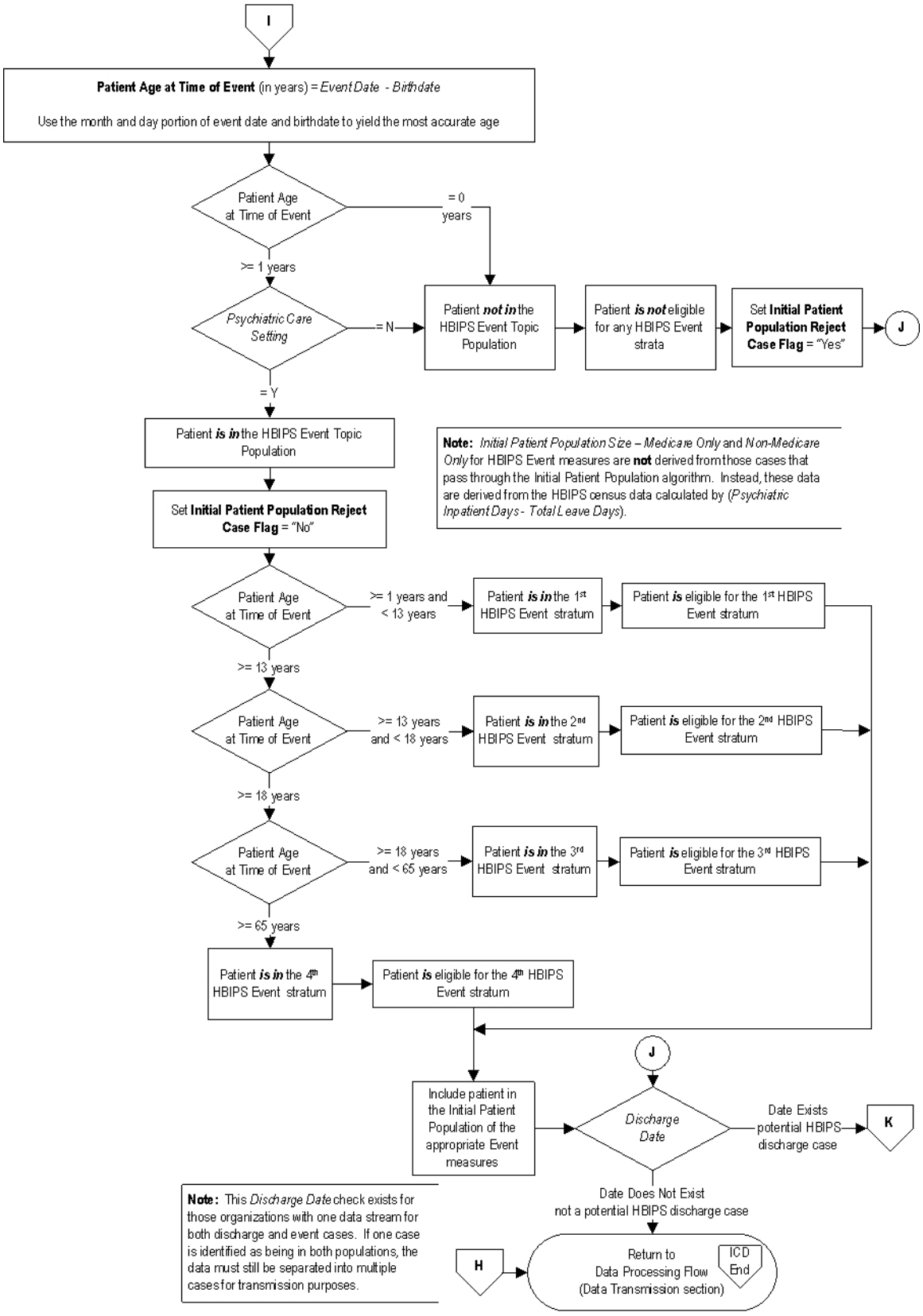
HBIPS Initial Patient Population Algorithm




L
Patient Age at Discharge
>= 1 years and < 13 years
Patient *is in* the 1st HBIPS Discharge stratum
Patient *is* eligible to be sampled for the 1st HBIPS Discharge stratum
>= 13 years
Patient Age at Discharge
>= 13 years and < 18 years
Patient *is in* the 2nd HBIPS Discharge stratum
Patient *is* eligible to be sampled for the 2nd HBIPS Discharge stratum
>= 18 years
Patient Age at Discharge
>= 18 years and < 65 years
Patient *is in* the 3rd HBIPS Discharge stratum
Patient *is* eligible to be sampled for the 3rd HBIPS Discharge stratum
>= 65 years
Patient *is in* the 4th HBIPS Discharge stratum
Patient *is* eligible to be sampled for the 4th HBIPS Discharge stratum
Include patient in the Initial Patient Population of the appropriate Discharge measures
H


I
Patient Age at Time of Event (in years) = Event Date - Birthdate
Use the month and day portion of event date and birthdate to yield the most accurate age
Patient Age at Time of Event
= 0 years
>= 1 years
Psychiatric Care Setting
= N
Patient not in the HBIPS Event Topic Population
Patient is not eligible for any HBIPS Event strata
Set Initial Patient Population Reject Case Flag = "Yes"
J
= Y
Patient is in the HBIPS Event Topic Population
Set Initial Patient Population Reject Case Flag = "No"
Note: Initial Patient Population Size – Medicare Only and Non-Medicare Only for HBIPS Event measures are not derived from those cases that pass through the Initial Patient Population algorithm. Instead, these data are derived from the HBIPS census data calculated by (Psychiatric Inpatient Days - Total Leave Days).
Patient Age at Time of Event
>= 1 years and < 13 years
Patient is in the 1st HBIPS Event stratum
Patient is eligible for the 1st HBIPS Event stratum
>= 13 years
Patient Age at Time of Event
>= 13 years and < 18 years
Patient is in the 2nd HBIPS Event stratum
Patient is eligible for the 2nd HBIPS Event stratum
>= 18 years
Patient Age at Time of Event
>= 18 years and < 65 years
Patient is in the 3rd HBIPS Event stratum
Patient is eligible for the 3rd HBIPS Event stratum
>= 65 years
Patient is in the 4th HBIPS Event stratum
Patient is eligible for the 4th HBIPS Event stratum
J
Include patient in the Initial Patient Population of the appropriate Event measures
Discharge Date
Date Exists potential HBIPS discharge case
K
Note: This Discharge Date check exists for those organizations with one data stream for both discharge and event cases. If one case is identified as being in both populations, the data must still be separated into multiple cases for transmission purposes.
Date Does Not Exist not a potential HBIPS discharge case
H
Return to Data Processing Flow (Data Transmission section)
ICD End

Sample Size Requirements

Note For Joint Commission purposes, the HBIPS measure set is not included in the aligned Global Sampling methodology. All patients meeting the definition of the HBIPS Initial Patient Populations are eligible to be sampled, abstracted, and transmitted to the Joint Commission's Data Warehouse.

Sample Size Requirements for HBIPS Discharge Measures (HBIPS-1, HBIPS-5)
Hospitals that choose to sample have the option of sampling quarterly or sampling monthly. A hospital may choose to use a larger sample size than is required. Hospitals whose Initial Patient Population size is less than the minimum number of cases per quarter/month for the stratum cannot sample that stratum.

Regardless of the option used, hospital samples must be monitored to ensure that sampling procedures consistently produce statistically valid and useful data. Because the sample for a measure set will rarely be equal to the effective sample due to exclusions and contraindications, hospitals selecting sample cases MUST submit AT LEAST the minimum required sample size.

The following sample size tables for each option automatically build in the number of cases needed to obtain the required sample sizes. For information concerning how to perform sampling, refer to the Population and Sampling Specifications section in this manual.

Quarterly Sampling

For hospitals selecting sample cases for the HBIPS discharge measures, a modified sampling procedure is required. Hospitals selecting sample cases for this set must ensure that each individual stratum's population and effective quarterly sample size meets the following conditions:

- Select within each of the four individual measure strata. The effective quarterly sample size within a stratum is at least 44 cases per quarter. Cases are placed into the appropriate stratum based upon the patient's age.
- The required quarterly sample size is at least 20% of the stratum population for the quarter.

Quarterly Sample Size
Based on Initial Patient Population for the HBIPS Discharge (HBIPS-DSC) Measures

Hospital's Measures	
Average Quarterly Stratum Initial Patient Population Size "N"	**Minimum Required Stratum Sample Size "n"**
> 877	176

Hospital's Measures	
Average Quarterly Stratum Initial Patient Population Size "N"	Minimum Required Stratum Sample Size "n"
221 —- 877	20% of the Initial Patient Population
44 -— 220	44
< 44	No sampling; 100% of the Initial Patient Population is required

Monthly Sampling

For hospitals selecting sample cases for HBIPS discharge measures, a modified sampling procedure is required. Hospitals selecting sample cases for this set must ensure that each individual strata population and effective monthly sample size meets the following conditions:

- Select within each of the four individual measure strata. The effective monthly sample size within a stratum is at least 15 cases per month. Cases are placed into the appropriate stratum based upon the patient's age.
- The required monthly sample size is at least 20% of the stratum population for the month.

Monthly Sample Size
Based on Initial Patient Population for the HBIPS Discharge (HBIPS-DSC) Measures

Hospital's Measures	
Average Monthly Stratum Initial Patient Population Size "N"	Minimum Required Stratum Sample Size "n"
> 295	60
76 —- 295	20% of the Initial Patient Population
15 —- 75	15
< 15	No sampling; 100% of the Initial Patient Population is required

Sample Size Examples

All sampled strata in HBIPS should be used in the calculation of all HBIPS discharge measures. All of the HBIPS discharge measures' specific exclusion criteria are used to filter out cases that do not belong in the measure denominator. Using HBIPS-1b as an example, include cases covering all sampled strata, although the measure-specific exclusion criteria would only allow cases with an age of 1 year through 12 years to be included in the denominator.

- Quarterly sampling:
  When applicable, larger hospitals must also abide by the required quarterly sample sizes for the four

individual measure strata a minimum of 44 or 20% of population required sample cases per stratum when Initial Patient Population size is 44 or greater.

- The HBIPS Initial Patient Population sizes for a hospital are 5, 100, 221, and 876 patients for each stratum respectively per quarter. The required quarterly sample sizes would be 5, 44, 45, and 176.
  - The 1st stratum is less than the minimum required quarterly sample size, so 100% of this stratum is sampled.
  - The 2nd stratum has 100 patients per quarter, which falls in the average quarterly population size of 44 to 220 patients, so 44 cases are sampled.
  - The 3rd stratum has 221 patients per quarter, which requires a 20% sample size, of 45 cases (twenty percent of 221 equals 44.2 rounded to the next highest whole number = 45).
  - The 4th stratum has 876 patients per quarter, which is more than the maximum condition, so a minimum of 176 cases are required to be sampled.

- Monthly sampling:
  When applicable, larger hospitals must also abide by the required monthly sample sizes for the four individual measure strata a minimum of 15 required sample cases per stratum when Initial Patient Population size is 15 or greater.
  - The HBIPS Initial Patient Population sizes for a hospital are 5, 45, 294 and 400 patients respectively in July. The required monthly sample sizes would be 5, 15, 59, and 60.
    - The 1st stratum is less than the minimum required monthly sample size, so 100% of this stratum is sampled.
    - The 2nd stratum has 45 patients per month, which falls in the average monthly population size of 15 to 75 patients, so 15 cases are sampled.
    - The 3rd stratum has 294 patients per month, which requires a 20% sample size, of 59 cases (twenty percent of 294 equals 58.8 rounded to the next highest whole number = 59).
    - The 4th stratum has 400 patients per month, which is more than the maximum condition, so a minimum of 60 cases are required to be sampled.

Sampling Requirements for HBIPS Event Measures (HBIPS-2 and HBIPS-3)
The measures in HBIPS-EVT (HBIPS-2 and HBIPS-3) are not eligible for sampling and will use the entire Initial Patient Population for reporting.

Measure Information Form

Measure Set: Hospital Based Inpatient Psychiatric Services (HBIPS)

Set Measure ID: HBIPS-1

Set Measure ID	Performance Measure Name
HBIPS-1a	Admission Screening- Overall Rate
HBIPS-1b	Admission Screening- Children (1 through 12 years)
HBIPS-1c	Admission Screening- Adolescent (13 through 17 years)
HBIPS-1d	Admission Screening- Adult (18 through 64 years)
HBIPS-1e	Admission Screening- Older Adult (≥65 years)

Performance Measure Name: Admission Screening for Violence Risk, Substance Use, Psychological Trauma History and Patient Strengths completed

Description: Patients admitted to a hospital-based inpatient psychiatric setting who are screened within the first three days of admission for all of the following: risk of violence to self or others, substance use, psychological trauma history and patient strengths.

Rationale: Substantial evidence exists that there is a high prevalence of co-occurring substance use disorders as well as history of trauma among persons admitted to acute psychiatric settings. Professional literature suggests that these factors are under-identified yet integral to current psychiatric status and should be assessed in order to develop appropriate treatment (Ziedonis, 2004; NASMHPD, 2005). Similarly, persons admitted to inpatient settings require a careful assessment of risk for violence and the use of seclusion and restraint. Careful assessment of risk is critical to safety and treatment. Effective, individualized treatment relies on assessments that explicitly recognize patients' strengths. These strengths may be characteristics of the individuals themselves, supports provided by families and others, or contributions made by the individuals' community or cultural environment (Rapp, 1998). In the same way, inpatient environments require assessment for factors that lead to conflict or less than optimal outcomes.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Psychiatric inpatients with admission screening within the first three days of admission for **all** of the following: risk of violence to self or others; substance use; psychological trauma history; and patient strengths

> **Included Populations:** Not applicable

Excluded Populations: None

Data Elements:

- *Patient Strengths*
- *Psychological Trauma History*
- *Substance Use*
- *Violence Risk to Others*
- *Violence Risk to Self*

Denominator Statement: Psychiatric inpatient discharges

Included Populations:

- Patients with *ICD-10-CM Principal* or *Other Diagnosis Codes* for Mental Disorders as defined in Appendix A, Table 10.01

Excluded Populations:

- Patients for whom there is an inability to complete admission screening for *Violence Risk, Substance Use, Psychological Trauma History and Patient Strengths* within the first three days of admission
- Patients with a Length of Stay ≤ 3 days or ≥ 365 days

Data Elements:

- *Admission Date*
- *Birthdate*
- *Discharge Date*
- *ICD-10-CM Other Diagnosis Codes*
- *ICD-10-CM Principal Diagnosis Code*
- *Psychiatric Care Setting*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative/billing data and medical records.

Data Accuracy: Hospitals may wish to implement periodic audits to monitor and ensure data accuracy.

Measure Analysis Suggestions: The data elements for each of the five initial assessment elements provide an opportunity to assess each component individually. However, completion of all **five** initial assessment categories is required for this measure.

Sampling: Yes. For additional information see the Sampling Section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

- American Psychiatric Association. (2003). Practice guidelines for psychiatric evaluation of adults. Arlington (VA): American Psychiatric Association. http://www.guideline.gov/summary/summary.aspx?doc_id=9317
- Lyons JS, Uziel-Miller ND, Reyes F, Sokol PT (2000). Strengths of children and adolescents in residential settings: Prevalence and associations with psychopathology and discharge placement. Journal of the American Academy of Child & Adolescent Psychiatry, Vol 39(2): 176-181.
- NASMHPD. (2005) *Position Statement on Services and Supports to Trauma Survivors*. Alexandria, VA: NASMHPD.
- Rapp CA (1998). The strengths model: Case management with people suffering from severe and persistent mental illness. London: Oxford University Press.
- Ruiz P (2004). Addressing Culture, Race, & Ethnicity in Psychiatric Practice. Psychiatric Annals, Vol 34(7): 527-532.
- Ziedonis DM (2004). Integrated treatment of co-occurring mental illness and addiction: Clinical intervention, program, and system perspectives. CNS Spectrums 9(12): 892,894-904,925.

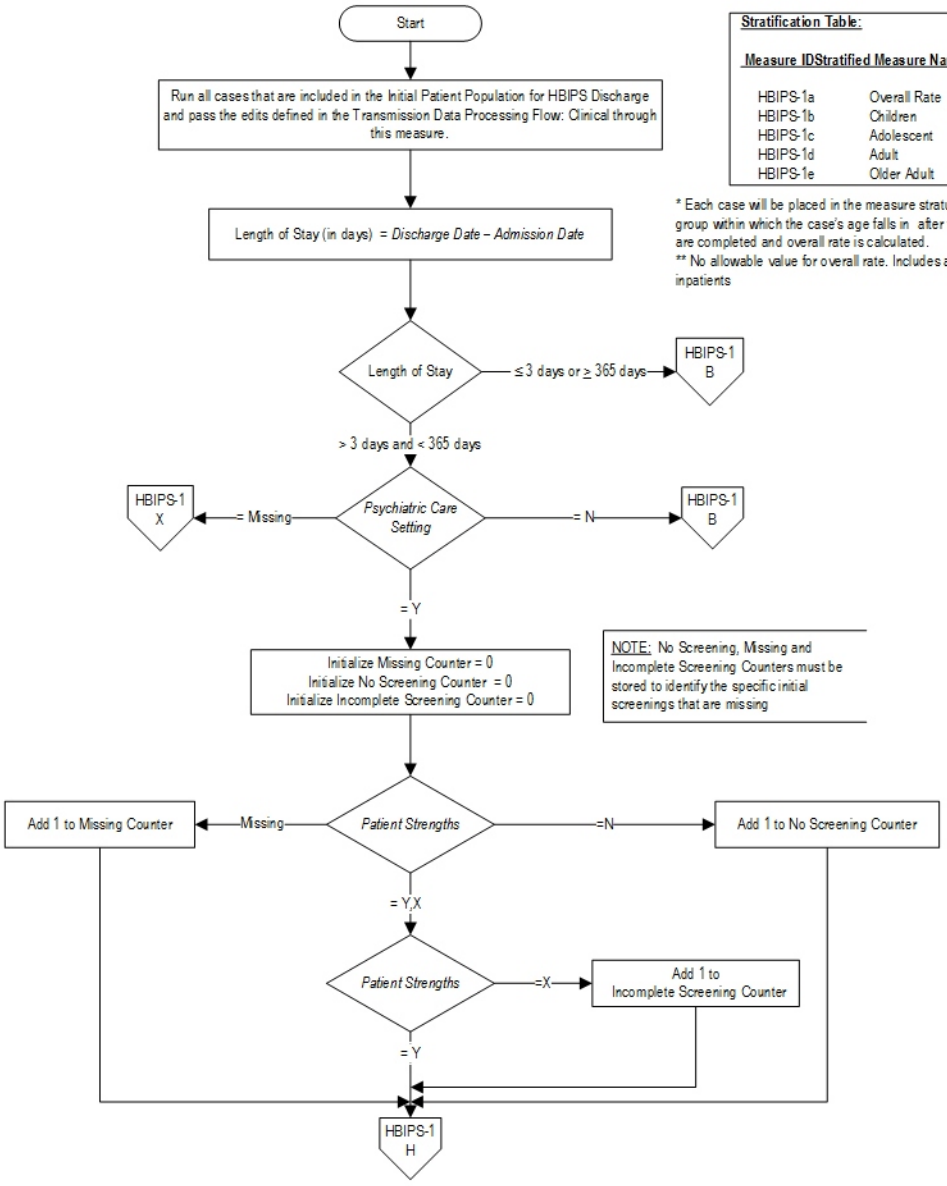
Measure Algorithm:

HBIPS-1: Admission Screening For Violence Risk, Substance Use, Psychological Trauma History And Patient Strengths Completed

Numerator Statement: Psychiatric inpatients with admission screening within the first three days of admission for all of the following: risk of violence to self or others; substance use; history of psychological trauma history, and patient strengths.

Denominator Statement: Psychiatric inpatient discharges.

Variable Key:
Patient Age at Discharge
Length of Stay
Missing Counter
No Screening Counter
Incomplete Screening Counter

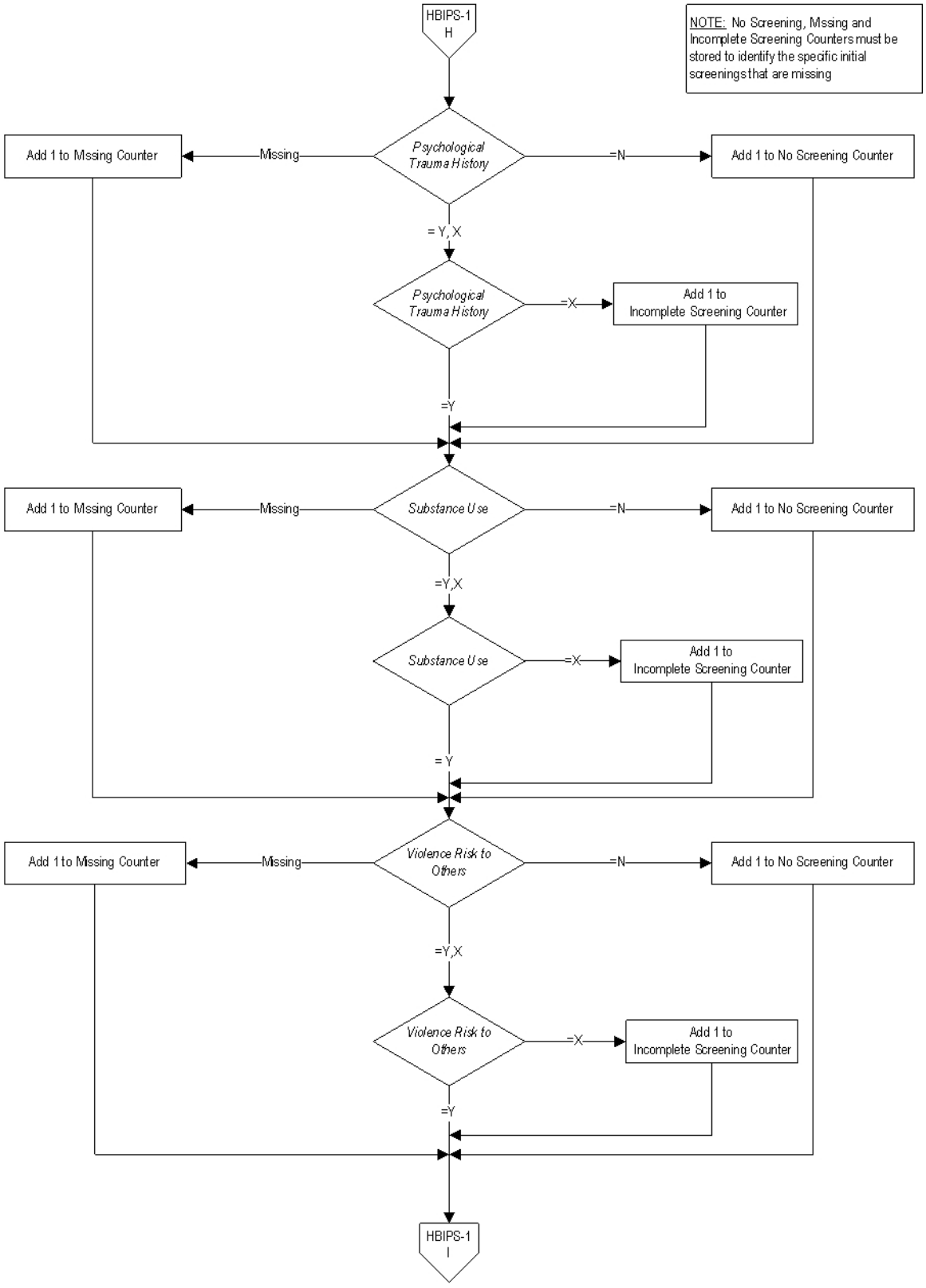


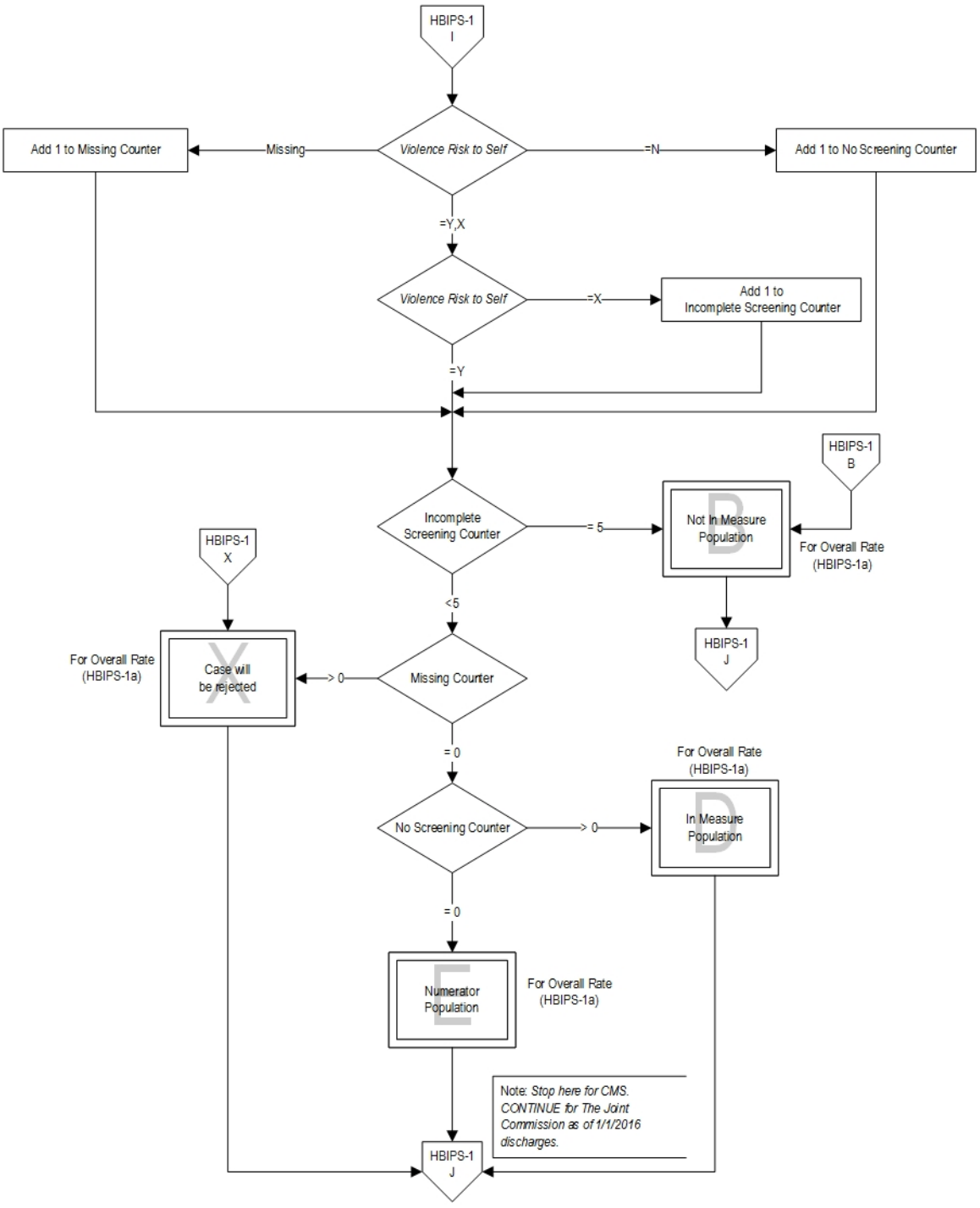
Stratification Table:

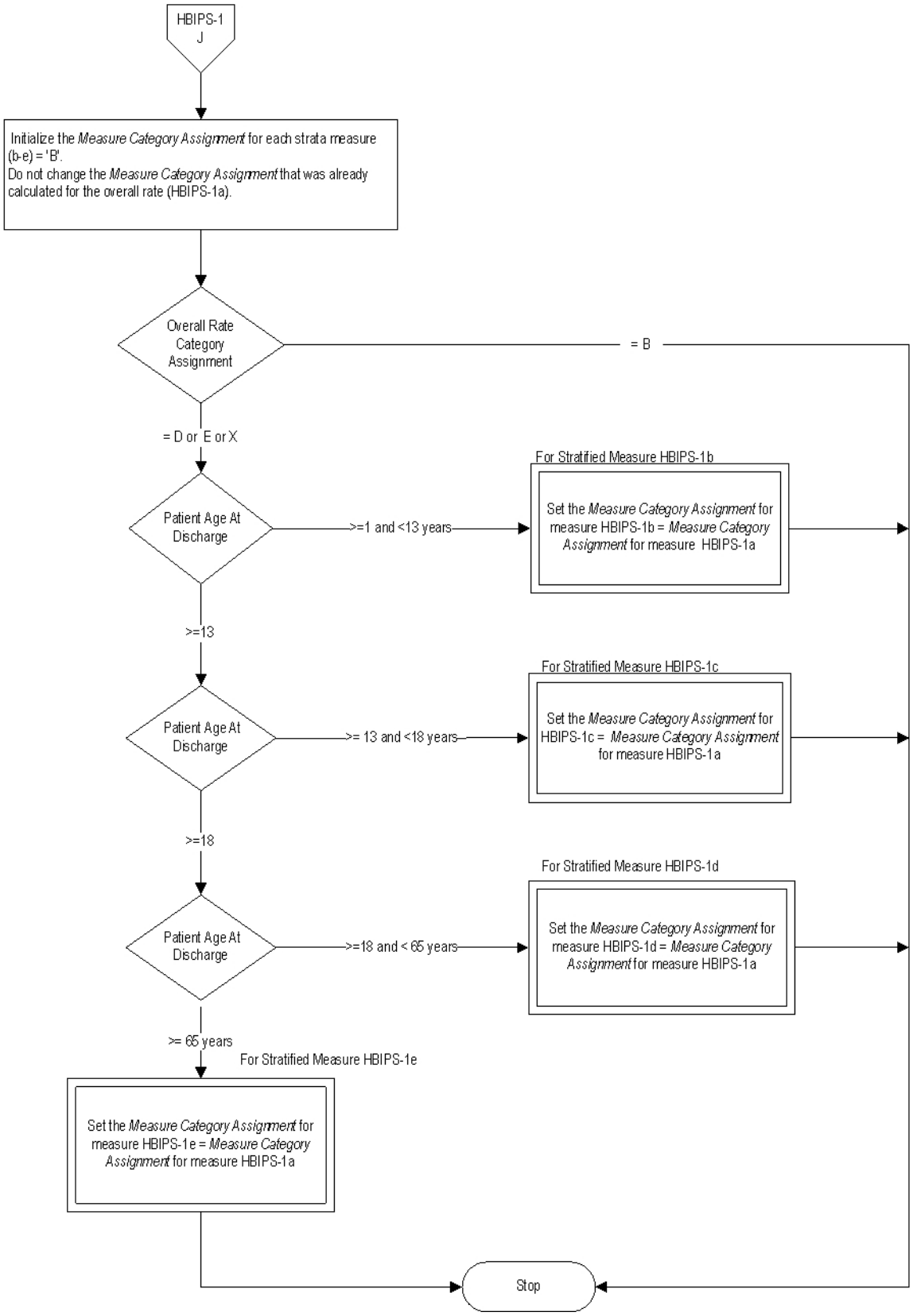
Measure ID	Stratified Measure Name	*Patient Age (Age Ranges)
HBIPS-1a	Overall Rate	**
HBIPS-1b	Children	1- 12 years
HBIPS-1c	Adolescent	13-17 years
HBIPS-1d	Adult	18-64 years
HBIPS-1e	Older Adult	>= 65 years

* Each case will be placed in the measure stratum according to the age group within which the case's age falls in after the Category Assignments are completed and overall rate is calculated.
** No allowable value for overall rate. Includes all Ages of Psychiatric inpatients

NOTE: No Screening, Missing and Incomplete Screening Counters must be stored to identify the specific initial screenings that are missing


HBIPS-1
H
NOTE: No Screening, Missing and Incomplete Screening Counters must be stored to identify the specific initial screenings that are missing
Psychological Trauma History
Missing
Add 1 to Missing Counter
=N
Add 1 to No Screening Counter
= Y, X
Psychological Trauma History
=X
Add 1 to Incomplete Screening Counter
=Y
Substance Use
Missing
Add 1 to Missing Counter
=N
Add 1 to No Screening Counter
=Y,X
Substance Use
=X
Add 1 to Incomplete Screening Counter
= Y
Violence Risk to Others
Missing
Add 1 to Missing Counter
=N
Add 1 to No Screening Counter
=Y,X
Violence Risk to Others
=X
Add 1 to Incomplete Screening Counter
=Y
HBIPS-1
I


HBIPS-1
I
Violence Risk to Self
Missing
Add 1 to Missing Counter
=N
Add 1 to No Screening Counter
=Y,X
Violence Risk to Self
=X
Add 1 to
Incomplete Screening Counter
=Y
HBIPS-1
B
Incomplete
Screening Counter
= 5
Not In Measure
Population
For Overall Rate
(HBIPS-1a)
HBIPS-1
X
<5
HBIPS-1
J
For Overall Rate
(HBIPS-1a)
Case will
be rejected
> 0
Missing Counter
= 0
For Overall Rate
(HBIPS-1a)
No Screening Counter
> 0
In Measure
Population
= 0
Numerator
Population
For Overall Rate
(HBIPS-1a)
Note: Stop here for CMS.
CONTINUE for The Joint
Commission as of 1/1/2016
discharges.
HBIPS-1
J


HBIPS-1
J
Initialize the *Measure Category Assignment* for each strata measure (b-e) = 'B'.
Do not change the *Measure Category Assignment* that was already calculated for the overall rate (HBIPS-1a).
Overall Rate Category Assignment
= B
= D or E or X
For Stratified Measure HBIPS-1b
Patient Age At Discharge
>=1 and <13 years
Set the *Measure Category Assignment* for measure HBIPS-1b = *Measure Category Assignment* for measure HBIPS-1a
>=13
For Stratified Measure HBIPS-1c
Patient Age At Discharge
>= 13 and <18 years
Set the *Measure Category Assignment* for HBIPS-1c = *Measure Category Assignment* for measure HBIPS-1a
>=18
For Stratified Measure HBIPS-1d
Patient Age At Discharge
>=18 and < 65 years
Set the *Measure Category Assignment* for measure HBIPS-1d = *Measure Category Assignment* for measure HBIPS-1a
>= 65 years
For Stratified Measure HBIPS-1e
Set the *Measure Category Assignment* for measure HBIPS-1e = *Measure Category Assignment* for measure HBIPS-1a
Stop

Measure Information Form

Measure Set: Hospital Based Inpatient Psychiatric Services (HBIPS)

Set Measure ID: HBIPS-2

Set Measure ID	Performance Measure Name
HBIPS-2a	Physical Restraint- Overall Rate
HBIPS-2b	Physical Restraint- Children (1 through 12 years)
HBIPS-2c	Physical Restraint- Adolescent (13 through 17 years)
HBIPS-2d	Physical Restraint- Adult (18 through 64 years)
HBIPS-2e	Physical Restraint- Older Adult (≥ 65 years)

Performance Measure Name: Hours of physical restraint use

Description: The total number of hours that all patients admitted to a hospital-based inpatient psychiatric setting were maintained in physical restraint.

Rationale: Mental health providers that value and respect an individual's autonomy, independence and safety seek to avoid the use of dangerous or restrictive interventions at all times (Donat, 2003). The use of seclusion and restraint is limited to situations deemed to meet the threshold of imminent danger and when restraint and seclusion are used; such use is rigorously monitored and analyzed to prevent future use. Providers also seek to prevent violence or aggression from occurring in their treatment environments by focusing their attention on prevention activities that have a growing evidence base (Donat, 2003).

Type Of Measure: Process

Improvement Noted As: Decrease in the rate

Numerator Statement: The total number of hours that all psychiatric inpatients were maintained in physical restraint

Numerator Basis: The numerator evaluates the number of hours of physical restraint; however, the algorithm calculates the number of minutes to ensure a more accurate calculation of the measure. Convert the minutes to hours when analyzing and reporting this measure.

> **Included Populations:**
>
> - Patients for whom at least one physical restraint event is reported during the month
>
> **Excluded Populations:** None

> **Data Elements:**
>
> - *Event Date*
> - *Event Type*
> - *Minutes of Physical Restraint*

Denominator Statement: Number of psychiatric inpatient days

Denominator Basis: per 1,000 hours

> **Included Populations:**
>
> - All psychiatric inpatient days
>
> **Excluded Populations:**
>
> - Total leave days
>
> **Data Elements:**
>
> - *Admission Date*
> - *Birthdate*
> - *Psychiatric Care Setting*
> - *Psychiatric Inpatient Days - Medicare Only*
> - *Psychiatric Inpatient Days-Non-Medicare Only*
> - *Total Leave Days - Medicare Only*
> - *Total Leave Days-Non-Medicare Only*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative/billing data and medical records.

Data Accuracy: Hospitals may wish to implement periodic audits to monitor and ensure data accuracy.

Measure Analysis Suggestions: In order to further examine the issue of restraint use within a facility it may be useful to study the incidence of physical restraint use by collecting additional information about the clinical justification for use.

Sampling: No.

Data Reported As: Aggregate rate generated from count data reported as a ratio .

Selected References:

- Donat, D. (August, 2003). An analysis of successful efforts to reduce the use of seclusion and restraint at a public psychiatric hospital. *Psychiatric Services*. 54(8): 1119-1123.
- Fisher, W. A. (2003). Elements of successful restraint and seclusion reduction programs and their application in a large, urban, state psychiatric hospital. *Journal of Psychiatric Practice*, 9(1), 7-15.
- Huckshorn, K.A. (2004/September). Reducing seclusion and restraint use in mental health settings: Core strategies for prevention. *Journal of Psychosocial Nursing and Mental Health Services*. 42(9). Pp. 22-31.
- Mohr, W. K., & Anderson, J. A. (2001). Faulty assumptions associated with the use of restraints with children. *Journal of Child and Adolescent Psychiatric Nursing*, 14(3), 141- 151.
- Special Section on Seclusion and Restraint, (2005, Sept). *Psychiatric Services*, 56 (9), 1104-1142.
- *Success Stories and Ideas for Reducing Restraint/Seclusion*. (2003). A compendium of strategies created by the American Psychiatric Association (APA), the American Psychiatric Nurses Association (APNA), the National Association of Psychiatric Health Systems (NAPHS), and the American Hospital Association Section for Psychiatric and Substance Abuse Services (AHA). Retrieved from the Internet on February 10, 2010 at http://www.naphs.org

Adopted for CMS Inpatient Psychiatric Facility Quality Reporting Program FY 2014

Measure Algorithm:

HBIPS-2: Hours of Physical Restraint Use

Numerator Statement: The total number of hours that all psychiatric inpatients spent in physical restraint

Denominator Statement: Number of psychiatric inpatient days

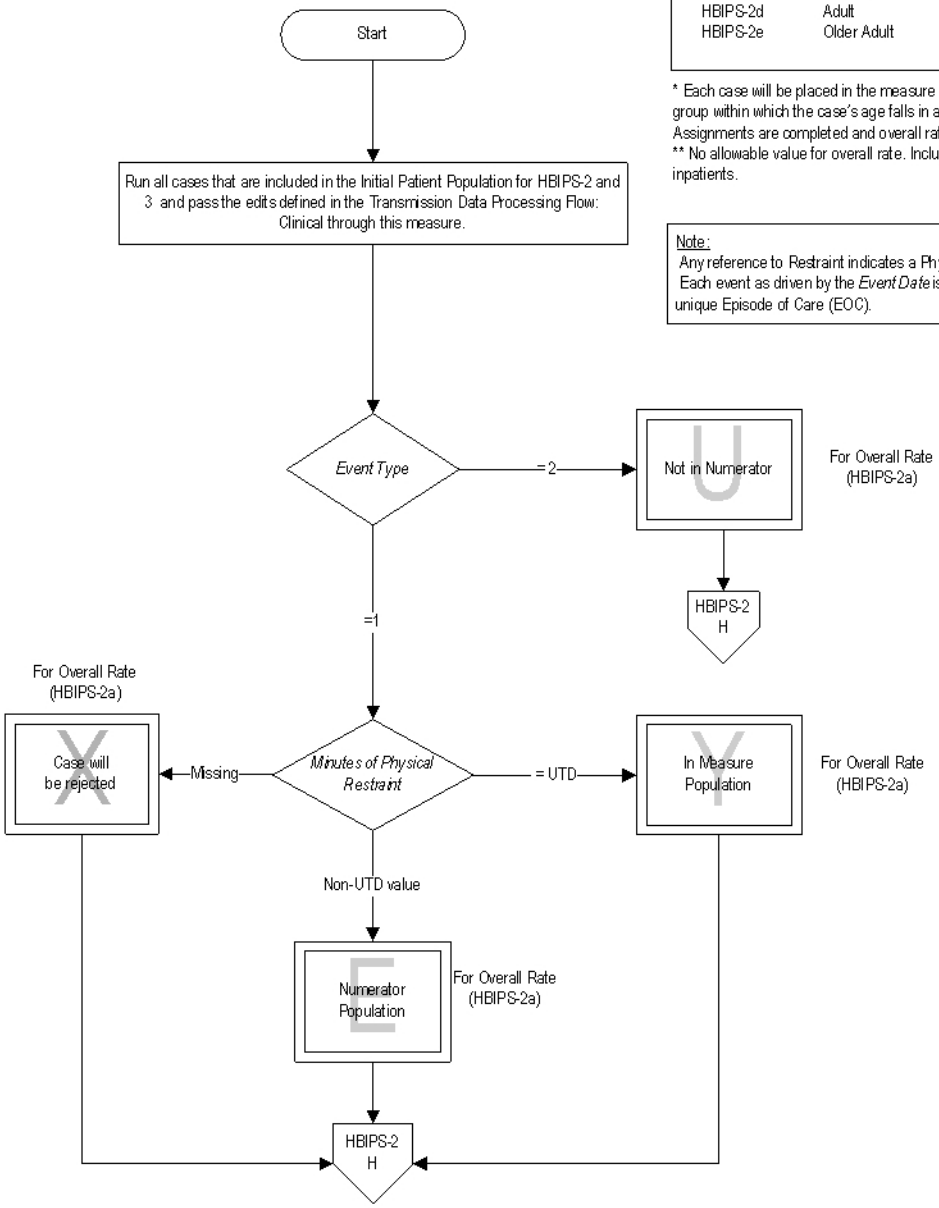
Variable Key:
Patient Age at Time of Event

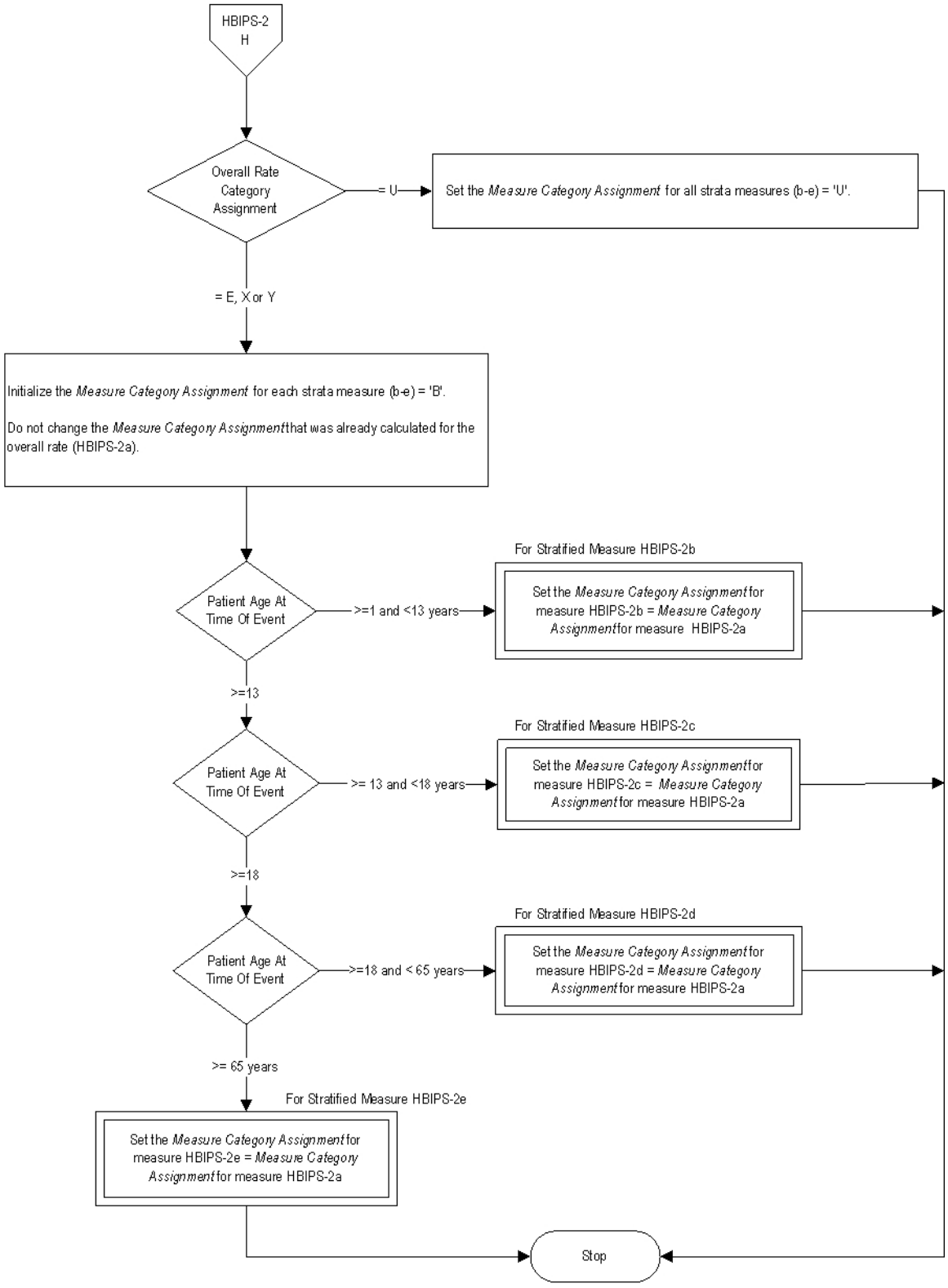
Stratification Table For Numerator:

Measure ID	Stratified Measure Name	*Patient Age (Age Ranges)
HBIPS-2a	Overall Rate	**
HBIPS-2b	Children	1- 12 years
HBIPS-2c	Adolescent	13-17 years
HBIPS-2d	Adult	18-64 years
HBIPS-2e	Older Adult	>= 65 years

* Each case will be placed in the measure stratum according to the age group within which the case's age falls in after the Category Assignments are completed and overall rate is calculated.
** No allowable value for overall rate. Includes all Ages of Psychiatric inpatients.

Note:
Any reference to Restraint indicates a Physical Restraint Event. Each event as driven by the *Event Date* is processed as a unique Episode of Care (EOC).




HBIPS-2 H
Overall Rate Category Assignment
= U
Set the *Measure Category Assignment* for all strata measures (b-e) = 'U'.
= E, X or Y
Initialize the *Measure Category Assignment* for each strata measure (b-e) = 'B'.
Do not change the *Measure Category Assignment* that was already calculated for the overall rate (HBIPS-2a).
For Stratified Measure HBIPS-2b
Patient Age At Time Of Event
>=1 and <13 years
Set the *Measure Category Assignment* for measure HBIPS-2b = *Measure Category Assignment* for measure HBIPS-2a
>=13
For Stratified Measure HBIPS-2c
Patient Age At Time Of Event
>= 13 and <18 years
Set the *Measure Category Assignment* for measure HBIPS-2c = *Measure Category Assignment* for measure HBIPS-2a
>=18
For Stratified Measure HBIPS-2d
Patient Age At Time Of Event
>=18 and < 65 years
Set the *Measure Category Assignment* for measure HBIPS-2d = *Measure Category Assignment* for measure HBIPS-2a
>= 65 years
For Stratified Measure HBIPS-2e
Set the *Measure Category Assignment* for measure HBIPS-2e = *Measure Category Assignment* for measure HBIPS-2a
Stop

Measure Calculation for Aggregated Denominator

Denominator
For the overall measure and each strata measure calculate the denominator by aggregating the Psychiatric Inpatient Days and Leave Days:

Number of Denominator Cases for the overall measure = (*Psychiatric Inpatient Days – Leave Days*)
for all patients for the reporting month

Number of Denominator Cases for each strata measure = (*Psychiatric Inpatient Days – Leave Days*)
for all patients with a **Patient Age (Reporting Date - *Birthdate*)** appropriate for the strata for the reporting month
where Reporting Date is the last date of the reporting month that the census data is being reported.

Performance Measurement Systems can refer to the Joint Commission's ORYX Technical Implementation Guide for information concerning the aggregation of HCO level data, including the *Observed Rate* and Population Size for this measure.

Measure Information Form

Measure Set: Hospital Based Inpatient Psychiatric Services (HBIPS)

Set Measure ID: HBIPS-3

Set Measure ID	Performance Measure Name
HBIPS-3a	Seclusion- Overall Rate
HBIPS-3b	Seclusion- Children (1 through 12 years)
HBIPS-3c	Seclusion- Adolescent (13 through 17 years)
HBIPS-3d	Seclusion- Adult (18 through 64 years)
HBIPS-3e	Seclusion- Older Adult (≥ 65 years)

Performance Measure Name: Hours of seclusion use

Description: The total number of hours that all patients admitted to a hospital-based inpatient psychiatric setting were held in seclusion.

Rationale: Mental health providers that value and respect an individual's autonomy, independence and safety seek to avoid the use of dangerous or restrictive interventions at all times (Donat, 2003). The use of seclusion and restraint is limited to situations deemed to meet the threshold of imminent danger and when restraint or seclusion are used; such use is rigorously monitored and analyzed to prevent future use. Providers also seek to prevent violence or aggression from occurring in their treatment environments by focusing their attention on prevention activities that have a growing evidence base (Donat, 2003).

Type Of Measure: Process

Improvement Noted As: Decrease in the rate

Numerator Statement: The total number of hours that all psychiatric inpatients were held in seclusion

Numerator Basis: The numerator evaluates the number of hours of seclusion; however, the algorithm calculates the number of minutes to ensure a more accurate calculation of the measure. Convert the minutes to hours when analyzing and reporting this measure.

> **Included Populations:**
>
> - Patients for whom at least one seclusion event is reported during the month
>
> **Excluded Populations:** None

> **Data Elements:**
>
> - *Event Date*
> - *Event Type*
> - *Minutes of Seclusion*

Denominator Statement: Number of psychiatric inpatient days

Denominator Basis: per 1,000 hours

> **Included Populations:**
>
> - All psychiatric inpatient days
>
> **Excluded Populations:**
>
> - Total leave days
>
> **Data Elements:**
>
> - *Admission Date*
> - *Birthdate*
> - *Psychiatric Care Setting*
> - *Psychiatric Inpatient Days - Medicare Only*
> - *Psychiatric Inpatient Days-Non-Medicare Only*
> - *Total Leave Days - Medicare Only*
> - *Total Leave Days-Non-Medicare Only*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative/billing data and medical records.

Data Accuracy: Hospitals may wish to implement periodic audits to monitor and ensure data accuracy.

Measure Analysis Suggestions: In order to further examine the issue of seclusion use within your facility it may be useful to study the incidence of seclusion use by collecting additional information about the clinical justification for use.

Sampling: No.

Data Reported As: Aggregate rate generated from count data reported as a ratio .

Selected References:

- Donat, D. (August, 2003). An analysis of successful efforts to reduce the use of seclusion and restraint at a public psychiatric hospital. *Psychiatric Services*. 54(8): 1119-1123.
- Fisher, W. A. (2003). Elements of successful restraint and seclusion reduction programs and their application in a large, urban, state psychiatric hospital. *Journal of Psychiatric Practice*, 9(1), 7-15.
- Huckshorn, K.A. (2004/September). Reducing seclusion and restraint use in mental health settings: Core strategies for prevention. *Journal of Psychosocial Nursing and Mental Health Services*. 42(9). Pp. 22-31.
- Mohr, W. K., & Anderson, J. A. (2001). Faulty assumptions associated with the use of restraints with children. *Journal of Child and Adolescent Psychiatric Nursing*, 14(3), 141- 151.
- Special Section on Seclusion and Restraint, (2005, Sept). *Psychiatric Services*, 56 (9), 1104-1142.
- *Success Stories and Ideas for Reducing Restraint/Seclusion*. (2003). A compendium of strategies created by the American Psychiatric Association (APA), the American Psychiatric Nurses Association (APNA), the National Association of Psychiatric Health Systems (NAPHS), and the American Hospital Association Section for Psychiatric and Substance Abuse Services (AHA). Retrieved from the Internet on February 10, 2010 at http://www.naphs.org

Adopted for CMS Inpatient Psychiatric Facility Quality Reporting Program FY 2014

Measure Algorithm:

HBIPS-3: Hours of Seclusion Use

Numerator Statement: The total number of hours that all psychiatric inpatients spent in seclusion

Denominator Statement: Number of psychiatric inpatient days

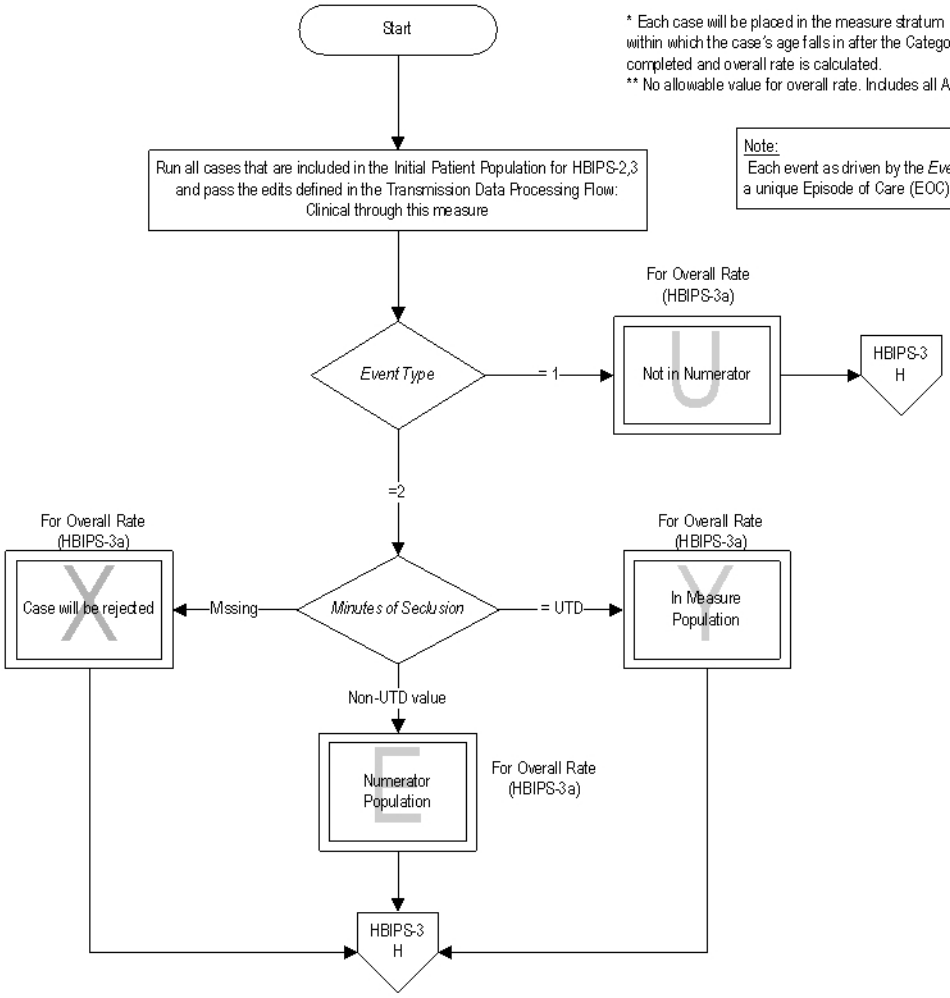
Variable Key:
Patient Age at Time of Event

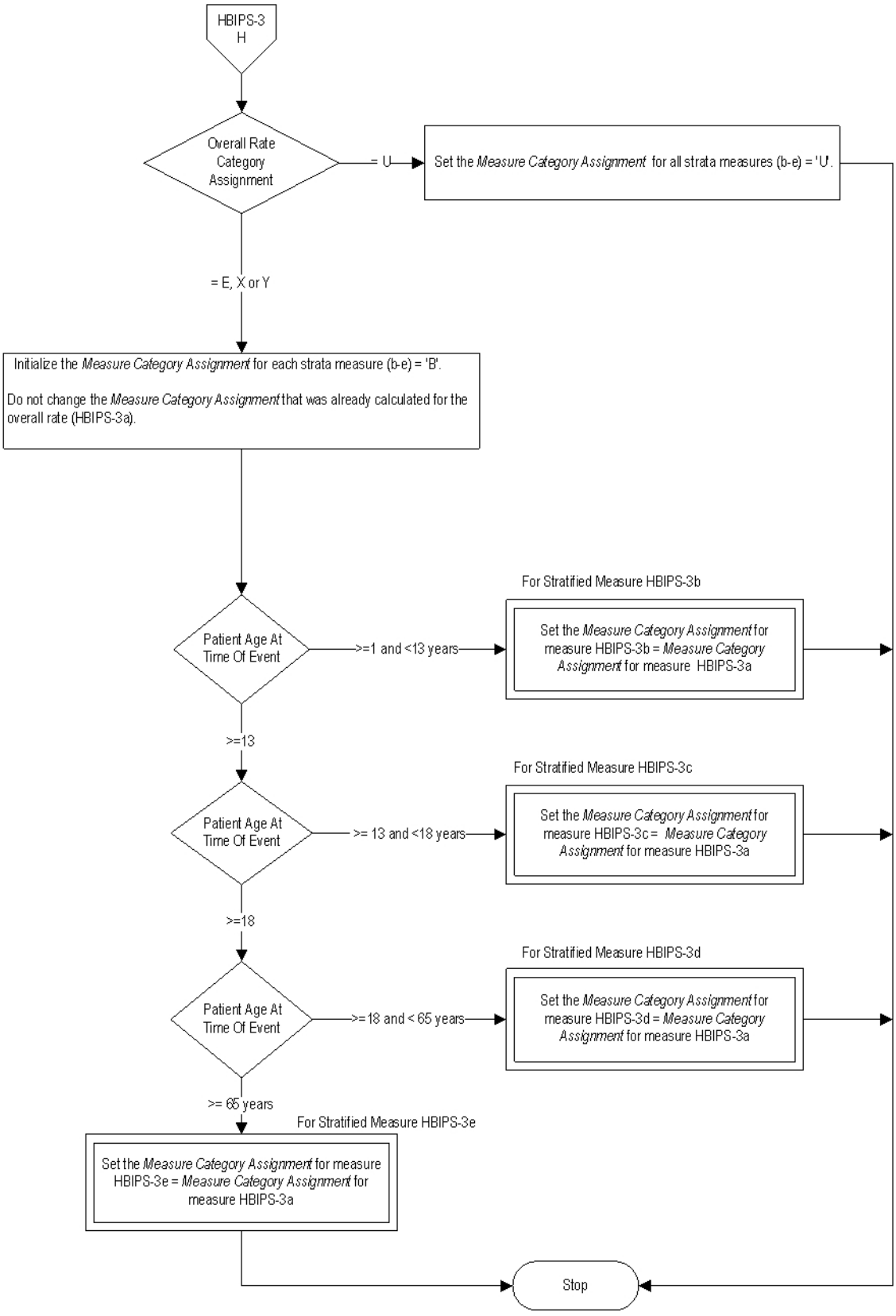
Stratification Table For Numerator:

Measure ID	Stratified Measure Name	*Patient Age (Age Ranges)
HBIPS-3a	Overall Rate	**
HBIPS-3b	Children	1- 12 years
HBIPS-3c	Adolescent	13-17 years
HBIPS-3d	Adult	18-64 years
HBIPS-3e	Older Adult	>= 65 years

* Each case will be placed in the measure stratum according to the age group within which the case's age falls in after the Category Assignments are completed and overall rate is calculated.
** No allowable value for overall rate. Includes all Ages of Psychiatric inpatients.

Note:
Each event as driven by the *Event Date* is processed as a unique Episode of Care (EOC).




HBIPS-3 H
Overall Rate Category Assignment
= U
Set the *Measure Category Assignment* for all strata measures (b-e) = 'U'.
= E, X or Y
Initialize the *Measure Category Assignment* for each strata measure (b-e) = 'B'.
Do not change the *Measure Category Assignment* that was already calculated for the overall rate (HBIPS-3a).
For Stratified Measure HBIPS-3b
Patient Age At Time Of Event
>=1 and <13 years
Set the *Measure Category Assignment* for measure HBIPS-3b = *Measure Category Assignment* for measure HBIPS-3a
>=13
For Stratified Measure HBIPS-3c
Patient Age At Time Of Event
>= 13 and <18 years
Set the *Measure Category Assignment* for measure HBIPS-3c = *Measure Category Assignment* for measure HBIPS-3a
>=18
For Stratified Measure HBIPS-3d
Patient Age At Time Of Event
>=18 and < 65 years
Set the *Measure Category Assignment* for measure HBIPS-3d = *Measure Category Assignment* for measure HBIPS-3a
>= 65 years
For Stratified Measure HBIPS-3e
Set the *Measure Category Assignment* for measure HBIPS-3e = *Measure Category Assignment* for measure HBIPS-3a
Stop

Measure Calculation for Aggregated Denominator

Denominator
For the overall measure and each strata measure calculate the denominator rate by aggregating the *Psychiatric Inpatient Days* and *Leave Days*:

Number of Denominator Cases for the overall measure = (*Psychiatric Inpatient Days – Leave Days*)
for all patients for the reporting month

Number of Denominator Cases for each strata measure = (*Psychiatric Inpatient Days – Leave Days*)
for all patients with a **Patient Age (Reporting Date - *Birthdate*)** appropriate for the strata for the reporting month
where Reporting Date is the last date of the reporting month that the census data is being reported.

Performance Measurement Systems can refer to the Joint Commission's ORYX Technical Implementation Guide for information concerning the aggregation of HCO level data, including the *Observed Rate* and Population Size for this measure.

Measure Information Form

Measure Set: Hospital Based Inpatient Psychiatric Services (HBIPS)

Set Measure ID: HBIPS-5

Set Measure ID	Performance Measure Name
HBIPS-5a	Multiple Antipsychotic Medications at Discharge with Appropriate Justification- Overall Rate
HBIPS-5b	Multiple Antipsychotic Medications at Discharge with Appropriate Justification- Children (1 through 12 years)
HBIPS-5c	Multiple Antipsychotic Medications at Discharge with Appropriate Justification- Adolescent (13 through 17 years)
HBIPS-5d	Multiple Antipsychotic Medications at Discharge with Appropriate Justification- Adult (18 through 64 years)
HBIPS-5e	Multiple Antipsychotic Medications at Discharge with Appropriate Justification- Older Adult (≥ 65 years)

Performance Measure Name: Patients discharged on multiple antipsychotic medications with appropriate justification

Description: Patients discharged from a hospital-based inpatient psychiatric setting on two or more antipsychotic medications with appropriate justification

Rationale: Research studies have found that 4-35% of outpatients and 30-50% of inpatients treated with an antipsychotic medication concurrently received 2 or more antipsychotics (Covell, Jackson, Evans, & Essock, 2002; Ganguly, Kotzan, Miller, Kennedy, & Martin, 2004; Gilmer, Dolder, Folsom, Mastin, & Jeste, 2007; Kreyenbuhl, Valenstein, McCarthy, Ganocyz, & Blow, 2006; Stahl & Grady, 2004). One study reported 4.6% of patients concurrently received 3 or more antipsychotics (Jaffe & Levine, 2003). These findings are seen across diverse sectors: state mental health authorities, the Veterans Health System and Medicaid-financed care. Antipsychotic polypharmacy can lead to greater side effects, often without improving clinical outcomes (Ananth, Parameswaran, & Gunatilake, 2004; Stahl & Grady, 2004). As a result, a range of stakeholders have called for efforts to reduce unnecessary use of multiple antipsychotics (Centorrino, Gören, Hennen, Salvatore, Kelleher, & Baldessarini, 2004; Gilmer, Dolder, Folsom, Mastin, & Jeste, 2007; National Association of State Mental Health Program Directors, 2001; University HealthSystem Consortium, 2006). Practice guidelines recommend the use of a second antipsychotic only after multiple trials of a single antipsychotic have proven inadequate (American Psychiatric Association [APA] Practice Guidelines, 2004). Randomized controlled trials (RCTs) provide some evidence to support augmentation with a second antipsychotic in treatment resistant patients. Most of these studies were limited to augmentation of clozapine with another second-generation antipsychotic (Tranulis, Skalli, Lalonde, & Nicole, 2008). Among patients without a documented history of previous treatment failures of antipsychotic monotherapy, multiple RCTs and other controlled trials failed to show a benefit of antipsychotic polypharmacy over monotherapy (Ananth, Parameswaran, & Gunatilake, 2004; Centorrino, Gören, Hennen, Salvatore, Kelleher, & Baldessarini, 2004; Potkin, Thyrum, Alva, Bera, Yeh, & Arvanitis, 2002; Shim et al., 2007; Stahl,& Grady, 2004). Clinical

circumstances, such as shorter inpatient stays, may require hospitals to discharge a patient on multiple antipsychotics with an aftercare plan to transition to monotherapy. In such cases, effective communication between the inpatient and aftercare clinician is an essential element of care.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Psychiatric inpatients discharged on two or more routinely scheduled antipsychotic medications with appropriate justification

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Appropriate Justification for Multiple Antipsychotic Medications*

Denominator Statement: Psychiatric inpatient discharges

> **Included Populations:**
>
> - Patients with *ICD-10-CM Principal or Other Diagnosis Codes* for Mental Disorders as defined in Appendix A, Table 10.01 discharged on two or more routinely scheduled antipsychotic medications (refer to Appendix C, Table 10.0- Antipsychotic Medications).
>
> **Excluded Populations:**
>
> - Patients who expired
> - Patients with an unplanned departure resulting in discharge due to elopement
> - Patients with an unplanned departure resulting in discharge due to failing to return from leave
> - Patients with a length of stay ≤ 3 days
>
> **Data Elements:**
>
> - *Admission Date*
> - *Birthdate*
> - *Discharge Date*
> - *Discharge Disposition*
> - *ICD-10-CM Other Diagnosis Codes*
> - *ICD-10-CM Principal Diagnosis Code*
> - *Number of Antipsychotic Medications Prescribed at Discharge*
> - *Patient Status at Discharge*
> - *Psychiatric Care Setting*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative/billing data and medical records.

Data Accuracy: Hospitals may wish to implement periodic audits to monitor and ensure data accuracy.

Measure Analysis Suggestions: For quality improvement purposes, the measurement system may want to create reports to identify patients discharged on two or more antipsychotic medications without appropriate supporting documentation. This would allow healthcare organizations to target education efforts.

Sampling: Yes. For additional information see the Sampling Section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

- American Psychiatric Association (APA). (2004). Steering Committee on Practice Guidelines. Practice guideline for the treatment of patients with schizophrenia, second edition. *Am J Psychiatry*. 161(2 Suppl):1-56
- Ananth, J., Parameswaran, S., & Gunatilake, S. (2004). Antipsychotic polypharmacy comparing monotherapy with polypharmacy and augmentation. *Curr Med Chem*. 11(3):313-327 *Curr Pharm Des*. 10(18):2231-2238.
- Centorrino, F., Gören, J.L., Hennen, J., Salvatore, P., Kelleher, J.P., & Baldessarini, R.J. (2004) Multiple versus single antipsychotic agents for hospitalized psychiatric patients: a case control study of risk versus benefit. *Am J Psychiatry*. 161 (4):700-706.
- Covell, N.H., Jackson, C.T., Evans, A.C., & Essock, S.M. (2002). Antipsychotic prescribing practices in Connecticut's public mental health system: rates of changing medication prescribing styles. *Schiz Bull*. 28(1):17-29,
- Ganguly, R., Kotzan, J.A., Miller, L.S., Kennedy, K., & Martin, B.C. (2004). Prevalence, trends, and factors associated with antipsychotic polypharmacy among Medicaid-eligible schizophrenia patients, 1998-2000. *J Clin Psychiatry*. 65(10):1377-88.
- Gilmer, T.P., Dolder, C.R., Folsom, D.P., Mastin, W., & Jeste, D.V. (2007), Antipsychotic polypharmacy trends among Medicaid beneficiaries with schizophrenia in San Diego County, 1999 - 2004. *Psychiatric Serv*. 59(7):1007-1010.
- Jaffe, A.B. & Levine, J. (2003). Antipsychotic medication co-prescribing in a large state hospital system. *Pharmacoepidemiol Drug Saf*.12:41-48.
- Kreyenbuhl, J., Valenstein, M., McCarthy, J.F., Ganocyz, D., & Blow, F.C. (2006). Long-term combination antipsychotic treatment in VA patients with schizophrenia. *Schiz Res*.84:90-99.
- National Association of State Mental Health Program Directors (NASMHPD). (2001).Technical report on psychiatric polypharmacy. Alexandria, VA.
- Potkin, S.G., Thyrum, P.T., Alva, G., Bera, R., Yeh, C., & Arvanitis, L.A. (2002). The safety and pharmacokinetics of quetiapine when coadministered with haloperidol, risperidone or thioridazine. *J Clin Psychopharmacol*. 22:121-130.
- Shim, J.C., Shin, J.G., Kelly, D.L., Jung, D.U., Seo, Y.S., Liu, K.H., et al. (2007). Adjunctive treatment with a dopamine partial agonist aripiprazole, for treatment of antipsychotic-induced hyperprolactinemia: A

placebo controlled trial. *Am J Psych.164*:1404-1410.
- Stahl, S.M. & Grady, M.M. (2004). A critical review of atypical antipsychotic utilization: comparing monotherapy with polypharmacy augmentation. *Curr Med Chem.11*:313-327.
- Tranulis, C., Skalli, L., Lalonde, P., & Nicole, L. (2008). Benefits and risks of antipsychotic polypharmacy. An evidence based review of the literature. *Drug Saf*.31(1):7-20
- University HealthSystem Consortium. (2006). Mental health performance measures field brief. Oakbrook, IL.

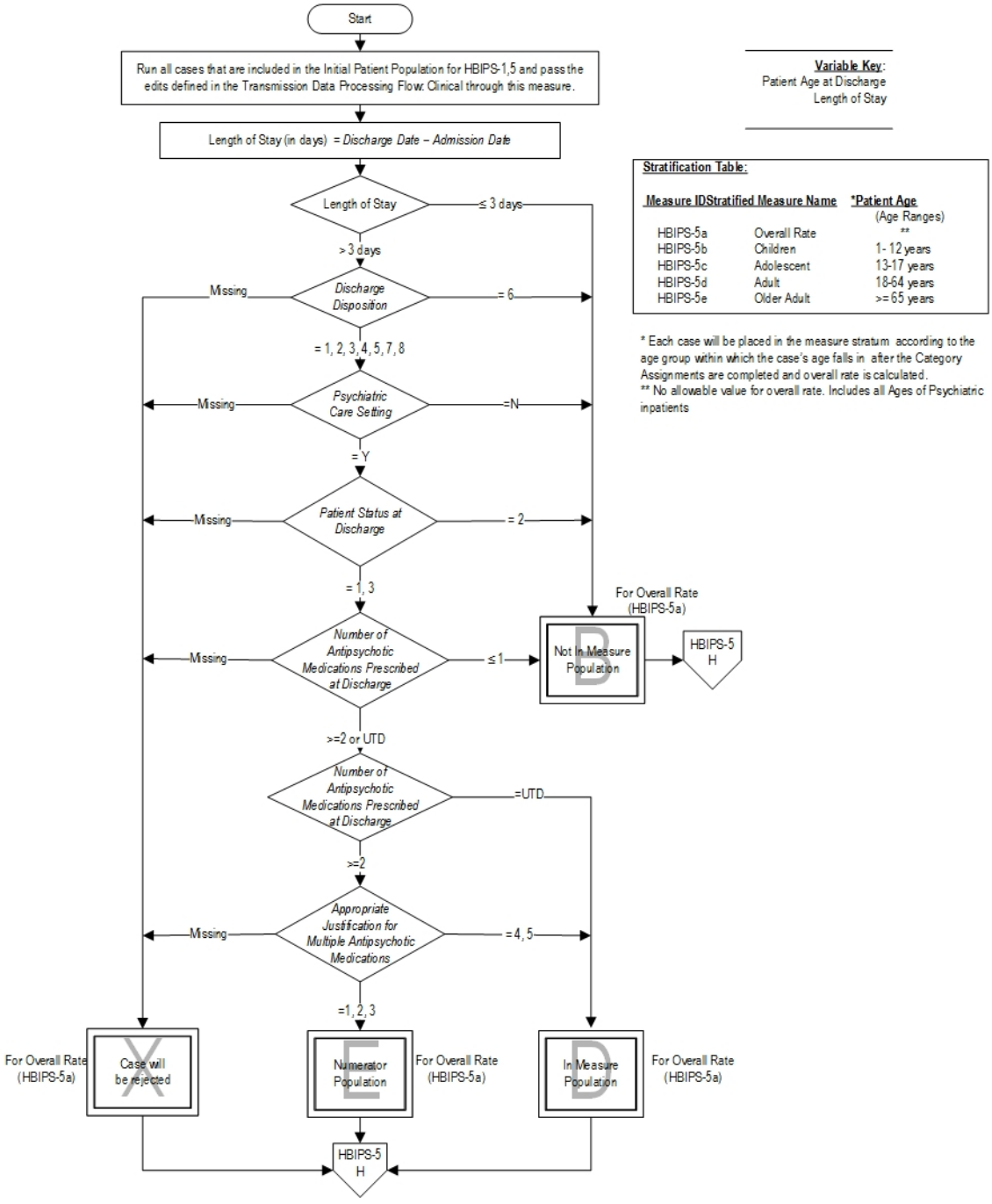
Adopted for CMS Inpatient Psychiatric Facility Quality Reporting Program FY 2014

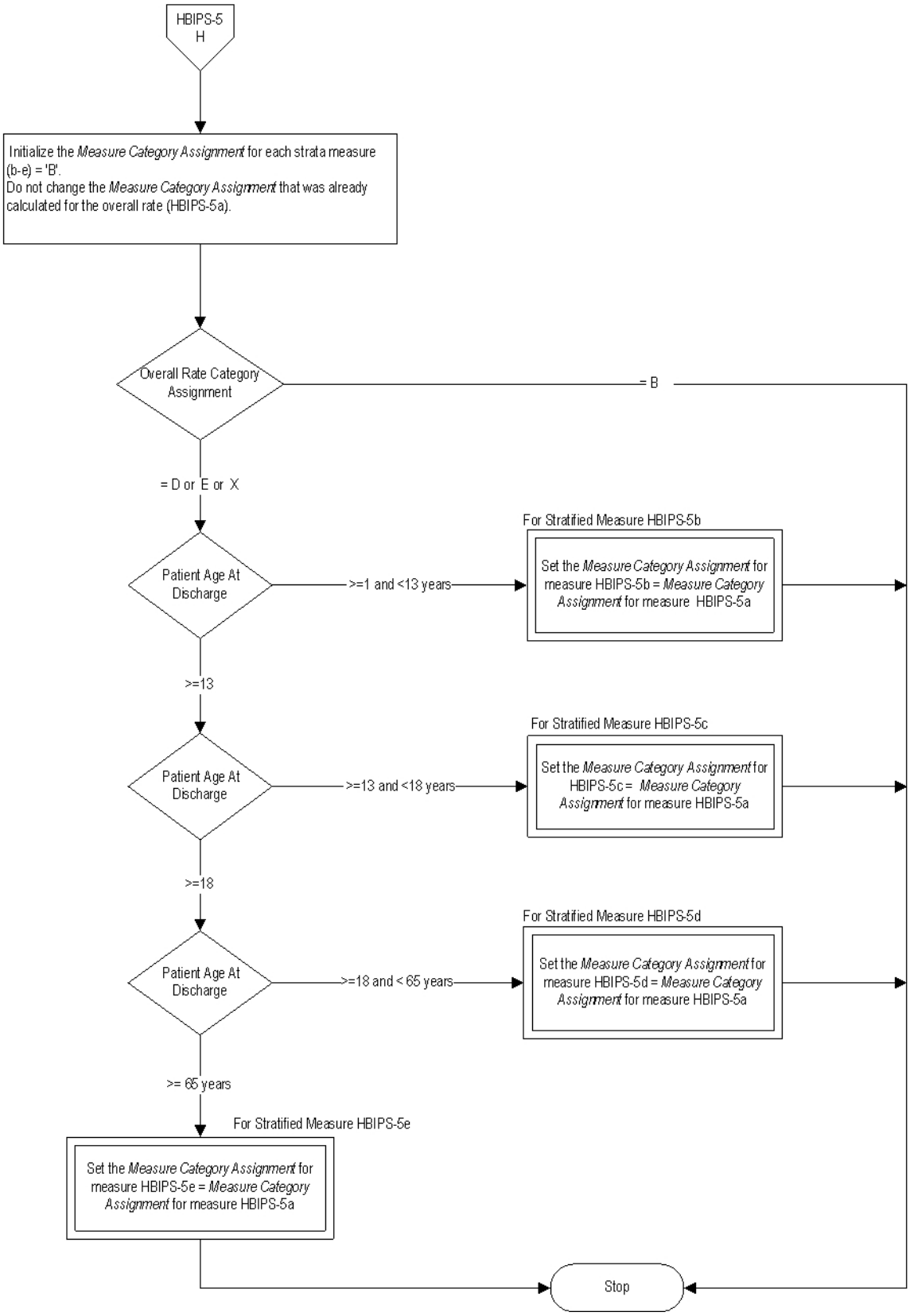
Measure Algorithm:

HBIPS-5: Patients Discharged On Multiple Antipsychotic Medications With Appropriate Justification

Numerator Statement: Psychiatric inpatients who are discharged on two or more routinely scheduled antipsychotic medications with appropriate justification.

Denominator Statement: Psychiatric inpatient discharges.




HBIPS-5
H
Initialize the *Measure Category Assignment* for each strata measure (b-e) = 'B'.
Do not change the *Measure Category Assignment* that was already calculated for the overall rate (HBIPS-5a).
Overall Rate Category Assignment
= B
= D or E or X
Patient Age At Discharge
>=1 and <13 years
For Stratified Measure HBIPS-5b
Set the *Measure Category Assignment* for measure HBIPS-5b = *Measure Category Assignment* for measure HBIPS-5a
>=13
Patient Age At Discharge
>=13 and <18 years
For Stratified Measure HBIPS-5c
Set the *Measure Category Assignment* for HBIPS-5c = *Measure Category Assignment* for measure HBIPS-5a
>=18
Patient Age At Discharge
>=18 and < 65 years
For Stratified Measure HBIPS-5d
Set the *Measure Category Assignment* for measure HBIPS-5d = *Measure Category Assignment* for measure HBIPS-5a
>= 65 years
For Stratified Measure HBIPS-5e
Set the *Measure Category Assignment* for measure HBIPS-5e = *Measure Category Assignment* for measure HBIPS-5a
Stop

Perinatal Care (PC)

Set Measures

Set Measure ID	Measure Short Name
PC-01	Elective Delivery
PC-02	Cesarean Birth
PC-03	Antenatal Steroids
PC-04	Health Care-Associated Bloodstream Infections in Newborns
PC-05	Exclusive Breast Milk Feeding
PC-06	Unexpected Complications in Term Newborns

General Data Elements

Element Name	Collected For
Admission Date	All Records,
Birthdate	All Records,
Discharge Date	All Records, Not collected for HBIPS-2 and HBIPS-3
Health Care Organization Identifier	All Records, Patient Population Data File, Hospital Clinical Data File,
Hispanic Ethnicity	All Records,
ICD-10-CM Other Diagnosis Codes	All Records, Optional for HBIPS-2, HBIPS-3
ICD-10-CM Principal Diagnosis Code	All Records, Optional for HBIPS-2, HBIPS-3
ICD-10-PCS Other Procedure Codes	All Records, Optional for All HBIPS Records
ICD-10-PCS Other Procedure Dates	All Records, Optional for All HBIPS Records
ICD-10-PCS Principal Procedure Code	All Records, Optional for All HBIPS Records
ICD-10-PCS Principal Procedure Date	All Records, Optional for All HBIPS Records
Measure Category Assignment	All Records, Calculation, Transmission, Hospital Clinical Data File, Used in calculation of the Joint Commission's aggregate data and in the transmission of the Hospital Clinical Data file.

Element Name	Collected For
Payment Source	All Records, Optional for HBIPS-2 and HBIPS-3
Race	All Records,
Sex	All Records,

Algorithm Output Data Elements

Element Name	Collected For
Measure Category Assignment	All Records, Calculation, Transmission, Hospital Clinical Data File
Measurement Value	Calculation, Transmission, Hospital Clinical Data File

Measure Set Specific Data Elements

Element Name	Collected For
Admission to NICU	PC-05
Antenatal Steroids Initiated	PC-03
Birth Weight	PC-04, PC-06
Bloodstream Infection Confirmed	PC-04
Bloodstream Infection Present on Admission	PC-04
Discharge Disposition	PC-04, PC-05, PC-06
Exclusive Breast Milk Feeding	PC-05
Gestational Age	PC-01, PC-02, PC-03
History of Stillbirth	PC-01
Labor	PC-01
Previous Live Births	PC-02
Prior Uterine Surgery	PC-01
Reason for Not Initiating Antenatal Steroids	PC-03
Term Newborn	PC-05, PC-06

Related Materials

Document Name
Acknowledgment and Conditions of Use
Appendix A - ICD-10 Code Tables
Appendix C - Medication Tables
Appendix D - Glossary of Terms
Appendix E - Overview of Measure Information Form and Flowchart Formats
Appendix G - Resources
Appendix H - Miscellaneous Tables
Cover Page for the Joint Commission Manual
Data Dictionary
Introduction to the Manual
Missing and Invalid Data
Sampling
Table of Contents
Transmission Alpha Data Dictionary
Transmission Data Processing Flow: Clinical
Transmission Data Processing Flow: Population and Sampling
Transmission of Data
Using the The Joint Commission's National Measure Specifications Manual

Perinatal Care (PC) Initial Patient Population

The PC measure set is unique in that there are two distinct Initial Patient Populations within the measure set, mothers and newborns.

Mothers
The population of the PC-Mother measures (PC-01, 02, and 03) are identified using 4 data elements:

- *Admission Date*
- *Birthdate*
- *Discharge Date*
- *ICD-10-PCS Principal or Other Procedure Code*

Patients admitted to the hospital for inpatient acute care are included in the PC Mother Initial sampling group if they have: ICD-10-PCS Principal or Other Procedure Codes as defined in Appendix A, Table 11.01.1, a Patient Age (Admission Date — Birthdate) >= 8 years and < 65 and a Length of Stay (Discharge Date - Admission Date) ≤ 120 days.

Note: Hospitals are NOT required to sample their data. If sampling offers minimal benefit (e.g., a hospital has 80 cases for the quarter and must select a sample of 76 cases), or if the hospital has access to a data source which makes medical record review unnecessary (e.g., using vital records, delivery logs or clinical information systems as a data source for some of the maternal measures in the perinatal measure set), the hospital may choose to use all cases.

Newborns
The population of the PC-Newborn measures (PC-04, 05 and PC-06) are identified using 6 data elements:

- *Admission Date*
- *Birthdate*
- *Discharge Date*
- *ICD-10-CM Principal or Other Diagnosis Code*
- *ICD-10-PCS Principal or Other Procedure Code*
- *Birth Weight*

Within the PC-Newborn population, there are three subpopulations, i.e Newborns with Blood Stream Infection or BSI, Newborns with Breast Feeding, and Newborns with Unexpected Complications, each identified by Patient Age at admission and a specific group of diagnosis and procedure codes or lack thereof. The patients in each subpopulation are processed independently through each initial patient population flow. Patients may fall in any one or two or three subpopulations depending on the presence or absence of the diagnosis codes or procedure codes and other data elements defined by the respective initial patient subpopulations.

Measures	Initial Patient Population definition
PC-04	The count of all patients in PC-Newborns with BSI
PC-05	The count of all patients in PC-Newborns with Breast Feeding
PC-06	The count of all patients in PC-Newborns with Unexpected Complications

Patients admitted to the hospital for inpatient acute care are included in one of the PC Newborn subpopulations if they have:

Newborns with BSI - Patients with a Newborn Patient Age at admission (*Admission Date — Birthdate*) ≤ 2 days **AND** satisfy conditions #1 through #3.

1. **NO** *ICD-10-CM Principal Diagnosis Code* as defined in Appendix A, Table 11.10.2,
2. **ONE** of the following:
    - an *ICD-10-CM Other Diagnosis Code* as defined in Appendix A, Tables 11.12, 11.13, 11.14 Or *Birth Weight* >= 500g and <= 1499g
    - an *ICD-10-CM Other Diagnosis Code* as defined in Appendix A, Tables 11.15, 11.16, Or *Birth Weight* >=1500g with **ANY** OF THE FOLLOWING:

        - an *ICD-10-PCS-Principal* or *Other Procedure Code* as defined in Appendix A, Tables 11.18 or 11.19
        - *Discharge Disposition* of 6 (expired) or a Missing *Discharge Disposition*
        - **NO** *ICD-10-CM Principal Diagnosis Code* as defined in Appendix A, Table 11.10.3
    - *Birth Weight* Missing or Unable To Determine (UTD).
3. **NO** *ICD-10-CM Other Diagnosis Code* as defined in Appendix A, Table 11.20 Or *Birth Weight* < 500g

There is NO sampling for this measure.

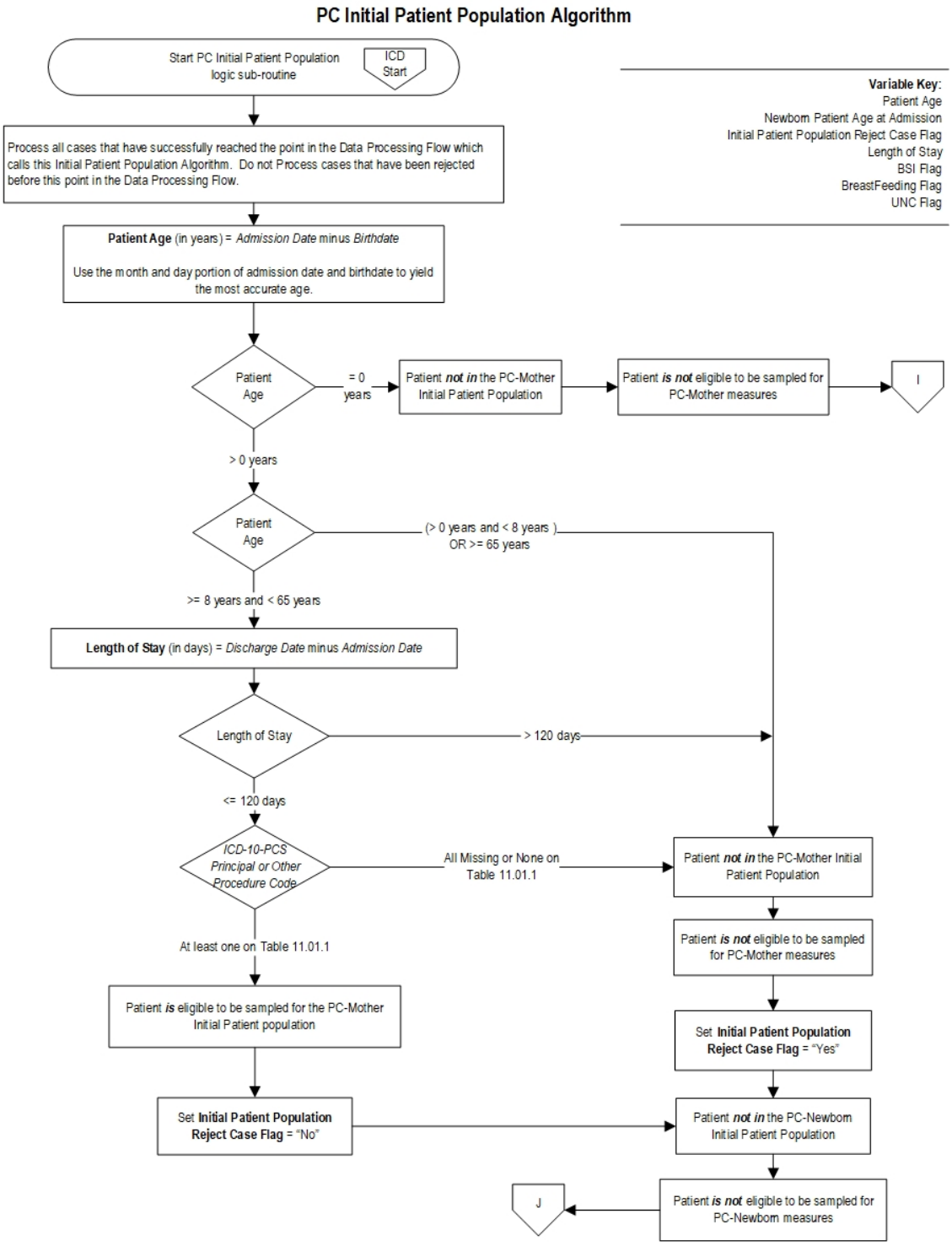
Newborns with Breast Feeding - Patient Age at admission (*Admission Date — Birthdate*) ≤ 2 days, Length of Stay (*Discharge Date - Admission Date*) ≤ 120 days, an *ICD-10-CM Principal Diagnosis Code* as defined in Appendix A, Table 11.20.1, **NO** *ICD-10-CM Other Diagnosis Codes* as defined in Appendix A, Table 11.21, **NO** *ICD-10-PCS-Principal* or *Other Procedure Code* as defined in Appendix A, Table 11.22 are included in this subpopulation and are eligible to be sampled.

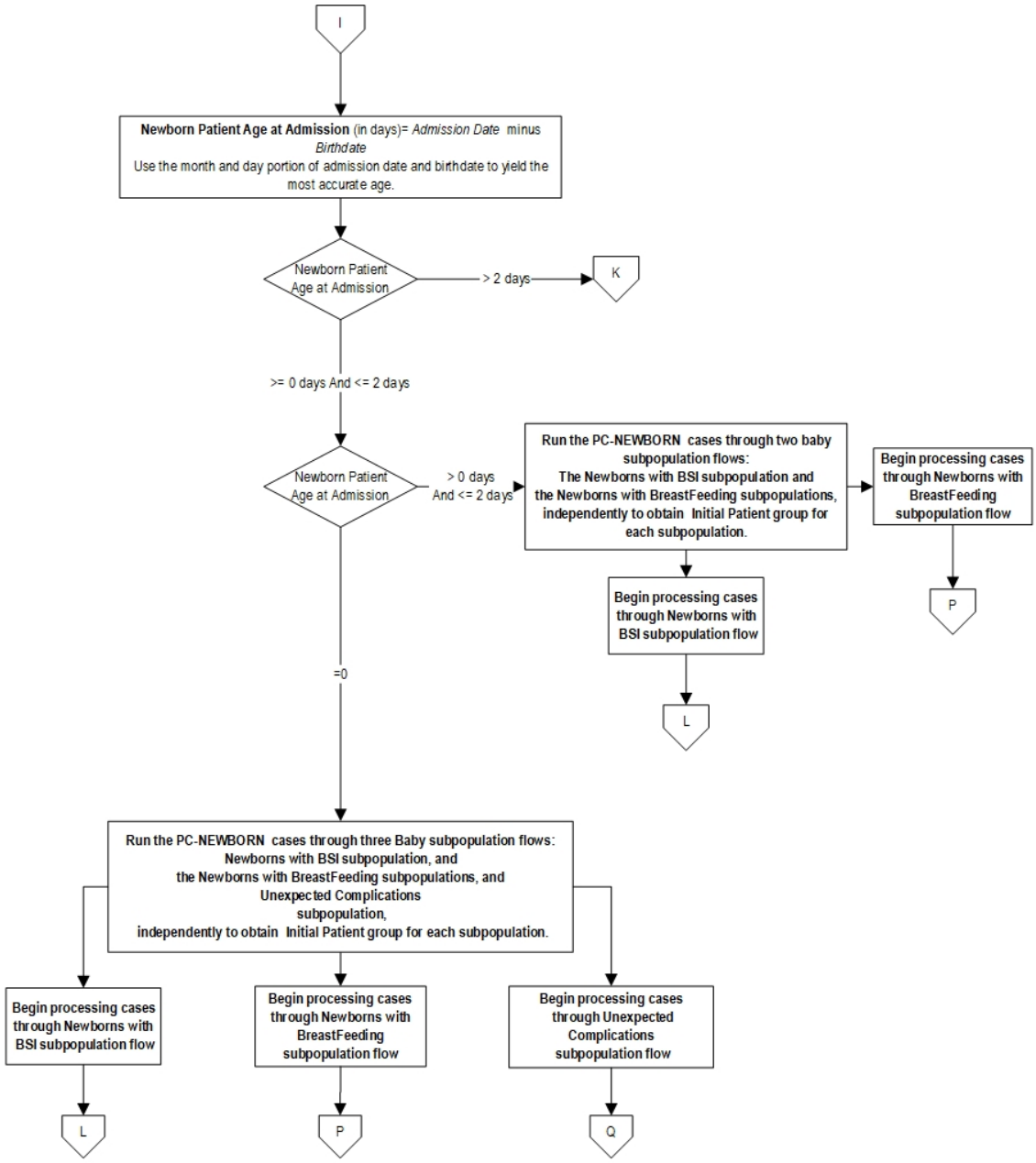
Newborns with Unexpected Complications - Patient Age at admission (Admission Date — Birthdate) =0 days, Length of Stay (Discharge Date - Admission Date) ≤ 120 days, an ICD-10-CM Principal or other Diagnosis Code as defined in Appendix A, Table 11.20.1, and No ICD-10-CM Other Diagnosis Codes as defined in Appendix A, Table 11.12, 11.13, 11.14, 11.15, 11.16, 11.20 are included in this subpopulation.

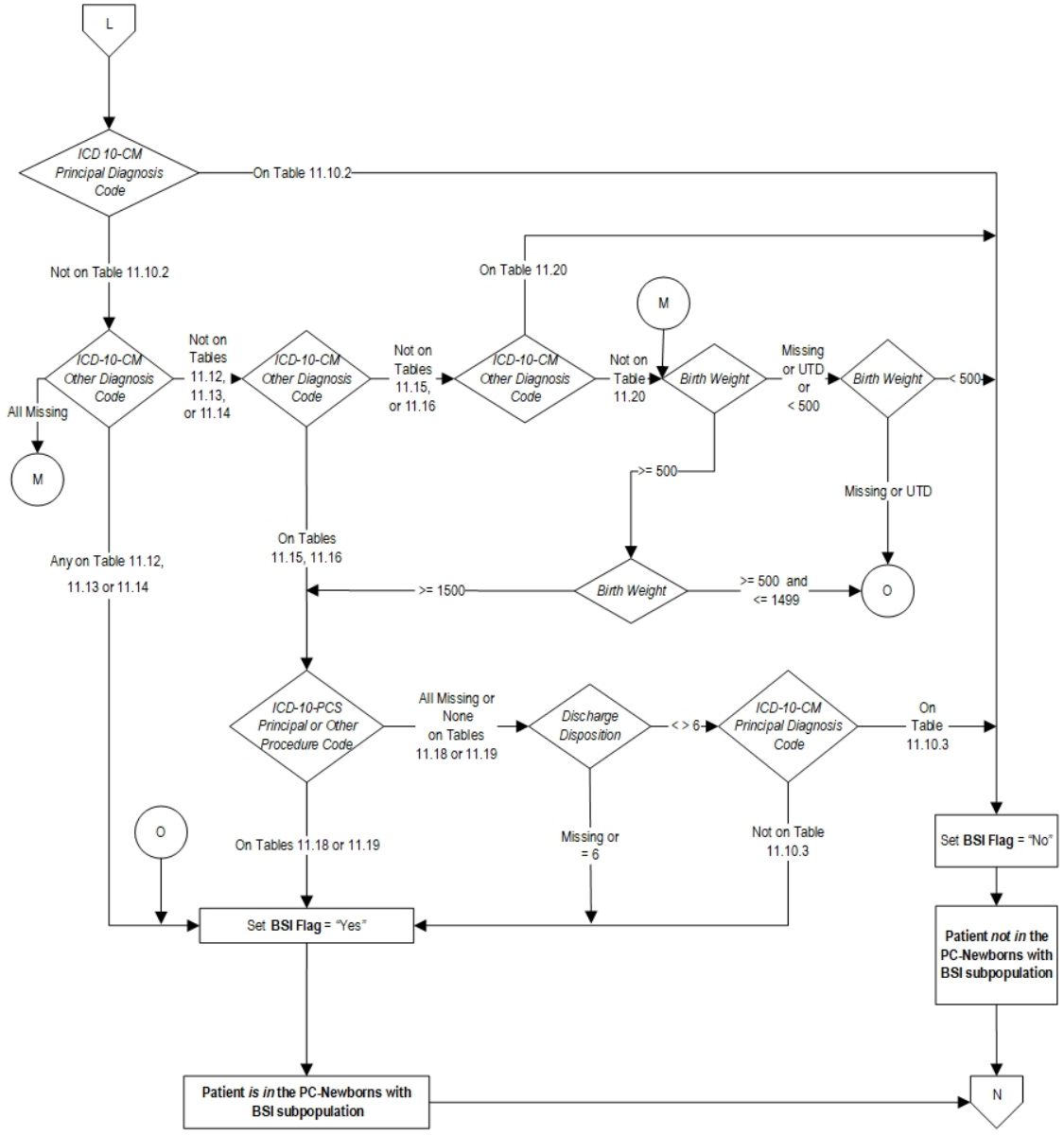
There is NO sampling for this measure.

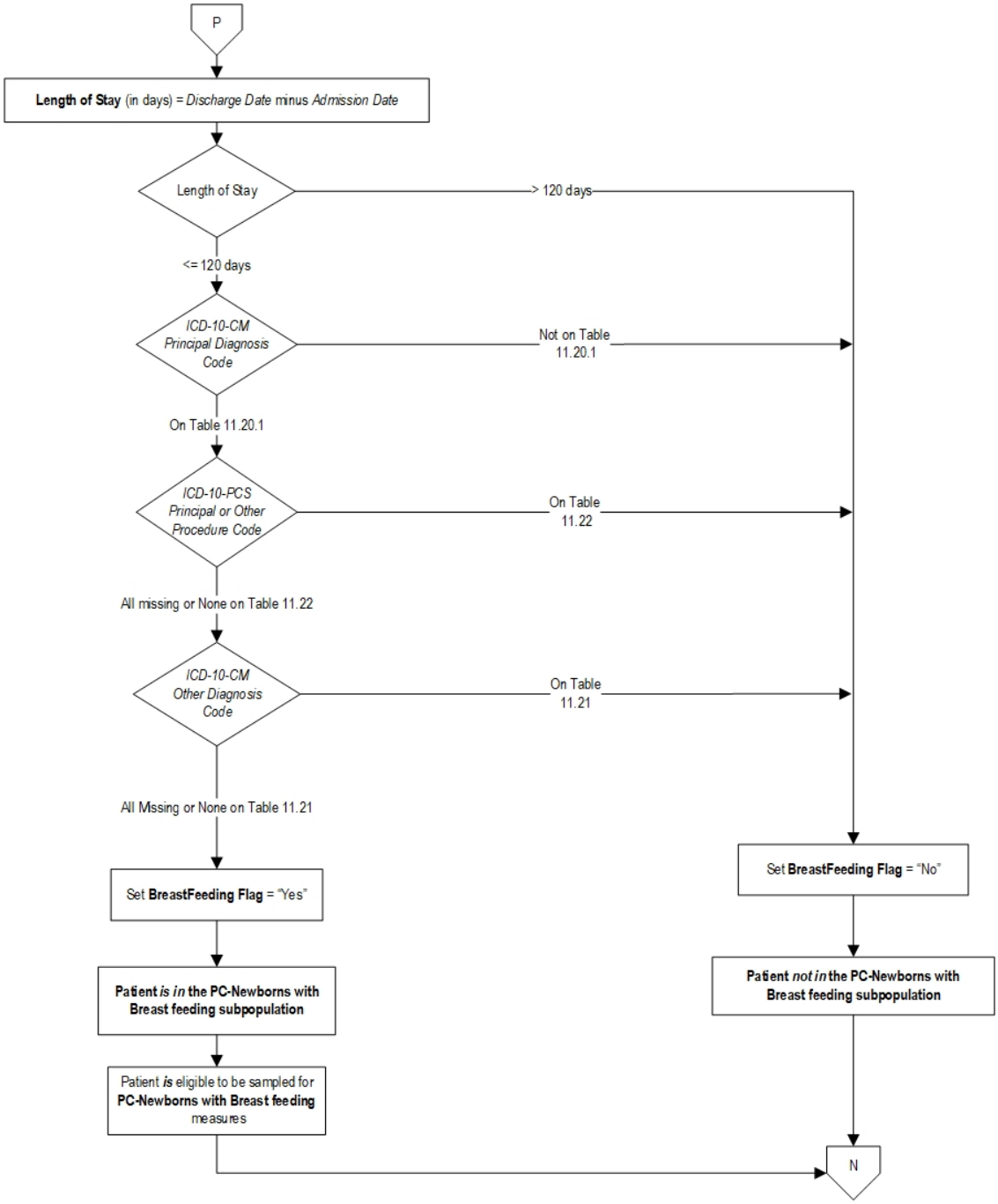
Note: Hospitals are encouraged to utilize a data source that reduces unnecessary medical record review e.g., using vital records, delivery logs or clinical information systems as a data source.

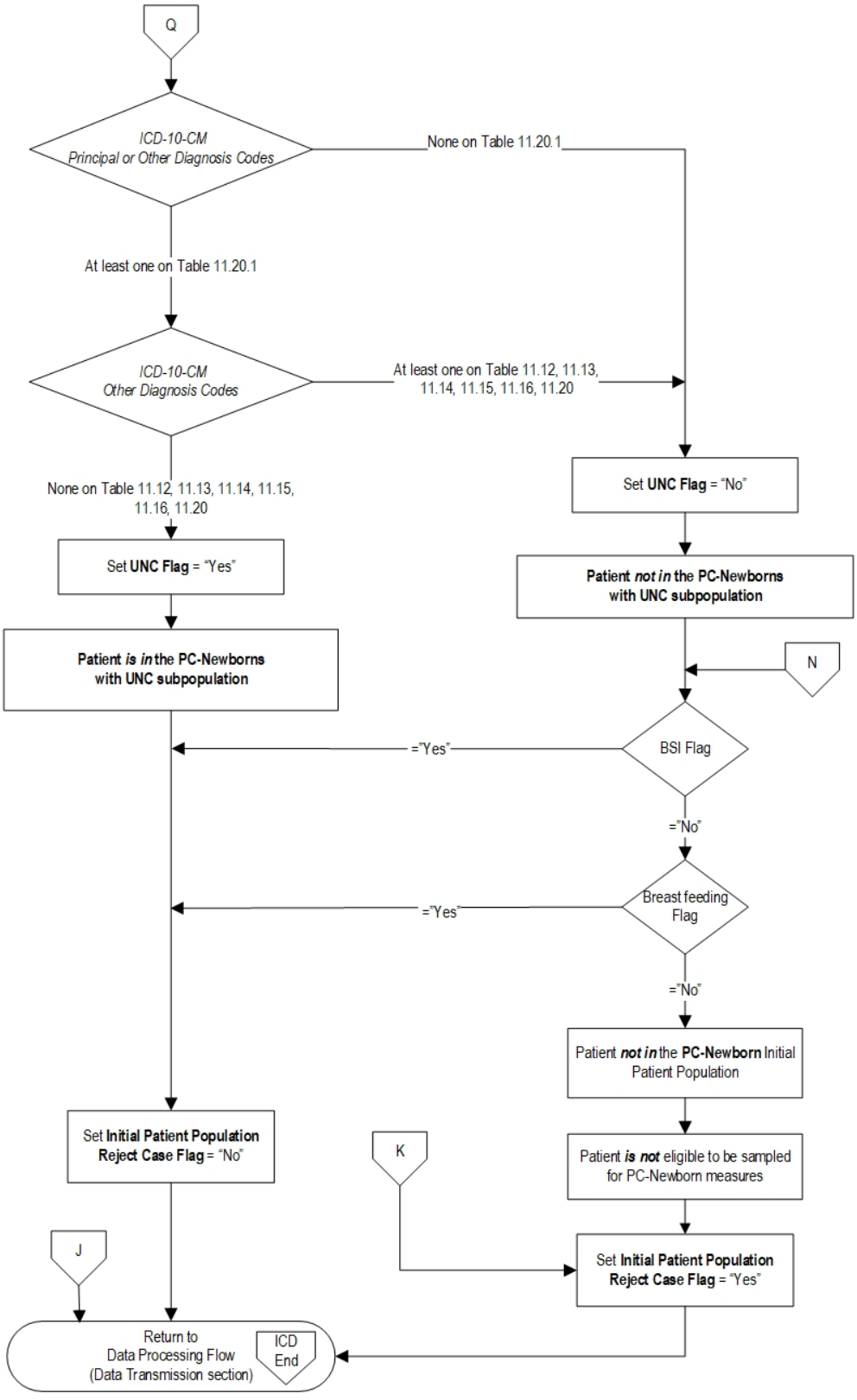
Initial Patient Population Algorithm




I
Newborn Patient Age at Admission (in days)= Admission Date minus Birthdate
Use the month and day portion of admission date and birthdate to yield the most accurate age.
Newborn Patient Age at Admission
> 2 days
K
>= 0 days And <= 2 days
Newborn Patient Age at Admission
> 0 days And <= 2 days
Run the PC-NEWBORN cases through two baby subpopulation flows:
The Newborns with BSI subpopulation and the Newborns with BreastFeeding subpopulations, independently to obtain Initial Patient group for each subpopulation.
Begin processing cases through Newborns with BreastFeeding subpopulation flow
P
Begin processing cases through Newborns with BSI subpopulation flow
L
=0
Run the PC-NEWBORN cases through three Baby subpopulation flows:
Newborns with BSI subpopulation, and
the Newborns with BreastFeeding subpopulations, and
Unexpected Complications subpopulation,
independently to obtain Initial Patient group for each subpopulation.
Begin processing cases through Newborns with BSI subpopulation flow
L
Begin processing cases through Newborns with BreastFeeding subpopulation flow
P
Begin processing cases through Unexpected Complications subpopulation flow
Q


L
ICD 10-CM Principal Diagnosis Code
On Table 11.10.2
Not on Table 11.10.2
ICD-10-CM Other Diagnosis Code
All Missing
M
Not on Tables 11.12, 11.13, or 11.14
ICD-10-CM Other Diagnosis Code
Not on Tables 11.15, or 11.16
ICD-10-CM Other Diagnosis Code
On Table 11.20
Not on Table 11.20
M
Birth Weight
Missing or UTD or < 500
Birth Weight
< 500
>= 500
Missing or UTD
Any on Table 11.12, 11.13 or 11.14
On Tables 11.15, 11.16
>= 1500
Birth Weight
>= 500 and <= 1499
O
ICD-10-PCS Principal or Other Procedure Code
All Missing or None on Tables 11.18 or 11.19
Discharge Disposition
< > 6
ICD-10-CM Principal Diagnosis Code
On Table 11.10.3
O
On Tables 11.18 or 11.19
Missing or = 6
Not on Table 11.10.3
Set BSI Flag = "No"
Set BSI Flag = "Yes"
Patient not in the PC-Newborns with BSI subpopulation
Patient is in the PC-Newborns with BSI subpopulation
N
Note: To determine eligible cases using Discharge Status codes, Discharge Status value = 20 has the same description as Discharge Disposition value=6


P
Length of Stay (in days) = *Discharge Date* minus *Admission Date*
Length of Stay
> 120 days
<= 120 days
ICD-10-CM Principal Diagnosis Code
Not on Table 11.20.1
On Table 11.20.1
ICD-10-PCS Principal or Other Procedure Code
On Table 11.22
All missing or None on Table 11.22
ICD-10-CM Other Diagnosis Code
On Table 11.21
All Missing or None on Table 11.21
Set **BreastFeeding Flag** = "Yes"
Set **BreastFeeding Flag** = "No"
Patient *is in* the PC-Newborns with Breast feeding subpopulation
Patient *not in* the PC-Newborns with Breast feeding subpopulation
Patient ***is*** eligible to be sampled for **PC-Newborns with Breast feeding** measures
N


Q
ICD-10-CM Principal or Other Diagnosis Codes
None on Table 11.20.1
At least one on Table 11.20.1
ICD-10-CM Other Diagnosis Codes
At least one on Table 11.12, 11.13, 11.14, 11.15, 11.16, 11.20
None on Table 11.12, 11.13, 11.14, 11.15, 11.16, 11.20
Set UNC Flag = "No"
Set UNC Flag = "Yes"
Patient not in the PC-Newborns with UNC subpopulation
Patient is in the PC-Newborns with UNC subpopulation
N
BSI Flag
="Yes"
="No"
Breast feeding Flag
="Yes"
="No"
Patient not in the PC-Newborn Initial Patient Population
Set Initial Patient Population Reject Case Flag = "No"
K
Patient is not eligible to be sampled for PC-Newborn measures
J
Set Initial Patient Population Reject Case Flag = "Yes"
Return to Data Processing Flow (Data Transmission section)
ICD End

Sample Size Requirements

Hospitals that choose to sample have the option of sampling quarterly or sampling monthly. A hospital may choose to use a larger sample size than is required. Hospitals whose Initial Patient Population size is less than the minimum number of cases per quarter/month for the sampling group cannot sample that sampling group. Hospitals that have five or fewer discharges for the three combined PC sampling groups (both Medicare and non-Medicare combined) in a quarter are not required to submit PC patient level data to the Joint Commission's Data Warehouse.

A hospital may choose to use vital records to identify the PC-Mother Initial Patient Population as given in the Population section earlier. If a hospital uses this method to identify the initial patient population, then the hospital is encouraged to submit all the records of the initial population rather than using sampling to identify the cases for submission. Submitting all the initial patient population provides a more precise estimate of the performance rate for the measures.

Regardless of the option used, hospital samples must be monitored to ensure that sampling procedures consistently produce statistically valid and useful data. Due to exclusions and contraindications, hospitals selecting sample cases MUST submit AT LEAST the minimum required sample size.

The following sample size tables for each option automatically build in the number of cases needed to obtain the required sample sizes. For information concerning how to perform sampling, refer to the Population and Sampling Specifications section in this manual.

Quarterly Sampling
A modified sampling procedure is required for hospitals performing quarterly sampling for PC. Hospitals selecting sample cases must ensure that each individual sampling group Initial Patient Population and sample size meet the following conditions:

- *Select within the two individual measure sampling groups (mothers and babies).*
- *Select independently from each of the Newborn subpopulation.*

Hospitals selecting sample cases for the **PC-Mothers** must ensure that the Initial Patient Population and sample size for this PC sampling group meets the following conditions:

Quarterly Sample Size
Based on Initial Patient Population for Mothers

Hospital's Measure	
Average Quarterly Initial Patient Sample Group Size "N"	Minimum Required Sampling Group Sample Size "n"
>= 1501	301
376 — 1500	20% of the Initial Patient Population size
75 — 375	75

Hospital's Measure	
Average Quarterly Initial Patient Sample Group Size "N"	Minimum Required Sampling Group Sample Size "n"
< 75	No sampling; 100% of the Initial Patient Population required

Within the **PC-Newborn** population, there are three subpopulations each identified by Patient Age at admission and a specific group of diagnosis and procedure codes or lack thereof:

- The PC-Newborns with BSI subpopulation and PC-Newborns with Unexpected Complications subpopulation *are not eligible* for sampling and will use the entire Newborns with BSI and Unexpected Complications Initial Patient subpopulation for reporting.
- Hospitals sampling for the PC-Newborns with Breast Feeding must ensure the sample size calculations should be based on the **newborns with breast feed subpopulation count ONLY**. Hospitals selecting cases for the PC-Newborns with Breastfeeding must ensure that the patient population size for this subpopulation meets the following conditions:

Quarterly Sample Size
Based on Initial Patient Population for PC-Newborns with Breastfeeding

Hospital's Measure	
Average Quarterly Initial Patient Sample Group Size "N"	Minimum Required Sample Size "n"
>= 541	109
136 — 540	20% of the Initial Patient Population size
27 — 135	27
< 27	No sampling; 100% of Initial Patient Population required

Monthly Sampling
Hospitals selecting sample cases for the **Mothers** must ensure that the Initial Patient Population and sample size for this sampling group meets the following conditions:

Monthly Sample Size
Based on Initial Patient Population for Mothers

Hospital's Measure	
Average Monthly Initial Patient Sample Group Size "N"	Minimum Required Sampling Group Sample Size "n"
>= 501	101

Hospital's Measure	
Average Monthly Initial Patient Sample Group Size "N"	Minimum Required Sampling Group Sample Size "n"
126 — 500	20% of the Initial Patient Population
25 — 125	25
< 25	No sampling; 100% Initial Patient Population required

Within the **PC-Newborn** population, there are three sampling groups each identified by Patient Age at admission and a specific group of diagnosis codes, or lack there of:

- The PC-Newborns with BSI subpopulation and PC-Newborns with Unexpected Complications subpopulation *are not eligible* for sampling and will use the entire Newborns with BSI and Unexpected Complications Initial Patient subpopulation for reporting.
- Hospitals sampling for the PC-Newborns with Breast Feeding must ensure the sample size calculations should be based on the **newborns with breast feed subpopulation count ONLY**. Hospitals selecting cases for the PC-Newborns with Breastfeeding must ensure that the patient population size for this subpopulation meets the following conditions:

Monthly Sample Size
Based on Initial Patient Population for Newborns with Breast Feeding

Hospital's Measure	
Average Monthly Initial Patient Sample Group Size "N"	Minimum Required Sampling Group Sample Size "n"
>= 181	37
46 — 180	20% of the Initial Patient Population
9 — 45	9
< 9	No sampling; 100% Initial Patient Population required

Sample Size Examples
Note: PC-Mothers: All sampling groups in PC-Mother population should be used in the calculation of all PC-Mother measures. All of the PC measures' specific exclusion criteria are used to filter out cases that do not belong in the measure denominator.
PC-Newborns: Cases falling within each newborns subpopulation should be run through the respective Newborn measures only. Cases falling in the Newborns with BSI subpopulation ONLY will flow through the PC-04 measure, cases falling in the Newborns with Breast Feeding subpopulation ONLY will flow through the PC-05 measure only and cases falling in the Newborns with Unexpected Complications subpopulation ONLY will flow through the PC-06 measure. Cases may fall in all three subpopulations and in such scenarios will be processed through all three measures. It should be noted that cases should be processed independently through each of newborn initial subpopulation flows to obtain cases for sampling and abstraction.

Quarterly Sampling
Mother Population

- A hospital's Mother Population size is 2300 cases during the second quarter. Using the quarterly sampling table for the Mother population, the sample size required is 301 cases for the quarter.
- A hospital's Mother Population size is 1500 cases during the second quarter. Using the quarterly sampling table for the Mother population, the sample size required is 20% of this sub-population or 300 cases for the quarter.
- A hospital's Mother Population size is 300 cases during the second quarter. Using the quarterly sampling table for the Mother population, the sample size required 75 cases for the quarter.
- A hospital's Mother Population size is 72 cases during the second quarter. Using the quarterly sampling table for the Mother population, the sample size is less than the minimum required quarterly sample size, so 100% of this sub-population or all 72 cases are sampled.

Newborns with Breast Feeding

- A hospital's Newborns with Breast Feeding Population size is 600 cases during the second quarter. Using the quarterly sampling table for the Newborns with Breast Feeding population, the sample size required is 109 cases.
- A hospital's Newborns with Breast Feeding Population size is 350 cases during the second quarter. Using the quarterly sampling table for the Newborns with Breast Feeding population, the sample size required is 20% of this sub-population or 70 cases for the quarter .
- A hospital's Newborns with Breast Feeding Population size is 99 cases during the second quarter. Using the quarterly sampling table for the Newborns with Breast Feeding population, the sample size required 27 cases for the quarter.
- A hospital's Newborns with Breast Feeding Population size is 25 cases during the second quarter. Using the quarterly sampling table for the Newborns with Breast Feeding population, the sample size is less than the minimum required quarterly sample size, so 100% of this sub-population or all 25 cases are sampled.

Newborns with BSI and Unexpected Complications
The Newborns with BSI population and PC-Newborns with Unexpected Complications *are not eligible* for sampling and will use the entire Newborns with BSI Initial Patient sampling group for reporting.

Monthly Sampling
Mother Population

- A hospital's Mother Population size is 510 cases during March. Using the monthly sampling table for the Mother population, the sample size required is 101 cases for the month.
- A hospital's Mother Population size is 400 cases during March. Using the monthly sampling table for the Mother population, the sample size required is 20% of this sub-population or 80 cases for the month.
- A hospital's Mother Population size is 125 cases during March. Using the monthly sampling table for the Mother population, the sample size required is 25 cases for the month.
- A hospital's Mother Population size is 20 cases during March. Using the quarterly sampling table for the Mothers population, the sample size is less than the minimum required quarterly sample size, so 100% of this sub-population or all 20 cases are sampled.

Newborns with Breast Feeding

- A hospital's Newborns with Breast Feeding Population size is 200 cases for the month of March. Using the monthly sampling table for the Newborns with Breast Feeding population, the sample size required is 37 cases.
- A hospital's Newborns with Breast Feeding Population size is 100 cases for the month of March. Using the monthly sampling table for the Newborns with Breast Feeding population, the sample size required is 20% of this sub-population or 20 cases for the month.
- A hospital's Newborns with Breast Feeding Population size is 30 cases for the month of March. Using the monthly sampling table for the Newborns with Breast Feeding population, the sample size required 9 cases for the month.
- A hospital's Newborns with Breast Feeding Population size is 8 cases during the second quarter. Using the monthly sampling table for the Newborns with Breast Feeding population, the sample size is less than the minimum required monthly sample size, so 100% of this sub-population or all 8 cases are sampled.

Newborns with BSI and Unexpected Complications

The Newborns with BSI population and PC-Newborns with Unexpected Complications *are not eligible* for sampling and will use the entire Newborns with BSI Initial Patient sampling group for reporting.

Measure Information Form

Measure Set: Perinatal Care (PC)

Set Measure ID: PC-01

Performance Measure Name: Elective Delivery

Description: Patients with elective vaginal deliveries or elective cesarean births at >= 37 and < 39 weeks of gestation completed

Rationale: For almost 3 decades, the American College of Obstetricians and Gynecologists (ACOG) and the American Academy of Pediatrics (AAP) have had in place a standard requiring 39 completed weeks gestation prior to ELECTIVE delivery, either vaginal or operative (ACOG, 1996). A survey conducted in 2007 of almost 20,000 births in HCA hospitals throughout the U.S. carried out in conjunction with the March of Dimes at the request of ACOG revealed that almost 1/3 of all babies delivered in the United States are electively delivered with 5% of all deliveries in the U.S. delivered in a manner violating ACOG/AAP guidelines. Most of these are for convenience, and result in significant short term neonatal morbidity (neonatal intensive care unit admission rates of 13- 21%) (Clark et al., 2009).

According to Glantz (2005), compared to spontaneous labor, elective inductions result in more cesarean births and longer maternal length of stay. The American Academy of Family Physicians (2000) also notes that elective induction doubles the cesarean delivery rate. Repeat elective cesarean births before 39 weeks gestation also result in higher rates of adverse respiratory outcomes, mechanical ventilation, sepsis and hypoglycemia for the newborns (Tita et al., 2009).

Type Of Measure: Process

Improvement Noted As: Decrease in the rate

Numerator Statement: Patients with elective deliveries

> **Included Populations:** *ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes* for one or more of the following:
>
> - Medical induction of labor as defined in Appendix A, Table 11.05 while not in *Labor* prior to the procedure
> - Cesarean birth as defined in Appendix A, Table 11.06 and all of the following:
>   - not in *Labor*
>   - no history of a *Prior Uterine Surgery*
>
> **Excluded Populations:** None
>
> **Data Elements:**

- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Principal Procedure Code*
- *Labor*
- *Prior Uterine Surgery*

Denominator Statement: Patients delivering newborns with >= 37 and < 39 weeks of gestation completed

Included Populations:

- *ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes* for delivery as defined in Appendix A, Table 11.01.1

- *ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes* for planned cesarean birth in labor as defined in Appendix A, Table 11.06.1

Excluded Populations:

- *ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes* for conditions possibly justifying elective delivery prior to 39 weeks gestation as defined in Appendix A, Table 11.07
- History of prior stillbirth
- Less than 8 years of age
- Greater than or equal to 65 years of age
- Length of stay > 120 days
- *Gestational Age* < 37 or >= 39 weeks or UTD

Data Elements:

- *Admission Date*
- *Birthdate*
- *Discharge Date*
- *Gestational Age*
- *History of Stillbirth*
- *ICD-10-CM Other Diagnosis Codes*
- *ICD-10-CM Principal Diagnosis Code*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: In order to identify areas for improvement, hospitals may want to review results based on specific ICD-10 codes or patient populations. Data could be analyzed further to determine specific patterns or trends to help reduce elective deliveries.

Sampling: Yes. For additional information see the Sampling Section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

- American Academy of Family Physicians. (2000). Tips from Other Journals: Elective induction doubles cesarean delivery rate, 61, 4.Retrieved December 29, 2008 at: http://www.aafp.org/afp/20000215/tips/39.html.
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- Glantz, J. (Apr.2005). Elective induction vs. spontaneous labor associations and outcomes. [Electronic Version]. *J Reprod Med*. 50(4):235-40.
- Tita, A., Landon, M., Spong, C., Lai, Y., Leveno, K., Varner, M, et al. (2009). Timing of elective repeat cesarean delivery at term and neonatal outcomes. [Electronic Version]. *NEJM*. 360:2, 111-120.

Original Performance Measure Source / Developer:
Hospital Corporation of America-Women's and Children's Clinical Services

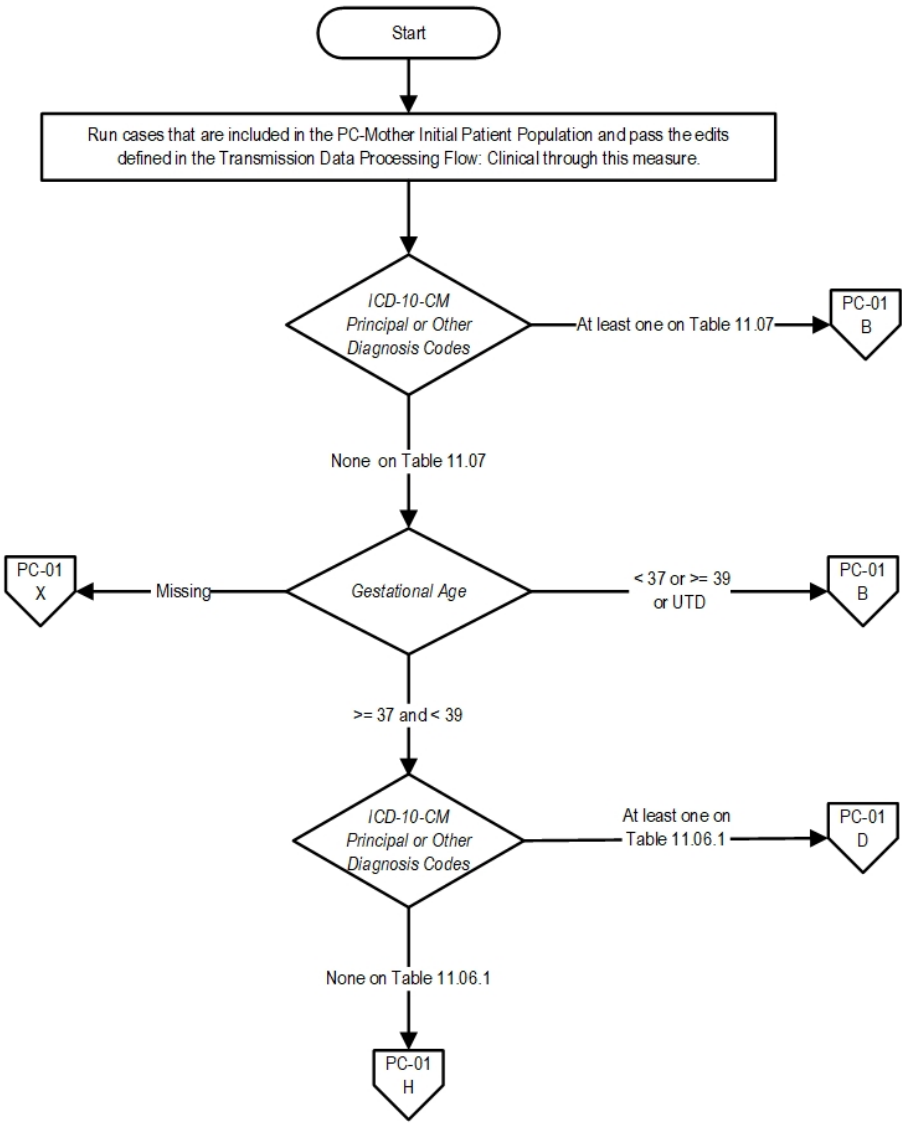
Adopted for CMS Hospital Inpatient Quality Reporting Program FY 2015 and Stage 2 Medicare and Medicaid EHR Incentive Program

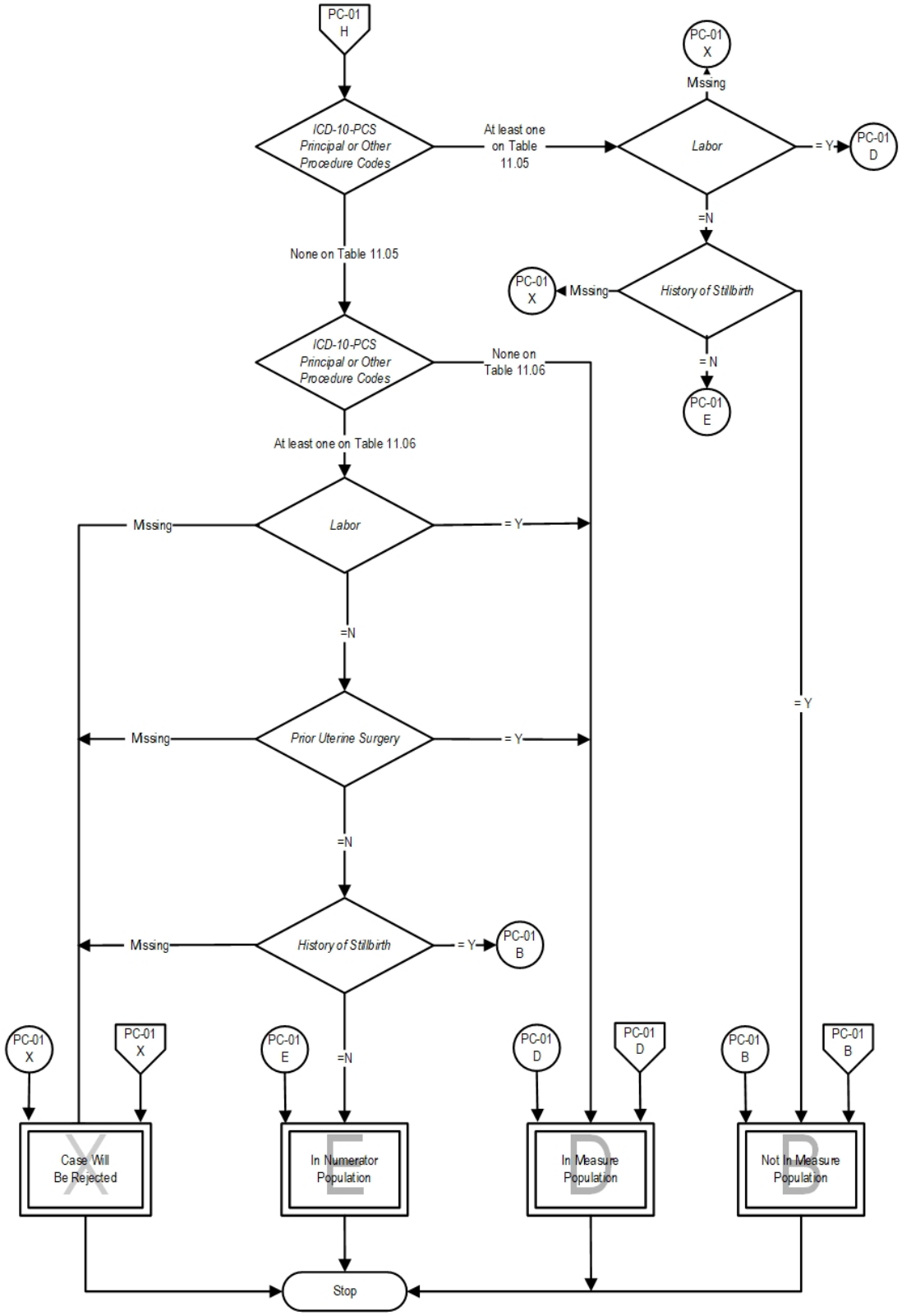
Measure Algorithm:

PC-01: Elective Delivery

Numerator: Patients with elective deliveries

Denominator: Patients delivering newborns with >= 37 and < 39 weeks of gestation completed




PC-01 H
ICD-10-PCS Principal or Other Procedure Codes
At least one on Table 11.05
PC-01 X
Missing
Labor
= Y
PC-01 D
=N
None on Table 11.05
PC-01 X
Missing
History of Stillbirth
= N
PC-01 E
ICD-10-PCS Principal or Other Procedure Codes
None on Table 11.06
At least one on Table 11.06
Missing
Labor
= Y
=N
Missing
Prior Uterine Surgery
= Y
=N
Missing
History of Stillbirth
= Y
PC-01 B
= Y
PC-01 X
PC-01 X
PC-01 E
=N
PC-01 D
PC-01 D
PC-01 B
PC-01 B
X
Case Will Be Rejected
E
In Numerator Population
D
In Measure Population
B
Not In Measure Population
Stop

Measure Information Form

Measure Set: Perinatal Care (PC)

Set Measure ID: PC-02

Performance Measure Name: Cesarean Birth

Description: Nulliparous women with a term, singleton baby in a vertex position delivered by cesarean birth

Rationale: The removal of any pressure to not perform a cesarean birth has led to a skyrocketing of hospital, state and national cesarean birth (CB) rates. Some hospitals now have CB rates over 50%. Hospitals with CB rates at 15-20% have infant outcomes that are just as good and better maternal outcomes (Gould et al., 2004). There are no data that higher rates improve any outcomes, yet the CB rates continue to rise. This measure seeks to focus attention on the most variable portion of the CB epidemic, the term labor CB in nulliparous women. This population segment accounts for the large majority of the variable portion of the CB rate, and is the area most affected by subjectivity.

As compared to other CB measures, what is different about NTSV CB rate (Low-risk Primary CB in first births) is that there are clear cut quality improvement activities that can be done to address the differences. Main et al. (2006) found that over 60% of the variation among hospitals can be attributed to first birth labor induction rates and first birth early labor admission rates. The results showed if labor was forced when the cervix was not ready the outcomes were poorer. Alfirevic et al. (2004) also showed that labor and delivery guidelines can make a difference in labor outcomes. Many authors have shown that physician factors, rather than patient characteristics or obstetric diagnoses are the major driver for the difference in rates within a hospital (Berkowitz, et al., 1989; Goyert et al., 1989; Luthy et al., 2003). The dramatic variation in NTSV rates seen in all populations studied is striking according to Menacker (2006). Hospitals within a state (Coonrod et al., 2008; California Office of Statewide Hospital Planning and Development [OSHPD], 2007) and physicians within a hospital (Main, 1999) have rates with a 3-5 fold variation.

Type Of Measure: Outcome

Improvement Noted As: Decrease in the rate

Numerator Statement: Patients with cesarean births

> **Included Populations:** *ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes* for cesarean birth as defined in Appendix A, Table 11.06
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *ICD-10-PCS Other Procedure Codes*

- *ICD-10-PCS Principal Procedure Code*

Denominator Statement: Nulliparous patients delivered of a live term singleton newborn in vertex presentation

Included Populations:

- *ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes* for delivery as defined in Appendix A, Table 11.01.1
- Nulliparous patients with *ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes* for outcome of delivery as defined in Appendix A, Table 11.08 and with a delivery of a newborn with 37 weeks or more of gestation completed

Excluded Populations:

- *ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes* for multiple gestations and other presentations as defined in Appendix A, Table 11.09
- Less than 8 years of age
- Greater than or equal to 65 years of age
- Length of Stay >120 days
- *Gestational Age* < 37 weeks or UTD

Data Elements:

- *Admission Date*
- *Birthdate*
- *Discharge Date*
- *Gestational Age*
- *ICD-10-CM Other Diagnosis Codes*
- *ICD-10-CM Principal Diagnosis Code*
- *Previous Live Births*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: In order to identify areas for improvement, hospitals may want to review results based on specific ICD-10 codes or patient populations. Data could then be analyzed further determine specific patterns or trends to help reduce cesarean births.

Sampling: Yes. For additional information see the Sampling Section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

- Agency for Healthcare Research and Quality. (2002). *AHRQ Quality Indicators Guide to Inpatient Quality Indicators: Quality of Care in Hospitals Volume, Mortality, and Utilization*. Revision 4 (December 22, 2004). AHRQ Pub. No. 02-RO204.
- Alfirevic, Z., Edwards, G., & Platt, M.J. (2004). The impact of delivery suite guidelines on intrapartum care in "standard primigravida." *Eur J Obstet Gynecol Reprod Biol*.115:28-31.
- American College of Obstetricians and Gynecologists. (2000). *Task Force on Cesarean Delivery Rates. Evaluation of Cesarean Delivery*. (Developed under the direction of the Task Force on Cesarean Delivery Rates, Roger K. Freeman, MD, Chair, Arnold W. Cohen, MD, Richard Depp III, MD, Fredric D. Frigoletto Jr, MD, Gary D.V. Hankins, MD, Ellice Lieberman, MD, DrPH, M. Kathryn Menard, MD, David A. Nagey, MD, Carol W. Saffold, MD, Lisa Sams, RNC, MSN and ACOG Staff: Stanley Zinberg, MD, MS, Debra A. Hawks, MPH, and Elizabeth Steele).
- Bailit, J.L., Garrett, J.M., Miller, W.C., McMahon, M.J., & Cefalo, R.C. (2002). Hospital primary cesarean delivery rates and the risk of poor neonatal outcomes. *Am J Obstet Gynecol*. 187(3):721-7.
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- Bailit, J.L., Love, T.E., & Dawson, N.V. (2006). Quality of obstetric care and risk-adjusted primary cesarean delivery rates. *Am J Obstet Gynecol*.194:402.
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- California Office of Statewide Hospital Planning and Development. (2017). Hospital Volume and Utilization Indicators for California, Retrieved from the Internet on February 22, 2018 at: https://www.oshpd.ca.gov/HID/AHRQ-Volume-Utilization.html
- Cleary, R., Beard, R.W., Chapple, J., Coles, J., Griffin, M., & Joffe, M. (1996). The standard primipara as a basis for inter-unit comparisons of maternity care. *Br J Obstet Gynecol*. 103:223-9.
- Coonrod, D.V., Drachman, D., Hobson, P., & Manriquez, M. (2008). Nulliparous term singleton vertex cesarean delivery rates: institutional and individual level predictors. *Am J Obstet Gynecol*. 694-696.
- DiGiuseppe, D.L., Aron, D.C., Payne, S.M., Snow, R.J., Dieker, L., & Rosenthal, G.E. (2001). Risk adjusting cesarean delivery rates: a comparison of hospital profiles based on medical record and birth certificate data. *Health Serv Res*.36:959-77.
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- Goyert, G.L., Bottoms, F.S., Treadwell, M.C., et al. (1989). The physician factor in cesarean birth rates. *N Engl J Med*.320:706-9.
- Le Ray, C., Carayol, M., Zeitlin, J., Berat, G., & Goffinet, F. (2006). Level of perinatal care of the maternity unit and rate of cesarean in low-risk nulliparas. *Am J Obstet Gynecol*. 107:1269-77.
- Luthy, D.A., Malmgren, J.A., Zingheim, R.W., & Leininger, C.J. (2003). Physician contribution to a cesarean delivery risk model. *Am J Obstet Gynecol*.188:1579-85.
- Main, E.K. (1999). Reducing cesarean birth rates with data-driven quality improvement activities. *Peds*. 103: 374-383.
- Main E.K., Bloomfield, L., & Hunt, G. (2004). Development of a large-scale obstetric quality-improvement program that focused on the nulliparous patient at term. *Am J Obstet Gynecol*.190:1747-

58.
- Main, E.K., Moore, D., Farrell, B., Schimmel, L.D., Altman, R.J., Abrahams, C., et al., (2006). Is there a useful cesarean birth measure? Assessment of the nulliparous term singleton vertex cesarean birth rate as a tool for obstetric quality improvement. *Am J Obstet Gynecol*. 194:1644-51.
- Menacker, F. (2005).Trends in cesarean rates for first births and repeat cesarean rates for low-risk women: United States, 1990-2003. *Nat Vital Stat Rep*. 54(4): 1-5.
- Romano, P.S., Yasmeen, S., Schembri, M.E., Keyzer, J.M., & Gilbert, W.M. (2005). Coding of perineal lacerations and other complications of obstetric care in hospital discharge data. *Am J Obstet Gynecol*.106:717-25.
- U.S. Department of Health and Human Services. (2000). *Healthy People 2010: Understanding and Improving Health*. 2nd ed. Washington, DC: U.S. Government Printing Office. Measure 16-9.
- Yasmeen, S., Romano, P.S., Schembri, M.E., Keyzer, J.M., & Gilbert, W.M. (2006). Accuracy of obstetric diagnoses and procedures in hospital discharge data. *Am J Obstet Gynecol*. 194:992-1001.

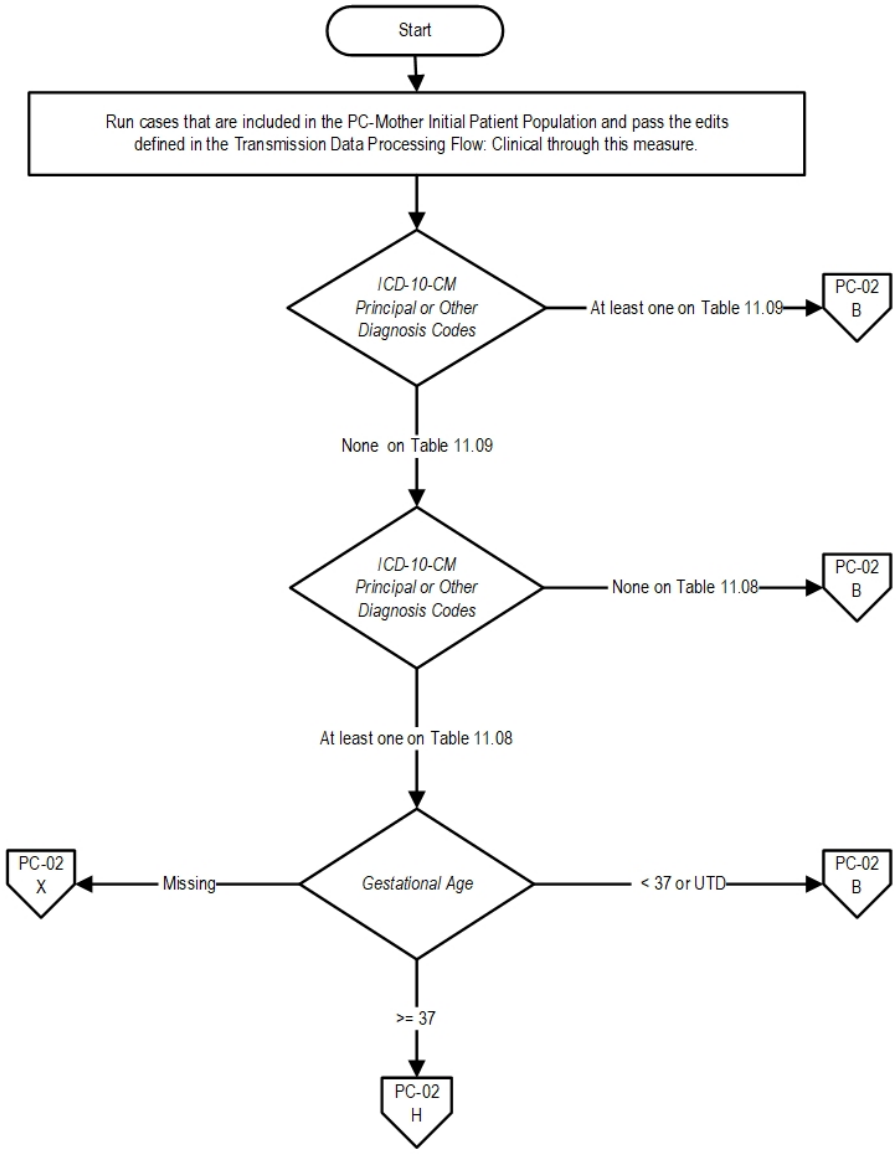
Original Performance Measure Source / Developer:
California Maternal Quality Care Collaborative

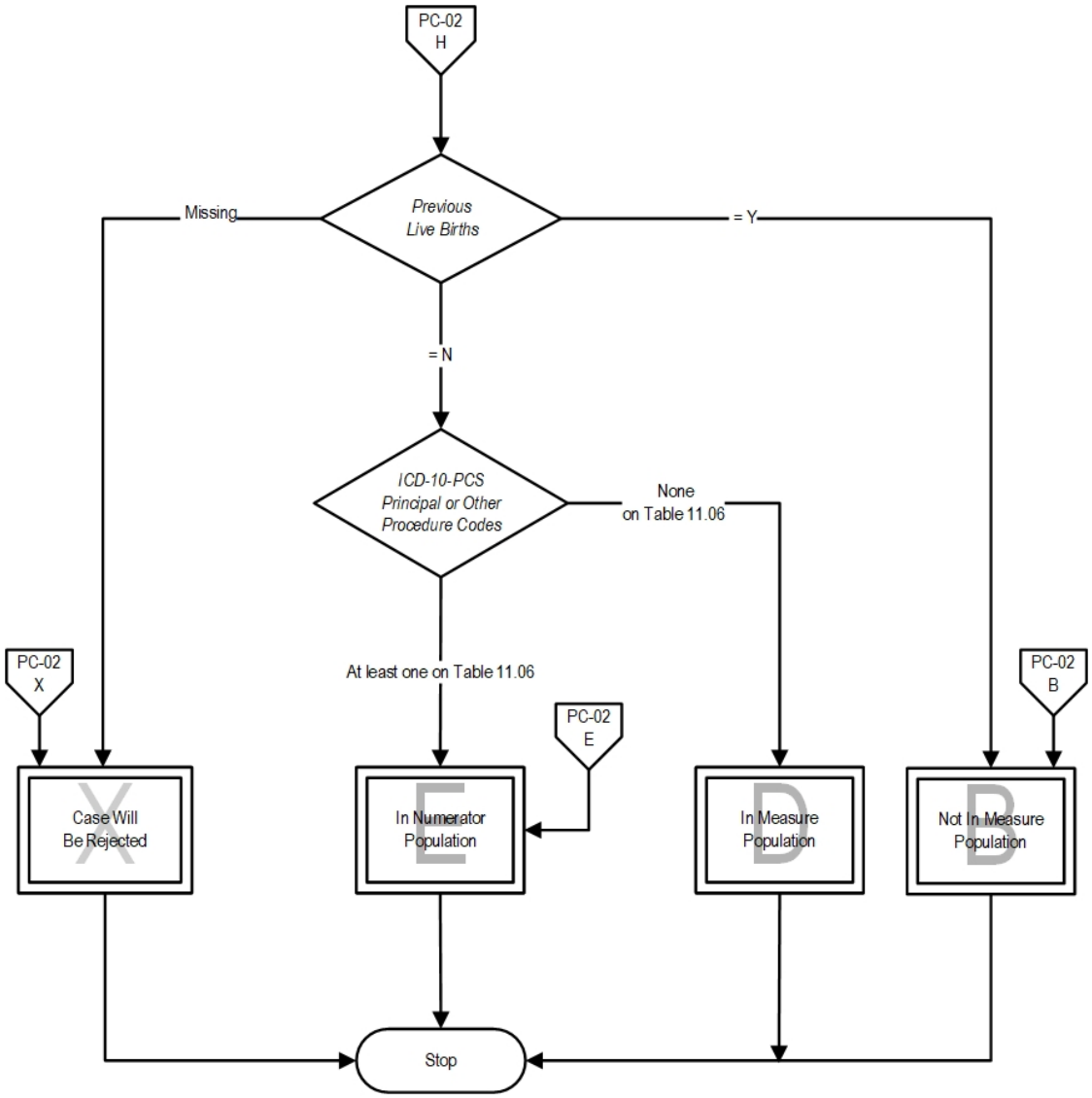
Measure Algorithm:

PC-02: Cesarean Birth

Numerator: Patients with cesarean births

Denominator: Nulliparous patients delivered of a live term singleton newborn in vertex presentation




PC-02
H
Previous
Live Births
Missing
= Y
= N
ICD-10-PCS
Principal or Other
Procedure Codes
None
on Table 11.06
At least one on Table 11.06
PC-02
X
PC-02
E
PC-02
B
X
Case Will
Be Rejected
E
In Numerator
Population
D
In Measure
Population
B
Not In Measure
Population
Stop

Measure Information Form

Measure Set: Perinatal Care (PC)

Set Measure ID: PC-03

Performance Measure Name: Antenatal Steroids

Description: Patients at risk of preterm delivery at >=24 and <34 weeks gestation receiving antenatal steroids prior to delivering preterm newborns

Rationale: The National Institutes of Health 1994 recommendation is to give a full course of corticosteroids to all pregnant women between 24 weeks and 34 weeks of gestation who are at risk of preterm delivery. Repeated corticosteroid courses should not be used routinely, because clinical trials show decreased brain size, decreased birth weight, and adrenal insufficiency in newborns exposed to repeated doses. Treatment should consist of two doses of 12 mg of betamethasone given intramuscularly 24 hours apart or four doses of 6 mg dexamethasone given intramuscularly every 12 hours.

A single course of corticosteroids should be given at 24 0/7 to 33 6/7 weeks gestation (NIH, 2000). A Cochrane meta-analysis reinforces the beneficial effect of this therapy regardless of membrane status and further concludes for all preterm deliveries the single course of corticosteroids should be routinely administered (Roberts & Dalziel, 2006).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients with antenatal steroids initiated prior to delivering preterm newborns

> **Included Populations:** Antenatal steroids initiated (refer to Appendix C, Table 11.0, antenatal steroid medications)
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Antenatal Steroids Initiated*

Denominator Statement: Patients delivering live preterm newborns with >=24 and <34 weeks gestation completed

> **Included Populations:**

- *ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes* for delivery as defined in Appendix A, Table 11.01.1

Excluded Populations:

- Less than 8 years of age
- Greater than or equal to 65 years of age
- Length of Stay >120 days
- Documented *Reason for Not Initiating Antenatal Steroids*
- *ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes* for fetal demise as defined in Appendix A, Table 11.09.1
- *Gestational Age* < 24 or >= 34 weeks or UTD

Data Elements:

- *Admission Date*
- *Birthdate*
- *Discharge Date*
- *Gestational Age*
- *ICD-10-CM Other Diagnosis Codes*
- *ICD-10-CM Principal Diagnosis Code*
- *Reason for Not Initiating Antenatal Steroids*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records. Data are collected as weeks and days of gestation, but the vendor converts to total days of gestation for data transmission and measure calculation.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: In order to identify areas for improvement in antenatal steroid administration rates, hospitals may wish to review documentation for reasons. Education efforts can be targeted based on the specific reasons identified.

Sampling: Yes. For additional information see the Sampling Section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

- American College of Obstetricians and Gynecologists. (ACOG). (2013). Practice Bulletin: Clinical Management Guidelines for Obstetrician-Gynecologists for Premature rupture of membranes.
- Lockwood, C.J., ed. & Lemons, J.A., ed. (2007). Guidelines for Perinatal Care, Sixth Edition, *American Academy of Pediatrics and the American College of Obstetricians and Gynecologists*, ISBN 978-1-58110-

270-3; ISBN 978-1-932328-36-3, pp. 178-181.
- NIH Consensus Development Conference Statement: *The Effect of Corticosteroids for Fetal Maturation on Perinatal Outcomes*. February 28-March 2, 1994.
- NIH Consensus Statement: *Antenatal corticosteroids revisited: repeat courses*.2000. 17(2)1-18.
- Roberts, D. & Dalziel, S.R. (2010) *Antenatal corticosteroids for accelerating fetal lung maturation for women at risk of preterm birth (Review)*. The Cochrane Collaboration. Issue 9.

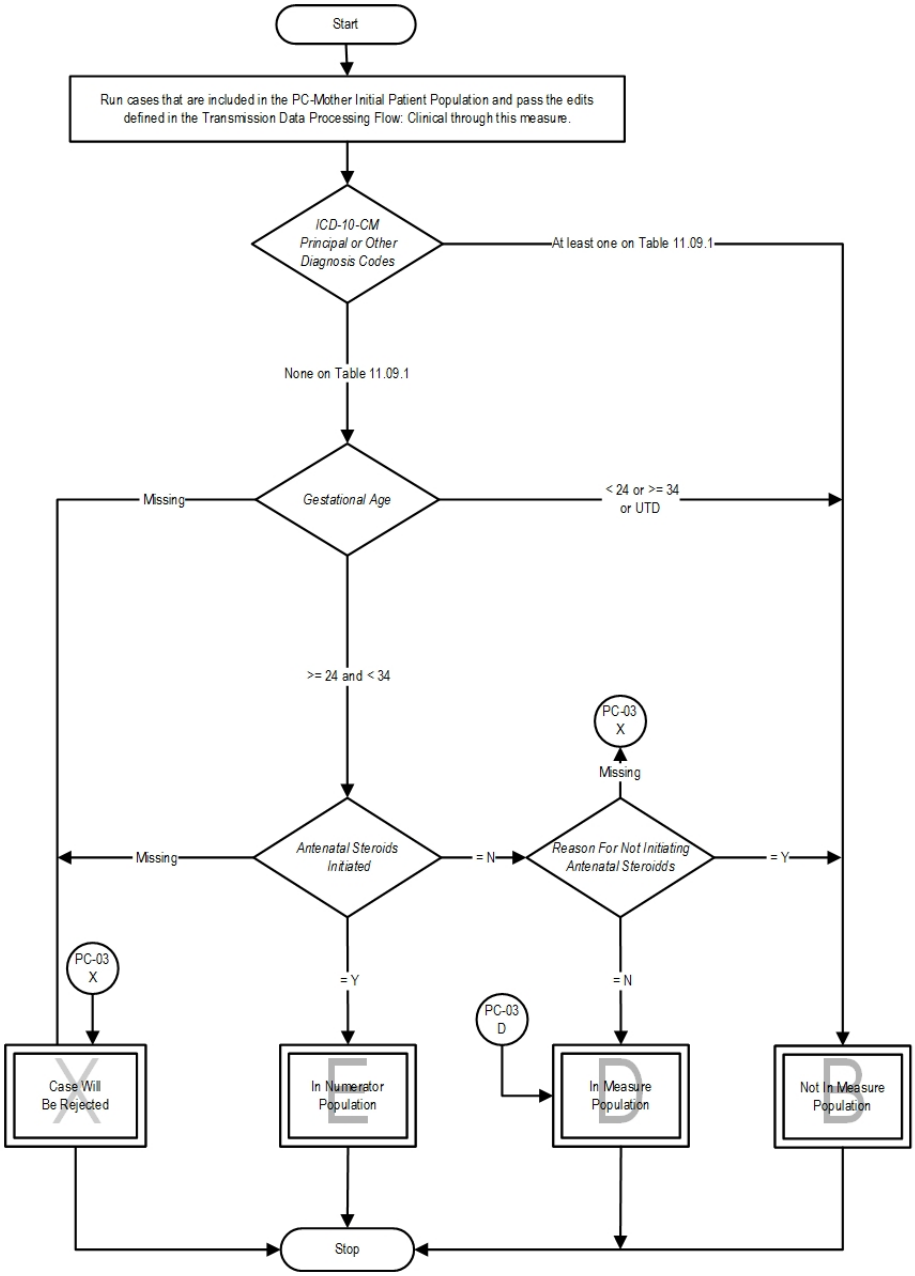
Original Performance Measure Source / Developer:
Providence St Vincent's Hospital/Council of Women and Infant's Specialty Hospitals

Measure Algorithm:

PC-03: Antenatal Steroids

Numerator: Patients with antenatal steroids therapy initiated prior to delivering preterm newborns

Denominator: Patients delivering live preterm newborns with >= 24 and < 34 weeks gestation completed



Measure Information Form

Measure Set: Perinatal Care (PC)

Set Measure ID: PC-04

Performance Measure Name: Health Care-Associated Bloodstream Infections in Newborns

Description: Staphylococcal and gram negative septicemias or bacteremias in high-risk newborns

Rationale: Health care-associated bacteremia is significant problem for infants admitted into neonatal intensive care units (NICUs) and other hospital units. This is especially true for very low birth weight infants who are at high risk for these infections due to their immature immune systems and need for invasive monitoring and supportive care (Adams-Chapman & Stoll, 2002; Bloom et al., 2003; Clark et al., 2004a; Clark et al., 2004b; Gaynes et al., 1996; Payne et al., 2004; Sohn et al., 2001; Stoll et al., 2002). Reported health care-associated infection rates range from 6% to 33%, but the rate varies widely among different centers (Adams-Chapman & Stoll, 2002; Bloom et al.,2003; Clark et al.,2004b ; Sohn et al.,2001; Stoll et al.,2002). Mortality rates are high and infections result in increased length of stay as well as increased hospital costs and charges (Adams-Chapman & Stoll, 2002; Bloom et al.,2003; Clark et al., 2004b; Horbar et al., 2001; Kilbride et al., 2003a; Sohn et al.,2001; Stoll et al., 2002).

The incidence of health care-associated bacteremia increases with decreasing birth weight. Other risk factors include central venous catheter use, prolonged time using parenteral nutrition, prolonged time on mechanical ventilation, use of H2-blocking agents, and overcrowding or heavy staff loads (Adams-Chapman & Stoll, 2002; Barton et al., 1999; Gaynes et al., 1996; Stoll et al., 2002). The most common causative organisms are coagulase-negative staphylococci, Staphylococcus aureus, enterococci, Enterobacter sp, and Escherichia coli (Adams-Chapman & Stoll, 2002; Clark et al., 2004b; Gaynes et al., 1996; Horbar et al., 2001; Payne et al., 2004; Sohn et al., 2001; Stoll et al., 2002).

Effective preventive measures range from simple hand-washing protocols or closed medication delivery systems to more elaborate multidisciplinary quality improvement plans involving hand-washing, nutrition, skin care, respiratory care, vascular access, and diagnostic practices. All of these interventions have been shown to substantially reduce infection rates, albeit in nonrandomized studies using historical or concurrent control units (Adams-Chapman & Stoll, 2002; Aly et al., 2005; Bloom et al., 2003; Clark et al., 2004a; Clark et al., 2004b; Horbar et al., 2001; Lam et al., 2004; Kilbride et al., 2003a; Kilbride et al., 2003b; Ng et al., 2004; Schelonka et al., 2006). For example, six Vermont Oxford Network NICUs reduced their rates of coagulase-negative staphylococcus infections from 22.0% in 1994 to 16.6% in 1996 after implementing a quality improvement model (versus a much smaller decrease from 15.4% to 14.5% at 66 comparison NICUs) (Horbar et al., 2001). A similar reduction from 24.6% to 16.4% was achieved with a multi-modality, multi-hospital intervention focusing on hand hygiene with an effective agent before and after every patient contact, eliminating hand jewelry and artificial nails, using maximal barrier precautions during central venous catheter insertion, decreasing the number of skin punctures, reducing the duration of intravenous lipid and deep line use, and improving the diagnosis of health care-associated infections. (Kilbride et al., 2003a; Kilbride et al., 2003b).

Given the fragility and susceptibility of the patient population, a baseline level of health care-associated infections will be expected, even with good protocols in place. However, those centers that have prevention protocols, and are able to encourage health care workers to adhere to these protocols, will probably have success in reducing their rates of health care-associated bacteremia in their neonatal population. Indeed, several quasi-experimental studies have demonstrated that NICUs can lower their infection rates (based on positive blood cultures) from as high as 13.5 per 1,000 patient days to as low as 3.0 per 1,000 patient days(Adams-Chapman & Stoll, 2002; Aly et al., 2005; Bloom et al. ,2003; Clark et al., 2004a; Clark et al., 2004b; Horbar et al., 2001; Lam et al., 2004; Kilbride et al., 2003a; Kilbride et al., 2003b; Ng et al., 2004; Schelonka et al., 2006).

Type Of Measure: Outcome

Improvement Noted As: Decrease in the rate

Numerator Statement: Newborns with septicemia or bacteremia

> **Included Populations:**
>
> - *ICD-10-CM Other Diagnosis Codes* for newborn septicemia or bacteremia as defined in Appendix A, Table 11.10 with a *Bloodstream Infection Confirmed*
>
> OR
>
> - *ICD-10-CM Other Diagnosis Codes* for sepsis as defined in Appendix A, Table 11.10.1 with a *Bloodstream Infection Confirmed*
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Bloodstream Infection Confirmed*
> - *ICD-10-CM Other Diagnosis Codes*

Denominator Statement: Liveborn newborns

> **Included Populations:**
>
> - ICD-10-CM Other Diagnosis Codes for birth weight between 500 and 1499g as defined in Appendix A, Table 11.12, 11.13 or 11.14 OR *Birth Weight* between 500 and 1499g
>
> OR
>
> - ICD-10-CM Other Diagnosis Codes for birth weight ≥ 1500g as defined in Appendix A, Table 11.15 or 11.16 OR *Birth Weight* ≥ 1500g who experienced one or more of the following:
>   - Experienced death

    - *ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes* for major surgery as defined in Appendix A, Table 11.18
    - *ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes* for mechanical ventilation as defined in Appendix A, Table 11.19
    - Transferred in from another acute care hospital or health care setting within 2 days of birth

Excluded Populations:

- *ICD-10-CM Principal Diagnosis Code* for septicemias or bacteremias as defined in Appendix A, Table 11.10.2
- *ICD-10-CM Other Diagnosis Codes* for septicemias or bacteremias as defined in Appendix A, Table 11.10.2 or *ICD-10-CM Principal or Other Diagnosis Codes* for newborn septicemia or bacteremia as defined in Appendix A, Table 11.10 with a *Bloodstream Infection Present on Admission*
- *ICD-10-CM Other Diagnosis Codes* for birth weight < 500g as defined in Appendix A, Table 11.20 OR Birth Weight < 500g
- Length of Stay < 2 days

Data Elements:

- *Admission Date*
- *Birth Weight*
- *Birthdate*
- *Bloodstream Infection Present on Admission*
- *Discharge Date*
- *Discharge Disposition*
- *ICD-10-CM Other Diagnosis Codes*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Principal Procedure Code*

Risk Adjustment: Yes. This section has been moved to the *ORYX Risk Adjustment Guide*. This guide is available to the public on the Joint Commission's website and, in addition, it is available to performance measurement systems via the Joint Commission's extranet site for measurement systems (PET).

Data Elements:

- *Birth Weight*
- *Discharge Disposition*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-CM Other Diagnosis Codes*

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy:

- Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.
- Since Birth Weight is a risk factor for hospital associated blood stream infections in newborns, ICD-10-CM codes have been provided in Appendix A, Tables 11.12-11.16, 11.20 to assist in identifying newborns with prematurity and fetal growth retardation to denote birth weight (less than 500 grams up to birth weight 2000-2499 grams). Therefore, newborns with birth weights greater than or equal to 2500 grams will need to be captured using the data element Birth Weight.
- It is important to ensure that all weight conversions from pounds and ounces to grams are accurate and concise. Birth Weight should not be rounded off i.e., when converting from pounds and ounces to grams, do not round to the nearest pound before converting the weight to grams.
- Discrepancies can occur between Birth Weights obtained from labor and delivery vs. nursery departments. Organizations should determine which is the most reliable source for this data element value and consistently obtain it from that source.

Measure Analysis Suggestions: In order to identify areas for improvement, hospitals may want to review results based on specific ICD-10 codes or patient populations. Data could then be analyzed further determine specific patterns or trends to help reduce bloodstream infections.

Sampling: No. For additional information see the Sampling Section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

- Adams-Chapman, I. & Stoll, B.J. (2002). Prevention of nosocomial infections in the neonatal intensive care unit. *Current Opinion in Pediatrics*.14 (2):157-64.
- Aly, H., Herson, V., Duncan, A., et al. (2005). Is bloodstream infection preventable among premature infants? A tale of two cities. *Pediatrics*. 115(6):1513-8.
- Barton, L., Hodgman, J.E., & Pavlova, Z. (1999). Causes of death in the extremely low birth weight infant. *Pediatrics*. 103(2):446-51.
- Bloom, B.T., Craddock, A., Delmore, P.M., et al. (2003). Reducing acquired infections in the NICU: observing and implementing meaningful differences in process between high and low acquired infection rate centers. *Journal of Perinatology*. 23(6):489-92.
- Clark, R., Powers, R., White, R., Bloom, B., Sanchez, P., & Benjamin, D.K., Jr. (2004a). Prevention and treatment of nosocomial sepsis in the NICU. *Journal of Perinatology*. 4; 24(7):446-53.
- Clark, R., Powers, R., White, R., Bloom, B., Sanchez, P., & Benjamin, D.K., Jr. (2004b). Nosocomial infection in the NICU: a medical complication or unavoidable problem? *Journal of Perinatology*. 24(6):382-8.
- Gaynes, R.P., Edwards, J.R., Jarvis, W.R., Culver, D.H., Tolson, J.S., & Martone, W.J. (1996). Nosocomial infections among neonates in high-risk nurseries in the United States. National Nosocomial Infections Surveillance System. *Pediatrics*. 98(3 Pt 1):357-61.
- Horbar, J.D., Rogowski, J., Plsek, P.E., et al. (2001). Collaborative quality improvement for neonatal intensive care. NIC/Q Project Investigators of the Vermont Oxford Network. *Pediatrics*. 107(1):14-22.
- Kilbride, H.W., Wirtschafter, D.D., Powers, R.J., & Sheehan, M.B. (2003a). Implementation of evidence-based potentially better practices to decrease nosocomial infections. *Pediatrics*. 111(4 Pt 2):e519-33.

- Kilbride, H.W., Powers, R., Wirtschafter, D.D., et al. (2003b). Evaluation and development of potentially better practices to prevent neonatal nosocomial bacteremia. *Pediatrics*. 111(4 Pt 2):e504-18.
- Lam, B.C., Lee, J., & Lau, Y.L. (2004). Hand Hygiene Practices in a Neonatal Intensive Care Unit: A Multimodal Intervention and Impact on Nosocomial Infection. *Pediatrics*.114 (5):e565.
- Ng, P.C., Wong, H.L., Lyon, D.J., et al. (2004). Combined use of alcohol hand rub and gloves reduces the incidence of late onset infection in very low birthweight infants. Archives of Disease in Childhood Fetal & Neonatal Edition. 89(4):F336-40.
- Payne, N.R., Carpenter, J.H., Badger, G.J., Horbar, J.D., & Rogowski, J. (2004). Marginal increase in cost and excess length of stay associated with nosocomial bloodstream infections in surviving very low birth weight infants. *Pediatrics*. 114(2):348-55.
- Schelonka, R.L., Scruggs, S., Nichols, K., Dimmitt, R.A., & Carlo, W.A. (2006). Sustained reductions in neonatal nosocomial infection rates following a comprehensive infection control intervention. *Journal of Perinatology*. 26(3):176-9.
- Sohn, A.H., Garrett, D.O., Sinkowitz-Cochran, R.L., et al. (2001). Prevalence of nosocomial infections in neonatal intensive care unit patients: Results from the first national point-prevalence survey. *Journal of Pediatrics*. 139(6):821-7.
- Stoll, B.J., Hansen, N., Fanaroff, A.A., et al. (2002). Late-onset sepsis in very low birth weight neonates: the experience of the NICHD Neonatal Research Network. *Pediatrics*. 110(2 Pt 1):285-91.

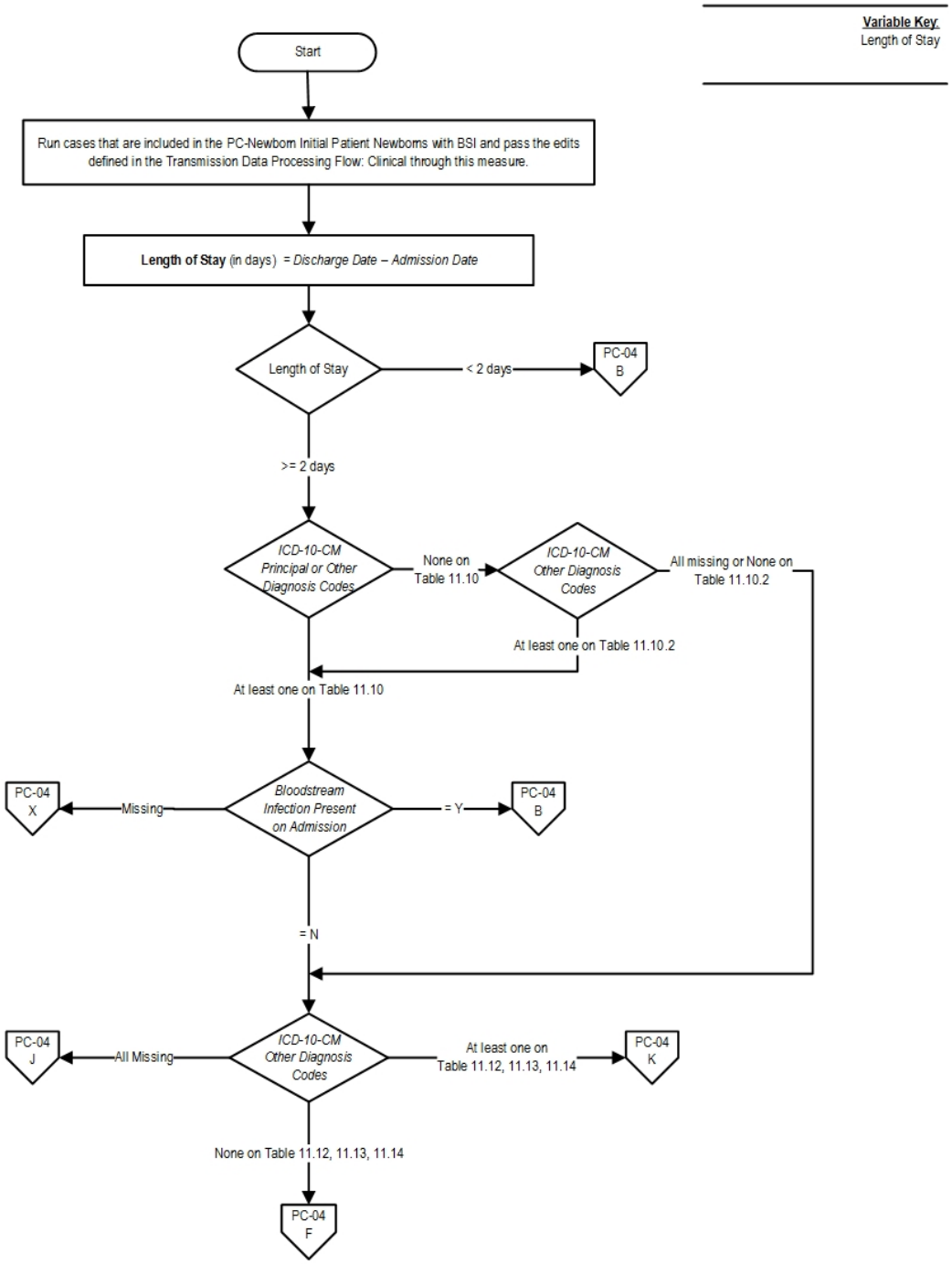
Original Performance Measure Source / Developer:
Agency for Healthcare Research and Quality

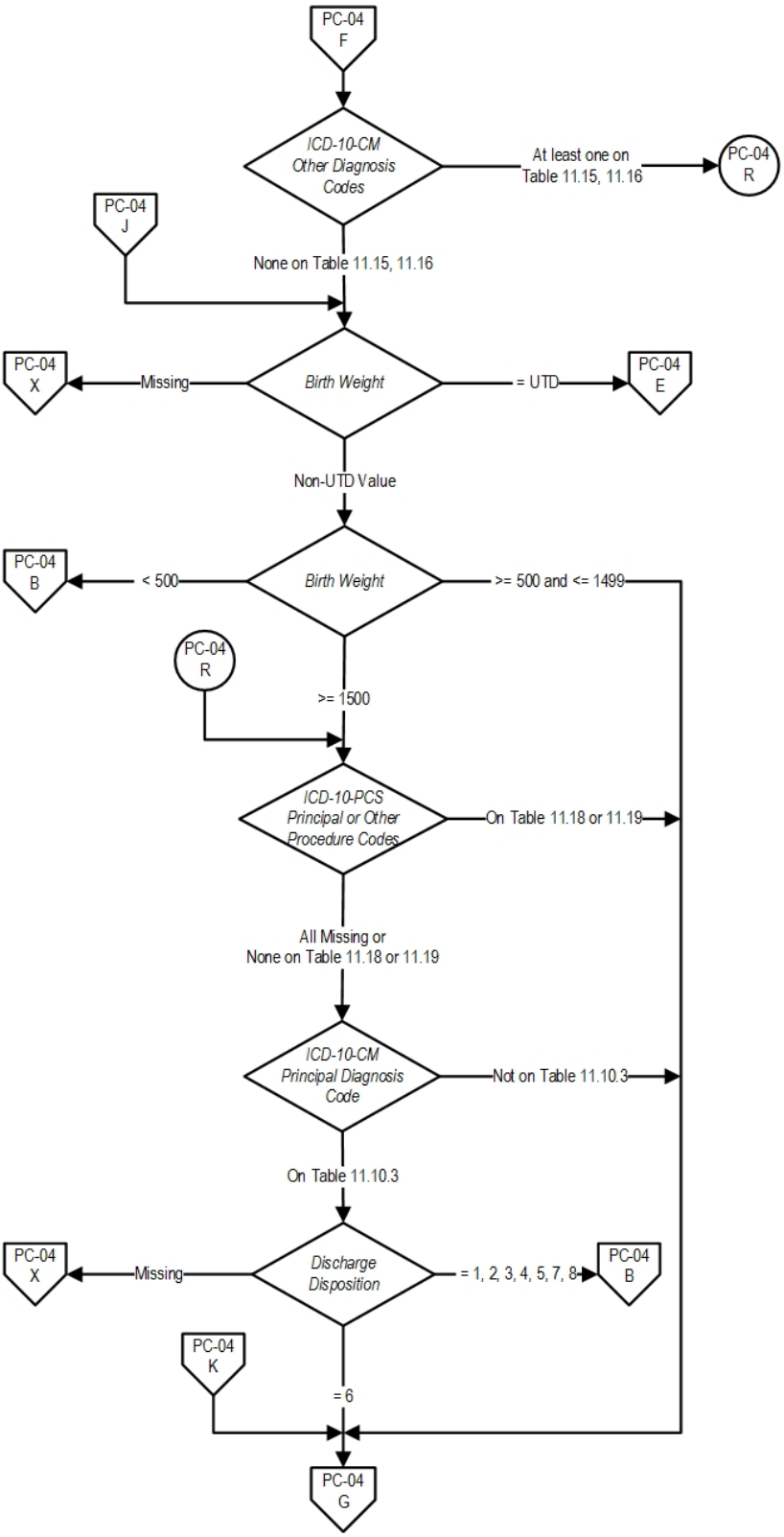
Measure Algorithm:

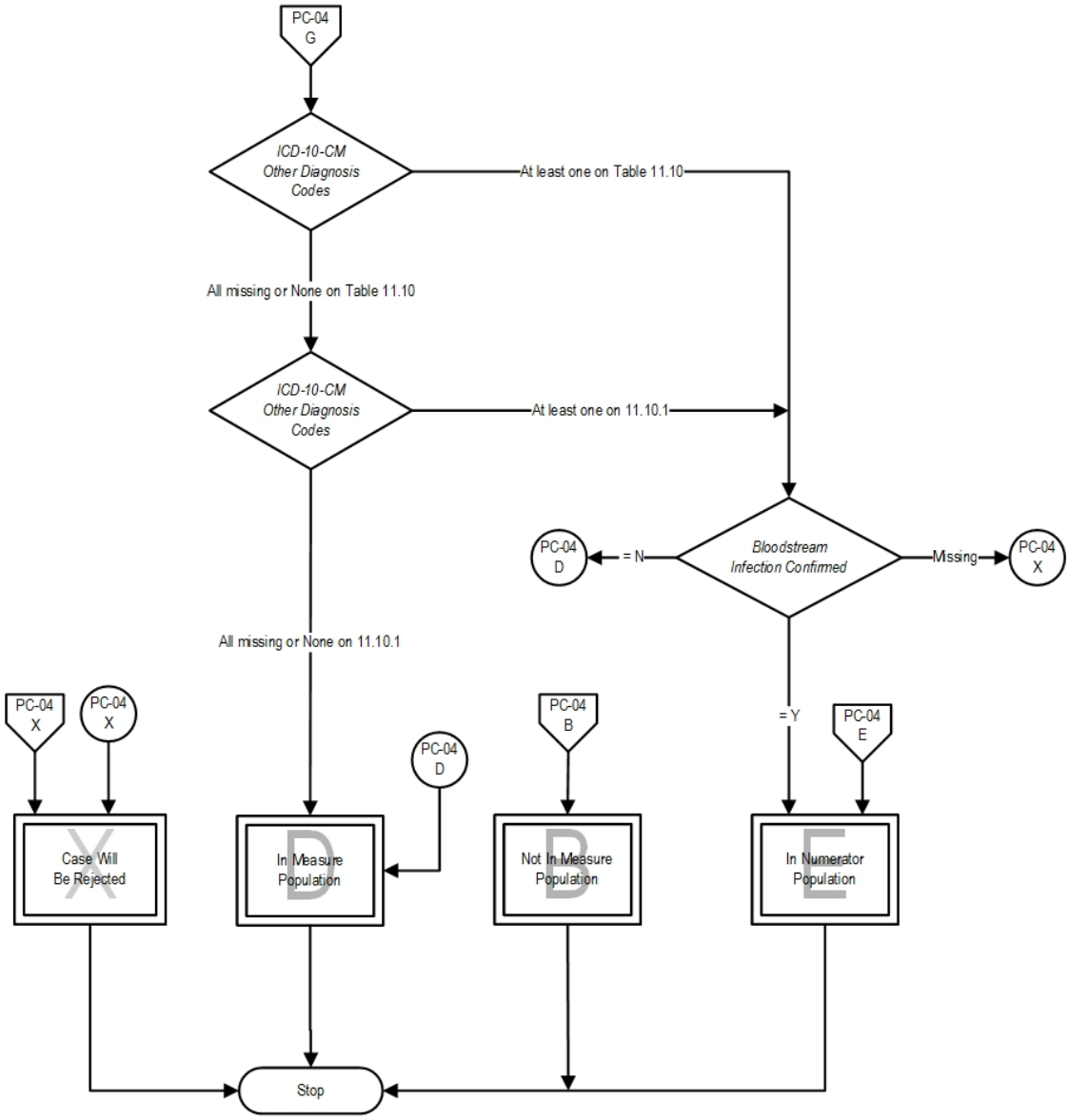
PC-04: Health Care-Associated Bloodstream Infections in Newborns

Numerator: Newborns with septicemia or bacteremia

Denominator: Live-born newborns




PC-04 F
ICD-10-CM Other Diagnosis Codes
At least one on Table 11.15, 11.16
PC-04 R
PC-04 J
None on Table 11.15, 11.16
PC-04 X
Missing
Birth Weight
= UTD
PC-04 E
Non-UTD Value
PC-04 B
< 500
Birth Weight
>= 500 and <= 1499
PC-04 R
>= 1500
ICD-10-PCS Principal or Other Procedure Codes
On Table 11.18 or 11.19
All Missing or None on Table 11.18 or 11.19
ICD-10-CM Principal Diagnosis Code
Not on Table 11.10.3
On Table 11.10.3
PC-04 X
Missing
Discharge Disposition
= 1, 2, 3, 4, 5, 7, 8
PC-04 B
PC-04 K
= 6
PC-04 G


PC-04
G
ICD-10-CM
Other Diagnosis
Codes
At least one on Table 11.10
All missing or None on Table 11.10
ICD-10-CM
Other Diagnosis
Codes
At least one on 11.10.1
PC-04
D
= N
Bloodstream
Infection Confirmed
Missing
PC-04
X
All missing or None on 11.10.1
= Y
PC-04
X
PC-04
X
PC-04
D
PC-04
B
PC-04
E
X
Case Will
Be Rejected
D
In Measure
Population
B
Not In Measure
Population
E
In Numerator
Population
Stop

Measure Information Form

Measure Set: Perinatal Care (PC)

Set Measure ID: PC-05

Performance Measure Name: Exclusive Breast Milk Feeding

Description: Exclusive breast milk feeding during the newborn's entire hospitalization

The measure is reported as an overall rate which includes all newborns that were exclusively fed breast milk during the entire hospitalization.

Rationale: Exclusive breast milk feeding for the first 6 months of neonatal life has long been the expressed goal of World Health Organization (WHO), Department of Health and Human Services (DHHS), American Academy of Pediatrics (AAP) and American College of Obstetricians and Gynecologists (ACOG). ACOG has recently reiterated its position (ACOG, 2007). A recent Cochrane review substantiates the benefits (Kramer et al., 2002). Much evidence has now focused on the prenatal and intrapartum period as critical for the success of exclusive (or any) BF (Centers for Disease Control and Prevention [CDC], 2007; Petrova et al., 2007; Shealy et al., 2005; Taveras et al., 2004). Exclusive breast milk feeding rate during birth hospital stay has been calculated by the California Department of Public Health for the last several years using newborn genetic disease testing data. Healthy People 2010 and the CDC have also been active in promoting this goal.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Newborns that were fed breast milk only since birth

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Exclusive Breast Milk Feeding*

Denominator Statement: Single term newborns discharged alive from the hospital

> **Included Populations:** Liveborn newborns with *ICD-10-CM Principal Diagnosis Code* for single liveborn newborn as defined in Appendix A, Table 11.20.1
>
> **Excluded Populations:**

- Admitted to the Neonatal Intensive Care Unit (NICU) at this hospital during the hospitalization
- *ICD-10-CM Other Diagnosis Codes* for galactosemia as defined in Appendix A, Table 11.21
- *ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes* for parenteral nutrition as defined in Appendix A, Table 11.22
- Experienced death
- Length of Stay >120 days
- Patients transferred to another hospital
- Patients who are not term or with < 37 weeks gestation completed

Data Elements:

- *Admission Date*
- *Admission to NICU*
- *Birthdate*
- *Discharge Date*
- *Discharge Disposition*
- *ICD-10-CM Other Diagnosis Codes*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Principal Procedure Code*
- *Term Newborn*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: In order to identify areas for improvement in breast milk feeding rates, hospitals may wish to review documentation for reasons. Education efforts can be targeted based on the specific reasons identified.

Sampling: Yes. For additional information see the Sampling Section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

- American Academy of Pediatrics. (2005). Section on Breastfeeding. Policy Statement: Breastfeeding and the Use of Human Milk. *Pediatrics*.115:496— 506.
- American College of Obstetricians and Gynecologists. (Feb. 2007). Committee on Obstetric Practice and Committee on Health Care for Underserved Women.Breastfeeding: Maternal and Infant Aspects. ACOG Committee Opinion 361.

- California Department of Public Health. (2017). Division of Maternal, Child and Adolescent Health, Breastfeeding Initiative, In-Hospital Breastfeeding Initiation Data, Hospital of Occurrence: Available at: https://www.cdph.ca.gov/Programs/CFH/DMCAH/Breastfeeding/Pages/In-Hospital-Breastfeeding-Initiation-Data.aspx
- Centers for Disease Control and Prevention. (Aug 3, 2007). Breastfeeding trends and updated national health objectives for exclusive breastfeeding--United States birth years 2000-2004. *MMWR - Morbidity & Mortality Weekly Report*. 56(30):760-3.
- Centers for Disease Control and Prevention. (2017). Division of Nutrition, Physical Activity and Obesity. Breastfeeding Report Card. Available at: https://www.cdc.gov/breastfeeding/data/reportcard.htm
- Ip, S., Chung, M., Raman, G., et al. (2007). Breastfeeding and maternal and infant health outcomes in developed countries. Rockville, MD: *US Department of Health and Human Services*. Available at: https://archive.ahrq.gov/downloads/pub/evidence/pdf/brfout/brfout.pdf
- Kramer, M.S. & Kakuma, R. (2002).Optimal duration of exclusive breastfeeding. [107 refs] Cochrane Database of Systematic Reviews. (1):CD003517.
- Petrova, A., Hegyi, T., & Mehta, R. (2007). Maternal race/ethnicity and one-month exclusive breastfeeding in association with the in-hospital feeding modality. *Breastfeeding Medicine*. 2(2):92-8.
- Shealy, K.R., Li, R., Benton-Davis, S., & Grummer-Strawn, L.M. (2005).The CDC guide to breastfeeding interventions. Atlanta, GA: US Department of Health and Human Services, CDC. Available at: http://www.cdc.gov/breastfeeding/pdf/breastfeeding_interventions.pdf.
- Taveras, E.M., Li, R., Grummer-Strawn, L., Richardson, M., Marshall, R., Rego, V.H., Miroshnik, I., & Lieu, T.A. (2004). Opinions and practices of clinicians associated with continuation of exclusive breastfeeding. *Pediatrics*. 113(4):e283-90.
- US Department of Health and Human Services. (2007). Healthy People 2010 Midcourse Review. Washington, DC: US Department of Health and Human Services. Available at: https://www.healthypeople.gov/2010/data/midcourse/html/default.htm?visit=1
- World Health Organization. (2007). Indicators for assessing infant and young child feeding practices. Washington, DC, USA: World Health Organization. Available at: http://apps.who.int/iris/bitstream/10665/43895/1/9789241596664_eng.pdf

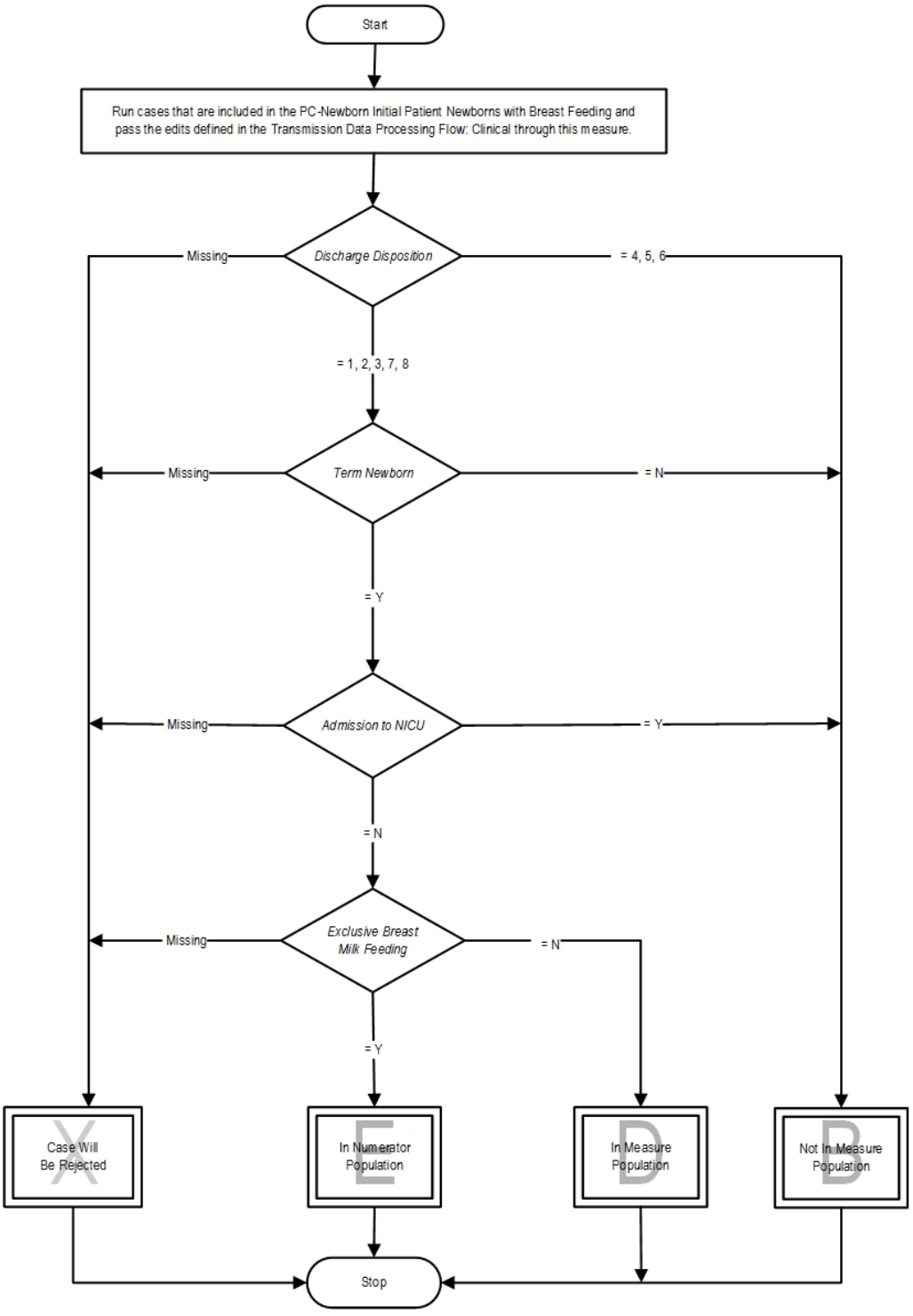
Original Performance Measure Source / Developer:
California Maternal Quality Care Collaborative

Measure Algorithm:

PC-05: Exclusive Breast Milk Feeding

Numerator: Newborns that were fed breast milk only since birth

Denominator: Single term newborns discharged alive from the hospital



Measure Information Form

Measure Set: Perinatal Care (PC)

Set Measure ID: PC-06

Set Measure ID	Performance Measure Name
PC-06.0	Unexpected Complications in Term Newborns - Overall Rate
PC-06.1	Unexpected Complications in Term Newborns - Severe Rate
PC-06.2	Unexpected Complications in Term Newborns - Moderate Rate

Performance Measure Name: Unexpected Complications in Term Newborns

Description: The percent of infants with unexpected newborn complications among full term newborns with no preexisting conditions.

Severe complications include neonatal death, transfer to another hospital for higher level of care, severe birth injuries such as intracranial hemorrhage or nerve injury, neurologic damage, severe respiratory and infectious complications such as sepsis.

Moderate complications include diagnoses or procedures that raise concern but at a lower level than the list for severe e.g. use of CPAP or bone fracture. Examples include less severe respiratory complications e.g. Transient Tachypnea of the Newborn, or infections with a longer length of stay not including sepsis, infants who have a prolonged length of stay of over 5 days.

Rationale: The most important childbirth outcome for families is bringing home a healthy baby. While there have been measures developed to assess clinical practices and outcomes in preterm infants, there is a lack of metrics that assess the health outcomes of term infants who represent over 90% of all births. This measure addresses this gap and gauges adverse outcomes resulting in severe or moderate morbidity in otherwise healthy term infants without preexisting conditions. Importantly, this metric also serves as a balancing measure for other maternal measures such as NTSV Cesarean rates and early elective delivery rates. The purpose of a balancing measure is to guard against any unanticipated or unintended consequences of quality improvement activities for these measures.

Type Of Measure: Outcome

Improvement Noted As: Decrease in the rate

Numerator Statement: Newborns with severe complications and moderate complications.

> **Included Populations:**
> **Severe Complications:**
>
> - Death

- Transfer to a another acute care facility
- *ICD-10-CM Principal Diagnosis Code*, *ICD-10-CM Other Diagnosis Codes*, *ICD-10-PCS Principal Procedure Code* or *ICD-10-PCS Other Procedure Codes* for Severe Morbidities as defined in Appendix A, Tables:
    - 11.36 Severe Birth Trauma
    - 11.37 Severe Hypoxia/Asphyxia
    - 11.38 Severe Shock and Resuscitation
    - 11.39 Neonatal Severe Respiratory Complications
    - 11.40 Neonatal Severe Infection
    - 11.41 Neonatal Severe Neurological Complications
    - 11.42 Severe Shock and Resuscitation Procedures
    - 11.43 Neonatal Severe Respiratory Procedures
    - 11.44 Neonatal Severe Neurological Procedures
- Patients with Length of Stay greater than 4 days AND an *ICD-10-CM Principal Diagnosis Code* or *ICD-10-CM Other Diagnosis Codes* for Sepsis as defined in Appendix A, Table 11.45 Neonatal Severe Septicemia

Moderate Complications:

- *ICD-10-CM Principal Diagnosis Code*, *ICD-10-CM Other Diagnosis Codes*, *ICD-10-PCS Principal Procedure Code* or *ICD-10-PCS Other Procedure Codes* for moderate complications as defined in Appendix A, Tables:
    - 11.46 Moderate Birth Trauma
    - 11.47 Moderate Respiratory Complications
    - 11.48 Moderate Respiratory Complications Procedures
- *ICD-10-CM Principal Diagnosis Code* for single liveborn newborn as defined in Appendix A, Table 11.20.2 Single Liveborn Newborn-Vaginal AND Length of Stay greater than 2 days
  OR
  ICD-10-CM Principal Diagnosis Code for single liveborn newborn as defined in Appendix A, Table 11.20.3 Single Liveborn Newborn-Cesarean AND Length of Stay greater than 4 days
  AND ANY
  ICD-10-CM Principal Diagnosis Code, *ICD-10-CM Other Diagnosis Codes*, *ICD-10-PCS Principal Procedure Code* or *ICD-10-PCS Other Procedure Codes* for moderate complications as defined in Appendix A, Tables:
    - 11.49 Moderate Birth Trauma with LOS
    - 11.50 Moderate Respiratory Complications with LOS
    - 11.51 Moderate Neurological Complications with LOS Procedures
    - 11.52 Moderate Respiratory Complications with LOS Procedures
    - 11.53 Moderate Infection with LOS
- Patients with Length of Stay greater than 5 days and NO *ICD-10-CM Principal Diagnosis Code*, *ICD-10-CM Other Diagnosis Codes*, *ICD-10-PCS Principal Procedure Code* or *ICD-10-PCS Other Procedure Codes* for jaundice or social indications as defined in Appendix A, Tables:
    - 11.33 Neonatal Jaundice
    - 11.34 Phototherapy
    - 11.35 Social Indications

Excluded Populations: None

Data Elements:

- *Admission Date*
- *Discharge Date*
- *Discharge Disposition*
- *ICD-10-CM Other Diagnosis Codes*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Principal Procedure Code*

Denominator Statement: Liveborn single term newborns over 2500 gm in birth weight.

Included Populations: Single liveborn newborns with *ICD-10-CM Principal Diagnosis Code* for single liveborn newborn as defined in Appendix A, Table Number 11.20.1: Single Liveborn Newborn

Excluded Populations:

- Patients who are not born in the hospital or are part of multiple gestation pregnancies, with no *ICD-10-CM Principal Diagnosis Code* for single liveborn newborn as defined in Appendix A, Table Number 11.20.1: Single Liveborn Newborn
- *ICD-10-CM Principal Diagnosis Code* or *ICD-10-CM Other Diagnosis Codes* for birth weight <= 2500g as defined in Appendix A, Table 11.12, 11.13, 11.14, 11.15, 11.16, 11.20 OR *Birth Weight* <= 2500g
- Patients who are not term or with < 37 weeks gestation completed
- *ICD-10-CM Principal Diagnosis Code* or *ICD-10-CM Other Diagnosis Codes* for congenital malformations and genetic diseases as defined in Appendix A, Table 11.30 Congenital Malformations
- *ICD-10-CM Principal Diagnosis Code* or *ICD-10-CM Other Diagnosis Codes* for pre-existing fetal conditions as defined in Appendix A, Table 11.31 Fetal Conditions
- *ICD-10-CM Principal Diagnosis Code* or *ICD-10-CM Other Diagnosis Codes* for maternal drug use exposure in-utero as defined in Appendix A, Table 11.32 Maternal Drug Use

Data Elements:

- *Birth Weight*
- *Birthdate*
- *ICD-10-CM Other Diagnosis Codes*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Principal Procedure Code*
- *Term Newborn*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: In order to identify areas for improvement, hospitals may want to review results based on specific ICD-10 codes or patient populations. Data could then be analyzed further to determine specific patterns or trends to help reduce unexpected newborn complications.

Sampling: No.

Data Reported As: Aggregate rate generated from count data reported as a rate per 1000 livebirths.

Selected References:

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- "Unexpected Complications in Term Newborns." California Maternal Quality Care Collaborative (CMQCC), 2018, www.cmqcc.org/focus-areas/quality-metrics/unexpected-complications-term-newborns.

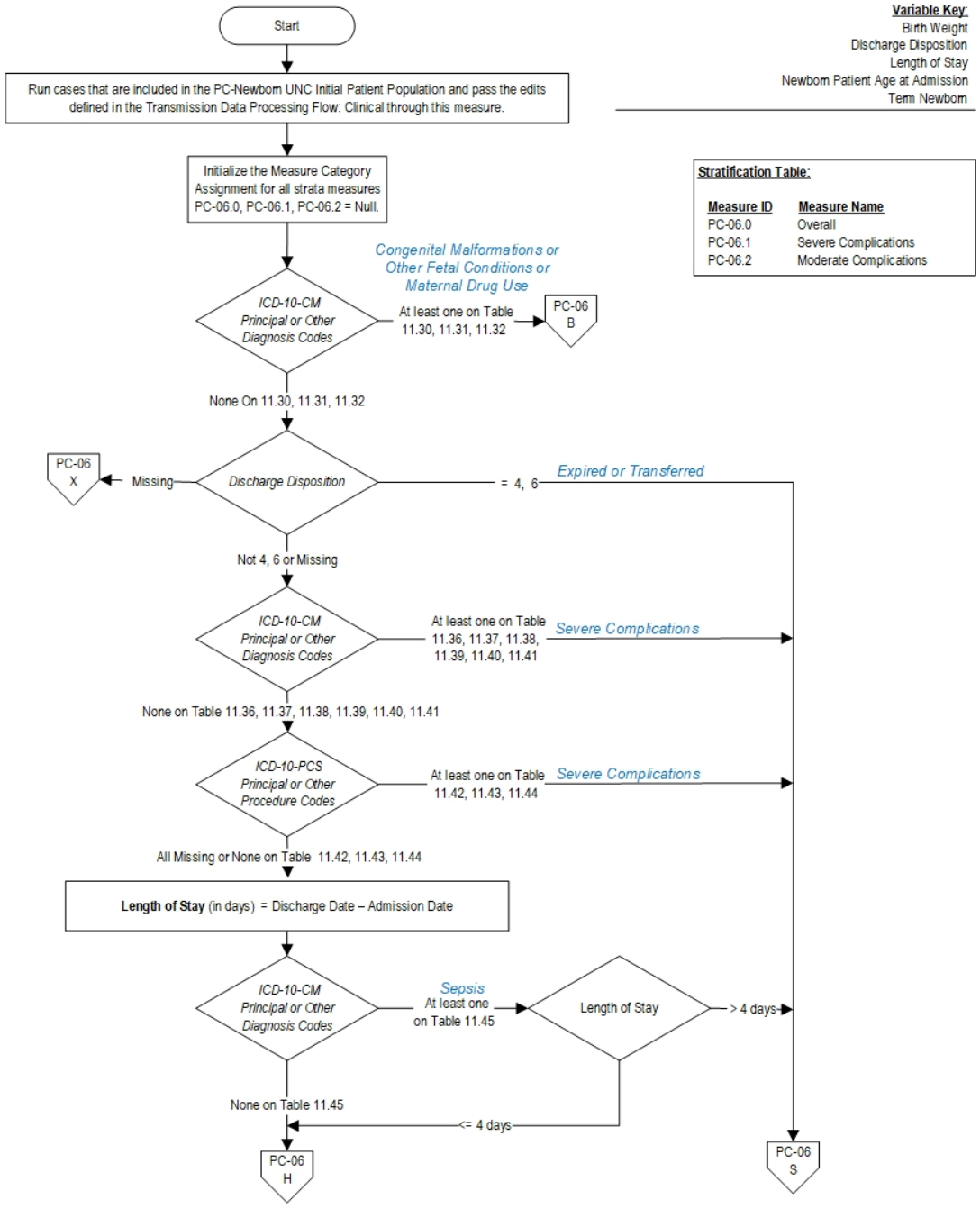
Original Performance Measure Source / Developer:
California Maternal Quality Care Collaborative

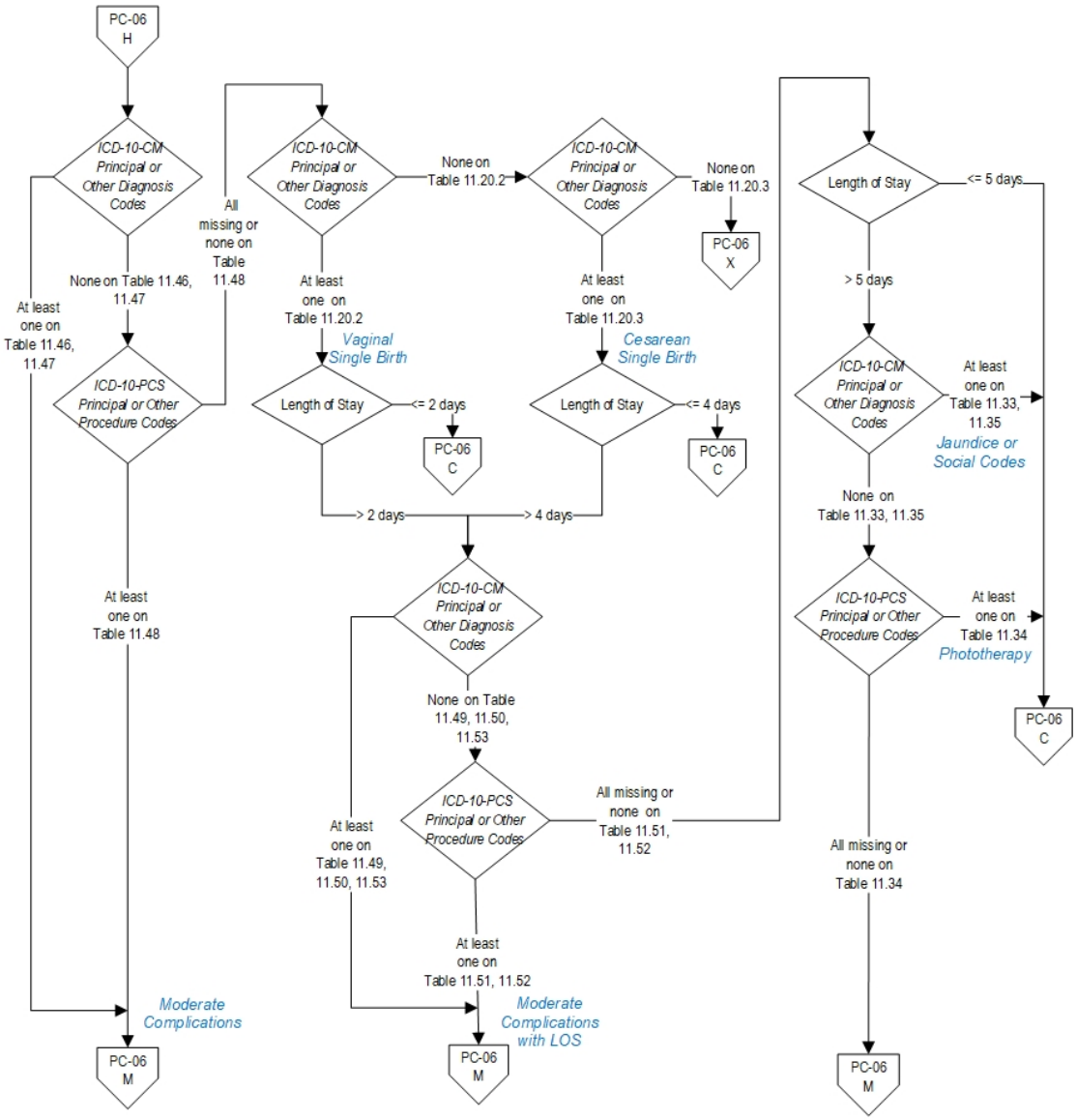
Measure Algorithm:

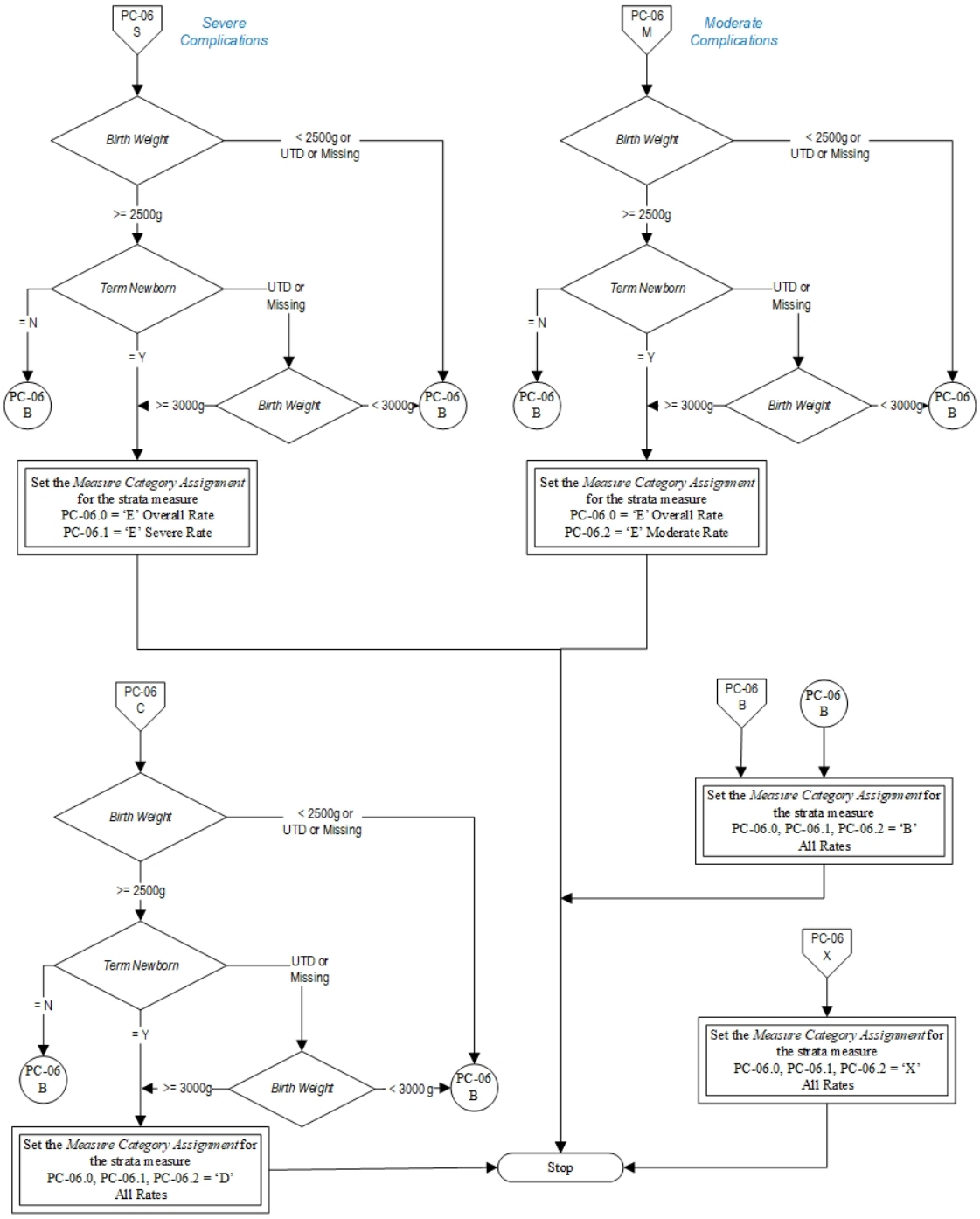
PC-06: Unexpected Complications in Term Newborns

Numerator: Newborns with severe complications and moderate complications.

Denominator: Liveborn single term newborns over 2500 gm in birth weight.




PC-06 H
ICD-10-CM Principal or Other Diagnosis Codes
None on Table 11.46, 11.47
At least one on Table 11.46, 11.47
ICD-10-PCS Principal or Other Procedure Codes
All missing or none on Table 11.48
At least one on Table 11.48
Moderate Complications
PC-06 M
ICD-10-CM Principal or Other Diagnosis Codes
None on Table 11.20.2
At least one on Table 11.20.2
Vaginal Single Birth
Length of Stay
<= 2 days
PC-06 C
> 2 days
ICD-10-CM Principal or Other Diagnosis Codes
None on Table 11.49, 11.50, 11.53
At least one on Table 11.49, 11.50, 11.53
ICD-10-PCS Principal or Other Procedure Codes
All missing or none on Table 11.51, 11.52
At least one on Table 11.51, 11.52
Moderate Complications with LOS
PC-06 M
ICD-10-CM Principal or Other Diagnosis Codes
None on Table 11.20.3
PC-06 X
At least one on Table 11.20.3
Cesarean Single Birth
Length of Stay
<= 4 days
PC-06 C
> 4 days
Length of Stay
<= 5 days
PC-06 C
> 5 days
ICD-10-CM Principal or Other Diagnosis Codes
At least one on Table 11.33, 11.35
Jaundice or Social Codes
None on Table 11.33, 11.35
ICD-10-PCS Principal or Other Procedure Codes
At least one on Table 11.34
Phototherapy
All missing or none on Table 11.34
PC-06 M


PC-06 S
Severe Complications
Birth Weight
< 2500g or UTD or Missing
>= 2500g
Term Newborn
UTD or Missing
= N
= Y
PC-06 B
>= 3000g
Birth Weight
< 3000g
PC-06 B
Set the Measure Category Assignment for the strata measure
PC-06.0 = 'E' Overall Rate
PC-06.1 = 'E' Severe Rate
PC-06 M
Moderate Complications
Birth Weight
< 2500g or UTD or Missing
>= 2500g
Term Newborn
UTD or Missing
= N
= Y
PC-06 B
>= 3000g
Birth Weight
< 3000g
PC-06 B
Set the Measure Category Assignment for the strata measure
PC-06.0 = 'E' Overall Rate
PC-06.2 = 'E' Moderate Rate
PC-06 C
Birth Weight
< 2500g or UTD or Missing
>= 2500g
Term Newborn
UTD or Missing
= N
= Y
PC-06 B
>= 3000g
Birth Weight
< 3000 g
PC-06 B
Set the Measure Category Assignment for the strata measure
PC-06.0, PC-06.1, PC-06.2 = 'D'
All Rates
PC-06 B
PC-06 B
Set the Measure Category Assignment for the strata measure
PC-06.0, PC-06.1, PC-06.2 = 'B'
All Rates
PC-06 X
Set the Measure Category Assignment for the strata measure
PC-06.0, PC-06.1, PC-06.2 = 'X'
All Rates
Stop

Acute Stroke Ready Inpatient (ASR-IP)

Set Measures

Set Measure ID	Measure Short Name
ASR-IP-1	Thrombolytic Therapy: Inpatient Admission
ASR-IP-2	Antithrombotic Therapy By End of Hospital Day 2
ASR-IP-3	Discharged on Antithrombotic Therapy

General Data Elements

Element Name	Collected For
Admission Date	All Records,
Birthdate	All Records,
Discharge Date	All Records, Not collected for HBIPS-2 and HBIPS-3
Hispanic Ethnicity	All Records,
ICD-10-CM Principal Diagnosis Code	All Records, Optional for HBIPS-2, HBIPS-3
Payment Source	All Records, Optional for HBIPS-2 and HBIPS-3
Race	All Records,
Sex	All Records,

Measure Set Specific Data Elements

Element Name	Collected For
Antithrombotic Therapy Administered by End of Hospital Day 2	ASR-IP-2
Antithrombotic Therapy Prescribed at Discharge	ASR-IP-3
Arrival Date	ASR-IP-1, ASR-IP-2
Arrival Time	ASR-IP-1
Comfort Measures Only	ASR-IP-2, ASR-IP-3

Element Name	Collected For
Date Last Known Well	ASR-IP-1
Discharge Disposition	ASR-IP-3
ED Patient	ASR-IP-1
IV Alteplase Initiation	ASR-IP-1
IV Alteplase Initiation Date	ASR-IP-1
IV Alteplase Initiation Time	ASR-IP-1
IV OR IA Alteplase Administered at This Hospital or Within 24 Hours Prior to Arrival	ASR-IP-2
Last Known Well	ASR-IP-1
Reason for Extending the Initiation of IV Alteplase	ASR-IP-1
Reason for Not Administering Antithrombotic Therapy by End of Hospital Day 2	ASR-IP-2
Reason for Not Initiating IV Alteplase	ASR-IP-1
Reason for Not Prescribing **Antithrombotic** Therapy at Discharge	ASR-IP-3
Time Last Known Well	ASR-IP-1

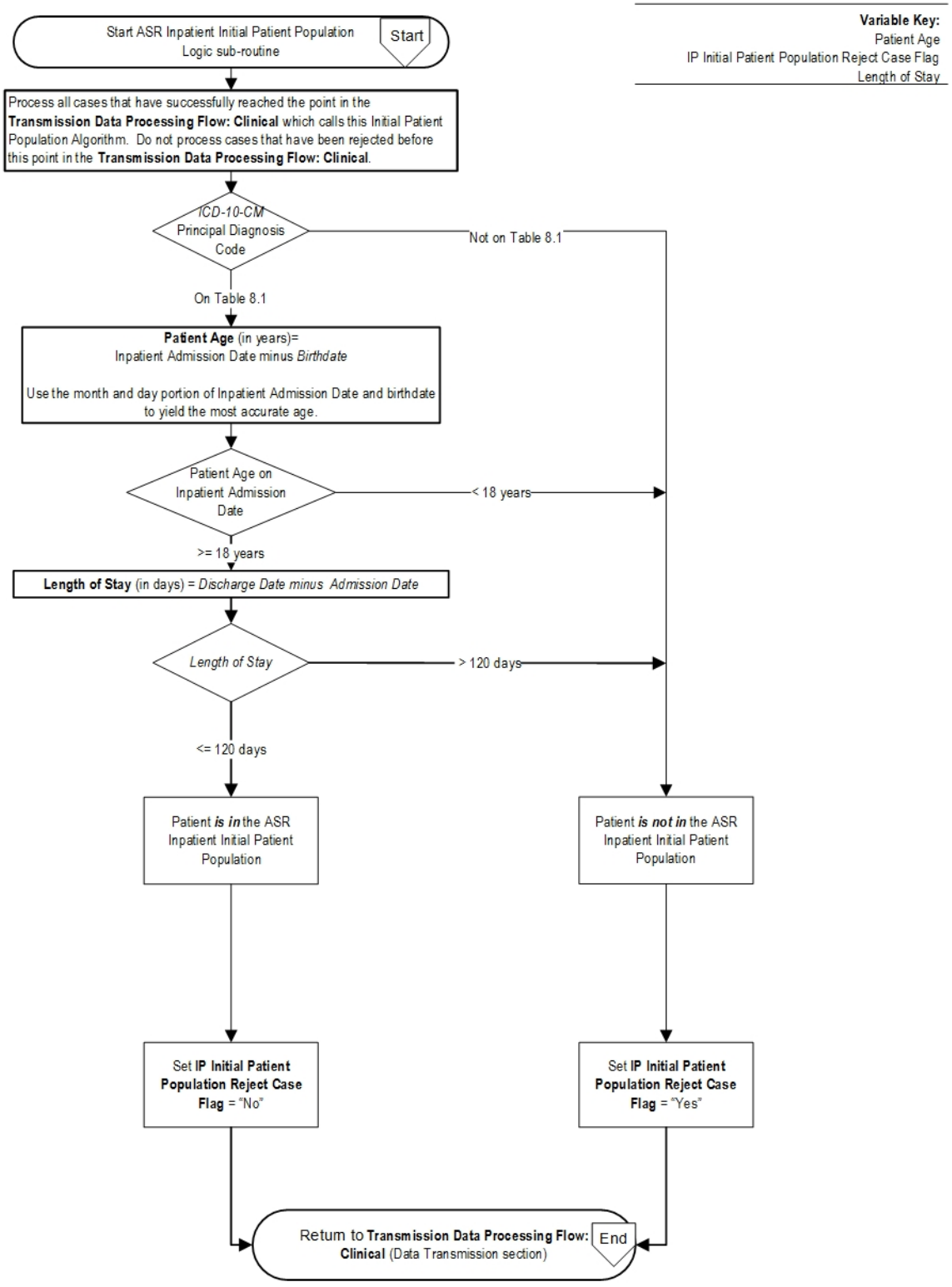
ASR-IP Initial Patient Population

The population of the ASR-IP measure set is identified using 4 data elements:

- ICD-10-CM Principal Diagnosis Code
- Admission Date
- Birthdate
- Discharge Date

Patients admitted to the hospital for inpatient acute care with an ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.1, a Patient Age (Admission Date minus Birthdate) greater than or equal to 18 years and a Length of Stay (Discharge Date minus Admission Date) less than or equal to 120 days are included in the ASR-IP Initial Patient Population.

Acute Stroke Ready Hospital Inpatient Initial Patient Population Algorithm



Measure Information Form

Measure Set: Acute Stroke Ready Inpatient (ASR-IP)

Set Measure ID: ASR-IP-1

Performance Measure Name: Thrombolytic Therapy: Inpatient Admission

Description: Acute ischemic stroke patients who arrive at this hospital within 2 hours of time last known well and for whom IV alteplase was initiated at this hospital within 3 hours of time last known well (i.e., patients admitted for inpatient care following initiation of IV alteplase in the emergency department).

Rationale: The administration of IV alteplase to carefully screened, eligible patients with acute ischemic stroke has been shown to be beneficial in several clinical trials. These included two positive randomized controlled trials in the United States: The National Institute of Neurological Disorders and Stroke (NINDS) Studies, Part I and Part II. Based on the results of these studies, the Food and Drug Administration (FDA) approved the use of intravenous alteplase for the treatment of acute ischemic stroke when given within 3 hours of stroke symptom onset. A large meta-analysis controlling for factors associated with stroke outcome confirmed the benefit of IV alteplase in patients treated within 3 hours of symptom onset. Physicians with experience and skill in stroke management and the interpretation of CT scans should supervise treatment.

The European Cooperative Acute Stroke Study (ECASS) III trial indicated that intravenous thrombolytic therapy (tPA; rtPA) can be given safely to, and can improve outcomes for, carefully selected patients treated 3 to 4.5 hours after stroke; however, as the NINDS investigators concluded, the earlier that IV thrombolytic therapy is initiated, the better the patient outcome. Therefore, the target for IV alteplase initiation remains within 3 hours of time last known well. The administration of IV alteplase beyond 3 hours of stroke symptom onset has not been FDA approved.

Although the benefit of IV alteplase has been well established, only a minority of patients with acute ischemic stroke actually receive this medication across the United States. Recent recommendations from the American Heart Association/American Stroke Association and FDA remove or make less specific many previous contraindications and warnings for therapy.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Acute ischemic stroke patients for whom IV alteplase was initiated at this hospital within 3 hours (less than or equal to 180 minutes) of time last known well.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**

- *Date Last Known Well*
- *IV Alteplase Initiation*
- *IV Alteplase Initiation Date*
- *IV Alteplase Initiation Time*
- *Time Last Known Well*

Denominator Statement: Acute ischemic stroke patients whose time of arrival is within 2 hours (less than or equal to 120 minutes) of time last known well.

Included Populations: Discharges with an ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.1

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Time Last Known Well to arrival in the emergency department greater than 2 hours
- Patients with a documented Reason For Extending the Initiation of IV Alteplase
- Patients with a documented Reason For Not Initiating IV Alteplase

Data Elements:

- *Admission Date*
- *Arrival Date*
- *Arrival Time*
- *Birthdate*
- *Date Last Known Well*
- *Discharge Date*
- *ED Patient*
- *ICD-10-CM Principal Diagnosis Code*
- *Last Known Well*
- *Reason for Extending the Initiation of IV Alteplase*
- *Reason for Not Initiating IV Alteplase*
- *Time Last Known Well*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal or other ICD-10 diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: No.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

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- Guyatt, G. H., E. A. Akl, M. Crowther, D. D. Gutterman, H. J. Schuunemann, Therapy American College of Chest Physicians Antithrombotic, and Panel Prevention of Thrombosis. "Executive Summary: Antithrombotic Therapy and Prevention of Thrombosis, 9th Ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines." [In eng]. Chest 141, no. 2 Suppl (Feb 2012): 7S-47S.

- Hacke, W., G. Donnan, C. Fieschi, M. Kaste, R. von Kummer, J. P. Broderick, T. Brott, et al. "Association of Outcome with Early Stroke Treatment: Pooled Analysis of Atlantis, Ecass, and Ninds Rt-Pa Stroke Trials." [In eng]. Lancet 363, no. 9411 (Mar 6 2004): 768-74.
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- Saposnik, G., J. Fang, M. K. Kapral, J. V. Tu, M. Mamdani, P. Austin, S. C. Johnston, Network Investigators of the Registry of the Canadian Stroke, and Group Stroke Outcomes Research Canada Working. "The Iscore Predicts Effectiveness of Thrombolytic Therapy for Acute Ischemic Stroke." [In eng]. Stroke 43, no. 5 (May 2012): 1315-22.
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- Wardlaw, J. M., V. Murray, E. Berge, and G. J. Del Zoppo. "Thrombolysis for Acute Ischaemic Stroke." [In eng]. Cochrane Database Syst Rev, no. 4 (2009): CD000213.
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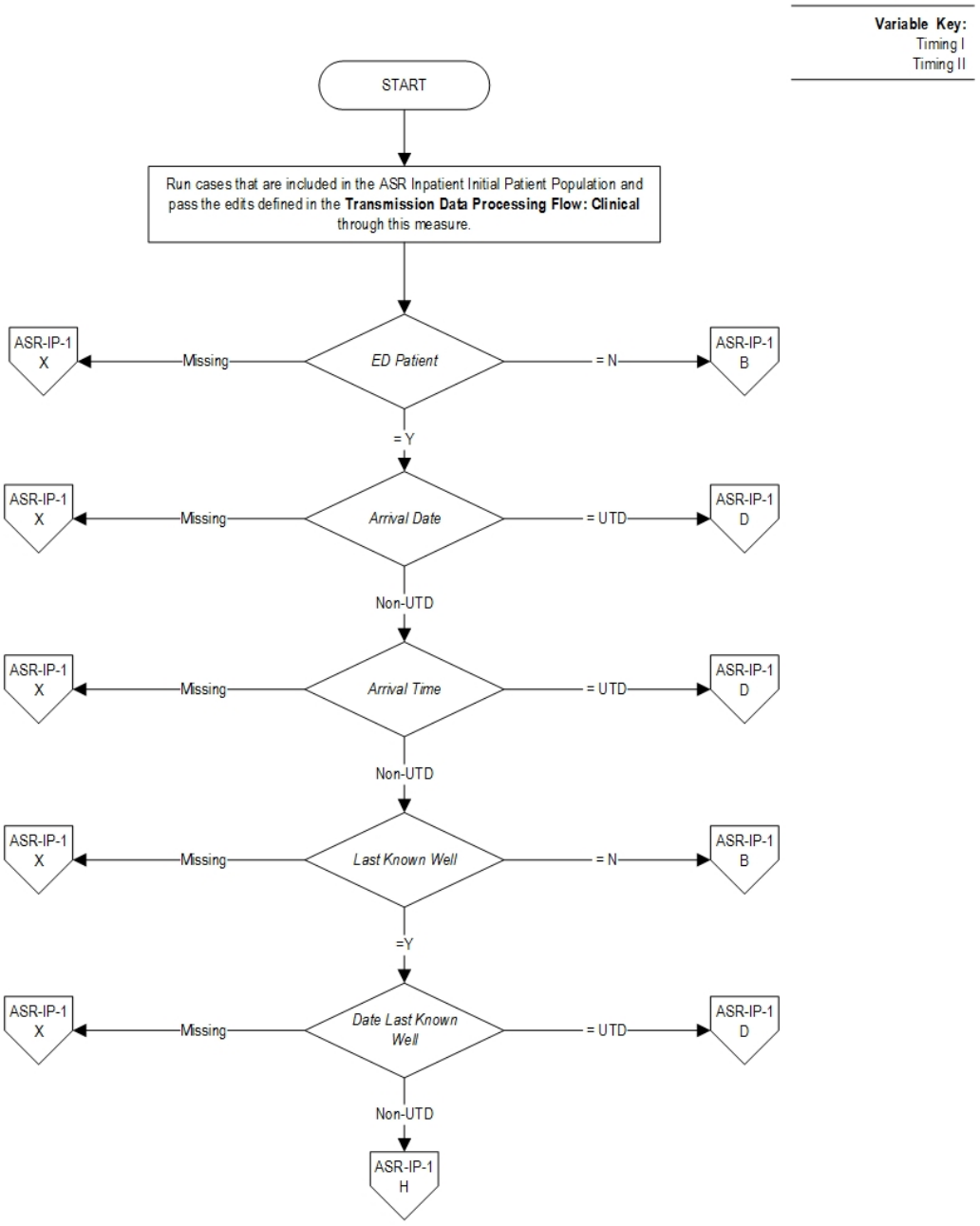
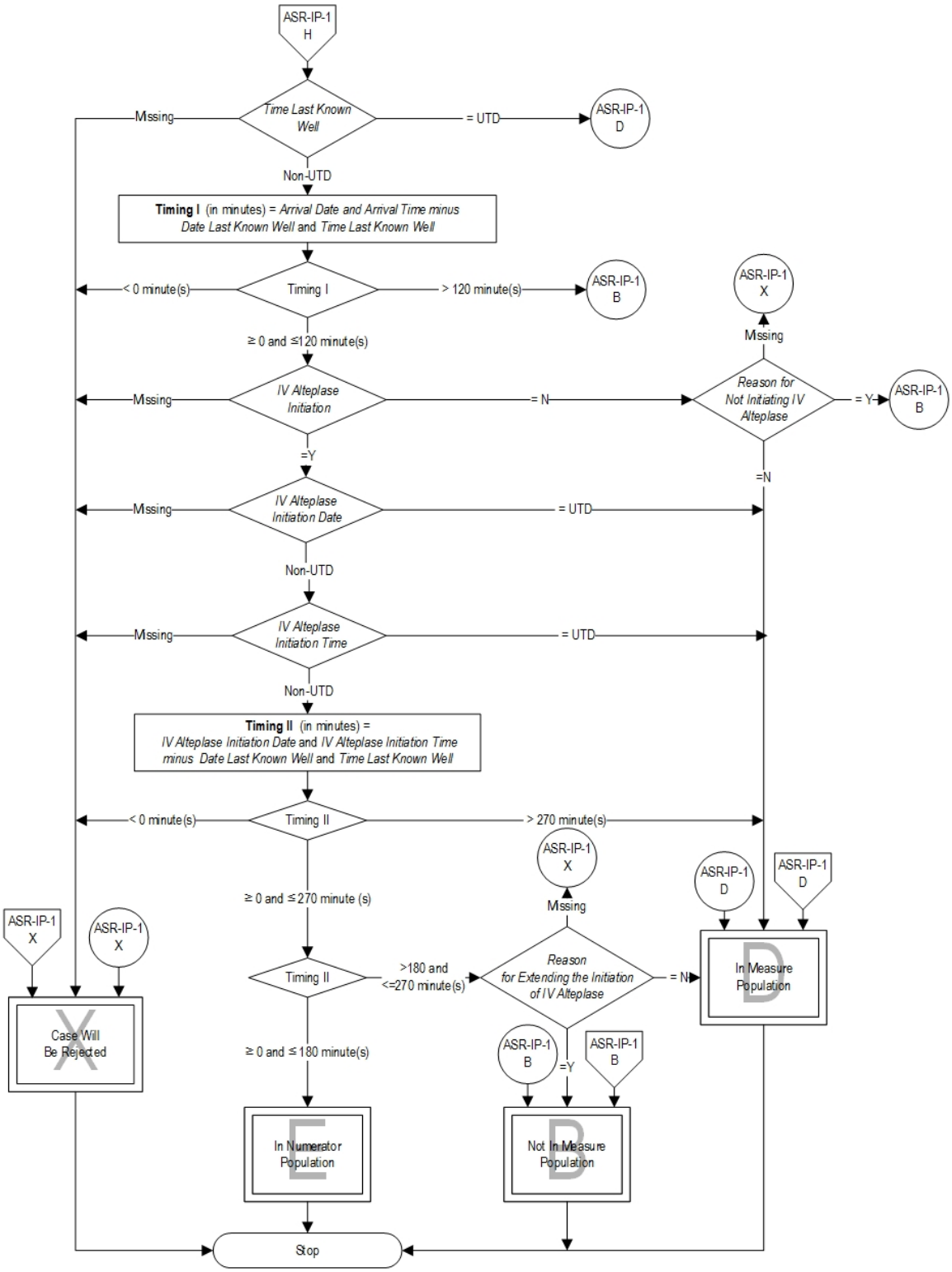
Measure Algorithm:

ASR–IP–1: Thrombolytic Therapy : Inpatient Admission

Numerator: Acute ischemic stroke patients for whom IV alteplase therapy was initiated at this hospital within 3 hours (≤ 180 minutes) of time last known well.

Denominator: Acute ischemic stroke patients whose time of arrival is within 2 hours (≤ 120 minutes) of time last known well.




ASR-IP-1 H
Time Last Known Well
Missing
= UTD
ASR-IP-1 D
Non-UTD
Timing I (in minutes) = Arrival Date and Arrival Time minus Date Last Known Well and Time Last Known Well
Timing I
< 0 minute(s)
> 120 minute(s)
ASR-IP-1 B
≥ 0 and ≤120 minute(s)
ASR-IP-1 X
Missing
IV Alteplase Initiation
Missing
= N
Reason for Not Initiating IV Alteplase
= Y
ASR-IP-1 B
=Y
=N
IV Alteplase Initiation Date
Missing
= UTD
Non-UTD
IV Alteplase Initiation Time
Missing
= UTD
Non-UTD
Timing II (in minutes) = IV Alteplase Initiation Date and IV Alteplase Initiation Time minus Date Last Known Well and Time Last Known Well
Timing II
< 0 minute(s)
> 270 minute(s)
ASR-IP-1 X
ASR-IP-1 D
ASR-IP-1 D
≥ 0 and ≤ 270 minute (s)
Missing
ASR-IP-1 X
ASR-IP-1 X
Timing II
>180 and <=270 minute(s)
Reason for Extending the Initiation of IV Alteplase
= N
In Measure Population
D
Case Will Be Rejected
X
≥ 0 and ≤ 180 minute(s)
ASR-IP-1 B
=Y
ASR-IP-1 B
In Numerator Population
E
Not In Measure Population
B
Stop

Measure Information Form

Measure Set: Acute Stroke Ready Inpatient (ASR-IP)

Set Measure ID: ASR-IP-2

Performance Measure Name: Antithrombotic Therapy By End of Hospital Day 2

Description: Ischemic stroke patients administered antithrombotic therapy by the end of hospital day 2.

Rationale: The effectiveness of antithrombotic agents in reducing stroke mortality, stroke-related morbidity and recurrence rates has been studied in several large clinical trials. While the use of these agents for patients with acute ischemic stroke and transient ischemic attacks continues to be the subject of study, substantial evidence is available from completed studies. Data at this time suggest that antithrombotic therapy should be administered within 2 days of symptom onset in acute ischemic stroke patients to reduce stroke mortality and morbidity as long as no contraindications exist.

Anticoagulants at doses to prevent venous thromboembolism are insufficient antithrombotic therapy to prevent recurrent stroke or TIA.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic stroke patients who had antithrombotic therapy administered by end of hospital day 2

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Antithrombotic Therapy Administered by End of Hospital Day 2*

Denominator Statement: Ischemic stroke patients.

> **Included Populations:** Discharges with an ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.1.
>
> **Excluded Populations:**
>
> - Patients less than 18 years of age
> - Patients who have a Duration of Stay less than 2 days
> - Patients who have a Length of Stay greater than 120 days
> - Patients with Comfort Measures Only documented on day of or day after arrival

- Patients discharged prior to the end of hospital day 2
- Patients with IV OR IA Alteplase Administered at This Hospital or Within 24 Hours Prior to Arrival
- Patients with a documented Reason for Not Administering Antithrombotic Therapy by End of Hospital Day 2

Data Elements:

- *Admission Date*
- *Arrival Date*
- *Birthdate*
- *Comfort Measures Only*
- *Discharge Date*
- *ICD-10-CM Principal Diagnosis Code*
- *IV OR IA Alteplase Administered at This Hospital or Within 24 Hours Prior to Arrival*
- *Reason for Not Administering Antithrombotic Therapy by End of Hospital Day 2*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal or other ICD-10 diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: No.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

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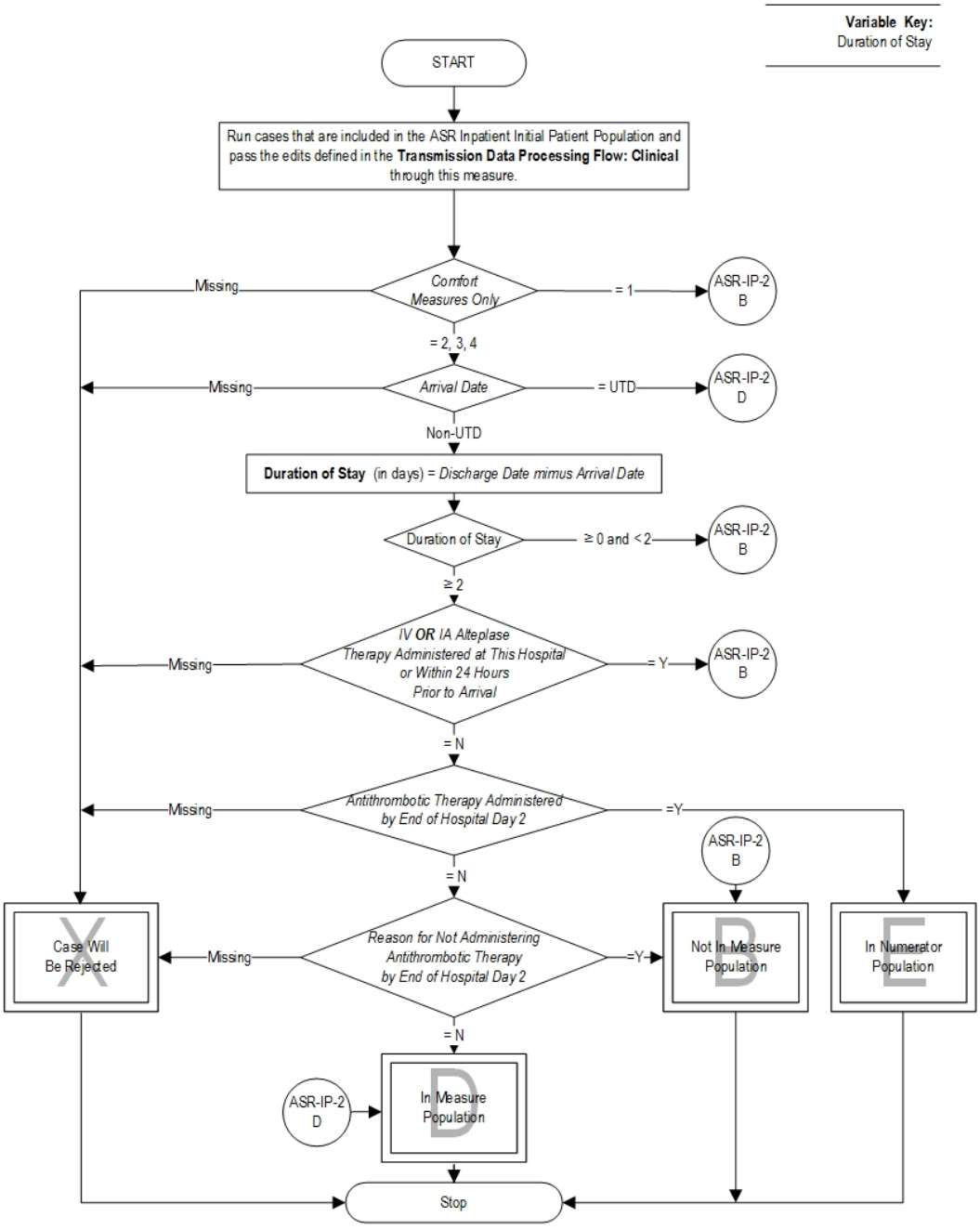
Measure Algorithm:

ASR–IP–2: Antithrombotic Therapy by End of Hospital Day 2

Numerator: Ischemic stroke patients who had antithrombotic therapy administered by end of hospital day 2.

Denominator: Ischemic stroke patients.



Measure Information Form

Measure Set: Acute Stroke Ready Inpatient (ASR-IP)

Set Measure ID: ASR-IP-3

Performance Measure Name: Discharged on Antithrombotic Therapy

Description: Ischemic stroke patients prescribed antithrombotic therapy at hospital discharge

Rationale: The effectiveness of antithrombotic agents in reducing stroke mortality, stroke-related morbidity and recurrence rates has been studied in several large clinical trials. While the use of these agents for patients with acute ischemic stroke and transient ischemic attacks continues to be the subject of study, substantial evidence is available from completed studies. Data at this time suggest that antithrombotic therapy should be prescribed at discharge following acute ischemic stroke to reduce stroke mortality and morbidity as long as no contraindications exist.

For patients with a stroke due to a cardioembolic source (e.g., atrial fibrillation, mechanical heart valve), warfarin is recommended unless contraindicated. In recent years, novel oral anticoagulants (NOACs) have been developed and approved by the U.S. Food and Drug Administration (FDA) for stroke prevention, and may be considered as an alternative to warfarin for select patients. Anticoagulation therapy is not generally recommended for secondary stroke prevention in patients presumed to have a non-cardioembolic stroke.

Anticoagulants at doses to prevent venous thromboembolism are insufficient antithrombotic therapy to prevent recurrent ischemic stroke or TIA.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic stroke patients prescribed antithrombotic therapy at hospital discharge.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Antithrombotic Therapy Prescribed at Discharge*

Denominator Statement: Ischemic stroke patients.

> **Included Populations:** Discharges with an ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.1.
>
> **Excluded Populations:**

- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients discharged to another hospital
- Patients who left against medical advice
- Patients who expired
- Patients discharged to home for hospice care
- Patients discharged to a health care facility for hospice care
- Patients with a documented Reason For Not Prescribing Antithrombotic Therapy at Discharge

Data Elements:

- *Admission Date*
- *Birthdate*
- *Comfort Measures Only*
- *Discharge Date*
- *Discharge Disposition*
- *ICD-10-CM Principal Diagnosis Code*
- *Reason for Not Prescribing **Antithrombotic** Therapy at Discharge*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal or other ICD-10 diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: No.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

- Adams, H., R. Adams, G. Del Zoppo, L. B. Goldstein, Association Stroke Council of the American Heart, and Association American Stroke. "Guidelines for the Early Management of Patients with Ischemic Stroke: 2005 Guidelines Update a Scientific Statement from the Stroke Council of the American Heart Association/American Stroke Association." [In eng]. Stroke 36, no. 4 (Apr 2005): 916-23.
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Cardiovascular Radiology and Intervention Council, and the Atherosclerotic Peripheral Vascular Disease and Quality of Care Outcomes in Research Interdisciplinary Working Groups: The American Academy of Neurology Affirms the Value of This Guideline as an Educational Tool for Neurologists." [In eng]. Stroke 38, no. 5 (May 2007): 1655-711.

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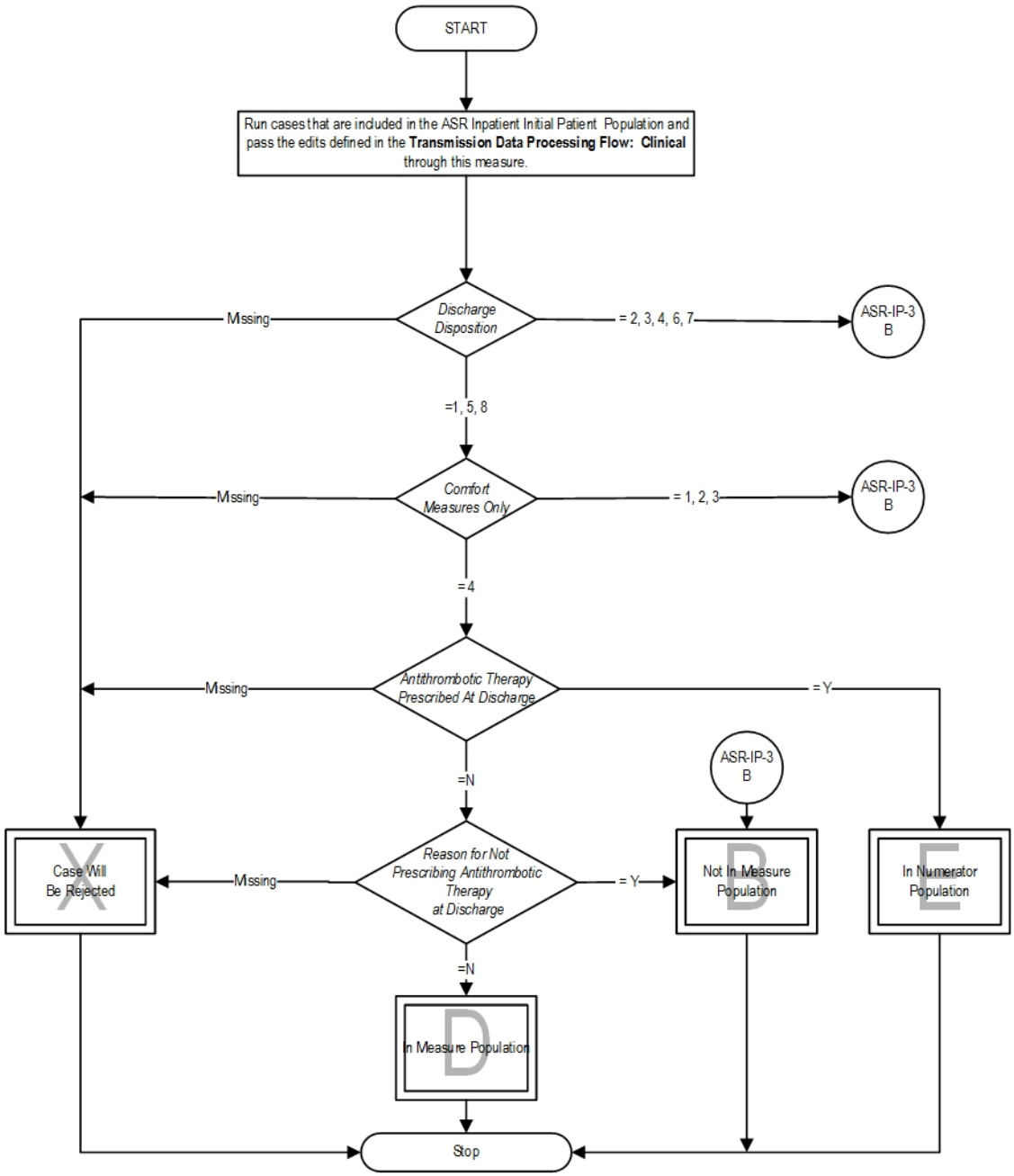
Measure Algorithm:

ASR–IP–3: Discharged on Antithrombotic Therapy

Numerator: Ischemic stroke patients prescribed antithrombotic therapy at hospital discharge

Denominator: Ischemic stroke patients.



Acute Stroke Ready Outpatient (ASR-OP)

Set Measures

Set Measure ID	Measure Short Name
ASR-OP-1	Thrombolytic Therapy: Drip and Ship
ASR-OP-2	Door to Transfer to Another Hospital

General Data Elements

Element Name	Collected For
Birthdate	All Records,
Hispanic Ethnicity	All Records,
ICD-10-CM Principal Diagnosis Code	All Records, Optional for HBIPS-2, HBIPS-3
Payment Source	All Records, Optional for HBIPS-2 and HBIPS-3
Race	All Records,
Sex	All Records,

Measure Set Specific Data Elements

Element Name	Collected For
Arrival Time	ASR-OP-1, ASR-OP-2
Comfort Measures Only	ASR-OP-2
Date Last Known Well	ASR-OP-1
Discharge Code	ASR-OP-2
E/M Code	ASR-OP-1, ASR-OP-2
ED Departure Date	ASR-OP-2
ED Departure Time	ASR-OP-2
IV Alteplase Initiation	ASR-OP-1, ASR-OP-2

Element Name	Collected For
IV Alteplase Initiation Date	ASR-OP-1
IV Alteplase Initiation Time	ASR-OP-1
Last Known Well	ASR-OP-1
Outpatient Encounter Date	ASR-OP-1, ASR-OP-2
Reason for Extending the Initiation of IV Alteplase	ASR-OP-1
Reason for Not Initiating IV Alteplase	ASR-OP-1
Time Last Known Well	ASR-OP-1

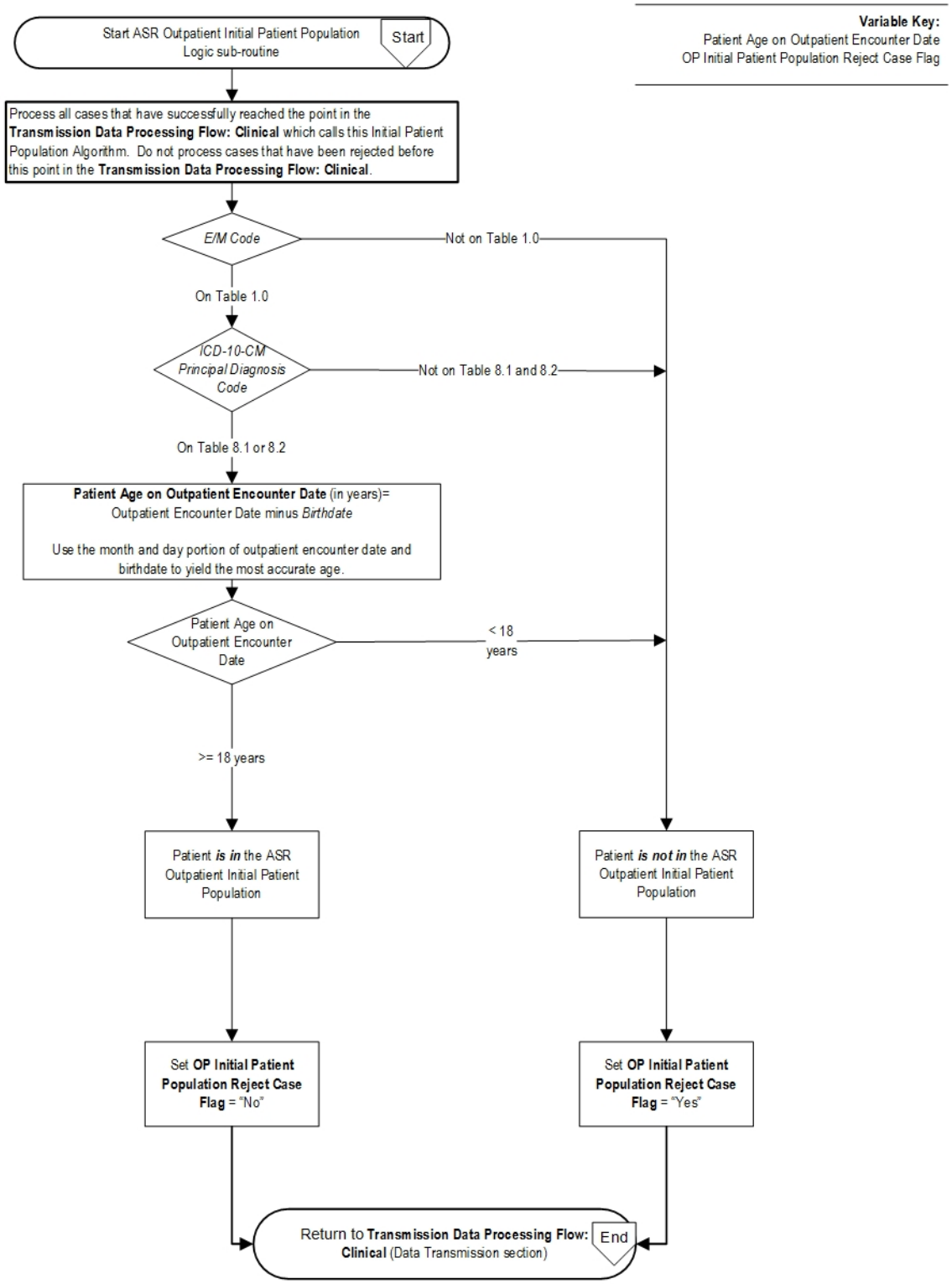
ASR-OP Initial Patient Population

The population of the ASR-OP measure set is identified using 4 data elements:

- EM Code
- ICD-10-CM Principal Diagnosis Code
- Outpatient Encounter Date
- Birthdate

Patients admitted to the hospital for outpatient acute care with an EM Code as defined in Appendix A, Table 1.0, and an ICD-10-CM Principal Diagnosis Code for ischemic or hemorrhagic stroke as defined in Appendix A, Table 8.1 or Table 8.2, and a Patient Age (Outpatient Encounter Date minus Birthdate) greater than or equal to 18 years are included in the ASR-OP Initial Patient Population.

Acute Stroke Ready Hospital Outpatient Initial Patient Population Algorithm



Measure Information Form

Measure Set: Acute Stroke Ready Outpatient (ASR-OP)

Set Measure ID: ASR-OP-1

Performance Measure Name: Thrombolytic Therapy: Drip and Ship

Description: Acute ischemic stroke patients who arrive at this hospital within 2 hours of time last known well and for whom IV alteplase was initiated at this hospital within 3 hours of time last known well (i.e., drip and ship patients).

Rationale: The administration of IV alteplase to carefully screened, eligible patients with acute ischemic stroke has been shown to be beneficial in several clinical trials. These included two positive randomized controlled trials in the United States: The National Institute of Neurological Disorders and Stroke (NINDS) Studies, Part I and Part II. Based on the results of these studies, the Food and Drug Administration (FDA) approved the use of intravenous alteplase for the treatment of acute ischemic stroke when given within 3 hours of stroke symptom onset. A large meta-analysis controlling for factors associated with stroke outcome confirmed the benefit of IV alteplase in patients treated within 3 hours of symptom onset. Physicians with experience and skill in stroke management and the interpretation of CT scans should supervise treatment.

The European Cooperative Acute Stroke Study (ECASS) III trial indicated that intravenous thrombolytic therapy (tPA; rtPA) can be given safely to, and can improve outcomes for, carefully selected patients treated 3 to 4.5 hours after stroke; however, as the NINDS investigators concluded, the earlier that IV thrombolytic therapy is initiated, the better the patient outcome. Therefore, the target for IV alteplase initiation remains within 3 hours of time last known well. The administration of IV alteplase beyond 3 hours of stroke symptom onset has not been FDA approved.

Although the benefit of IV alteplase has been well established, only a minority of patients with acute ischemic stroke actually receive this medication across the United States. Recent recommendations from the American Heart Association/American Stroke Association and FDA remove or make less specific many previous contraindications and warnings for therapy.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Acute ischemic stroke patients for whom IV alteplase therapy was initiated at this hospital within 3 hours (< 180 min.) of time last known well

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**

- *Date Last Known Well*
- *IV Alteplase Initiation*
- *IV Alteplase Initiation Date*
- *IV Alteplase Initiation Time*
- *Time Last Known Well*

Denominator Statement: Acute ischemic stroke patients whose time of arrival is within 2 hours (< 120 min.) of time last known well

Included Populations:

- Patients with an ICD-10-CM Principal Diagnosis Code for acute ischemic stroke as defined in Appendix A, Table 8.1, **AND**
- An E/M Code for emergency department encounter as defined in Appendix A, Table 1.0

Excluded Populations:

- Patients less than 18 years of age
- Time Last Known Well to arrival in ED > 2 hours
- Patients with a documented Reason for Extending the Initiation of IV Alteplase
- Patients with a documented Reason for Not Initiating IV Alteplase

Data Elements:

- *Arrival Time*
- *Birthdate*
- *Date Last Known Well*
- *E/M Code*
- *ICD-10-CM Principal Diagnosis Code*
- *Last Known Well*
- *Outpatient Encounter Date*
- *Reason for Extending the Initiation of IV Alteplase*
- *Reason for Not Initiating IV Alteplase*
- *Time Last Known Well*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal or other ICD-10 diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: No.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

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- Guyatt, G. H., E. A. Akl, M. Crowther, D. D. Gutterman, H. J. Schuunemann, Therapy American College of Chest Physicians Antithrombotic, and Panel Prevention of Thrombosis. "Executive Summary: Antithrombotic Therapy and Prevention of Thrombosis, 9th Ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines." [In eng]. Chest 141, no. 2 Suppl (Feb 2012): 7S-47S.

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- Hacke, W., M. Kaste, E. Bluhmki, M. Brozman, A. Davalos, D. Guidetti, V. Larrue, et al. "Thrombolysis with Alteplase 3 to 4.5 Hours after Acute Ischemic Stroke." [In eng]. N Engl J Med 359, no. 13 (Sep 25 2008): 1317-29.
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- Saposnik, G., J. Fang, M. K. Kapral, J. V. Tu, M. Mamdani, P. Austin, S. C. Johnston, Network Investigators of the Registry of the Canadian Stroke, and Group Stroke Outcomes Research Canada Working. "The Iscore Predicts Effectiveness of Thrombolytic Therapy for Acute Ischemic Stroke." [In eng]. Stroke 43, no. 5 (May 2012): 1315-22.
- "Tissue Plasminogen Activator for Acute Ischemic Stroke. The National Institute of Neurological Disorders and Stroke Rt-Pa Stroke Study Group." [In eng]. N Engl J Med 333, no. 24 (Dec 14 1995): 1581-7.
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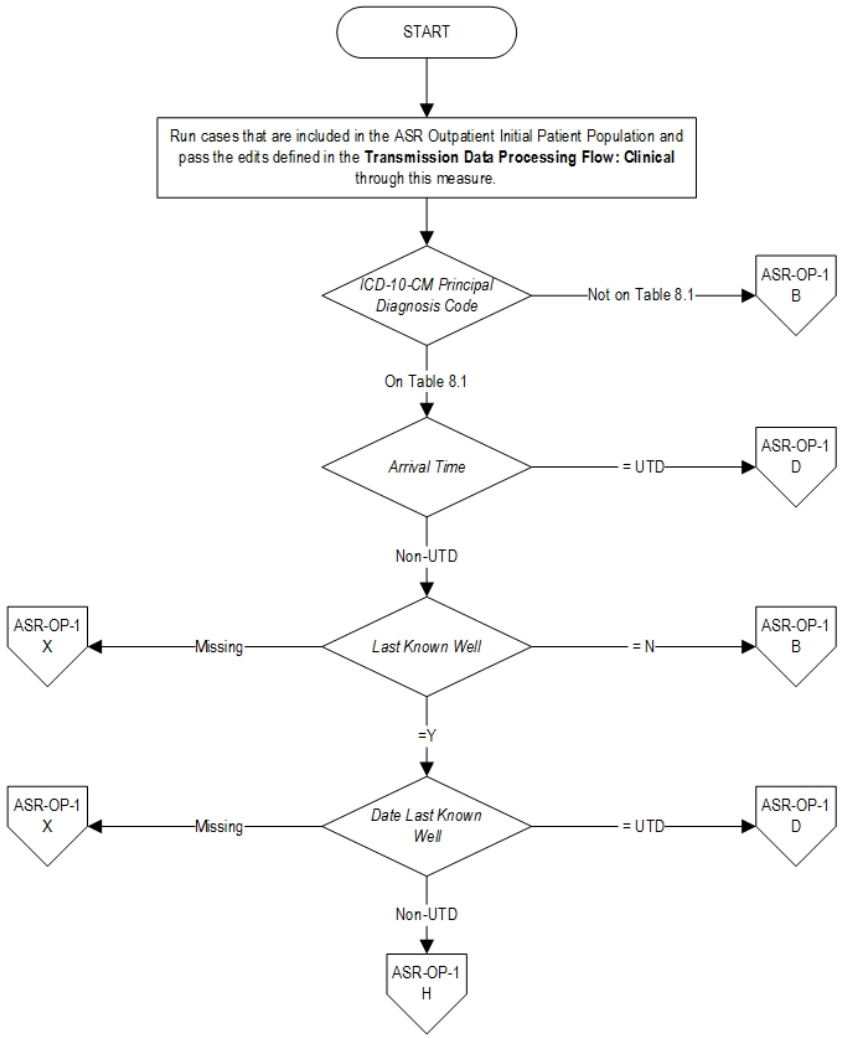
Measure Algorithm:

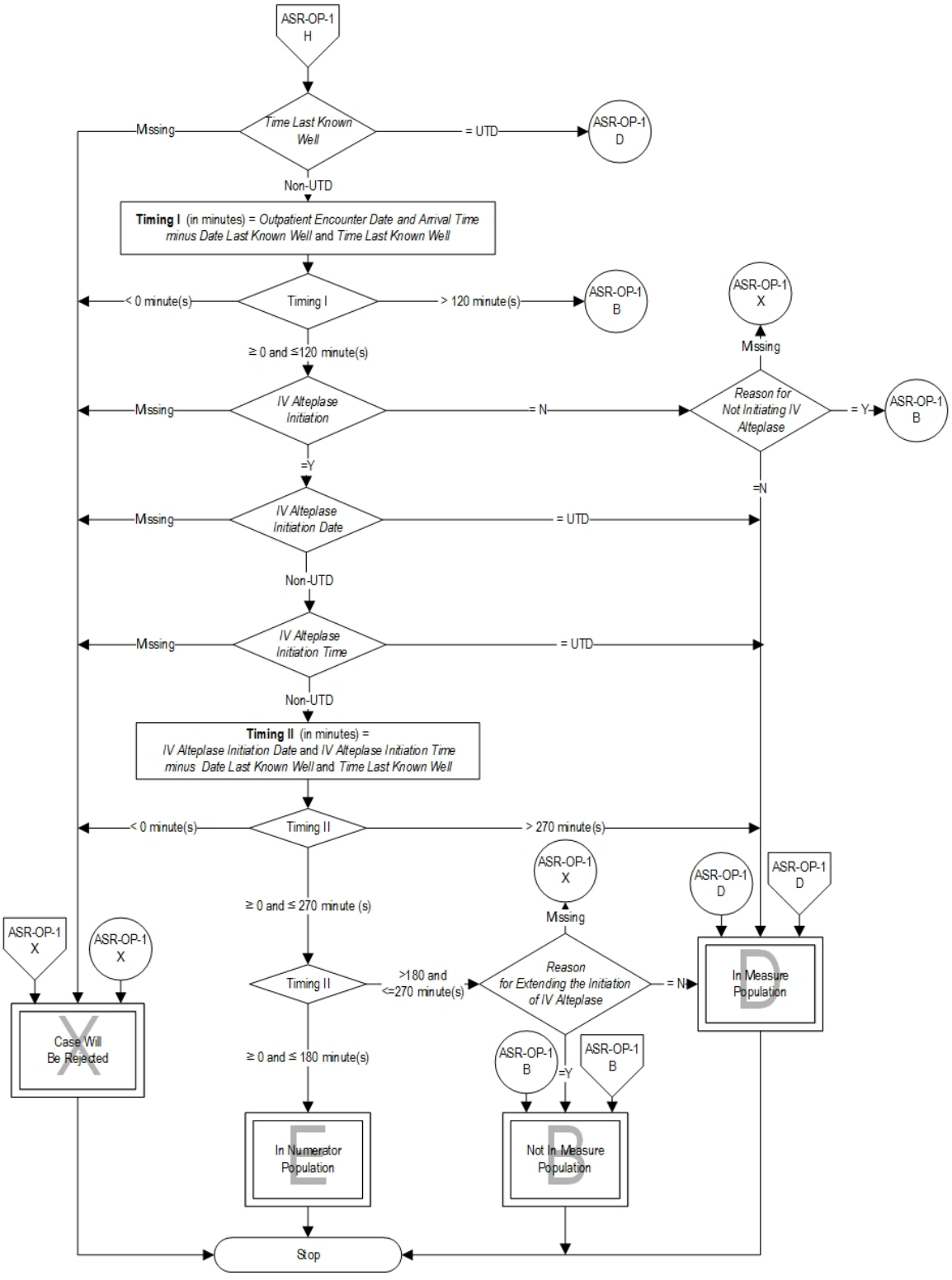
ASR–OP–1: Thrombolytic Therapy

Numerator: Acute ischemic stroke patients for whom IV alteplase therapy was initiated at this hospital within 3 hours (≤ 180 minutes) of time last known well.

Denominator: Acute ischemic stroke patients whose time of arrival is within 2 hours (≤ 120 minutes) of time last known well.

Variable Key:
Timing I
Timing II




ASR-OP-1 H
Time Last Known Well
Missing
= UTD
ASR-OP-1 D
Non-UTD
Timing I (in minutes) = Outpatient Encounter Date and Arrival Time minus Date Last Known Well and Time Last Known Well
Timing I
< 0 minute(s)
> 120 minute(s)
ASR-OP-1 B
≥ 0 and ≤120 minute(s)
IV Alteplase Initiation
Missing
= N
Reason for Not Initiating IV Alteplase
= Y
ASR-OP-1 B
ASR-OP-1 X
Missing
=Y
=N
IV Alteplase Initiation Date
Missing
= UTD
Non-UTD
IV Alteplase Initiation Time
Missing
= UTD
Non-UTD
Timing II (in minutes) = IV Alteplase Initiation Date and IV Alteplase Initiation Time minus Date Last Known Well and Time Last Known Well
Timing II
< 0 minute(s)
> 270 minute(s)
ASR-OP-1 X
ASR-OP-1 D
ASR-OP-1 D
≥ 0 and ≤ 270 minute (s)
Missing
ASR-OP-1 X
ASR-OP-1 X
Timing II
>180 and <=270 minute(s)
Reason for Extending the Initiation of IV Alteplase
= N
In Measure Population
Case Will Be Rejected
≥ 0 and ≤ 180 minute(s)
ASR-OP-1 B
=Y
ASR-OP-1 B
In Numerator Population
Not In Measure Population
Stop

Measure Information Form

Measure Set: Acute Stroke Ready Outpatient (ASR-OP)

Set Measure ID: ASR-OP-2

Set Measure ID	Performance Measure Name
ASR-OP-2a	Door to Transfer to Another Hospital - Overall Rate
ASR-OP-2b	Door to Transfer to Another Hospital - Hemorrhagic Stroke
ASR-OP-2c	Door to Transfer to Another Hospital - Ischemic Stroke; Drip and Ship
ASR-OP-2d	Door to Transfer to Another Hospital - Ischemic Stroke; No IV Alteplase Prior to Transfer

Performance Measure Name: Door to Transfer to Another Hospital

Description: Median time from hospital arrival in the emergency department to transfer of a hemorrhagic stroke patient, an ischemic stroke patient (drip and ship), or an ischemic stroke patient (no IV alteplase given prior to transfer) to another hospital

Rationale: For the past ten years, the organization of acute stroke care in the United States has moved in the direction of stroke centers; however, many patients with an acute stroke live in areas without ready access to a Primary (PSC) or Comprehensive Stroke Center (CSC). A third designation of stroke center, the Acute Stroke Ready Hospital (ASRH), has emerged for hospitals that can provide timely, evidence-based care, i.e., initial diagnostic services, initial stroke diagnosis, stabilization, emergent care and therapies, to patients with an acute stroke who are seen in their emergency department.

Most patients with an acute stroke seen initially at an ASRH will require emergent transfer to a PSC or CSC. The Brain Attack Coalition recommends that such transfers occur within 2 hours of the patient presenting to the ASRH (Alberts, 2013). Additionally, written transfer agreements between the ASRH and at least one PSC or CSC and a transportation vendor with both ground and air ambulance transfer options are recommended. One in four patients are transferred while receiving intravenous (IV) alteplase (Sheth, 2015); others transferred after initiation of coagulopathy reversal treatment. Reducing the time stroke patients remain in the emergency department (ED) can improve access to a higher-level of stroke care and advanced intra-arterial or endovascular treatments, and increase quality of care. A door to needle time goal within 60 minutes should be established for acute ischemic stroke patients treated with IV alteplase. Door to needle times within 45 minutes may be reasonable for some patients (Powers, 2018). For those stroke patients who are not transferred to a PSC or CSC, inpatient admission within 3 hours, preferably to a formal stroke unit, is recommended (Jauch, 2013).

Type Of Measure: Process

Improvement Noted As: Decrease in the median value

Continuous Variable Statement:

ASR-OP-2b Time (in minutes) from ED arrival to transfer of a hemorrhagic stroke patient to another hospital

ASR-OP-2c Time (in minutes) from ED arrival to transfer of an ischemic stroke patient (drip and ship) to another hospital

ASR-OP-2d Time (in minutes) from ED arrival to transfer of an ischemic stroke patient (no IV alteplase prior to transfer) to another hospital

> **Included Populations:**
>
> - Patients with an ICD-10-CM Principal Diagnosis Code for ischemic or hemorrhagic stroke as defined in Appendix A, Table 8.1 or Table 8.2
>
> **AND**
>
> - Patients who are transferred to another hospital
>
> **AND**
>
> - An E/M Code for emergency department encounter as defined in Appendix A, Table 1.0
>
> **Excluded Populations:**
>
> - Patients less than 18 years of age
> - Patients with Comfort Measures Only documented on day of or day after arrival
> - Patients who expired in the emergency department
> - Discharges to dispositions other than an acute care facility
>
> **Data Elements:**
>
> - *Arrival Time*
> - *Birthdate*
> - *Comfort Measures Only*
> - *Discharge Code*
> - *E/M Code*
> - *ED Departure Date*
> - *ED Departure Time*
> - *ICD-10-CM Principal Diagnosis Code*
> - *IV Alteplase Initiation*
> - *Outpatient Encounter Date*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service.

However, complete documentation includes the principal or other ICD-10 diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: No.

Data Reported As: Aggregate measure of central tendency .

Selected References:

- Alberts MJ, Wechsler LR, Jensen MEL, Lachtaw RE, Crocco TJ, George MG, Baranski J, Bass RR, et al. “Formation and Function of Acute Stroke-Ready Hospitals Within a Stroke System of Care Recommendations From the Brain Attack Coalition” [In Eng]. Stroke (Nov 12 2013).
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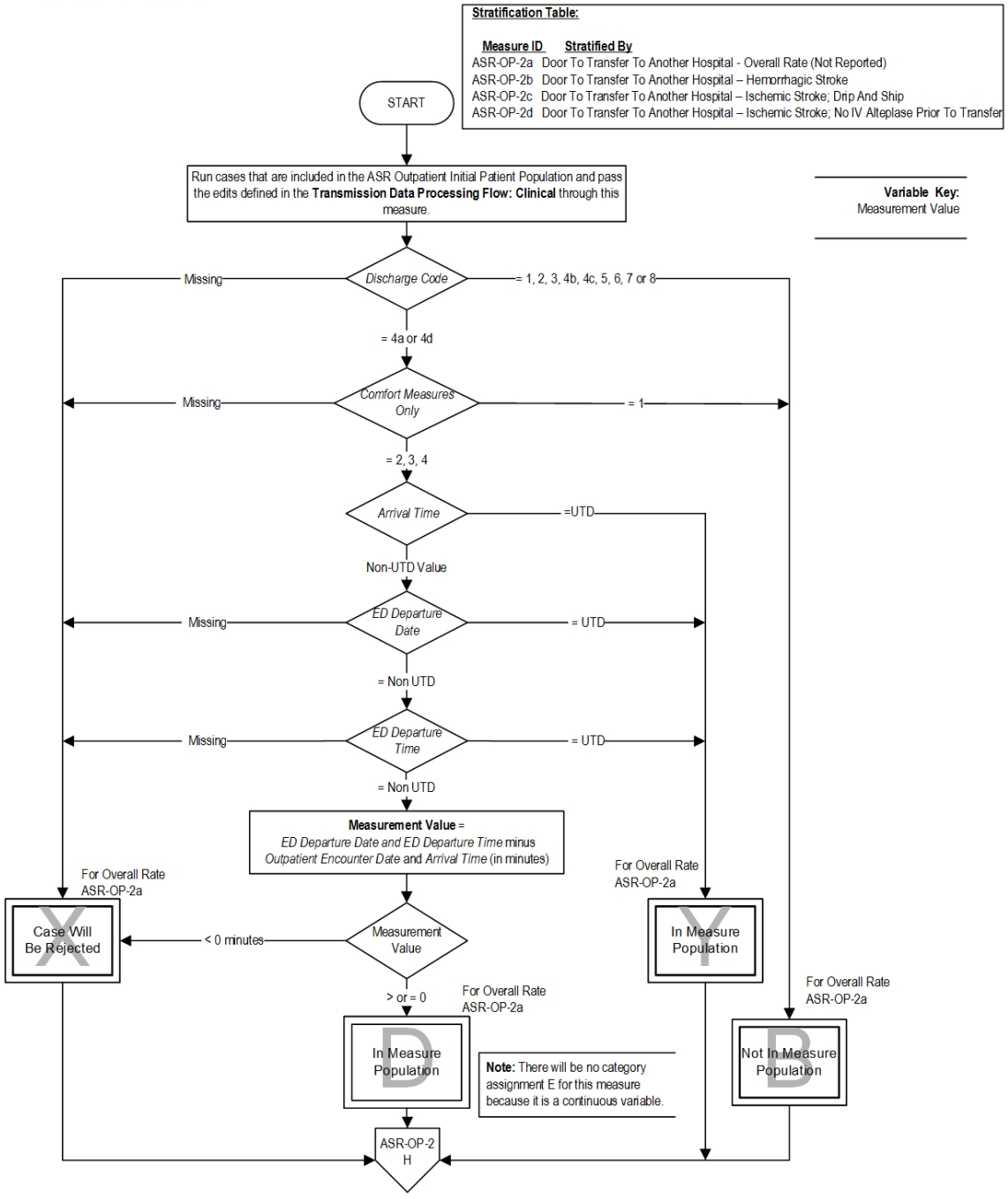
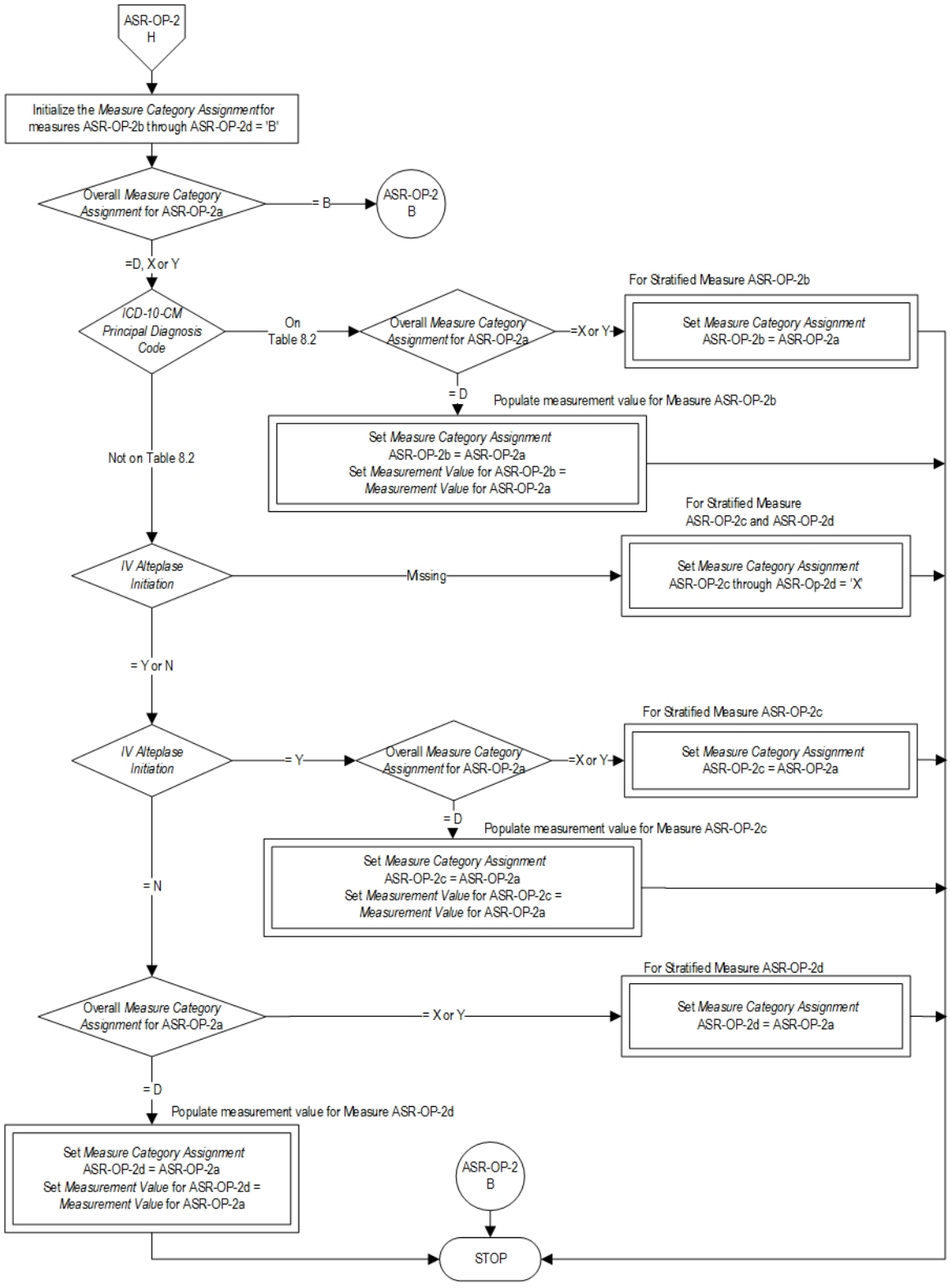
- American Heart Association. Acute Stroke Ready Hospital, 2015.
- Jauch, E. C., J. L. Saver, H. P. Adams, Jr., A. Bruno, J. J. Connors, B. M. Demaerschalk, P. Khatri, et al. "Guidelines for the Early Management of Patients with Acute Ischemic Stroke: A Guideline for Healthcare Professionals from the American Heart Association/American Stroke Association." [In Eng]. Stroke (Jan 31 2013).
- Lyerly MJ, Albright KC, Boehme AK, Shahripour RB, Donnelly JP, Houston JT, Rawal PV, Kapoor N, Alvi M, Sisson A, Alexandrov AW, Alexandrov AV. “Patient Selection for Drip and Ship Thrombolysis in Acute Ischemic Stroke”. [In Eng]. South Med J (Jul 2015).
- Powers WJ, Rabinstein AA, Ackerson T, Adeoye OM, Bambakidis NC, Becker K, Biller J, et al; on behalf of the American Heart Association Stroke Council. 2018 Guidelines for the Early Management of Patients with Acute Ischemic Stroke: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association. *Stroke*. 2018 Jan;49:e8, e10.
- Sheth KN, Smith EE, Grau-Sepulveda MV, Kleindorfer D, Fonarow GC, Schwamm LH. "Drip and Ship Thrombolytic Therapy for Acute Ischemic Stroke: Use, Temporal Trends, and Outcomes." [In Eng]. Stoke (Mar 2015).

Measure Algorithm:

ASR–OP–2 : Door to Transfer to Another Hospital

Continuous Variable Statement: Time (in minutes) from ED arrival to transfer of an ischemic or hemorrhagic stroke patient to another hospital.




ASR-OP-2 H
Initialize the Measure Category Assignment for measures ASR-OP-2b through ASR-OP-2d = 'B'
Overall Measure Category Assignment for ASR-OP-2a
= B
ASR-OP-2 B
=D, X or Y
ICD-10-CM Principal Diagnosis Code
On Table 8.2
Overall Measure Category Assignment for ASR-OP-2a
=X or Y
For Stratified Measure ASR-OP-2b
Set Measure Category Assignment ASR-OP-2b = ASR-OP-2a
= D
Populate measurement value for Measure ASR-OP-2b
Set Measure Category Assignment ASR-OP-2b = ASR-OP-2a Set Measurement Value for ASR-OP-2b = Measurement Value for ASR-OP-2a
Not on Table 8.2
For Stratified Measure ASR-OP-2c and ASR-OP-2d
IV Alteplase Initiation
Missing
Set Measure Category Assignment ASR-OP-2c through ASR-Op-2d = 'X'
= Y or N
IV Alteplase Initiation
= Y
Overall Measure Category Assignment for ASR-OP-2a
=X or Y
For Stratified Measure ASR-OP-2c
Set Measure Category Assignment ASR-OP-2c = ASR-OP-2a
= D
Populate measurement value for Measure ASR-OP-2c
Set Measure Category Assignment ASR-OP-2c = ASR-OP-2a Set Measurement Value for ASR-OP-2c = Measurement Value for ASR-OP-2a
= N
Overall Measure Category Assignment for ASR-OP-2a
= X or Y
For Stratified Measure ASR-OP-2d
Set Measure Category Assignment ASR-OP-2d = ASR-OP-2a
= D
Populate measurement value for Measure ASR-OP-2d
Set Measure Category Assignment ASR-OP-2d = ASR-OP-2a Set Measurement Value for ASR-OP-2d = Measurement Value for ASR-OP-2a
ASR-OP-2 B
STOP

Advanced Certification Heart Failure (ACHF)

Set Measures

Set Measure ID	Measure Short Name
ACHF-01	Beta-Blocker Therapy (i.e., Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate Prescribed for LVSD at Discharge)
ACHF-02	Post-Discharge Appointment for Heart Failure Patients
ACHF-03	Care Transition Record Transmitted
ACHF-04	Discussion of Advance Directives/Advance Care Planning
ACHF-05	Advance Directive Executed
ACHF-06	Post-Discharge Evaluation for Heart Failure Patients

General Data Elements

Element Name	Collected For
Admission Date	All Records,
Birthdate	All Records,
Discharge Date	All Records, Not collected for HBIPS-2 and HBIPS-3
Hispanic Ethnicity	All Records,
ICD-10-CM Principal Diagnosis Code	All Records, Optional for HBIPS-2, HBIPS-3
ICD-10-PCS Other Procedure Codes	All Records, Optional for All HBIPS Records
ICD-10-PCS Principal Procedure Code	All Records, Optional for All HBIPS Records
ICD-10-PCS Principal Procedure Date	All Records, Optional for All HBIPS Records
Race	All Records,
Sex	All Records,

Measure Set Specific Data Elements

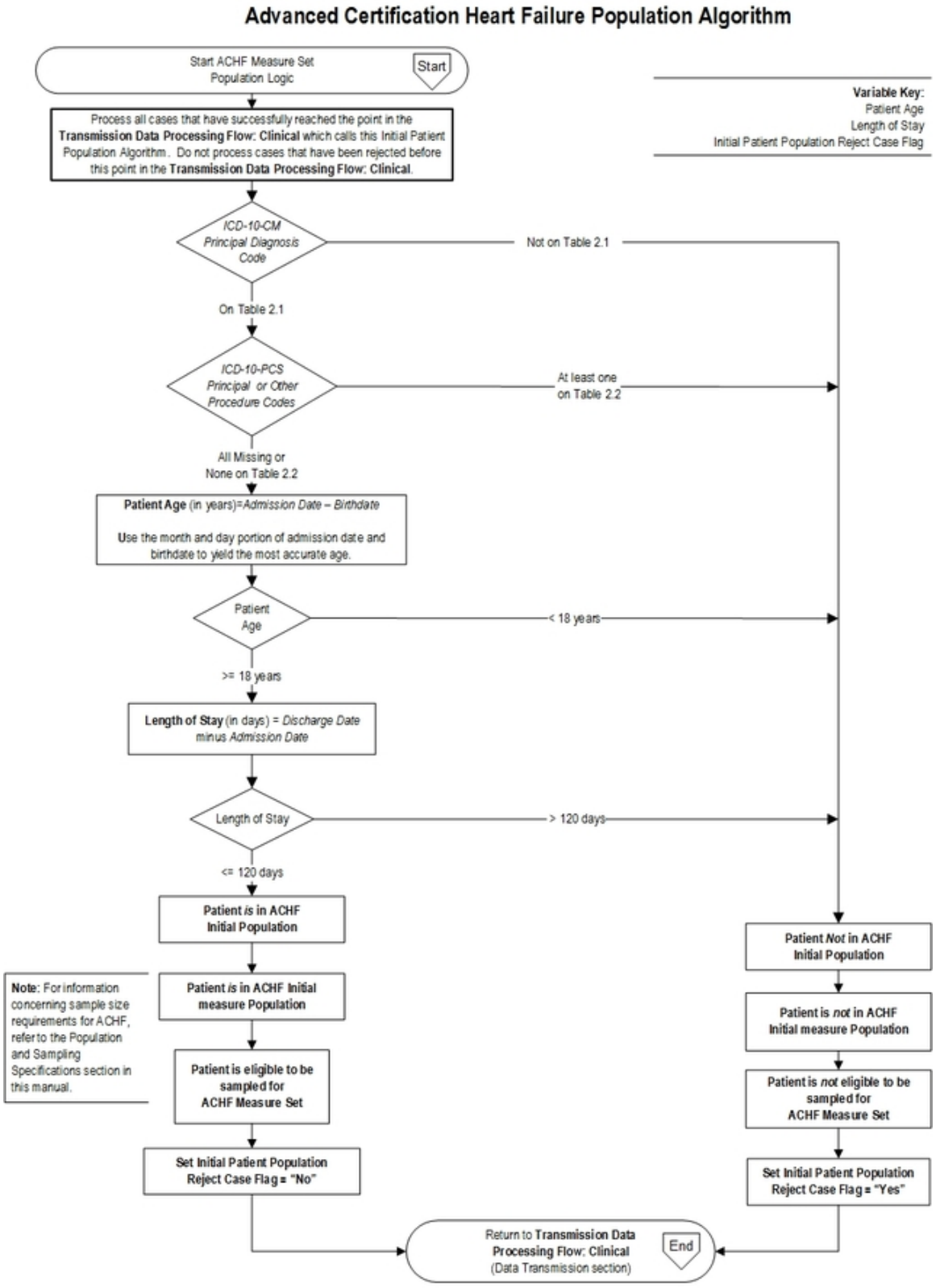
Element Name	Collected For
Advance Directive Executed	ACHF-05
Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate Prescribed for LVSD at Discharge	ACHF-01
Care Transition Record Transmitted	ACHF-03
Care Transition Record-Discharge Medications	ACHF-03
Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed	ACHF-03
Care Transition Record-Procedures Performed During Hospitalization	ACHF-03
Care Transition Record-Reason for Hospitalization	ACHF-03
Care Transition Record-Treatment(s)/Service(s) Provided	ACHF-03
Clinical Trial	ACHF-01, ACHF-02, ACHF-03, ACHF-06
Comfort Measures Only	ACHF
Discharge Disposition	ACHF
Discussion of Advance Directives/Advance Care Planning	ACHF-04
LVSD < 40%	ACHF-01
Post-Discharge Appointment Scheduled Within 7 Days	ACHF-02
Post-Discharge Evaluation Conducted Within 72 Hours	ACHF-06
Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate Prescribed for LVSD at Discharge	ACHF-01
Reason for No Post-Discharge Appointment Within 7 Days	ACHF-02

Related Materials

Document Name
Acknowledgment and Conditions of Use
Appendix A - ICD-10 Code Tables
Appendix C - Medication Tables
Appendix D - Glossary of Terms
Appendix E - Overview of Measure Information Form and Flowchart Formats

Document Name
Appendix G - Resources
Appendix H - Miscellaneous Tables
Cover Page for the Joint Commission Manual
Data Dictionary
Introduction to the Manual
Missing and Invalid Data
Sampling
Table of Contents
Transmission Alpha Data Dictionary
Transmission Data Processing Flow: Clinical
Transmission Data Processing Flow: Population and Sampling
Transmission of Data
Using the The Joint Commission's National Measure Specifications Manual

Initial Patient Population Algorithm



HF Sample Size Requirements

Hospitals that choose to sample have the option of sampling quarterly or sampling monthly. A hospital may choose to use a larger sample size than is required. Hospitals whose Initial Patient Population size is less than the minimum number of cases per quarter for the measure set cannot sample. Hospitals that have five or fewer HF discharges (both Medicare and non-Medicare combined) in a quarter are not required to submit HF patient level data to the QIO Clinical Warehouse[1] and Joint Commission's Data Warehouse.

Regardless of the option used, hospital samples must be monitored to ensure that sampling procedures consistently produce statistically valid and useful data. Due to exclusions, hospitals selecting sample cases MUST submit AT LEAST the minimum required sample size.

The following sample size tables for each option automatically build in the number of cases needed to obtain the required sample sizes. For information concerning how to perform sampling, refer to the Population and Sampling Specifications section in this manual.

Quarterly Sampling

Hospitals performing quarterly sampling for HF must ensure that its Initial Patient Population and sample size meet the following conditions:

Quarterly Sample Size
Based on Initial Patient Population Size for the HF Measure Set

Hospital's Measure

Average Quarterly Initial Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
≥ 1516	304
381 -— 1515	20% of Initial Patient Population size
76 —- 380	76
6 —- 75	No sampling; 100% Initial Patient Population required
0 - 5	Submission of patient level data is encouraged but not required: • CMS: if submission occurs, 1-5 cases of Initial Patient Population may be submitted[1] • The Joint Commission: if submission occurs, 100% Initial Patient Population required

Monthly Sampling

Hospitals performing monthly sampling for HF must ensure that its Initial Patient Population and sample size meet the following conditions:

Monthly Sample Size
Based on Initial Patient Population Size for the HF Measure Set

Hospital's Measure

Average Monthly Initial Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
≥ 506	102
131 -— 505	20% of Initial Patient Population size
26 -— 130	26
<26	No sampling; 100% Initial Patient Population required

Sample Size Examples

- Quarterly sampling:
  - The HF Initial Patient Population size for a hospital has been 500 patients per quarter during the past year. The required quarterly sample size would be 100 (twenty percent of 500) heart failure patients per quarter -- as this number is smaller than the maximum condition (i.e., 304 cases) and larger than the minimum condition (i.e., 76 cases).
  - A hospital's HF Initial Patient Population size is 1,482 patients during the third quarter. The required sample size is 20% of the patient population or 297 cases for the quarter (twenty percent of 1,482 equals 296.4 rounded to the next highest whole number equals 297).
  - A hospital's HF Initial Patient Population size is 5 patients during the first quarter. Submission of patient level data is not required. If the hospital chooses to submit patient level data:
    - CMS: the quarterly sample size would be 1 — 5 cases for the quarter.[1]
    - The Joint Commission: the required quarterly sample size would be 100% of the patient population or 5 cases for the quarter.

- Monthly sampling:
  - A hospital's HF Initial Patient Population size is 25 patients during March. Since this is less than the minimum condition (i.e., 26 cases), no sampling is allowed or 100% of the patient population of 25 cases is required.
  - A hospital's HF Initial Patient Population size is 503 patients during July. The required sample size is 20% of the patient population or 101 cases for the month (twenty percent of 503 equals 100.6 rounded to the next highest whole number equals 101).

[1] The Heart Failure (HF) core measure sampling methodology is applicable to the ACHF measures. Data collection for the ACHF measures is required by Joint Commission Disease-Specific Care Certification.

Measure Information Form

Measure Set: Advanced Certification Heart Failure (ACHF)

Set Measure ID: ACHF-01

Performance Measure Name: Beta-Blocker Therapy (i.e., Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate Prescribed for LVSD at Discharge)

Description: Beta-blocker therapy (i.e., bisoprolol, carvedilol, or sustained-release metoprolol succinate) is prescribed for heart failure patients with LVSD at discharge. For purposes of this measure, LVSD is defined as chart documentation of a left ventricular ejection fraction (LVEF) less than 40% or a narrative description of left ventricular systolic (LVS) function consistent with moderate or severe systolic dysfunction.

Rationale: Beta-blocker therapy has been recommended for the treatment of patients with heart failure and reduced left ventricular ejection fraction (LVEF) since the 1970's (HFSA, 2010). Several large-scale clinical trials have provided unequivocal evidence of important reductions in both morbidity and mortality. The marked beneficial effects of beta blockade has been well demonstrated in large-scale clinical trials of symptomatic patients with New York Heart Association (NYHA) class II-IV heart failure and reduced LVEF using carvedilol, bisoprolol, and sustained-release metoprolol succinate (Hunt et al., 2009). These beta-blockers, in addition to ACE inhibitors and diuretics, are considered routine therapy for heart failure patients with reduced LVEF. Beta-blocker therapy is well tolerated by the majority of patients, even those with co-morbidities such as, diabetes mellitus, chronic obstructive lung disease, and peripheral vascular disease.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients who are prescribed bisoprolol, carvedilol, or sustained-release metoprolol succinate for LVSD at hospital discharge.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate Prescribed for LVSD at Discharge*

Denominator Statement: Heart failure patients with current or prior documentation of left ventricular ejection fraction (LVSD) < 40%.

> **Included Populations:**

- Discharges with ICD-10-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1, and
- Documentation of LVSD < 40%

Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in a Clinical Trial
- Patients discharged to another hospital
- Patients who left against medical advice
- Patients who expired
- Patients discharged to home for hospice care
- Patients discharged to a healthcare facility for hospice care
- Patients with a documented Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate Prescribed for LVSD at Discharge

Data Elements:

- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Date*
- *Discharge Disposition*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*
- *LVSD < 40%*
- *Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate Prescribed for LVSD at Discharge*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

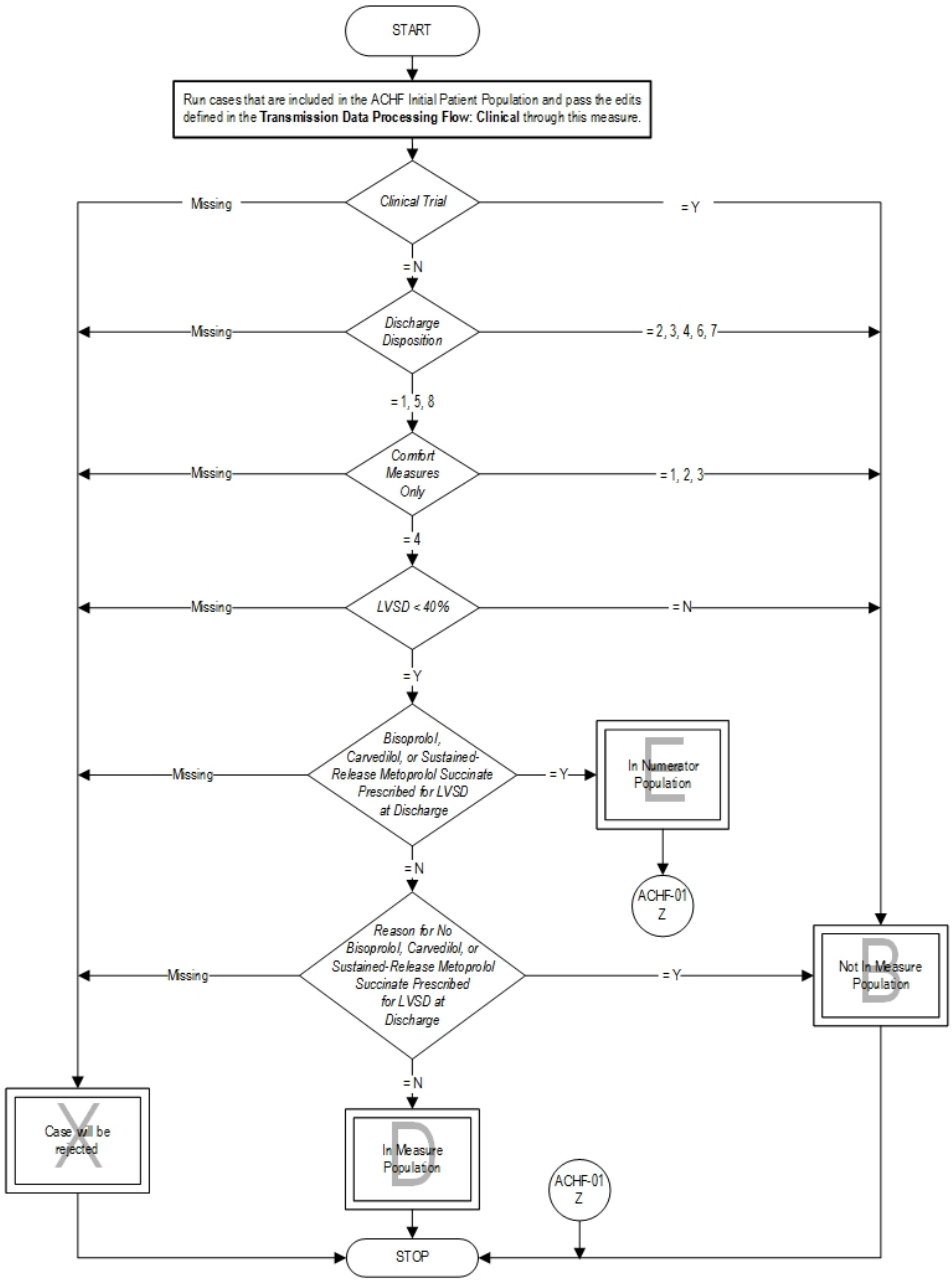
1. American College of Cardiology Foundation, American Heart Association, Physician Consortium for Performance Improvement® (PCPI). Heart Failure Performance Measurement Set. Jan. 2011; 47-56.
2. American Heart Association. Get With The Guidelines® Outpatient Fact Sheet. 2010.
3. Hunt SA, Abraham WT, Chin MH, Felman AM, Francis GS, Ganiats TG, Jessup M, Konstam MA, Mancini DM, Michl K, Oates JA, Rahko PS, Silver MA, Stevenson LW, Yancy CW. 2009 Focused update incorporated Into the ACC/AHA 2005 guidelines for the diagnosis and management of heart failure in adults: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines Developed in Collaboration With the International Society for Heart and Lung Transplantation. Circulation. 2009;119(14):e391-e479.
4. Lindenfeld J, Albert NM, Boehmer JP, Collins SP, Ezekowitz JA, Givertz MM, Klapholz M, MoserDK, Rogers JG, Starling RC, Stevenson WG, Tang WHW, Teerlink JR, Walsh MN. Executive Summary: HFSA 2010 Comphrensive Heart Failure Practice Guideline. J Card Fail 2010;16:475-539.
5. Yancy CW, Jessup M, Bozkurt B, Butler J, Casey DE Jr, Drazner MH, Fonarow GC, Geraci SA, Horwich T, Januzzi JL, Johnson MR, Kasper EK, Levy WC, Masoudi FA, McBride PE, McMurray JJV, Mitchell JE, Peterson PN, Riegel B, Sam F, Stevenson LW, Tang WHW, Tsai EJ, Wilkoff BL. 2013 ACCF/AHA guideline for the management of heart failure: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Circulation. 2013;128:e240–e327.

Measure Algorithm:

ACHF–01: Beta-Blocker Therapy (i.e., Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate) Prescribed for LVSD at Discharge

Numerator: Patients who are prescribed bisoprolol, carvedilol, or sustained-release metoprolol succinate for LVSD at discharge.

Denominator: Heart failure patients with current or prior documentation of left ventricular ejection fraction (LVSD) < 40%.



Measure Information Form

Measure Set: Advanced Certification Heart Failure (ACHF)

Set Measure ID: ACHF-02

Performance Measure Name: Post-Discharge Appointment for Heart Failure Patients

Description: Patients for whom a follow-up appointment for an office or home health visit for management of heart failure was scheduled within 7 days post-discharge and documented including location, date, and time.

Rationale: Care coordination is important for all patients, but especially for vulnerable populations, such as patients with heart failure and other chronic diseases. Today, the average Medicare patient sees two primary care and five specialists per year (NQF, 2010). For patients with multiple chronic conditions, the number of healthcare providers involved in the care of the patient is even higher.

The exchange of information from one healthcare provider to another should smooth the transition of care from the inpatient to outpatient setting. According to Bell and colleagues (2008), the separation of hospital and ambulatory care may result in significant care discontinuities after discharge. Therefore, it is paramount that discussions between providers summarize the patient's history and communicate the plan for follow-up care after discharge in order to be effective. When done well, this exchange of information can avoid conflicting plans of care; overuse, underuse, and misuse of medications, tests and therapies; reduce costs and potentially adverse events.

The Joint Commission's 2017 Disease-Specific Care Advanced Certification Heart Failure standards require: "The program [to provide] care coordination services across inpatient and outpatient settings." Scheduling of the initial follow-up appointment with the primary care provider is a first-step to ensuring continuity of care. In addition, standards require that care, treatment, and services are provided in a planned and timely manner, which includes the arrangement of a follow-up appointment with a health care provider to occur within seven days after discharge.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients for whom a follow-up appointment for an office or home health visit for management of heart failure was scheduled within 7 days post-discharge and documented including location, date, and time.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**

- *Post-Discharge Appointment Scheduled Within 7 Days*

Denominator Statement: All heart failure patients discharged from a hospital inpatient setting to home or home care.

Included Populations:

- Discharges with ICD-10-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1, and
- A discharge to home, home care, or court/law enforcement

Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patient who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in a Clinical Trial
- Patients discharged to locations other than home, home care, or law enforcement
- Patients with a documented Reason for No Post-Discharge Appointment Within 7 Days
- Patients who left against medical advice (AMA)

Data Elements:

- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Date*
- *Discharge Disposition*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*
- *Reason for No Post-Discharge Appointment Within 7 Days*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

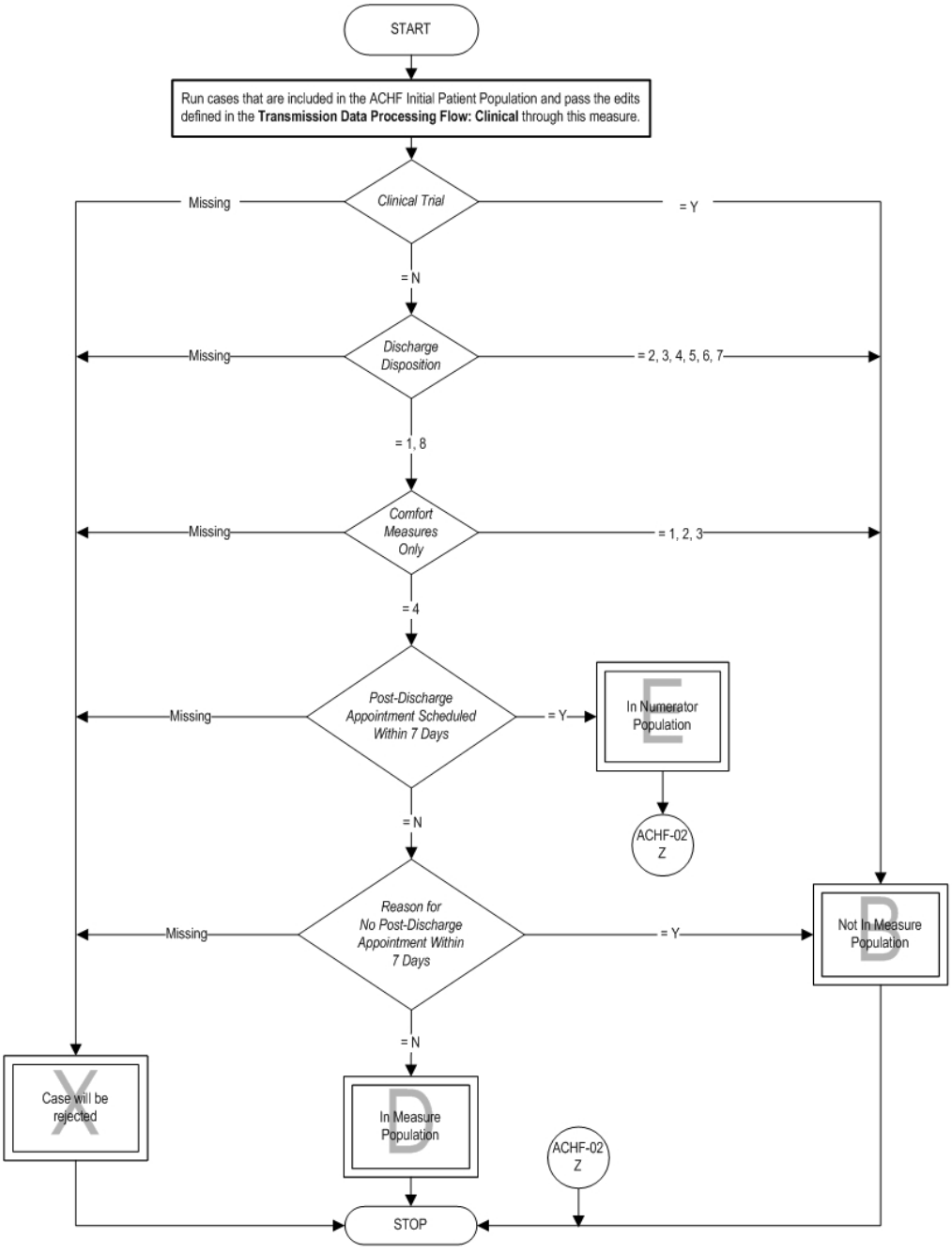
1. American College of Cardiology Foundation, American Heart Association, Physician Consortium for Performance Improvement® (PCPI). Heart Failure Performance Measurement Set. Jan. 2011; 47-56.
2. American Heart Association. Get With The Guidelines® Outpatient Fact Sheet. 2010.
3. Hunt SA, Abraham WT, Chin MH, Felman AM, Francis GS, Ganiats TG, Jessup M, Konstam MA, Mancini DM, Michl K, Oates JA, Rahko PS, Silver MA, Stevenson LW, Yancy CW. 2009 Focused update incorporated Into the ACC/AHA 2005 guidelines for the diagnosis and management of heart failure in adults: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines Developed in Collaboration With the International Society for Heart and Lung Transplantation. Circulation. 2009;119(14):e391-e479.
4. Lindenfeld J, Albert NM, Boehmer JP, Collins SP, Ezekowitz JA, Givertz MM, Klapholz M, MoserDK, Rogers JG, Starling RC, Stevenson WG, Tang WHW, Teerlink JR, Walsh MN. Executive Summary: HFSA 2010 Comphrensive Heart Failure Practice Guideline. J Card Fail 2010;16:475-539.
5. The Joint Commission. The Joint Commission's 2017 Comprehensive Certification Manual for Disease-Specific Care: Advanced Certification in Heart Failure Addendum. Oakbrook Terrace, IL: Author. 2017.
6. Yancy CW, Jessup M, Bozkurt B, Butler J, Casey DE Jr, Drazner MH, Fonarow GC, Geraci SA, Horwich T, Januzzi JL, Johnson MR, Kasper EK, Levy WC, Masoudi FA, McBride PE, McMurray JJV, Mitchell JE, Peterson PN, Riegel B, Sam F, Stevenson LW, Tang WHW, Tsai EJ, Wilkoff BL. 2013 ACCF/AHA guideline for the management of heart failure: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Circulation. 2013;128:e240–e327.

Measure Algorithm:

ACHF–02: Post-Discharge Appointment for Heart Failure Patients

Numerator: Patients for whom a follow-up appointment for an office or home health visit for management of heart failure was scheduled within 7 days post-discharge and documented including location, date, and time.

Denominator: All heart failure patients discharged from a hospital inpatient setting to home or home care.



Measure Information Form

Measure Set: Advanced Certification Heart Failure (ACHF)

Set Measure ID: ACHF-03

Performance Measure Name: Care Transition Record Transmitted

Description: A care transition record is transmitted to a next level of care provider within 7 days of discharge containing ALL of the following:

- Reason for hospitalization
- Procedures performed during this hospitalization
- Treatment(s)/Service(s) provided during this hospitalization
- Discharge medications, including dosage and indication for use
- Follow-up treatment and services needed (e.g., post-discharge therapy, oxygen therapy, durable medical equipment)

Rationale: The hand-over of care from one healthcare provider to another should smooth the transition of care from the inpatient to outpatient setting (van Walraven et al., 2002). Communication and information exchange should be completed to allow sufficient time for the receiving provider to treat the patient. The timeliness of communication should be consistent with the urgency of follow-up required (Kripalani et al., 2007). Communication and information exchange between providers may be in the form of a phone call, fax, or other secure vehicle, such as, mutual access to an electronic health record (EHR).

The Joint Commission's 2017 Disease-Specific Care Advanced Certification Heart Failure standards require: The program [to provide] care coordination services across inpatient and outpatient settings. Requirements specific to heart failure care certification include:

- The program identifies an individual to coordinate the care of participants.
- The program provides participants with access to a practitioner 24 hours a day, 7 days a week (access may include use of the telephone and the internet, and referral to urgent care settings).
- The program communicates important information regarding co-occurring conditions and co-morbidities to appropriate practitioner(s) to treat or manage conditions.
    - The program care coordinator(s) is responsible for the communication of relevant information among practitioners and across settings.
    - The program care coordinator(s) is responsible for sharing information among practitioners in a timeframe that meets the participant's needs.
    - The program care coordinator(s) is responsible for confirming practitioner receipt of information and actions taken.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Care transition record transmitted to a next level of care provider within 7 days of discharge containing ALL of the following:

- Reason for hospitalization
- Procedures performed during this hospitalization
- Treatment(s)/Service(s) provided during this hospitalization
- Discharge medications, including dosage and indication for use
- Follow-up treatment(s) and service(s) needed

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Care Transition Record Transmitted*
> - *Care Transition Record-Discharge Medications*
> - *Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed*
> - *Care Transition Record-Procedures Performed During Hospitalization*
> - *Care Transition Record-Reason for Hospitalization*
> - *Care Transition Record-Treatment(s)/Service(s) Provided*

Denominator Statement: All heart failure patients discharged from a hospital inpatient setting to home or home care

> **Included Populations:**
>
> - Discharges with ICD-10-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1, and
> - A discharge to home, home care, or court/law enforcement
>
> **Excluded Populations:**
>
> - Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
> - Patients less than 18 years of age
> - Patient who have a Length of Stay greater than 120 days
> - Patients with Comfort Measures Only documented
> - Patients enrolled in a Clinical Trial
> - Patients discharged to locations other than home, home care, or law enforcement
> - Patients who left against medical advice (AMA)
>
> **Data Elements:**
>
> - *Admission Date*

- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Date*
- *Discharge Disposition*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion. Aggregate rate generated from count data reported as a proportion

Selected References:

1. Bell CM, Schnipper JL, Auerback AD, Kaboli PJ, Wetterneck TB, Gonzales DV, Arora VM, Zhang JX, Meltzer DO; Association of communication between hospital-based physicians and Primary care providers with patient outcomes. J Gen Intern Med. 2008; 24(3):381-386.
2. Bodenheimer T. Coordinating care a perilous journey through the health care system.NEJM. 2008;358(10): 1064-1071.
3. Kripalani S, LeFevre F, Phillips CO, et al. Deficits in communication and information transfer between hospital-based and primary care physicians: Implications for patient safety and continuity of care. JAMA. 2007; 297(8):831-841.
4. Ravel AN, Marchiori GE, Arnold JMO. Improving the continuity of care following discharge of patients hospitalized with heart failure: Is the discharge summary adequate? Can J Cardiol. 2003;19(4):365-370.
5. van Walraven C, Seth R, Austin PC, Laupacis A. Effect of discharge summary availability during post-discharge visits on hospital readmission. J Gen Intern Med. 2002;17(3):186-192.
6. The Joint Commission. The Joint Commission's 2017 Comprehensive Certification Manual for Disease-Specific Care: Advanced Certification in Heart Failure Addendum. Oakbrook Terrace, IL: Author. 2017.

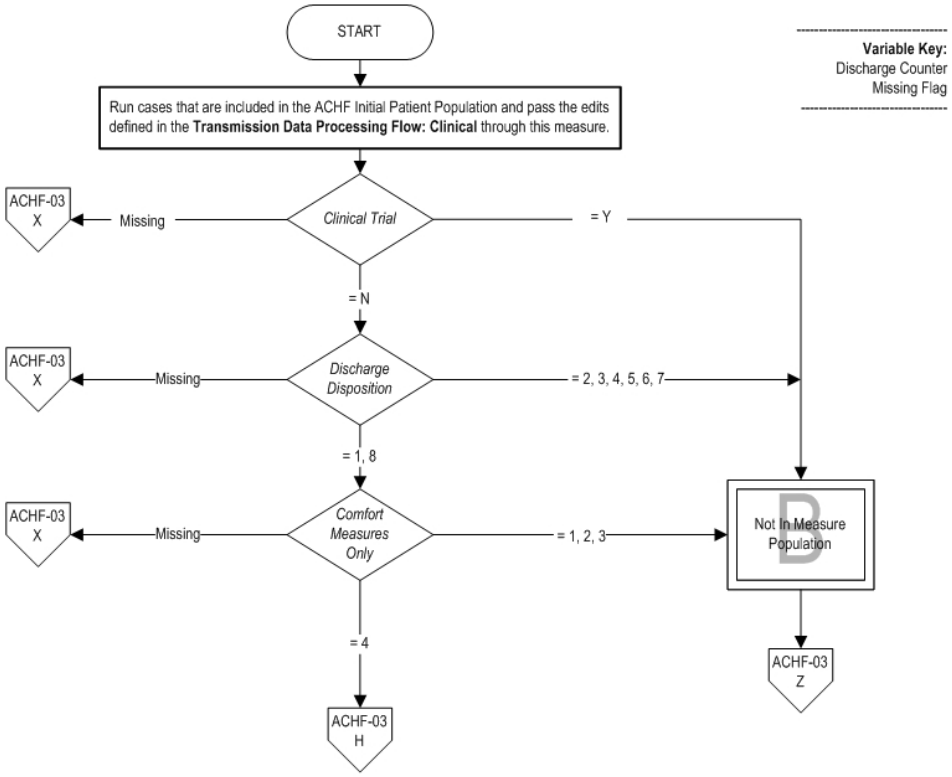
Measure Algorithm:

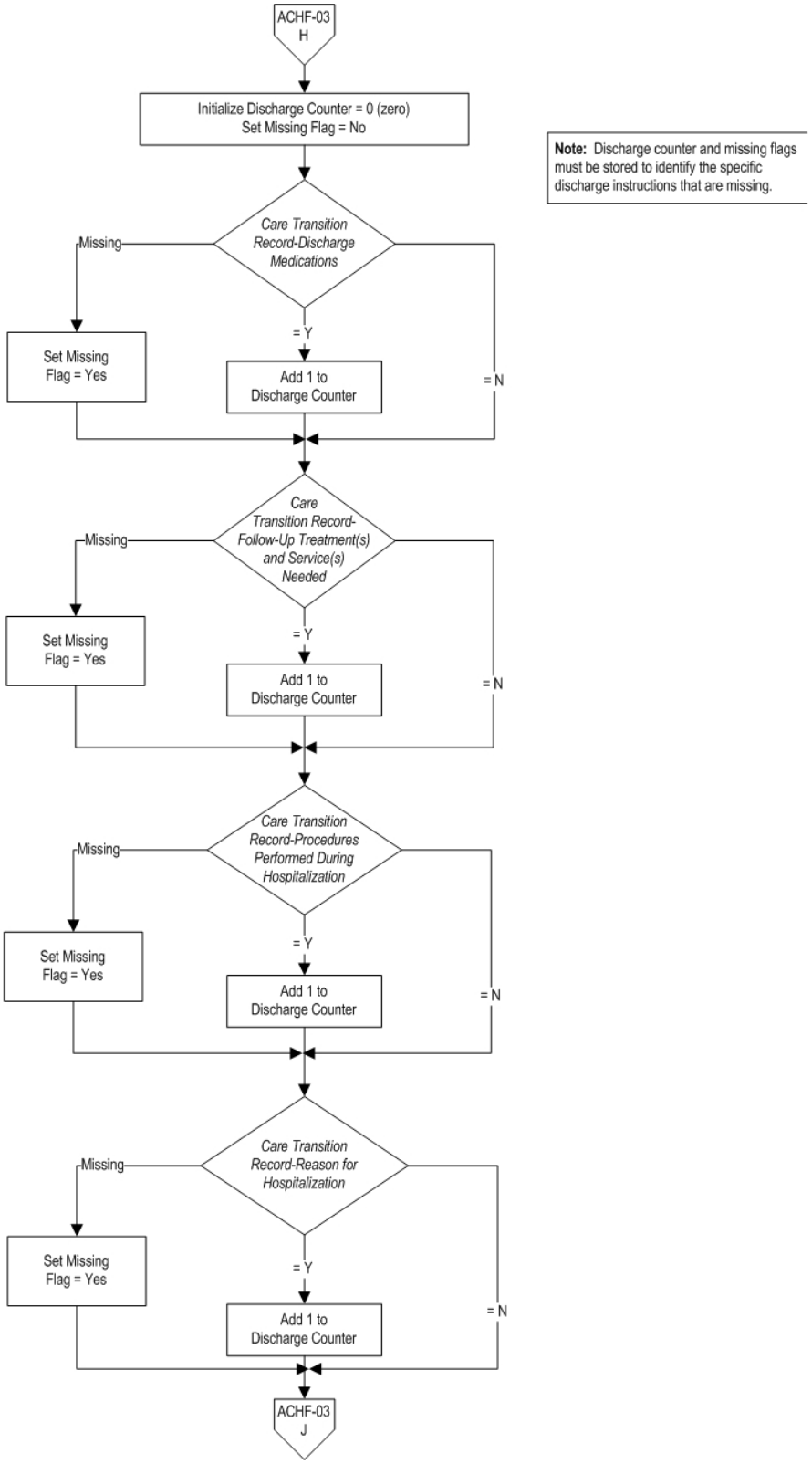
ACHF–03: Care Transition Record Transmitted

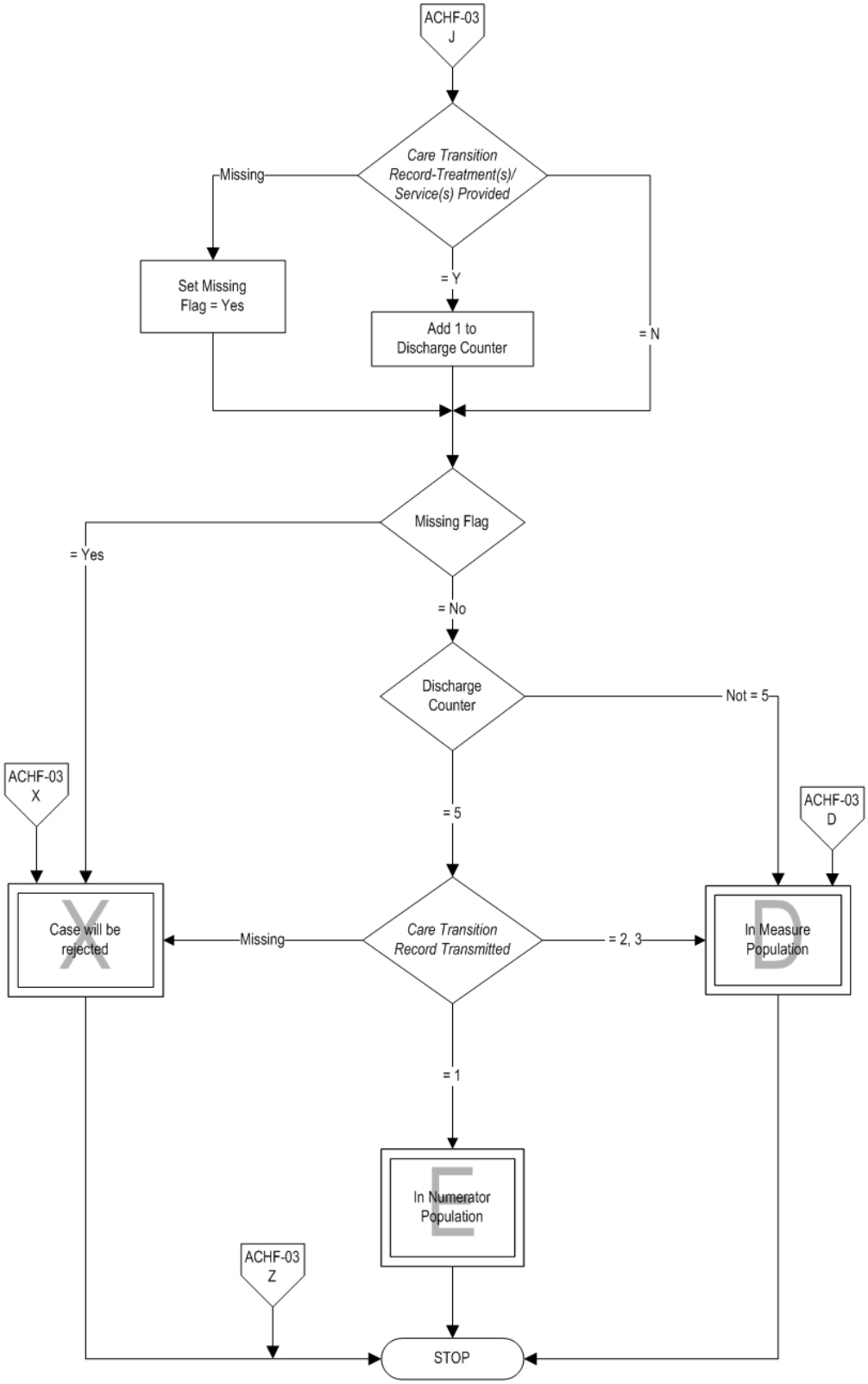
Numerator: Care transition record transmitted to a next level of care provider within 7 days of discharge containing ALL of the following:

- Reason for hospitalization
- Procedures performed during this hospitalization
- Treatment(s)/Service(s) provided during this hospitalization
- Discharge medications, including dosage and indication for use
- Follow-up treatment(s) and service(s) needed

Denominator: All heart failure patients discharged from a hospital inpatient setting to home or home care.




ACHF-03
H
Initialize Discharge Counter = 0 (zero)
Set Missing Flag = No
Note: Discharge counter and missing flags must be stored to identify the specific discharge instructions that are missing.
Care Transition Record-Discharge Medications
Missing
= Y
= N
Set Missing Flag = Yes
Add 1 to Discharge Counter
Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed
Missing
= Y
= N
Set Missing Flag = Yes
Add 1 to Discharge Counter
Care Transition Record-Procedures Performed During Hospitalization
Missing
= Y
= N
Set Missing Flag = Yes
Add 1 to Discharge Counter
Care Transition Record-Reason for Hospitalization
Missing
= Y
= N
Set Missing Flag = Yes
Add 1 to Discharge Counter
ACHF-03
J


ACHF-03
J
Care Transition
Record-Treatment(s)/
Service(s) Provided
Missing
Set Missing
Flag = Yes
= Y
Add 1 to
Discharge Counter
= N
Missing Flag
= Yes
= No
Discharge
Counter
Not = 5
ACHF-03
X
ACHF-03
D
= 5
X
Case will be
rejected
Missing
Care Transition
Record Transmitted
= 2, 3
D
In Measure
Population
= 1
E
In Numerator
Population
ACHF-03
Z
STOP

Measure Information Form

Measure Set: Advanced Certification Heart Failure (ACHF)

Set Measure ID: ACHF-04

Performance Measure Name: Discussion of Advance Directives/Advance Care Planning

Description: Patients who have documentation in the medical record of a one-time discussion of advance directives/advance care planning with a healthcare provider.

Rationale: Heart failure is a progressive, debilitating disease which carries with it a poor prognosis over time and high mortality rate. Physicians should acknowledge the life-threatening nature of the disease and discuss with patients and/or their caregivers prognosis, quality of life, pharmacologic and device therapies, self-management, and supportive care options (HFSA, 2010).

According to Heffner and Barbieri, most patients at fourteen cardiac rehabilitation programs across the United States, presumed the need for life-support at some point in the future and wanted to make their own decisions about end-of-life care. Most of the patients were aware of advance directives, desired more information, and preferred to get more information from their lawyers, families, physicians, or cardiac rehabilitation programs (Perkins, 2000). Despite this receptiveness, only 15% of patients had discussed advance directives with their physicians, and 10% had confidence that their physicians understood their wishes (Heffner and Barbieri, 2000).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients who have documentation in the medical record of a one-time discussion of advance directives/advance care planning with a healthcare provider

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Discussion of Advance Directives/Advance Care Planning*

Denominator Statement: All heart failure patients

> **Included Populations:**
>
> - Discharges with ICD-10-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1
> - Patients who left against medical advice (AMA)
> - Patients enrolled in a Clinical Trial

Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patient who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients discharged to another hospital
- Patients discharged to home for hospice care
- Patients discharged to a health care facility for hospice care
- Patients who expire

Data Elements:

- *Admission Date*
- *Birthdate*
- *Comfort Measures Only*
- *Discharge Date*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion. Aggregate rate generated from count data reported as a proportion

Selected References:

1. Anderson R, Joy S, Carkido A, Anthony S, Smyntek D, Perrine S, Puet TA, Butler ET. Development of a Congestive Heart Failure Protocol in a Rehabilitation Setting. Rehab Nursing 2010;35(1);3-7;30.
2. Hefner JE, Barberi C. End-of-life care preferences of patients enrolled in cardiovascular rehabilitation programs. Chest. 2000;117(5);1474-1481.

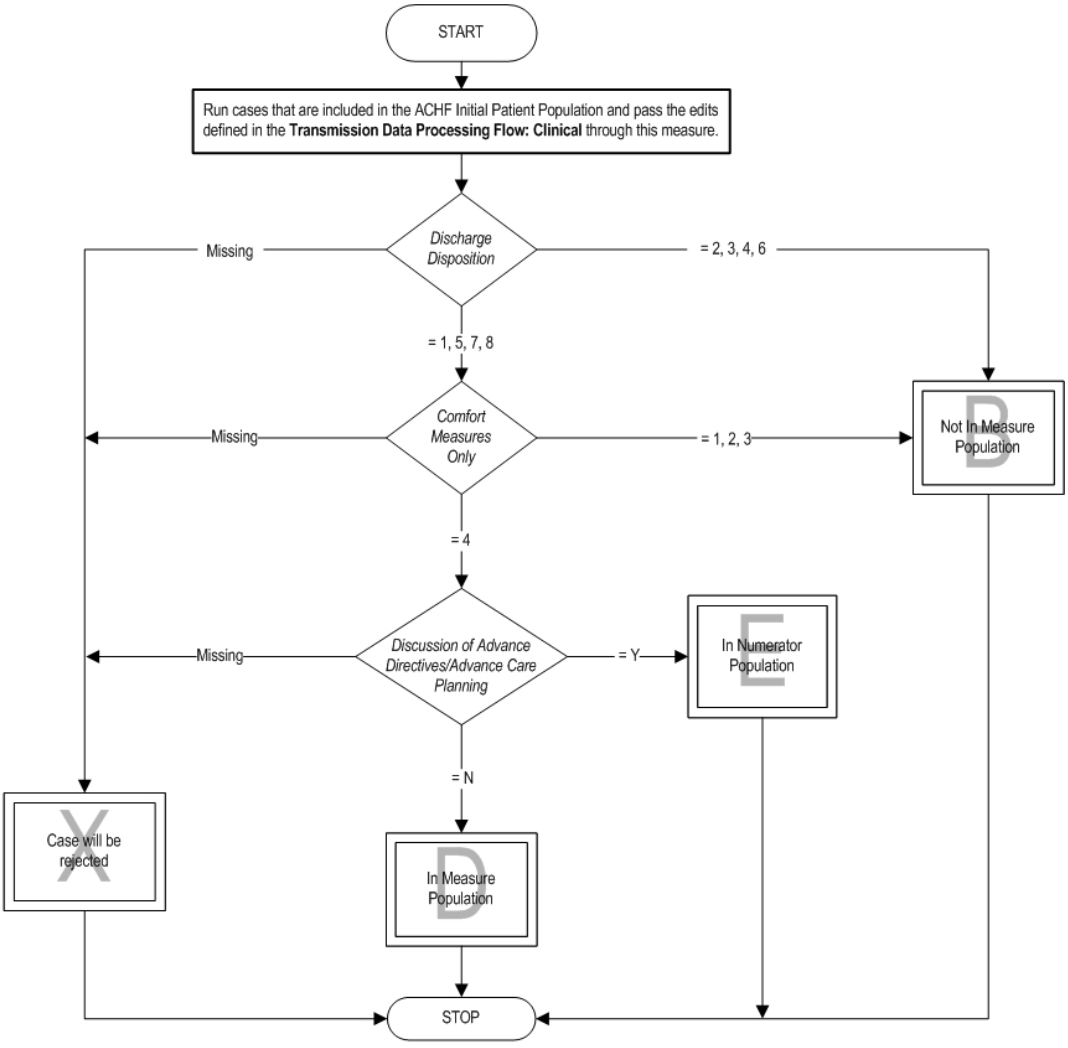
3. Kass-Bartelmes BL, Hughes R. Advance Care Planning Preferences for care at the end of life. J Pain Palliat Care Pharmacother. 2004;18(1):87-109.
4. Perkins HS. Time to move advance care planning beyond advance directives. Chest. 2000;117(5);128-1231.
5. Wilkinson A. Living with Advanced Congestive Heart Failure: A Guide for Family Caregivers. The Washington Home Center for Palliative Care Studies (A Division of the RAND Corporation). Nov 2002.
6. Yancy CW, Jessup M, Bozkurt B, Butler J, Casey DE Jr, Drazner MH, Fonarow GC, Geraci SA, Horwich T, Januzzi JL, Johnson MR, Kasper EK, Levy WC, Masoudi FA, McBride PE, McMurray JJV, Mitchell JE, Peterson PN, Riegel B, Sam F, Stevenson LW, Tang WHW, Tsai EJ, Wilkoff BL. 2013 ACCF/AHA guideline for the management of heart failure: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Circulation. 2013;128:e240–e327.

Measure Algorithm:

ACHF–04: Discussion of Advance Directives/Advance Care Planning

Numerator: Patients who have documentation in the medical record of a one-time discussion of advance directives/advance care planning with a healthcare provider.

Denominator: All heart failure patients.



Measure Information Form

Measure Set: Advanced Certification Heart Failure (ACHF)

Set Measure ID: ACHF-05

Performance Measure Name: Advance Directive Executed

Description: Patients who have documentation in the medical record that an advance directive was executed.

Rationale: Heart failure is a progressive, debilitating disease which carries with it a poor prognosis over time and high mortality rate. Physicians should acknowledge the life-threatening nature of the disease and discuss with patients and/or their caregivers prognosis, quality of life, pharmacologic and device therapies, self-management, and supportive care options (HFSA, 2010).

According to Heffner and Barbieri, most patients at fourteen cardiac rehabilitation programs across the United States, presumed the need for life-support at some point in the future and wanted to make their own decisions about end-of-life care. Most of the patients were aware of advance directives, desired more information, and preferred to get more information from their lawyers, families, physicians, or cardiac rehabilitation programs (Perkins, 2000). Despite this receptiveness, only 15% of patients had discussed advance directives with their physicians, and 10% had confidence that their physicians understood their wishes (Heffner and Barbieri, 2000).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients who have documentation in the medical record that an advance directive was executed.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Advance Directive Executed*

Denominator Statement: All heart failure patients.

> **Included Populations:**
>
> - Discharges with ICD-10-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1, and
> - Patients who left against medical advice (AMA)

- Patients enrolled in a Clinical Trial

Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patients who have a Length of Stay Greater than 120 days
- Patients with Comfort Measures Only documented
- Patients discharged to another hospital
- Patients discharged to home for hospice care
- Patients discharged to a health care facility for hospice care
- Patients who expire

Data Elements:

- *Admission Date*
- *Birthdate*
- *Comfort Measures Only*
- *Discharge Date*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

1. Anderson R, Joy S, Carkido A, Anthony S, Smyntek d, Perrine S, Puet TA, Butler ET. Development of a Congestive Heart Failure Protocol in a Rehabilitation Setting. *Rehab Nursing* 2010;35(1);3-7;30.

2. Hefner JE, Barberi C. End-of-life care preferences of patients enrolled in cardiovascular rehabilitation programs. Chest. 2000;117(5);1474-1481.

3. Kass-Bartelmes BL, Hughes R. Advance Care Planning Preferences for care at the end of life. *J Pain Palliat Care Pharmacother*. 2004;18(1):87-109.

4. Perkins HS. Time to move advance care planning beyond advance directives. *Chest*. 2000;117(5);128-1231.

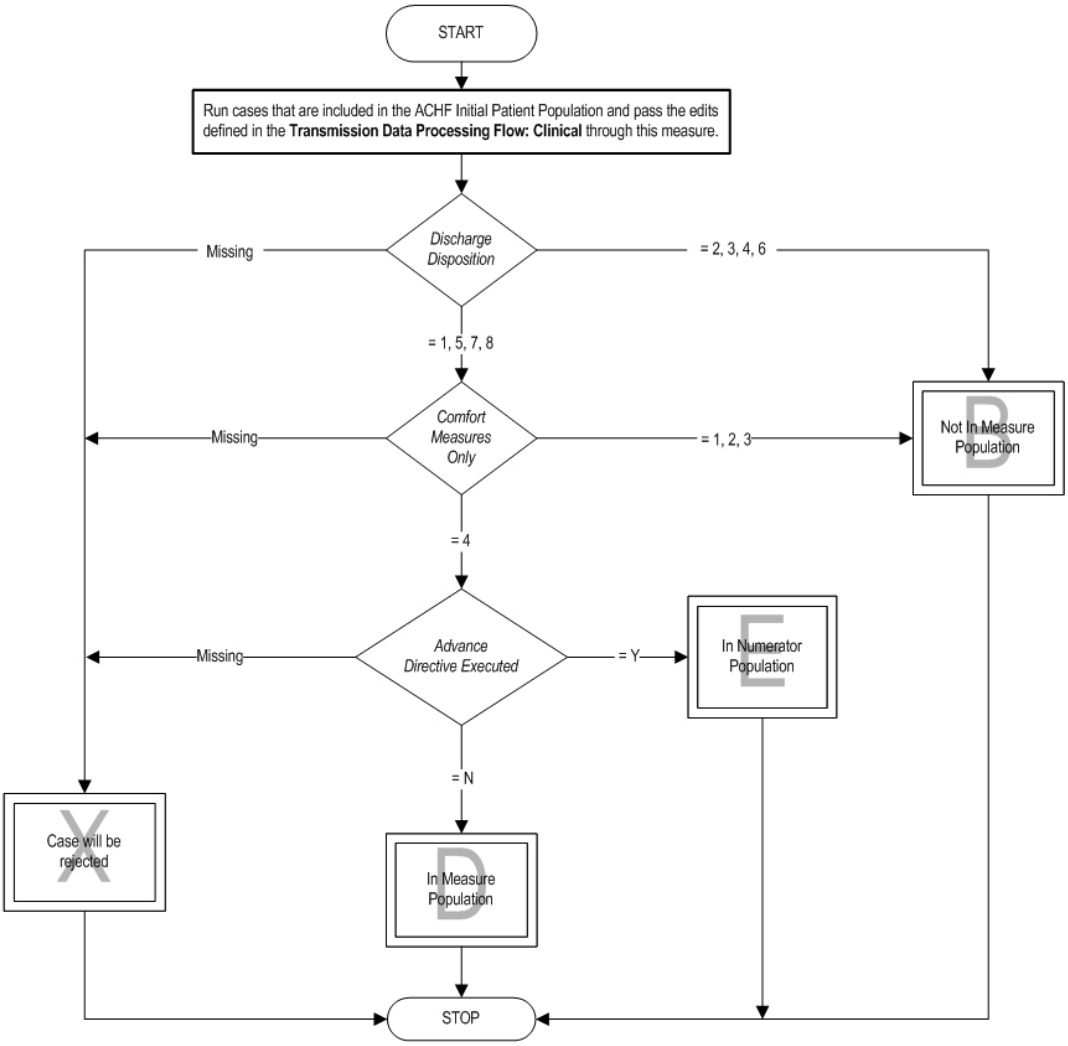
5. Wilkinson A. Living with Advanced Congestive Heart Failure: A Guide for Family Caregivers. The Washington Home Center for Palliative Care Studies (A Division of the RAND Corporation). Nov 2002.

6. Yancy CW, Jessup M, Bozkurt B, Butler J, Casey DE Jr, Drazner MH, Fonarow GC, Geraci SA, Horwich T, Januzzi JL, Johnson MR, Kasper EK, Levy WC, Masoudi FA, McBride PE, McMurray JJV, Mitchell JE, Peterson PN, Riegel B, Sam F, Stevenson LW, Tang WHW, Tsai EJ, Wilkoff BL. 2013 ACCF/AHA guideline for the management of heart failure: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Circulation. 2013;128:e240–e327.

Measure Algorithm:

ACHF–05: Advance Directive Executed

Numerator: Patients who have documentation in the medical record that an advance directive was executed.
Denominator: All heart failure patients.



Measure Information Form

Measure Set: Advanced Certification Heart Failure (ACHF)

Set Measure ID: ACHF-06

Performance Measure Name: Post-Discharge Evaluation for Heart Failure Patients

Description: Patients who receive a re-evaluation for symptoms worsening and treatment compliance by a program team member within 72 hours after inpatient discharge.

Rationale: Today, hospitals and providers in the United States are challenged to provide high-quality, cost-effective healthcare. Preventing readmissions to the hospital is one opportunity to control costs and deliver quality care. According to Hospital Compare (2010), the national 30-day readmission rate for heart failure is 24.7%. Jha and colleagues (2009) have concluded that data collection for discharge planning and instruction measures has not reduced unnecessary readmissions. Alternative interventions are needed to meet heart failure treatment goals post-discharge. Ongoing evaluation of patient symptoms and their functional consequences may help prevent hospital readmissions

The Joint Commission's 2017 Disease-Specific Care Advanced Certification Heart Failure standards require that care, treatment, and services are provided in a planned and timely manner. Compliance with this standard is demonstrated through a re-evaluation of the patient by a program team member within 72 hours after inpatient discharge. The re-evaluation may be conducted via phone call, home visit, or scheduled office appointment.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients who have a documented re-evaluation conducted via phone call or home visit within 72 hours after discharge.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Post-Discharge Evaluation Conducted Within 72 Hours*

Denominator Statement: All heart failure patients discharged from a hospital inpatient setting to home or home care AND patients leaving against medical advice (AMA).

> **Included Populations:**

- Discharges with ICD-10-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1, and
- A discharge to home, home care, or court/law enforcement
- Patients who left against medical advice (AMA)

Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patient who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in a Clinical Trial
- Patients discharged to locations other than home, home care or law enforcement

Data Elements:

- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Date*
- *Discharge Disposition*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion. Aggregate rate generated from count data reported as a proportion

Selected References:

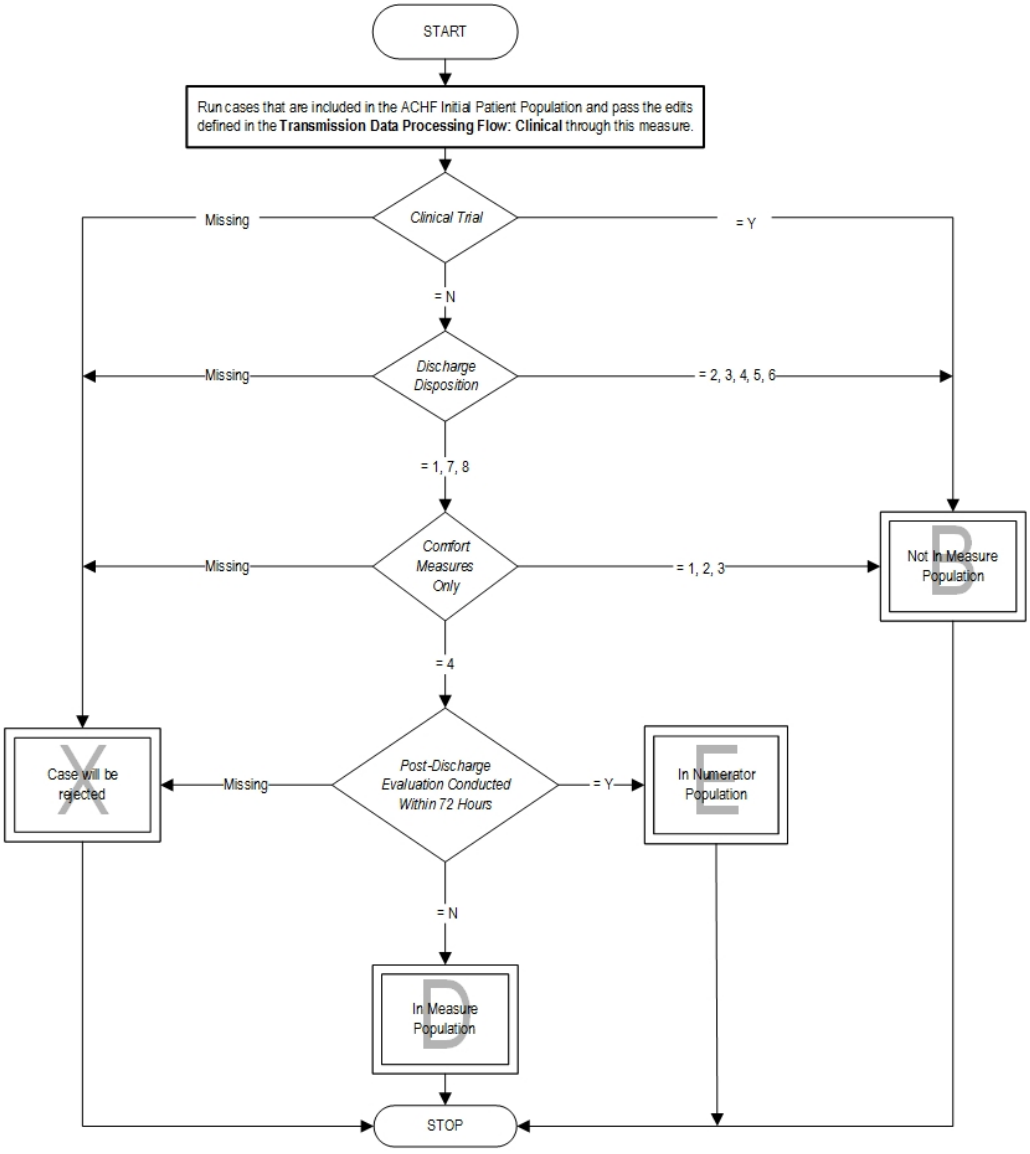
1. Hoyt RE, Bowling LS. Reducing Readmissions for Congestive Heart Failure. *Am Fam Physician* 2001;63(8):1593-1598.
2. Jha AK, Orav EJ, Epstein AM. Public Reporting of Discharge Planning and Rate of Readmissions. *N Eng J Med* 2009; 361(27):2637-2645.
3. The Joint Commission. The Joint Commission's 2017 Comprehensive Certification Manual for Disease-Specific Care: Advanced Certification in Heart Failure Addendum. Oakbrook Terrace, IL: Author. 2017.

Measure Algorithm:

ACHF–06: Post-Discharge Evaluation for Heart Failure Patients

Numerator: Patients who have a documented re-evaluation conducted via phone call or home visit within 72 hours after discharge.

Denominator: All heart failure patients discharged from a hospital inpatient setting to home or home care AND patients leaving against medical advice (AMA).



Advanced Certification Heart Failure Outpatient (ACHFOP)

Set Measures

Set Measure ID	Measure Short Name
ACHFOP-01	Hospital Outpatient Beta-Blocker Therapy (i.e., Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate Prescribed for LVSD)
ACHFOP-02	Hospital Outpatient ACEI or ARB Prescribed for LVSD
ACHFOP-03	Hospital Outpatient Aldosterone Receptor Antagonists Prescribed for LVSD
ACHFOP-04	Hosptial Outpatient New York Heart Association (NYHA Classification Assessment)
ACHFOP-05	Hospital Outpatient Activity Recommendations
ACHFOP-06	Hospital Outpatient Discussion of Advance Directives/Advance Care Planning
ACHFOP-07	Hospital Outpatient Advance Directive Executed

General Data Elements

Element Name	Collected For
Birthdate	All Records,
ICD-10-CM Principal Diagnosis Code	All Records, Optional for HBIPS-2, HBIPS-3
ICD-10-PCS Other Procedure Codes	All Records, Optional for All HBIPS Records
ICD-10-PCS Principal Procedure Code	All Records, Optional for All HBIPS Records
ICD-10-PCS Principal Procedure Date	All Records, Optional for All HBIPS Records

Measure Set Specific Data Elements

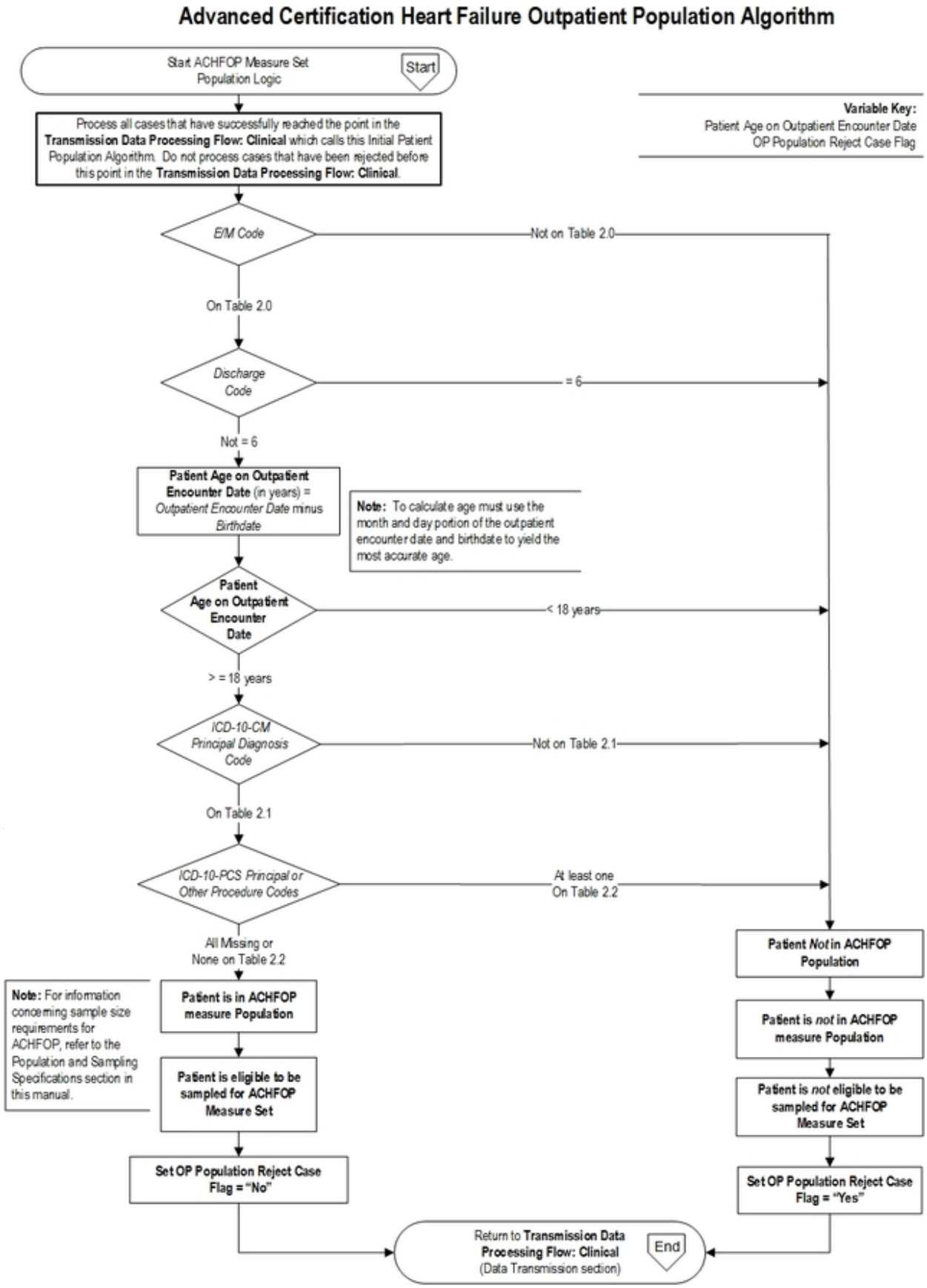
Element Name	Collected For
ACEI Prescribed for LVSD in the Outpatient Setting	ACHFOP-02
ARB Prescribed for LVSD in the Outpatient Setting	ACHFOP-02
Activity Recommendation — Duration of Activity	ACHFOP-05
Activity Recommendation — Intensity of Activity	ACHFOP-05
Activity Recommendation — Type of Activity	ACHFOP-05
Advance Directive Executed	ACHFOP-07
Aldosterone Receptor Antagonist Prescribed for LVSD in the Outpatient Setting	ACHFOP-03
Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD in the Outpatient Setting	ACHFOP-01
Clinical Trial	ACHFOP-01, ACHFOP-02, ACHFOP-03, ACHFOP-04, ACHFOP-05
Discharge Code	ACHFOP
Discussion of Advance Directives/Advance Care Planning	ACHFOP-06
E/M Code	ACHFOP
LVSD < 40%	ACHFOP-01, ACHFOP-02, ACHFOP-03
New York Heart Association (NYHA) Classification	ACHFOP-04
Outpatient Encounter Date	ACHFOP
Reason for No ACEI and No ARB Prescribed for LVSD in Outpatient Setting	ACHFOP-02
Reason for No Activity Recommendations in the Outpatient Setting	ACHFOP-05
Reason for No Aldosterone Receptor Antagonist Prescribed for LVSD in the Outpatient Setting	ACHFOP-03
Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD in the Outpatient Setting	ACHFOP-01

Related Materials

Document Name
Acknowledgment and Conditions of Use
Appendix A - ICD-10 Code Tables

Document Name
Appendix C - Medication Tables
Appendix D - Glossary of Terms
Appendix E - Overview of Measure Information Form and Flowchart Formats
Appendix G - Resources
Appendix H - Miscellaneous Tables
Cover Page for the Joint Commission Manual
Data Dictionary
Introduction to the Manual
Missing and Invalid Data
Sampling
Table of Contents
Transmission Alpha Data Dictionary
Transmission Data Processing Flow: Clinical
Transmission Data Processing Flow: Population and Sampling
Transmission of Data
Using the The Joint Commission's National Measure Specifications Manual

Initial Patient Population Algorithm



HF Sample Size Requirements

Hospitals that choose to sample have the option of sampling quarterly or sampling monthly. A hospital may choose to use a larger sample size than is required. Hospitals whose Initial Patient Population size is less than the minimum number of cases per quarter for the measure set cannot sample. Hospitals that have five or fewer HF discharges (both Medicare and non-Medicare combined) in a quarter are not required to submit HF patient level data to the QIO Clinical Warehouse[1] and Joint Commission's Data Warehouse.

Regardless of the option used, hospital samples must be monitored to ensure that sampling procedures consistently produce statistically valid and useful data. Due to exclusions, hospitals selecting sample cases MUST submit AT LEAST the minimum required sample size.

The following sample size tables for each option automatically build in the number of cases needed to obtain the required sample sizes. For information concerning how to perform sampling, refer to the Population and Sampling Specifications section in this manual.

Quarterly Sampling

Hospitals performing quarterly sampling for HF must ensure that its Initial Patient Population and sample size meet the following conditions:

Quarterly Sample Size
Based on Initial Patient Population Size for the HF Measure Set

Hospital's Measure

Average Quarterly Initial Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
≥ 1516	304
381 — 1515	20% of Initial Patient Population size
76 — 380	76
6 — 75	No sampling; 100% Initial Patient Population required
0 - 5	Submission of patient level data is encouraged but not required: • CMS: if submission occurs, 1-5 cases of Initial Patient Population may be submitted[1] • The Joint Commission: if submission occurs, 100% Initial Patient Population required

Monthly Sampling

Hospitals performing monthly sampling for HF must ensure that its Initial Patient Population and sample size meet the following conditions:

Monthly Sample Size
Based on Initial Patient Population Size for the HF Measure Set

Hospital's Measure

Average Monthly Initial Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
≥ 506	102
131 — 505	20% of Initial Patient Population size
26 — 130	26
<26	No sampling; 100% Initial Patient Population required

Sample Size Examples

- Quarterly sampling:
  - The HF Initial Patient Population size for a hospital has been 500 patients per quarter during the past year. The required quarterly sample size would be 100 (twenty percent of 500) heart failure patients per quarter -- as this number is smaller than the maximum condition (i.e., 304 cases) and larger than the minimum condition (i.e., 76 cases).
  - A hospital's HF Initial Patient Population size is 1,482 patients during the third quarter. The required sample size is 20% of the patient population or 297 cases for the quarter (twenty percent of 1,482 equals 296.4 rounded to the next highest whole number equals 297).
  - A hospital's HF Initial Patient Population size is 5 patients during the first quarter. Submission of patient level data is not required. If the hospital chooses to submit patient level data:
    - CMS: the quarterly sample size would be 1 — 5 cases for the quarter.[1]
    - The Joint Commission: the required quarterly sample size would be 100% of the patient population or 5 cases for the quarter.

- Monthly sampling:
  - A hospital's HF Initial Patient Population size is 25 patients during March. Since this is less than the minimum condition (i.e., 26 cases), no sampling is allowed or 100% of the patient population of 25 cases is required.
  - A hospital's HF Initial Patient Population size is 503 patients during July. The required sample size is 20% of the patient population or 101 cases for the month (twenty percent of 503 equals 100.6 rounded to the next highest whole number equals 101).

[1] The Heart Failure (HF) core measure sampling methodology is applicable to both the HF core measures as well as the ACHF measures. The HF sampling methodology is shared by CMS and The Joint Commission; however, data collection for the ACHF measures is required by Joint Commission Disease-Specific Care Certification only.

Measure Information Form

Measure Set: Advanced Certification Heart Failure Outpatient (ACHFOP)

Set Measure ID: ACHFOP-01

Performance Measure Name: Hospital Outpatient Beta-Blocker Therapy (i.e., Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate Prescribed for LVSD)

Description: Beta-blocker therapy (i.e., bisoprolol, carvedilol, or sustained-release metoprolol succinate) is prescribed for heart failure patients with LVSD. For purposes of this measure, LVSD is defined as chart documentation of a left ventricular ejection fraction (LVEF) less than 40% or a narrative description of left ventricular systolic (LVS) function consistent with moderate or severe systolic dysfunction.

Rationale: Beta-blocker therapy has been recommended for the treatment of patients with heart failure and reduced left ventricular ejection fraction (LVEF) since the 1970's (HFSA, 2010). Several large-scale clinical trials have provided unequivocal evidence of important reductions in both morbidity and mortality. The marked beneficial effects of beta blockade has been well demonstrated in large-scale clinical trials of symptomatic patients with New York Heart Association (NYHA) class II-IV heat failure and reduced LVEF using carvedilol, bisoprolol, and sustained-release metoprolol succinate (Hunt et al., 2009). These beta-blockers, in addition to ACE inhibitors and diuretics, are considered routine therapy for heart failure patients with reduced LVEF. Beta-blocker therapy is well tolerated by the majority of patients, even those with co-morbidities such as, diabetes mellitus, chronic obstructive lung disease, and peripheral vascular disease.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients prescribed bisoprolol, carvedilol, or sustained-release metoprolol succinate for LVSD when seen in the outpatient setting

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD in the Outpatient Setting*

Denominator Statement: Heart failure patients with current or prior documentation of left ventricular ejection fraction (LVSD) < 40%.

> **Included Populations:**
>
> - E/M Code for hospital outpatient encounter as defined in Appendix A, Table 2.0
> - An ICD-10-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1, and

- Documentation of LVSD < 40%

Excluded Populations:

- Patients enrolled in a Clinical Trial
- Patients who had a left ventricular assist device (LVAD) or heart transplant procedure (ICD-10-PCS Procedure Code for LVAD or heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patients with a documented Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate prescribed for LVSD in the Outpatient Setting

Data Elements:

- *Birthdate*
- *Clinical Trial*
- *Discharge Code*
- *E/M Code*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Other Procedure Dates*
- *ICD-10-PCS Principal Procedure Code*
- *LVSD < 40%*
- *Outpatient Encounter Date*
- *Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD in the Outpatient Setting*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

1. American College of Cardiology Foundation, American Heart Association, Physician Consortium for Performance Improvement® (PCPI). Heart Failure Performance Measurement Set. Jan. 2011; 47-56.
2. American Heart Association. Get With The Guidelines® Outpatient Fact Sheet. 2010.

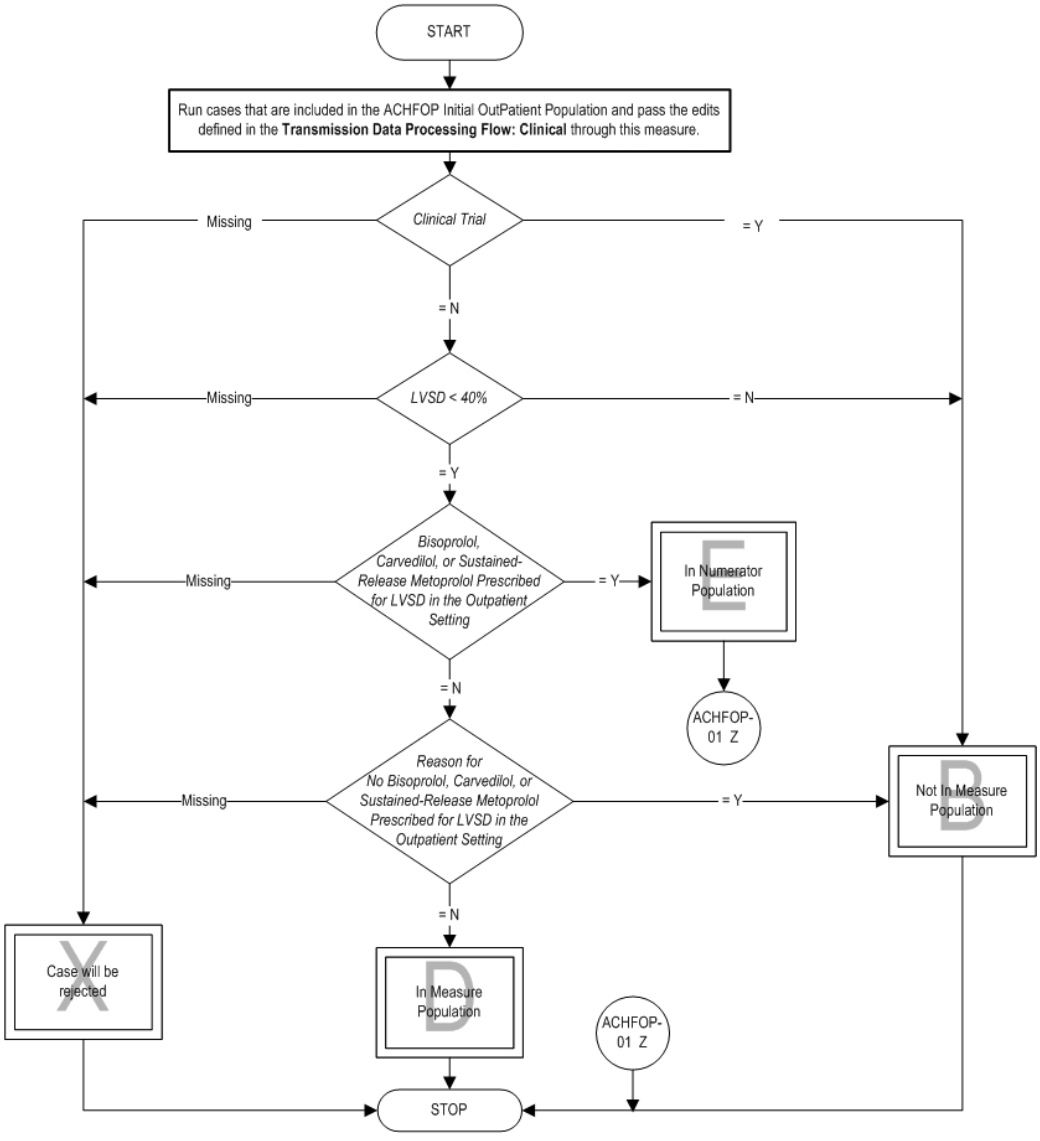
3. Hunt SA, Abraham WT, Chin MH, Felman AM, Francis GS, Ganiats TG, Jessup M, Konstam MA, Mancini DM, Michl K, Oates JA, Rahko PS, Silver MA, Stevenson LW, Yancy CW. 2009 Focused update incorporated Into the ACC/AHA 2005 guidelines for the diagnosis and management of heart failure in adults: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines Developed in Collaboration With the International Society for Heart and Lung Transplantation. Circulation. 2009;119(14):e391-e479.
4. Lindenfeld J, Albert NM, Boehmer JP, Collins SP, Ezekowitz JA, Givertz MM, Klapholz M, MoserDK, Rogers JG, Starling RC, Stevenson WG, Tang WHW, Teerlink JR, Walsh MN. Executive Summary: HFSA 2010 Comphrensive Heart Failure Practice Guideline. J Card Fail 2010;16:475-539.
5. Yancy CW, Jessup M, Bozkurt B, Butler J, Casey DE Jr, Drazner MH, Fonarow GC, Geraci SA, Horwich T, Januzzi JL, Johnson MR, Kasper EK, Levy WC, Masoudi FA, McBride PE, McMurray JJV, Mitchell JE, Peterson PN, Riegel B, Sam F, Stevenson LW, Tang WHW, Tsai EJ, Wilkoff BL. 2013 ACCF/AHA guideline for the management of heart failure: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Circulation. 2013;128:e240–e327.

Measure Algorithm:

ACHFOP–01: Hospital Outpatient Beta-Blocker Therapy (i.e., Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate) Prescribed for LVSD

Numerator: Patients who are prescribed bisoprolol, carvedilol, or sustained-release metoprolol succinate for LVSD when seen in the outpatient setting.

Denominator: Heart failure patients with current or prior documentation of left ventricular ejection fraction (LVSD) < 40%.



Measure Information Form

Measure Set: Advanced Certification Heart Failure Outpatient (ACHFOP)

Set Measure ID: ACHFOP-02

Performance Measure Name: Hospital Outpatient ACEI or ARB Prescribed for LVSD

Description: Heart failure patients with left ventricular systolic dysfunction (LVSD) who are prescribed an ACEI or ARB in the outpatient setting. For purposes of this measure, LVSD is defined as chart documentation of a left ventricular ejection fraction (LVEF) less than 40% or a narrative description of left ventricular systolic (LVS) function consistent with moderate or severe systolic dysfunction.

Rationale: ACE inhibitors reduce mortality and morbidity in patients with heart failure and left ventricular systolic dysfunction (The SOLVD Investigators, 1991 and CONSENSUS Trial Study Group, 1987) and are effective in a wide range of patients (Masoudi, 2004). Clinical trials have also established ARB therapy as an acceptable alternative to ACEI, especially in patients who are ACEI intolerant (Granger, 2003 and Pfeffer, 2003). National guidelines strongly recommend ACEIs for patients hospitalized with heart failure (Jessup, 2009 and HFSA, 2010). Guideline committees have also supported the inclusion of ARBs in performance measures for heart failure (Executive Council of the Heart Failure Society of America, 2004).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients who are prescribed an ACEI or ARB for LVSD when seen in the outpatient setting

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *ACEI Prescribed for LVSD in the Outpatient Setting*
> - *ARB Prescribed for LVSD in the Outpatient Setting*

Denominator Statement: Heart failure patients with current or prior documentation of left ventricular ejection fraction (LVSD) < 40%.

> **Included Populations:**
>
> - E/M Code for hospital outpatient encounter as defined in Appendix A, Table 2.0
> - An ICD-10-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1, and
> - Documentation of LVSD < 40%

Excluded Populations:

- Patients renrolled in a Clinical Trial
- Patients who had a left ventricular assist device (LVAD) or heart transplant procedure (ICD-10-PCS Procedure Code for LVAD or heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patients with a documented Reason for No ACEI or ARB Prescribed for LVSD in the Outpatient Setting

Data Elements:

- *Birthdate*
- *Clinical Trial*
- *Discharge Code*
- *E/M Code*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*
- *LVSD < 40%*
- *Outpatient Encounter Date*
- *Reason for No ACEI and No ARB Prescribed for LVSD in Outpatient Setting*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions:

Sampling: Yes. please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

- Bonow RO, Ganiats TG, Beam CT, Blake K, Casey DE, Goodlin SJ, et al. January 2011. American College of Cardiology Foundation/ American Heart Association/ Physician Consortium for Performance Improvement Heart Failure Performance Measurement Set. In American Medical Association. Retrieved February 2011, from http://www.ama-assn.org/ama1/pub/upload/mm/pcpi/hfset-12-5.pdf.
- Effects of enalapril on mortality in severe congestive heart failure. Results of the Cooperative North Scandinavian Enalapril Survival Study (CONSENSUS). The CONSENSUS Trial Study Group. N Engl J

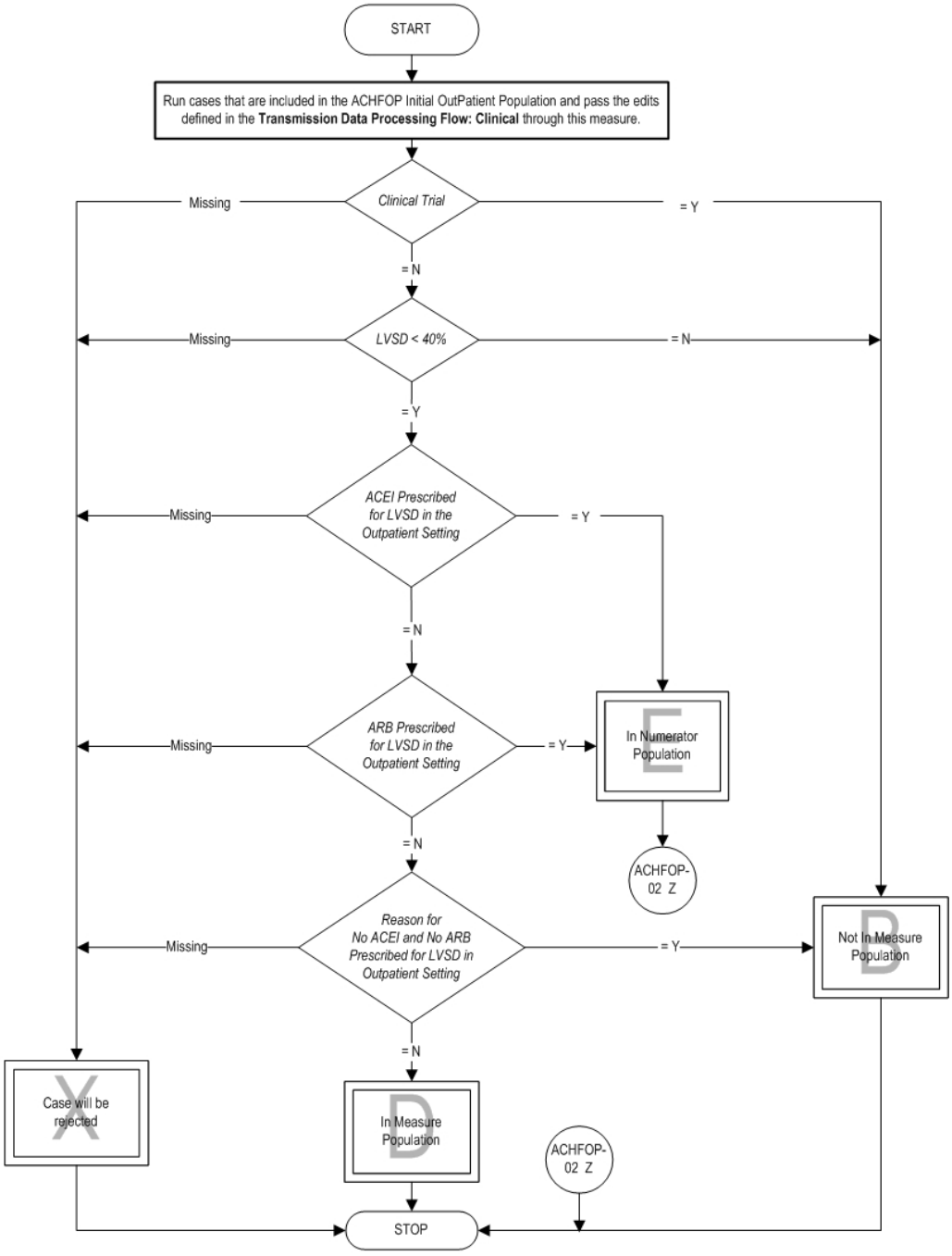
Med. 1987;316:1429-1435.
- Executive Council of the Heart Failure Society of America. Implications of recent clinical trials for heart failure performance measures. HFSA Position Statement. J Card Fail. 2004;10:4-5.
- Granger CB, McMurray JJ, Yusuf S et al. Effects of candesartan in patients with chronic heart failure and reduced left-ventricular systolic function intolerant to angiotensin-converting-enzyme inhibitors: the CHARM-Alternative trial. Lancet. 2003;362:772-776.
- Jessup M, Abraham WT, Casey DE, Feldman AM, Francis GS, Ganiats TG, et al, writing on behalf of the 2005 Guideline Update for the Diagnosis and Management of Chronic Heart Failure in the Adult Writing Committee. 2009 focused update: ACCF/AHA guidelines for the diagnosis and management of heart failure in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. J Am Coll Cardiol. 2009;53:1343— 82.
- Lindenfeld J, Albert NM, Boehmer JP, Collins SP, Ezekowitz JA, Givertz MM, et al. Executive Summary: HFSA 2010 Comprehensive Heart Failure Practice Guideline. J Card Fail 2010; 16:475-539.
- Masoudi FA, Rathore SS, Wang Y et al. National patterns of use and effectiveness of angiotensin-converting enzyme inhibitors in older patients with heart failure and left ventricular systolic dysfunction. Circulation. 2004;110:724-731.
- Pfeffer MA, McMurray JJ, Velazquez EJ et al. Valsartan, captopril, or both in myocardial infarction complicated by heart failure, left ventricular dysfunction, or both. N Engl J Med. 2003;349:1893-1906.
- The SOLVD Investigators. Effect of enalapril on survival in patients with reduced left ventricular ejection fractions and congestive heart failure. N Engl J Med. 1991;325:293-302.
- Yancy CW, Jessup M, Bozkurt B, Butler J, Casey DE Jr, Drazner MH, Fonarow GC, Geraci SA, Horwich T, Januzzi JL, Johnson MR, Kasper EK, Levy WC, Masoudi FA, McBride PE, McMurray JJV, Mitchell JE, Peterson PN, Riegel B, Sam F, Stevenson LW, Tang WHW, Tsai EJ, Wilkoff BL. 2013 ACCF/AHA guideline for the management of heart failure: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Circulation. 2013;128:e240–e327.

Measure Algorithm:

ACHFOP–02: Hospital Outpatient ACEI or ARB Prescribed for LVSD

Numerator: Patients who are prescribed an ACEI or ARB for LVSD when seen in the outpatient setting.

Denominator: Heart failure patients with current or prior documentation of left ventricular ejection fraction (LVSD) < 40%.



Measure Information Form

Measure Set: Advanced Certification Heart Failure Outpatient (ACHFOP)

Set Measure ID: ACHFOP-03

Performance Measure Name: Hospital Outpatient Aldosterone Receptor Antagonists Prescribed for LVSD

Description: Aldosterone receptor antagonist therapy prescribed for heart failure patients with LVSD. For purposes of this measure, LVSD is defined as chart documentation of a left ventricular ejection fraction (LVEF) less than 40% or a narrative description of left ventricular systolic (LVS) function consistent with moderate or severe systolic dysfunction.

Rationale: Use of aldosterone receptor antagonist in eligible HF patients with LVSD and no documented contraindications, intolerance, or other medical reason(s) is recommended to reduce heart failure hospitalization and moratlity. Both ACEIs and ARBs can lower circulating aldosterone with initial therapy; however, aldosterone suppression may not be sustained over time. Clinical studies have demonstrated that the addition of spironolactone to ACEI therapy for patients wih NYHA class III or IV symptoms and recent hospitalization reduced the risk of death from 46% to 35% (30% relative risk reduction) over two years. Furthermore, a 35% reduction in heart failure hospitalization and improvement in functional class was noted. A more recent trial of a newer aldosterone antagonist, eplerenone, in patients with LVSD < 40% and clinical evidence of heart failure or diabetes mellitus within 14 days of myocardial infarction (MI) also demonstrated a reducation in mortality (13.6% to 11.8% at one year).

Hyperkalemia is a major risk of aldosterone antagonist therapy. Potassium supplements should be discontinued after the initiation of therapy, and patients should be counseled to avoid high-potassium foods.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients who are prescribed an aldosterone receptor antagonist (spironolactone or eplerenone) when seen in the outpatient setting

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Aldosterone Receptor Antagonist Prescribed for LVSD in the Outpatient Setting*

Denominator Statement: Heart failure patients with current or prior documentation of left ventricular ejection fraction (LVSD) < 40%.

> **Included Populations:**

- E/M Code for hospital outpatient encounter as defined in Appendix A, Table 2.0
- An ICD-10-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1, and
- Documentation of LVSD < 40%

Excluded Populations:

- Clinical Trial
- Patients who had a left ventiricular assist device (LVAD) or heart transplant procedure (ICD-10-PCS Procedure Code for LVAD or heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patients with a documented Reason for No Aldosterone Receptor Antagonist Prescribed for LVSD in the Outpatient Setting

Data Elements:

- *Birthdate*
- *Clinical Trial*
- *Discharge Code*
- *E/M Code*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*
- *LVSD < 40%*
- *Outpatient Encounter Date*
- *Reason for No Aldosterone Receptor Antagonist Prescribed for LVSD in the Outpatient Setting*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None.

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

- American Heart Association. Get With The Guidelines® Outpatient Fact Sheet. 2010.

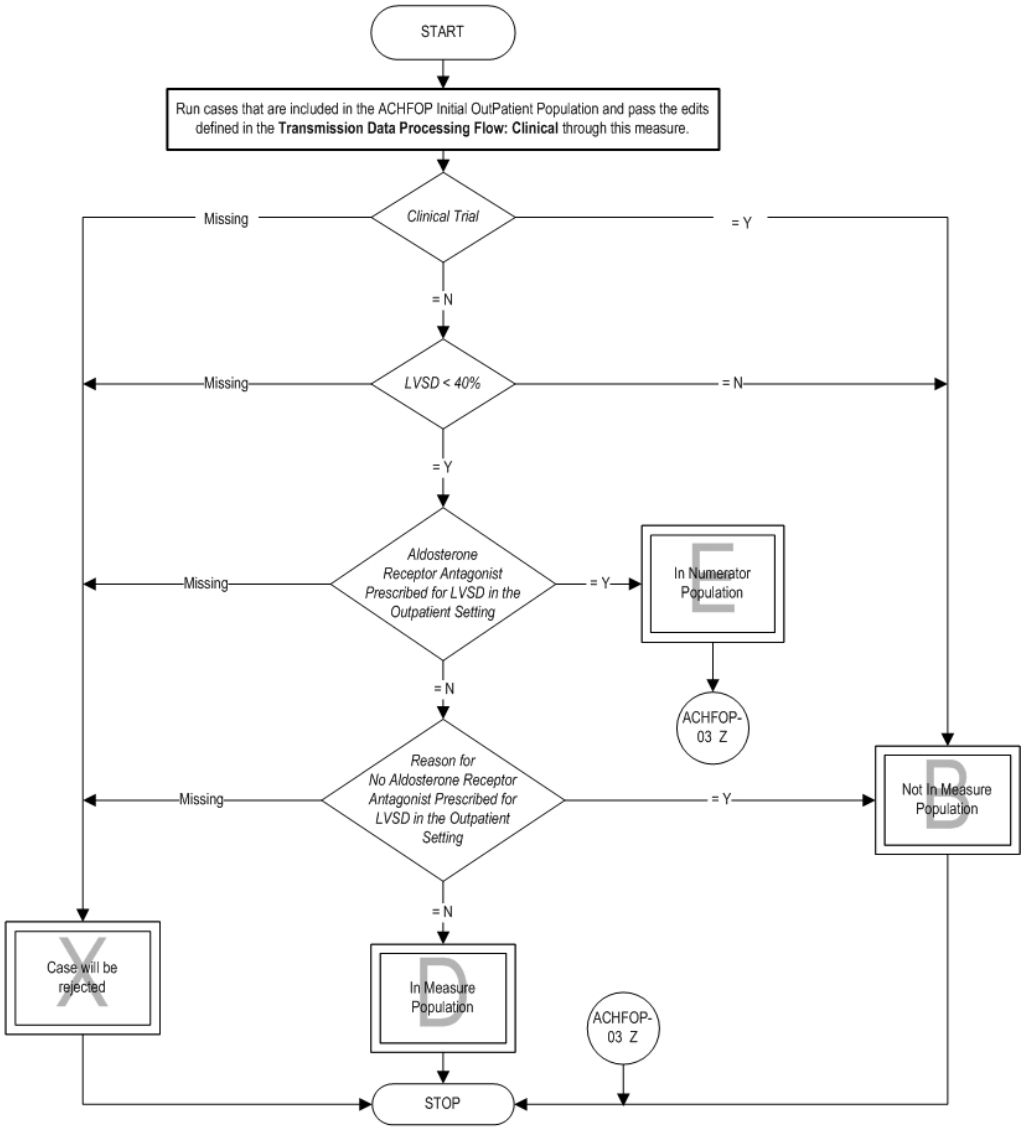
- Hunt SA, Abraham WT, Chin MH, Felman AM, Francis GS, Ganiats TG, Jessup M, Konstam MA, Mancini DM, Michl K, Oates JA, Rahko PS, Silver MA, Stevenson LW, Yancy CW. 2009 Focused update incorporated Into the ACC/AHA 2005 guidelines for the diagnosis and management of heart failure in adults: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines Developed in Collaboration With the International Society for Heart and Lung Transplantation. Circulation. 2009;119(14):e391-e479.
- Lindenfeld J, Albert NM, Boehmer JP, Collins SP, Ezekowitz JA, Givertz MM, Klapholz M, MoserDK, Rogers JG, Starling RC, Stevenson WG, Tang WHW, Teerlink JR, Walsh MN. Executive Summary: HFSA 2010 Comphrensive Heart Failure Practice Guideline. J Card Fail 2010;16:475-539.
- Yancy CW, Jessup M, Bozkurt B, Butler J, Casey DE Jr, Drazner MH, Fonarow GC, Geraci SA, Horwich T, Januzzi JL, Johnson MR, Kasper EK, Levy WC, Masoudi FA, McBride PE, McMurray JJV, Mitchell JE, Peterson PN, Riegel B, Sam F, Stevenson LW, Tang WHW, Tsai EJ, Wilkoff BL. 2013 ACCF/AHA guideline for the management of heart failure: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Circulation. 2013;128:e240–e327.

Measure Algorithm:

ACHFOP–03: Hospital Outpatient Aldosterone Receptor Antagonist Prescribed for LVSD

Numerator: Patients who are prescribed an aldosterone receptor antagonist (spironolactone or eplerenone) when seen in the outpatient setting.

Denominator: Heart failure patients with current or prior documentation of left ventricular ejection fraction (LVSD) < 40%.



Measure Information Form

Measure Set: Advanced Certification Heart Failure Outpatient (ACHFOP)

Set Measure ID: ACHFOP-04

Performance Measure Name: Hosptial Outpatient New York Heart Association (NYHA Classification Assessment)

Description: A baseline assessment of functional outcome utilizing the New York Heart Association (NYHA) classification documented at the time of the initial outpatient visit.

Rationale: Physician-assigned New York Heart Association (NYHA) class has been shown to be predictive of outcomes in heart failure including hospitalization and mortality (Holland et al., 2010). Classification involves the physician's subjective interpretation of patient symptoms and clinical data; therefore, variation in class assignment between different observers is common. To improve objectivity, the pairing of NYHA class with patient self-assessment of functional status has been recommended by some clinical studies (Coelho et al., 2005).

Treatment goals for heart failure patients include symptom relief and improved prognosis. Another major goal is to maximize function in activities of daily living and improve the quality of life within the limits imposed by the disease (Flynn et al., 2009).

Assessment activities consistent with clinical practice guidelines for a targeted population are an integral component of diseases-specific patient care. For Advanced Certification in Heart Failure, these activities should include an assessment of functional capacity (The Joint Commission's 2017 Comprehensive Certification Manual for Disease-Specific Care).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients for whom a New York Heart Association (NYHA) Classification Assessment was documented at the time of the initial outpatient visit.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *New York Heart Association (NYHA) Classification*

Denominator Statement: All heart failure patients

> **Included Populations:**

- E/M Code for hospital outpatient encounter as defined in Appendix A, Table 2.0, and
- An ICD-10-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1

Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patients enrolled in a clinical trial

Data Elements:

- *Birthdate*
- *Clinical Trial*
- *Discharge Code*
- *E/M Code*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*
- *Outpatient Encounter Date*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

1. Coelho R, Ramos S, Prata J, Bettencourt P, Ferreira A, Cerqueira-Gomes M. Heart failure and health related quality of life. Clin Pract Epidemiol Ment Health. 2005;1:19.
2. Flynn KE, Lin L, Ellis SJ, Russell SD, Spertus JA, Whellan DJ, Piña IL, Fine LJ, Schulman KA, Weinfurt KP; HF-ACTION Investigators. Outcomes, health policy, and managed care: relationships between patient-reported outcome measures and clinical measures in outpatients with heart failure. Am Heart J. 2009;158(4 Suppl):S64-71

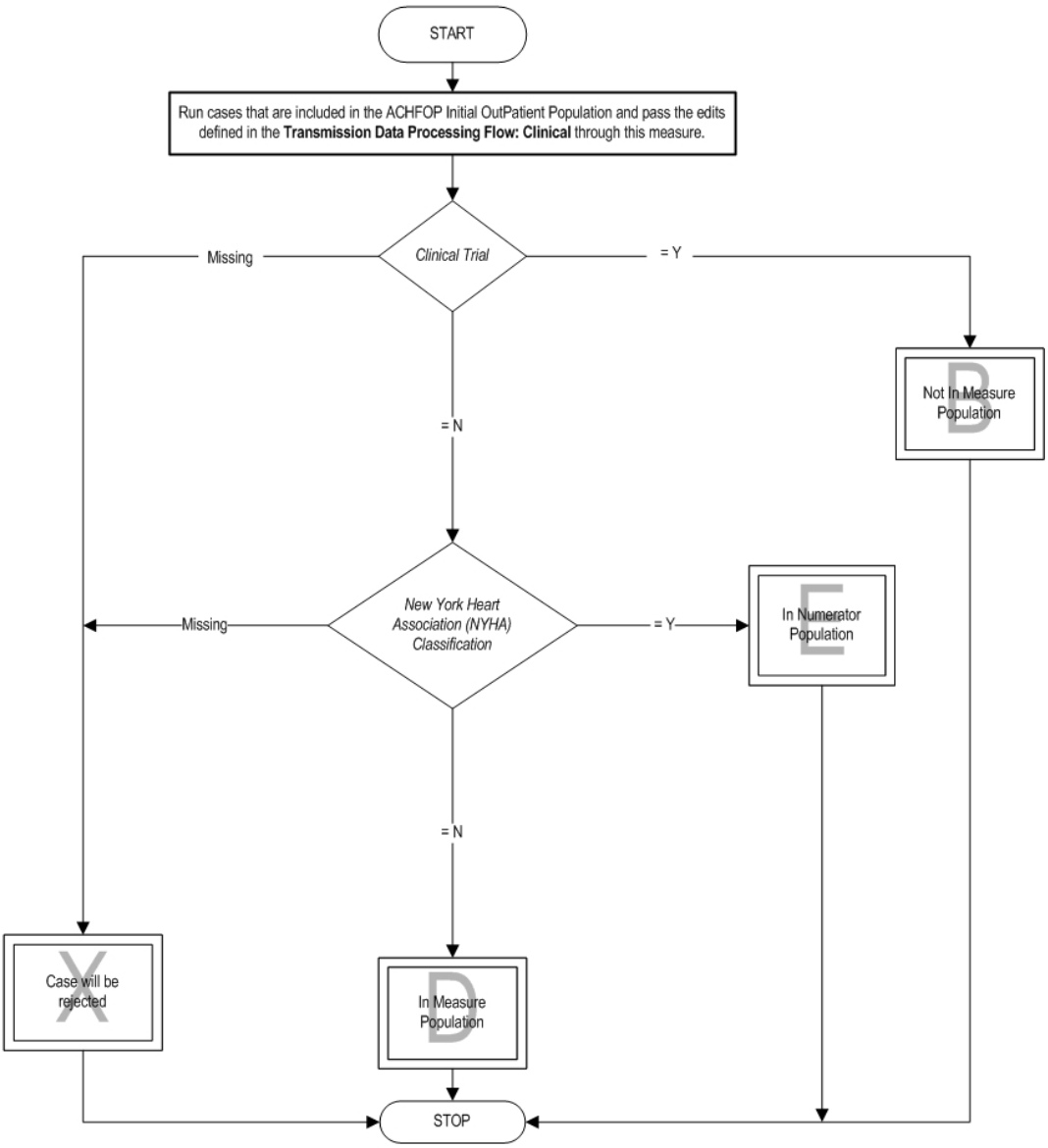
3. Hobbs FD, Kenkre JE, Roalfe AK, Davis RC, Hare R, Davies MK. Impact of heart failure and left ventricular systolic dysfunction on quality of life: a cross-sectional study comparing common chronic cardiac and medical disorders and a representative adult population. Eur Heart J. 2002;23(23):1867-1876.
4. Holland R, Rechel B, Stepien K, Harvey I, Brooksby I. Patients' self-assessed functional status in heart failure by New York Heart Association class: a prognostic predictor of hospitalizations, quality of life and death. J Card Fail. 2010 Feb;16(2):150-156.
5. Juenger J, Schellberg D, Kraemer S, Haunstetter A, Zugck C, Herzog W, Haass M. Health related quality of life in patients with congestive heart failure: comparison with other chronic diseases and relation to functional variables. Heart. 2002;87(3):235-241.
6. The Joint Commission. The Joint Commission's 2017 Comprehensive Certification Manual for Disease-Specific Care: Advanced Certification in Heart Failure Addendum. Oakbrook Terrace, IL: Author. 2017.
7. Yancy CW, Jessup M, Bozkurt B, Butler J, Casey DE Jr, Drazner MH, Fonarow GC, Geraci SA, Horwich T, Januzzi JL, Johnson MR, Kasper EK, Levy WC, Masoudi FA, McBride PE, McMurray JJV, Mitchell JE, Peterson PN, Riegel B, Sam F, Stevenson LW, Tang WHW, Tsai EJ, Wilkoff BL. 2013 ACCF/AHA guideline for the management of heart failure: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Circulation. 2013;128:e240–e327.

Measure Algorithm:

ACHFOP–04: Hosptial Outpatient New York Heart Association (NYHA) Classification

Numerator: Patients for whom a New York Heart Association (NYHA) Classification is documented in the outpatient record.

Denominator: All heart failure patients.



Measure Information Form

Measure Set: Advanced Certification Heart Failure Outpatient (ACHFOP)

Set Measure ID: ACHFOP-05

Performance Measure Name: Hospital Outpatient Activity Recommendations

Description: Outpatients who have received a document describing individualized activity recommendations including type of activity, duration and intensity, tailored to their needs. This document must be present in the outpatient record.

Rationale: Heart failure is a progressive clinical syndrome in which damage to the myocardium impairs the ability of the ventricle to effectively pump blood throughout the body. It manifests by fluid congestion or inadequate blood flow to tissues. Dyspnea and fatigue are cardinal signs of the disease, which may limit exercise tolerance, and negatively impact the quality of life.

The Committee on Exercise, Rehabilitation, and Prevention of the American Heart Association Council on Clinical Cardiology has concluded that exercise training in patients with heart failure seems to be safe and beneficial overall in improving exercise capacity, as measured by peak VO2, peak workload, exercise duration, and parameters of submaximal exercise performance. Although studies addressing quality of life for heart failure patients participating in an exercise program are limited, findings suggest that quality of life improves proportionately with increased exercise capacity. Since there is currently a lack of consensus as to a universal exercise protocol for all heart failure patients, exercise programs should be tailored to the needs of the individual. Recommendations for exercise should include the setting, type of activity, duration, and intensity (Piña et al., 2003).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Outpatients who have received a document describing individualized activity recommendations including ALL of the following:

- Type of activity
- Duration of activity
- Intensity of activity

This document must be present in the outpatient record.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**

- *Activity Recommendation — Duration of Activity*
- *Activity Recommendation — Intensity of Activity*
- *Activity Recommendation — Type of Activity*

Denominator Statement: All heart failure patients

Included Populations:

- E/M Code for hospital outpatient encounter as defined in Appendix A, Table 2.0, and
- An ICD-10-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1

Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patients enrolled in clinical trials
- Patients with a documented Reason for No Activity Recommendations in the Outpatient Setting

Data Elements:

- *Birthdate*
- *Clinical Trial*
- *Discharge Code*
- *E/M Code*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*
- *Outpatient Encounter Date*
- *Reason for No Activity Recommendations in the Outpatient Setting*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None.

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

1. Hunt SA, Abraham WT, Chin MH, Felman AM, Francis GS, Ganiats TG, Jessup M, Konstan MA, Mancini DM, Michl K, Oates JA, Rahko PS, Silver MA, Stevenson LW, Yancy CW. 2009 Focused update incorporated Into the ACC/AHA 2005 guidelines for the diagnosis and management of heart failure in adults: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines Developed in Collaboration With the International Society for Heart and Lung Transplantation. Circulation. 2009;119(14):e391-e479.
2. Lindenfeld J, Albert NM, Boehmer JP, Collins SP, Ezekowitz JA, Givertz MM, Klapholz M, MoserDK, Rogers JG, Starling RC, Stevenson WG, Tang WHW, Teerlink JR, Walsh MN. Executive Summary: HFSA 2010 Comprehensive Heart Failure Practice Guideline. J Card Fail 2010;16(6):475-539.
3. Yancy CW, Jessup M, Bozkurt B, Butler J, Casey DE Jr, Drazner MH, Fonarow GC, Geraci SA, Horwich T, Januzzi JL, Johnson MR, Kasper EK, Levy WC, Masoudi FA, McBride PE, McMurray JJV, Mitchell JE, Peterson PN, Riegel B, Sam F, Stevenson LW, Tang WHW, Tsai EJ, Wilkoff BL. 2013 ACCF/AHA guideline for the management of heart failure: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Circulation. 2013;128:e240–e327.

Measure Algorithm:

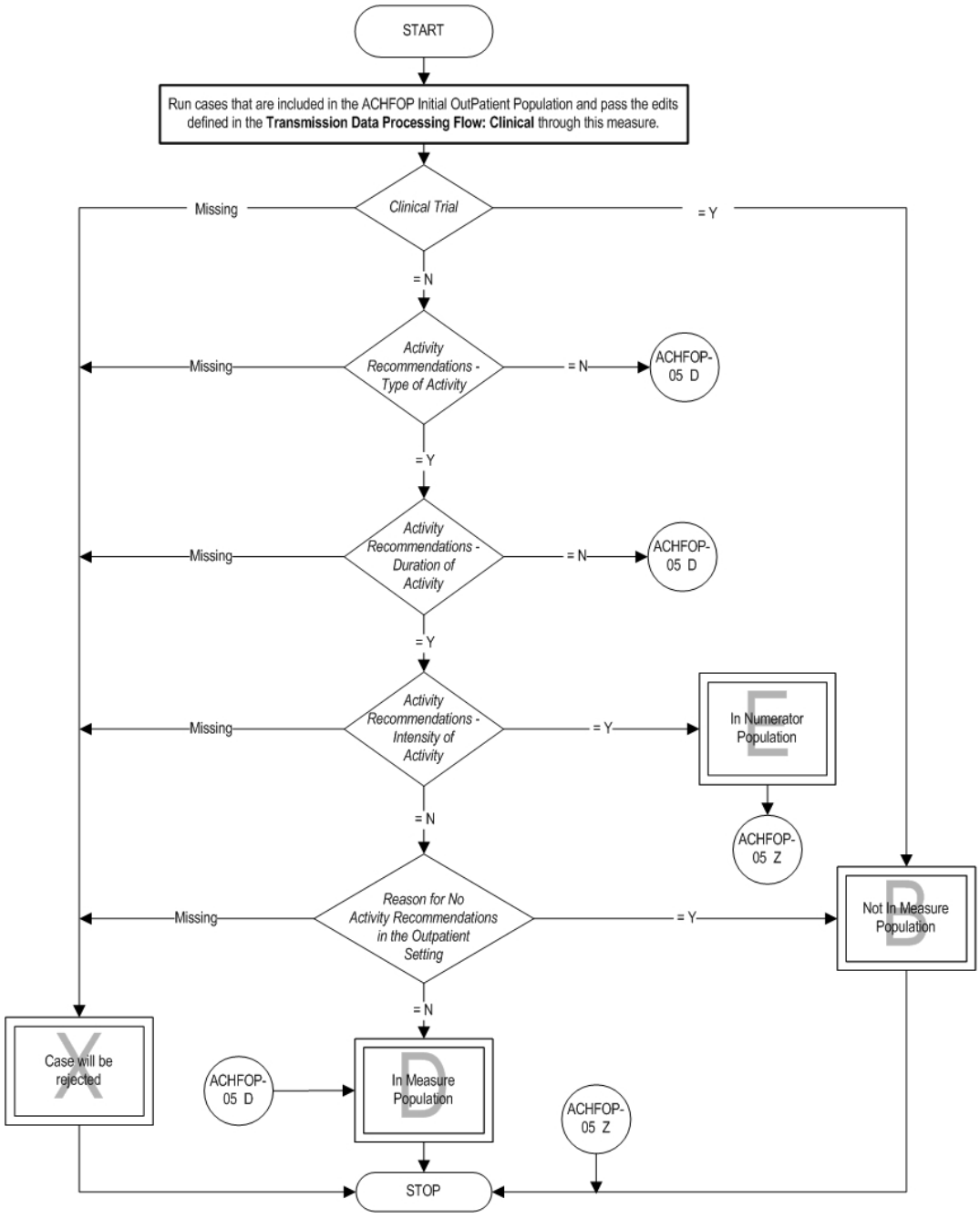
ACHFOP–05: Hospital Outpatient Activity Recommendations

Numerator: Outpatients who have received a document describing individualized activity recommendations including ALL of the following:

- Type of activity
- Duration of activity
- Intensity of activity

This document must be present in the outpatient record.

Denominator: All heart failure patients.



Measure Information Form

Measure Set: Advanced Certification Heart Failure Outpatient (ACHFOP)

Set Measure ID: ACHFOP-06

Performance Measure Name: Hospital Outpatient Discussion of Advance Directives/Advance Care Planning

Description: Outpatients who have documentation in the medical record of a one-time discussion of advance directives/advance care planning with a healthcare provider.

Rationale: Heart failure is a progressive, debilitating disease which carries with it a poor prognosis over time and high mortality rate. Physicians should acknowledge the life-threatening nature of the disease and discuss with patients and/or their caregivers prognosis, quality of life, pharmacologic and device therapies, self-management, and supportive care options (HFSA, 2010).

According to Heffner and Barbieri, most patients at fourteen cardiac rehabilitation programs across the United States, presumed the need for life-support at some point in the future and wanted to make their own decisions about end-of-life care. Most of the patients were aware of advance directives, desired more information, and preferred to get more information from their lawyers, families, physicians, or cardiac rehabilitation programs (Perkins, 2000). Despite this receptiveness, only 15% of patients had discussed advance directives with their physicians, and 10% had confidence that their physicians understood their wishes (Heffner and Barbieri, 2000).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Outpatients who have documentation in the medical record of a one-time discussion of advance directives/advance care planning with a healthcare provider.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Discussion of Advance Directives/Advance Care Planning*

Denominator Statement: All heart failure patients

> **Included Populations:**
>
> - E/M Code for hospital outpatient encounter as defined in Appendix A, Table 2.0, and
> - An ICD-10-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1

Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age

Data Elements:

- *Birthdate*
- *Discharge Code*
- *E/M Code*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*
- *Outpatient Encounter Date*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None.

Sampling: Yes. please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

1. Anderson R, Joy S, Carkido A, Anthony S, Smyntek d, Perrine S, Puet TA, Butler ET. Development of a Congestive Heart Failure Protocol in a Rehabilitation Setting. Rehab Nursing 2010;35(1);3-7;30.
2. Hefner JE, Barberi C. End-of-life care preferences of patients enrolled in cardiovascular rehabilitation programs. Chest. 2000;117(5);1474-1481.
3. Kass-Bartelmes BL, Hughes R. Advance Care Planning Preferences for care at the end of life. J Pain Palliat Care Pharmacother. 2004;18(1):87-109.
4. Perkins HS. Time to move advance care planning beyond advance directives. Chest. 2000;117(5);128-1231.
5. Wilkinson A. Living with Advanced Congestive Heart Failure: A Guide for Family Caregivers. The Washington Home Center for Palliative Care Studies (A Division of the RAND Corporation). Nov 2002.

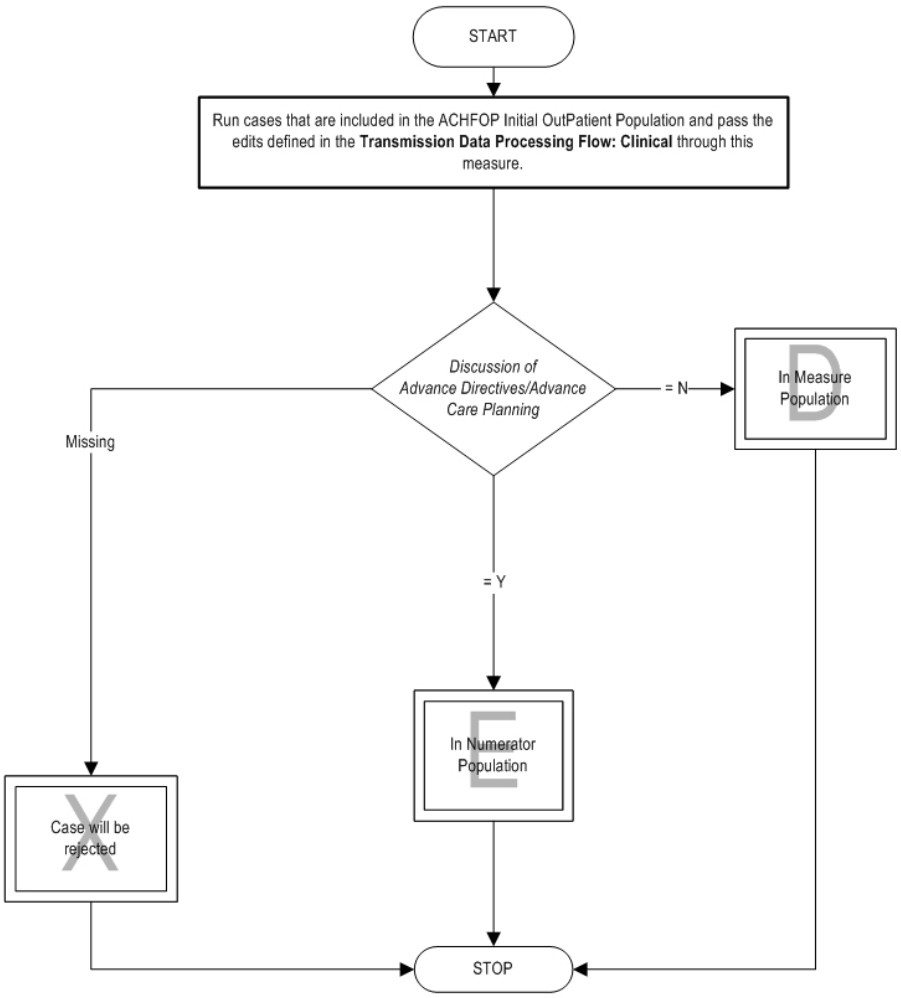
6. Yancy CW, Jessup M, Bozkurt B, Butler J, Casey DE Jr, Drazner MH, Fonarow GC, Geraci SA, Horwich T, Januzzi JL, Johnson MR, Kasper EK, Levy WC, Masoudi FA, McBride PE, McMurray JJV, Mitchell JE, Peterson PN, Riegel B, Sam F, Stevenson LW, Tang WHW, Tsai EJ, Wilkoff BL. 2013 ACCF/AHA guideline for the management of heart failure: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Circulation. 2013;128:e240–e327.

Measure Algorithm:

ACHFOP–06: Hospital Outpatient Discussion of Advance Directives/Advance Care Planning

Numerator: Outpatients who have documentation in the outpatient medical record of a one-time discussion of advance directives/advance care planning with a healthcare provider.

Denominator: All heart failure patients.



Measure Information Form

Measure Set: Advanced Certification Heart Failure Outpatient (ACHFOP)

Set Measure ID: ACHFOP-07

Performance Measure Name: Hospital Outpatient Advance Directive Executed

Description: Outpatients who have documentation in the medical record that an advance directive was executed.

Rationale: Heart failure is a progressive, debilitating disease which carries with it a poor prognosis over time and high mortality rate. Physicians should acknowledge the life-threatening nature of the disease and discuss with patients and/or their caregivers prognosis, quality of life, pharmacologic and device therapies, self-management, and supportive care options (HFSA, 2010). According to Heffner and Barbieri, most patients at fourteen cardiac rehabilitation programs across the United States, presumed the need for life-support at some point in the future and wanted to make their own decisions about end-of-life care. Most of the patients were aware of advance directives, desired more information, and preferred to get more information from their lawyers, families, physicians, or cardiac rehabilitation programs (Perkins, 2000). Despite this receptiveness, only 15% of patients had discussed advance directives with their physicians, and 10% had confidence that their physicians understood their wishes (Heffner and Barbieri, 2000).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Outpatients who have documentation in the medical record that an advance directive was executed.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Advance Directive Executed*

Denominator Statement: All heart failure patients.

> **Included Populations:**
>
> - E/M Code for hospital outpatient encounter as defined in Appendix A, Table 2.0, and
> - ICD-10-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1
>
> **Excluded Populations:**

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age

Data Elements:

- *Birthdate*
- *Discharge Code*
- *E/M Code*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*
- *Outpatient Encounter Date*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluaiton to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

1. Anderson R, Joy S, Carkido A, Anthony S, Smyntek d, Perrine S, Puet TA, Butler ET. Development of a Congestive Heart Failure Protocol in a Rehabilitation Setting. *Rehab Nursing* 2010;35(1);3-7;30.

2. Hefner JE, Barberi C. End-of-life care preferences of patients enrolled in cardiovascular rehabilitation programs. Chest. 2000;117(5);1474-1481.

3. Kass-Bartelmes BL, Hughes R. Advance Care Planning Preferences for care at the end of life. *J Pain Palliat Care Pharmacother*. 2004;18(1):87-109.

4. Perkins HS. Time to move advance care planning beyond advance directives. *Chest*. 2000;117(5);128-1231.

5. Wilkinson A. Living with Advanced Congestive Heart Failure: A Guide for Family Caregivers. The Washington Home Center for Palliative Care Studies (A Division of the RAND Corporation). Nov 2002.

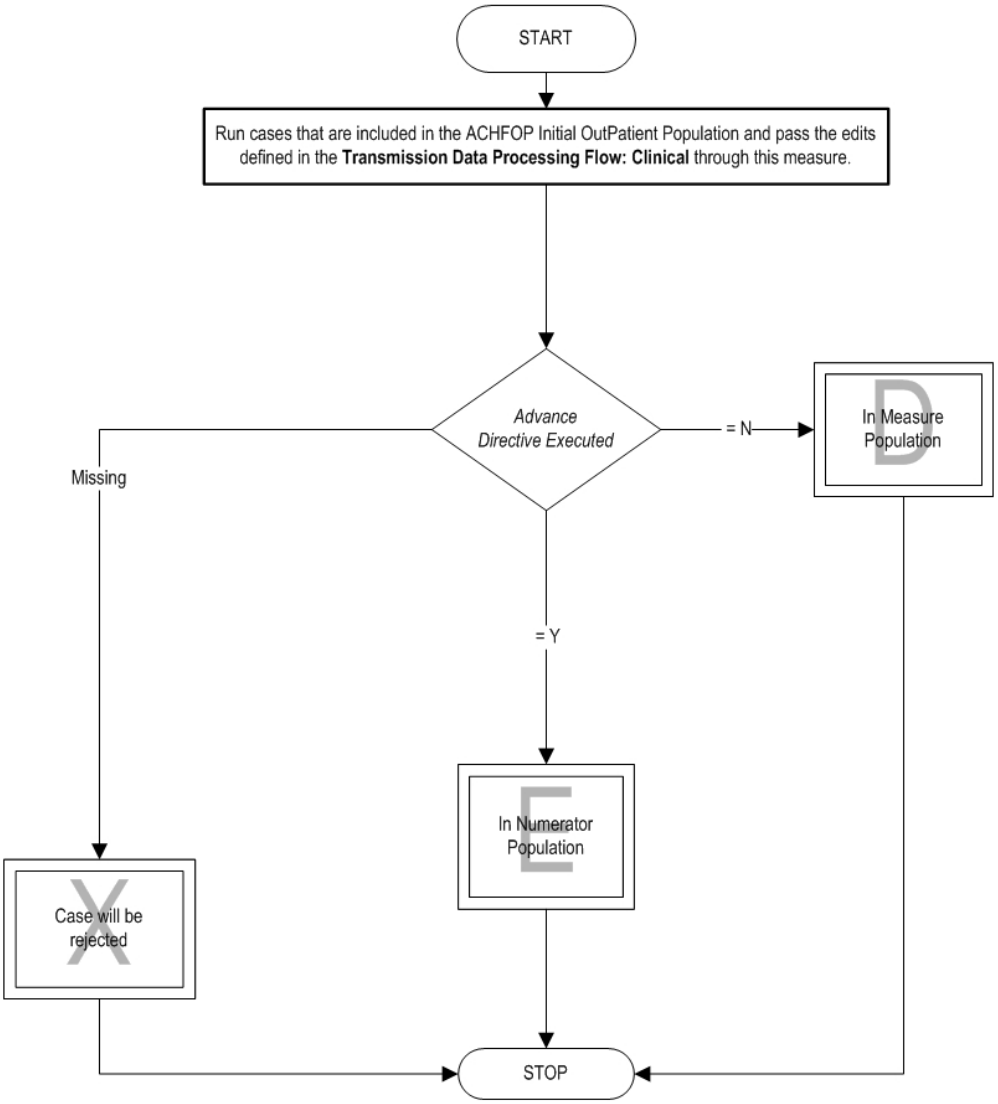
6. Yancy CW, Jessup M, Bozkurt B, Butler J, Casey DE Jr, Drazner MH, Fonarow GC, Geraci SA, Horwich T, Januzzi JL, Johnson MR, Kasper EK, Levy WC, Masoudi FA, McBride PE, McMurray JJV, Mitchell JE, Peterson PN, Riegel B, Sam F, Stevenson LW, Tang WHW, Tsai EJ, Wilkoff BL. 2013 ACCF/AHA guideline for the management of heart failure: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Circulation. 2013;128:e240–e327.

Measure Algorithm:

ACHFOP–07: Hospital Outpatient Advance Directive Executed

Numerator: Outpatients who have documentation in the outpatient medical record that an advance directive was executed.

Denominator: All heart failure patients.



Comprehensive Stroke (CSTK)

Set Measures

Set Measure ID	Measure Short Name
CSTK-01	National Institutes of Health Stroke Scale (NIHSS Score Performed for Ischemic Stroke Patients)
CSTK-02	Modified Rankin Score (mRS at 90 Days)
CSTK-03	Severity Measurement Performed for SAH and ICH Patients (Overall Rate)
CSTK-04	Procoagulant Reversal Agent Initiation for Intracerebral Hemorrhage (ICH)
CSTK-05	Hemorrhagic Transformation (Overall Rate)
CSTK-06	Nimodipine Treatment Administered
CSTK-07	Median Time to Revascularization
CSTK-08	Thrombolysis in Cerebral Infarction (TICI Post-Treatment Reperfusion Grade)
CSTK-09	Arrival Time to Skin Puncture
CSTK-10	Modified Rankin Score (mRS at 90 Days: Favorable Outcome)
CSTK-11	Timeliness of Reperfusion: Arrival Time to TICI 2B or Higher
CSTK-12	Timeliness of Reperfusion: Skin Puncture to TICI 2B or Higher

General Data Elements

Element Name	Collected For
Admission Date	All Records,
Birthdate	All Records,
Discharge Date	All Records, Not collected for HBIPS-2 and HBIPS-3
Hispanic Ethnicity	All Records,

Element Name	Collected For
ICD-10-CM Other Diagnosis Codes	All Records, Optional for HBIPS-2, HBIPS-3
ICD-10-CM Principal Diagnosis Code	All Records, Optional for HBIPS-2, HBIPS-3
ICD-10-PCS Other Procedure Codes	All Records, Optional for All HBIPS Records
ICD-10-PCS Other Procedure Dates	All Records, Optional for All HBIPS Records
ICD-10-PCS Principal Procedure Code	All Records, Optional for All HBIPS Records
ICD-10-PCS Principal Procedure Date	All Records, Optional for All HBIPS Records
Payment Source	All Records, Optional for HBIPS-2 and HBIPS-3
Race	All Records,
Sex	All Records,

Algorithm Output Data Elements

Element Name	Collected For
Measurement Value	Calculation, Transmission, Hospital Clinical Data File

Measure Set Specific Data Elements

Element Name	Collected For
Admitting Diagnosis	CSTK-04
Arrival Date	CSTK-01, CSTK-03, CSTK-05, CSTK-06, CSTK-07, CSTK-09, CSTK-11
Arrival Time	CSTK-01, CSTK-03, CSTK-05, CSTK-06, CSTK-07, CSTK-09, CSTK-11

Element Name	Collected For
Clinical Trial	CSTK-04, CSTK-06
Comfort Measures Only	CSTK-01, CSTK-03, CSTK-04, CSTK-06
Delayed Endovascular Rescue Procedure	CSTK-09, CSTK-11
Direct Admission	CSTK-01, CSTK-03
Discharge Disposition	CSTK-02, CSTK-10
Discharge Time	CSTK-01, CSTK-03, CSTK-06
ED Patient	CSTK-01, CSTK-03
Elective Carotid Intervention	CSTK-01, CSTK-02, CSTK-05, CSTK-07, CSTK-08, CSTK-09, CSTK-10, CSTK-11, CSTK-12
Failed Attempt at Thrombectomy	CSTK-08, CSTK-11, CSTK-12
First Pass Date	CSTK-07
First Pass Time	CSTK-07
First Pass of a Mechanical Reperfusion Device	CSTK-07
Highest NIHSS Score Documented Within 36 Hours Following IA Alteplase or MER Initiation	CSTK-05
Highest NIHSS Score Documented Within 36 Hours Following IV Alteplase Initiation	CSTK-05
IA Alteplase or MER Initiation Date	CSTK-05
IA Alteplase or MER Initiation Time	CSTK-05
IA Route of Alteplase Administration	CSTK-05, CSTK-07, CSTK-08, CSTK-09
IA Thrombolytic Initiation	CSTK-07
IA Thrombolytic Initiation Date	CSTK-07
IA Thrombolytic Initiation Time	CSTK-07
ICD-10-PCS Other Procedure Times	CSTK-01, CSTK-03
ICD-10-PCS Principal Procedure Time	CSTK-01, CSTK-03
INR Value > 1.4	CSTK-04
IV Alteplase Initiation	CSTK-05

Element Name	Collected For
IV Alteplase Initiation Date	CSTK-05
IV Alteplase Initiation Time	CSTK-05
IV Alteplase Prior to IA or Mechanical Reperfusion Therapy	CSTK-05, CSTK-08, CSTK-10
Initial Blood Glucose Value at Hospital Arrival	CSTK-05, CSTK-08, CSTK-10
Initial Blood Pressure at Hospital Arrival	CSTK-05, CSTK-08, CSTK-10
Initial Hunt and Hess Scale Date	CSTK-03
Initial Hunt and Hess Scale Performed	CSTK-03
Initial Hunt and Hess Scale Time	CSTK-03
Initial ICH Score Date	CSTK-03
Initial ICH Score Performed	CSTK-03
Initial ICH Score Time	CSTK-03
Initial NIHSS Score Date	CSTK-01
Initial NIHSS Score Performed	CSTK-01
Initial NIHSS Score Time	CSTK-01
Initial NIHSS Score at Hospital Arrival	CSTK-05, CSTK-08, CSTK-10
Initial Platelet Count at Hospital Arrival	CSTK-05, CSTK-08, CSTK-10
Large Vessel Occlusion (LVO)	CSTK
MER Eligibility	CSTK
Modified Rankin Score (mRS)	CSTK-02, CSTK-10
Modified Rankin Score (mRS) Date	CSTK-02, CSTK-10
NIHSS Score Documented Closest to IA Alteplase or MER Initiation	CSTK-05
NIHSS Score Documented Closest to IV Alteplase Initiation	CSTK-05
Nimodipine Administration	CSTK-06
Nimodipine Administration Date	CSTK-06
Nimodipine Administration Time	CSTK-06

Element Name	Collected For
Non-aneurysmal	CSTK-03
Positive Brain Image	CSTK-05
Positive Brain Image Date	CSTK-05
Positive Brain Image Time	CSTK-05
Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade	CSTK-08, CSTK-11, CSTK-12
Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade Date	CSTK-11, CSTK-12
Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade Time	CSTK-11, CSTK-12
Pre-Stroke Modified Rankin Score (mRS)	CSTK-10
Procoagulant Reversal Agent Initiation	CSTK-04
Proximal or Distal Occlusion	CSTK-08
Reason for Not Administering Nimodipine Treatment	CSTK-06
Reason for Not Administering a Procoagulant Reversal Agent	CSTK-04
Site of Primary Vessel Occlusion	CSTK-08, CSTK-11, CSTK-12
Skin Puncture	CSTK-09, CSTK-12
Skin Puncture Date	CSTK-09, CSTK-12
Skin Puncture Time	CSTK-09, CSTK-12

Related Materials

Document Name
Acknowledgment and Conditions of Use
Appendix A - ICD-10 Code Tables
Appendix C - Medication Tables
Appendix D - Glossary of Terms

	Document Name	
	Appendix E - Overview of Measure Information Form and Flowchart Formats	
	Appendix G - Resources	
	Appendix H - Miscellaneous Tables	
	Cover Page for the Joint Commission Manual	
	Data Dictionary	
	Introduction to the Manual	
	Missing and Invalid Data	
	Sampling	
	Table of Contents	
	Transmission Alpha Data Dictionary	
	Transmission Data Processing Flow: Clinical	
	Transmission Data Processing Flow: Population and Sampling	
	Transmission of Data	
	Using the The Joint Commission's National Measure Specifications Manual	

Comprehensive Stroke (CSTK) Initial Patient Population

The CSTK Initial Patient Population is unique in that it is comprised of three distinct subpopulations: ischemic stroke patients who do not undergo a reperfusion therapy (i.e., procedure), ischemic stroke patients who undergo a reperfusion therapy (IV t-PA, IA t-PA, or mechanical endovascular reperfusion (MER) therapy), and hemorrhagic stroke patients.

Ischemic Stroke
The population of the CSTK 1-Ischemic Stroke measures (CSTK-01) are identified using 4 data elements:

- Admission Date
- Birthdate
- Discharge Date
- ICD-10-CM-Principal Diagnosis Code

Patients admitted to the hospital for inpatient acute care are included in the CSTK 1-Ischemic Stroke Without Procedure subpopulation sampling group if they have: ICD-10-CM Principal Diagnosis Code as defined in Appendix A, Table 8.1, a Patient Age (Admission Date – Birthdate) ≥ 18 years and a Length of Stay (Discharge Date - Admission Date) ≤ 120 days.

Note: Hospitals are NOT required to sample their data. If sampling offers minimal benefit (i.e., a hospital has 45 cases for the quarter and must select a sample of 42 cases), the hospital may choose to use all cases.

Ischemic Stroke With IV t-PA, IA t-PA, or MER
The population of the CSTK 2-Ischemic Stroke With IV t-PA, IA t-PA, or MER measures (CSTK-01, CSTK-02, CSTK-05, CSTK-07, CSTK-08, CSTK-09, CSTK-10, CSTK-11, CSTK-12) are identified using 5 data elements:

- Admission Date
- Birthdate
- Discharge Date
- ICD-10-CM Principal Diagnosis Code
- ICD-10-PCS Principal or Other Procedure Codes

Patients admitted to the hospital for inpatient acute care are included in the CSTK-2 Ischemic Stroke With IV t-PA, IA t-PA, or MER subpopulation sampling group if they have: ICD-10-CM Principal Diagnosis Code as defined in Appendix A, Table 8.1 AND ICD-10-PCS Principal or Other Procedure Codes as defined in Appendix A, Table 8.1a OR Table 8.1b, a Patient Age (Admission Date – Birthdate) ≥ 18 years and a Length of Stay (Discharge Date - Admission Date) ≤ 120 days.

Note: Hospitals are NOT required to sample their data. If sampling offers minimal benefit (i.e., a hospital has 45 cases for the quarter and must select a sample of 42 cases), the hospital may choose to use all cases.

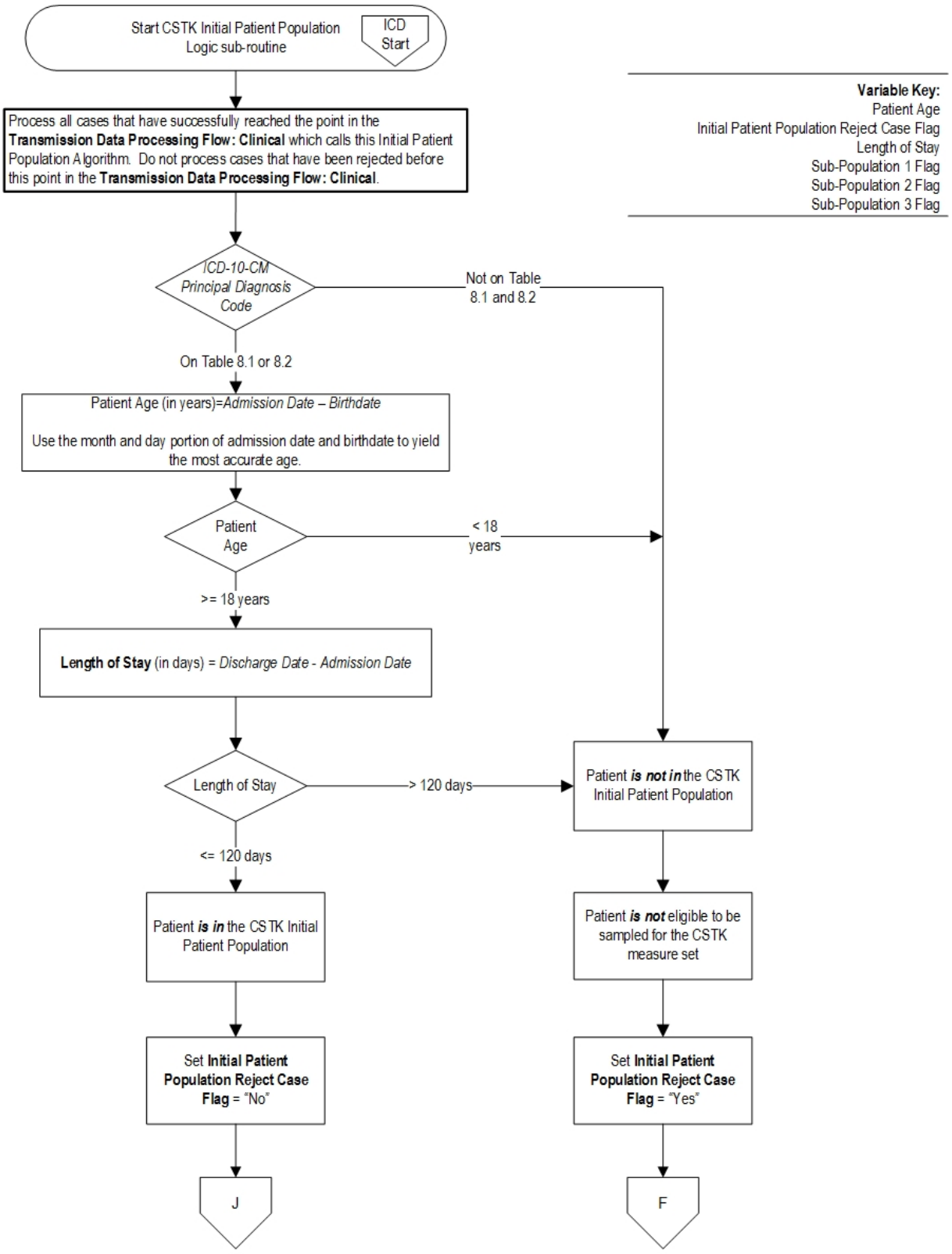
Hemorrhagic Stroke
The population of the CSTK 3-Hemorrhagic Stroke measures (CSTK-03, CSTK-04, CSTK-06) are identified using 4 data elements:

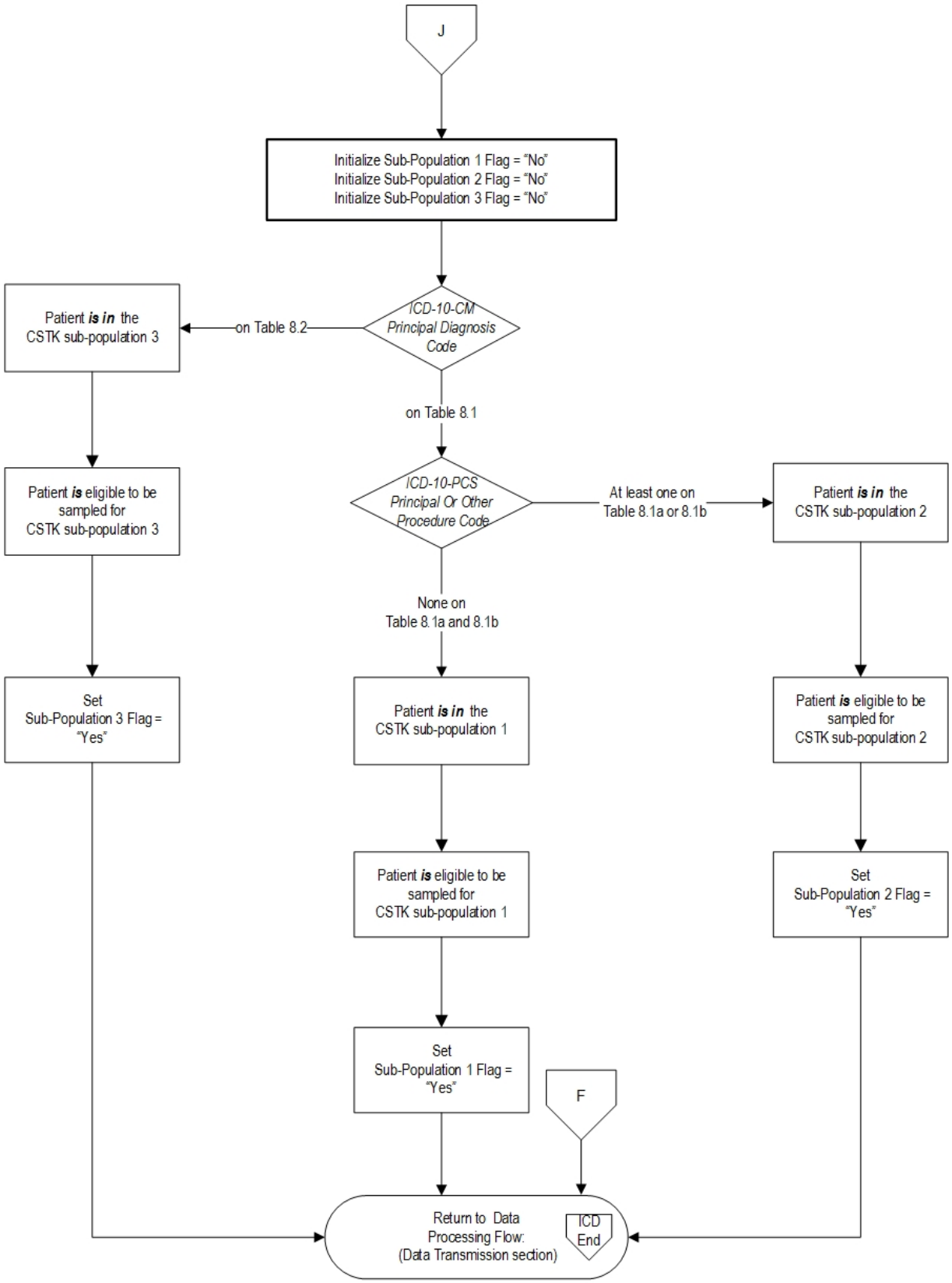
- Admission Date
- Birthdate
- Discharge Date
- ICD-10-CM-Principal Diagnosis Code

Patients admitted to the hospital for inpatient acute care are included in the CSTK 3-Hemorrhagic Stroke subpopulation sampling group if they have: ICD-10-CM Principal Diagnosis Code as defined in Appendix A, Table 8.2, a Patient Age (Admission Date – Birthdate) ≥ 18 years and a Length of Stay (Discharge Date - Admission Date) ≤ 120 days.

Note: Hospitals are NOT required to sample their data. If sampling offers minimal benefit (i.e., a hospital has 80 cases for the quarter and must select a sample of 75 cases), the hospital may choose to use all cases.

CSTK Initial Patient Population Algorithm




J
Initialize Sub-Population 1 Flag = "No"
Initialize Sub-Population 2 Flag = "No"
Initialize Sub-Population 3 Flag = "No"
ICD-10-CM Principal Diagnosis Code
on Table 8.2
Patient is in the CSTK sub-population 3
Patient is eligible to be sampled for CSTK sub-population 3
Set Sub-Population 3 Flag = "Yes"
on Table 8.1
ICD-10-PCS Principal Or Other Procedure Code
At least one on Table 8.1a or 8.1b
Patient is in the CSTK sub-population 2
Patient is eligible to be sampled for CSTK sub-population 2
Set Sub-Population 2 Flag = "Yes"
None on Table 8.1a and 8.1b
Patient is in the CSTK sub-population 1
Patient is eligible to be sampled for CSTK sub-population 1
Set Sub-Population 1 Flag = "Yes"
F
Return to Data Processing Flow: (Data Transmission section)
ICD End

CSTK Sample Size Requirements

Hospitals that choose to sample have the option of sampling quarterly or sampling monthly. A hospital may choose to use a larger sample size than is required. Hospitals whose Initial Patient Population size is less than the minimum number of cases per quarter for the measure set cannot sample. Hospitals that have five or fewer CSTK discharges (both Medicare and non-Medicare combined) in a quarter are not required to submit CSTK patient level data to the QIO Clinical Warehouse or the Joint Commission's Data Warehouse.

Regardless of the option used, hospital samples must be monitored to ensure that sampling procedures consistently produce statistically valid and useful data. Due to exclusions, hospitals selecting sample cases MUST submit AT LEAST the minimum required sample size.

The following sample size tables for each option automatically build in the number of cases needed to obtain the required sample sizes. For information concerning how to perform sampling, refer to the Population and Sampling Specifications section in this manual.

Quarterly Sampling

Hospitals performing quarterly sampling for CSTK must ensure that its Initial Patient Population and sample size meet the following conditions for each sampling group:

Quarterly Sample Size
Based on **CSTK Subpopulation 1** for Ischemic Stroke Without Procedure
(CSTK-01 Measure)

Hospital's Measure (Table 1)

Average Quarterly Initial Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
> 420	84
211-419	20% of Patient Population size
43-210	42
≤ 42	No sampling; 100% Patient Population required

Quarterly Sample Size
Based on **CSTK Subpopulation 2** for Ischemic Stroke With IV t-PA, IA t-PA,or MER
(CSTK-01, CSTK-02, CSTK-05, CSTK-07, CSTK-08, CSTK-09, CSTK-10, CSTK-11, CSTK-12)

Hospital's Measure (Table 2)

Average Quarterly Initial Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
> 420	84
211-419	20% of Patient Population size
43-210	42
≤ 42	No sampling; 100% Patient Population required

Quarterly Sample Size
Based on **CSTK Subpopulation 3** for Hemorrhagic Stroke
(CSTK-03, CSTK-04, CSTK-06)

Hospital's Measure (Table 3)

Average Quarterly Initial Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
> 750	150
376-750	20% of Patient Population size
76-375	75
≤ 75	No sampling; 100% Patient Population required

Monthly Sampling

Hospitals performing monthly sampling for CSTK must ensure that its Initial Patient Population and sample size meet the following conditions for each sampling group:

Monthly Sample Size
Based on **CSTK Subpopulation 1** for Ischemic Stroke Without Procedure
(CSTK-01 Measure)
Hospital's Measure (Table 4)

Average Monthly Initial Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
> 140	28
71-140	20% of Patient Population size
15-70	14
≤ 14	No sampling; 100% Patient Population required

Monthly Sample Size
Based on **CSTK Subpopulation 2** for Ischemic Stroke With IV t-PA, IA t-PA, or MER (CSTK-01, CSTK-02, CSTK-05, CSTK-07, CSTK-08, CSTK-09, CSTK-10, CSTK-11, CSTK-12)
Hospital's Measure (Table 5)

Average Monthly Initial Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
> 140	28
71-140	20% of Patient Population size
15-70	14
≤ 14	No sampling; 100% Patient Population required

Monthly Sample Size
Based on **CSTK Subpopulation 3** for Hemorrhagic Stroke (CSTK-03, CSTK-04, CSTK-06)
Hospital's Measure (Table 6)

Average Monthly Initial Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
> 250	50
126-250	20% of Patient Population size
26-125	25
≤ 25	No sampling; 100% Patient Population required

Sample Size Examples

NOTE: Two subpopulations make-up the population for the CSTK-01 measure; CSTK Subpopulation 1 for Ischemic Stroke Without Procedure and CSTK Subpopulation 2 for Ischemic Stroke With IV t-PA, IA t-PA, or MER. Both sampling groups must be sampled to meet the minimum sampling requirement for CSTK-01.
Examples:

- A hospital's ischemic stroke patient population size is 200 patients during the second quarter. Fifty (50) ischemic stroke patients had a procedure for thrombolysis or mechanical clot removal. The required quarterly sample size for the CSTK-01 measure is a minimum of 84 cases (42 cases from Table 1 plus 42 cases from Table 2 equals 84).

- A hospital's ischemic stroke patient population size is 200 patients during March. Twenty (20) ischemic stroke patients had a procedure for thrombolysis or mechanical clot removal. The required sample size for the CSTK-01 measure is a minimum of 42 cases for the month (28 cases from Table 4 plus 14 cases from Table 5 equals 42).

Quarterly sampling

CSTK Subpopulation 1 for Ischemic Stroke Without Procedure

- A hospital's ischemic stroke patient population size is 495 cases during the second quarter. Using the quarterly sampling table for the ischemic stroke subpopulation, the sample size required is 84 cases for the quarter.
- A hospital's ischemic stroke patient population size is 392 cases during the second quarter. Using the quarterly sampling table for the ischemic stroke subpopulation, the sample size required is 20% of this subpopulation or 78 cases for the quarter (20% of 392 equals 78.4 rounded to the next highest whole number equals 78).
- A hospital's ischemic stroke patient population size is 200 cases during the second quarter. Using the quarterly sampling table for the ischemic stroke subpopulation, the sample size required is 42 cases for the quarter.
- A hospital's ischemic stroke patient population size is 37 cases during the second quarter. Using the quarterly sampling table for the ischemic stroke subpopulation, the sample size is less than the minimum required quarterly sample size, so 100% of the subpopulation or all 37 cases are sampled.

CSTK Subpopulation 2 for Ischemic Stroke With IV t-PA, IA t-PA, or MER

- Four-hundred and twenty-eight (428) ischemic stroke cases had IV or IA thrombolysis or a mechanical clot removal procedure during the second quarter. Using the quarterly sampling table for the ischemic stroke with IV t-PA, IA t-PA or MER subpopulation, the sample size required is 84 cases for the quarter.
- Two-hundred and twenty-three (223) ischemic stroke cases had IV or IA thrombolysis or a mechanical clot removal procedure during the second quarter. Using the quarterly sampling table for the ischemic stroke with IV t-PA, IA t-PA or MER subpopulation, the sample size required is 20% of this subpopulation or 45 cases for the quarter (20% of 223 equals 44.6 rounded to the next highest whole number equals 45).
- Fifty (50) ischemic stroke cases had IV or IA thrombolysis or a mechanical clot removal procedure during the second quarter. Using the quarterly sampling table for the ischemic stroke with IV t-PA, IA t-PA or MER subpopulation, the sample size required is 42 cases for the quarter.
- Nineteen (19) ischemic stroke cases had IV or IA thrombolysis or a mechanical clot removal procedure during the second quarter. Using the quarterly sampling table for the ischemic stroke with IV t-PA, IA t-PA or MER subpopulation, the sample size is less than the minimum required quarterly sample size, so 100% of the subpopulation or all 19 cases are sampled.

CSTK Subpopulation 3 for Hemorrhagic Stroke

- A hospital's hemorrhagic stroke patient population size is 795 cases during the second quarter. Using the quarterly sampling table for the hemorrhagic stroke subpopulation, the sample size required is 150 cases for the quarter.
- A hospital's hemorrhagic stroke patient population size is 392 cases during the second quarter. Using the quarterly sampling table for the hemorrhagic stroke subpopulation, the sample size required is 20% of this subpopulation or 78 cases for the quarter (20% of 392 equals 78.4 rounded to the next highest whole number equals 78).
- A hospital's hemorrhagic stroke patient population size is 200 cases during the second quarter. Using the quarterly sampling table for the hemorrhagic stroke subpopulation, the sample size required is 75 cases for the quarter.
- A hospital's hemorrhagic stroke patient population size is 67 cases during the second quarter. Using the quarterly sampling table for the hemorrhagic stroke subpopulation, the sample size is less than the minimum required quarterly sample size, so 100% of the subpopulation or all 67 cases are sampled.

Monthly sampling
CSTK Subpopulation 1 for Ischemic Stroke Without Procedure

- A hospital's ischemic stroke patient population size is 295 cases during March. Using the monthly sampling table for the ischemic stroke subpopulation, the sample size required is 28 cases for the month.
- A hospital's ischemic stroke patient population size is 129 cases during March. Using the monthly sampling table for the ischemic stroke subpopulation, the sample size required is 20% of this subpopulation or 26 cases for the month (20% of 129 equals 25.8 rounded to the next highest whole number equals 26).
- A hospital's ischemic stroke patient population size is 70 cases during March. Using the monthly sampling table for the ischemic stroke subpopulation, the sample size required is 14 cases for the month.
- A hospital's ischemic stroke patient population size is 7 cases during March. Using the monthly sampling table for the ischemic stroke subpopulation, the sample size is less than the minimum required monthly sample size, so 100% of the subpopulation or all 7 cases are sampled.

CSTK Subpopulation 2 for Ischemic Stroke With IV t-PA, IA t-PA, or MER

- One-hundred and forty-eight (148) ischemic stroke cases had IV or IA thrombolysis or a mechanical clot removal procedure during March. Using the monthly sampling table for the ischemic stroke with IV t-PA, IA t-PA or MER subpopulation, the sample size required is 28 cases for the month.

- One-hundred and twenty-three (123) ischemic stroke cases had IV or IA thrombolysis or a mechanical clot removal procedure during March. Using the monthly sampling table for the ischemic stroke with IV t-PA, IA t-PA or MER subpopulation, the sample size required is 20% of this subpopulation or 25 cases for the month (20% of 123 equals 24.6 rounded to the next highest whole number equals 25).
- Sixty (60) ischemic stroke cases had IV or IA thrombolysis or a mechanical clot removal procedure during March. Using the monthy sampling table for the ischemic stroke with IV t-PA, IA t-PA or MER subpopulation, the sample size required is 14 cases for the month.
- Eleven (11) ischemic stroke cases had IV or IA thrombolysis or a mechanical clot removal procedure during March. Using the monthly sampling table for the ischemic stroke with IV t-PA, IA t-PA or MER subpopulation, the sample size is less than the minimum required monthly sample size, so 100% of the subpopulation or all 11 cases are sampled.

CSTK Subpopulation 3 for Hemorrhagic Stroke

- A hospital's hemorrhagic stroke patient population size is 295 cases during March. Using the monthly sampling table for the hemorrhagic stroke subpopulation, the sample size required is 50 cases for the month.
- A hospital's hemorrhagic stroke patient population size is 129 cases during March. Using the monthly sampling table for the hemorrhagic stroke subpopulation, the sample size required is 20% of this subpopulation or 26 cases for the month (20% of 129 equals 25.8 rounded to the next highest whole number equals 26).
- A hospital's hemorrhagic stroke patient population size is 60 cases during March. Using the monthly sampling table for the hemorrhagic stroke subpopulation, the sample size required is 25 cases for the month.
- A hospital's hemorrhagic stroke patient population size is 17 cases during March. Using the monthly sampling table for the hemorrhagic stroke subpopulation, the sample size is less than the minimum required monthly sample size, so 100% of the subpopulation or all 17 cases are sampled.

Measure Information Form

Measure Set: Comprehensive Stroke (CSTK)

Set Measure ID: CSTK-01

Performance Measure Name: National Institutes of Health Stroke Scale (NIHSS Score Performed for Ischemic Stroke Patients)

Description: Ischemic stroke patients for whom an initial NIHSS score is performed prior to any acute recanalization therapy (i.e., IV alteplase therapy, or IA alteplase therapy, or mechanical endovascular reperfusion therapy) in patients undergoing recanalization therapy and documented in the medical record, **OR** documented within 12 hours of arrival at the hospital emergency department for patients who do not undergo recanalization therapy.

Rationale: A neurological examination of all patients presenting to the hospital emergency department with warning signs and symptoms of stroke should be a top priority and performed in a timely fashion. Use of a standardized stroke scale or scoring tool ensures that the major components of the neurological examination are evaluated. Clinical practice guidelines from the American Heart Association/American Stroke Association recommend The National Institutes of Health Stroke Scale (NIHSS) as the preferred scoring tool for this purpose. Scores obtained aid in the initial diagnosis of the patient, facilitate communication among healthcare professionals, and identify patient eligibility for various interventions and the potential for complications.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic stroke patients for whom a NIHSS score is performed prior to any acute recanalization therapy in patients undergoing recanalization therapy and documented in the medical record, **OR** documented within 12 hours of hospital arrival for patients who do not undergo recanalization therapy.

> **Included Populations:**
>
> - Patients with documented thrombolytic (IV or IA alteplase) therapy (*ICD-10-PCS Principal or Other Procedure Codes* as defined in Appendix A, Table 8.1a for ICD-10 codes), **OR**
> - Patients with documented Mechanical Endovascular Reperfusion Therapy (*ICD-10-PCS Principal or Other Procedure Codes* as defined in Appendix A, Table 8.1b for ICD-10 codes)
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Arrival Date*

- *Arrival Time*
- *ICD-10-PCS Other Procedure Dates*
- *ICD-10-PCS Other Procedure Times*
- *ICD-10-PCS Principal Procedure Date*
- *ICD-10-PCS Principal Procedure Time*
- *Initial NIHSS Score Date*
- *Initial NIHSS Score Performed*
- *Initial NIHSS Score Time*

Denominator Statement: Ischemic stroke patients.

Included Populations:

- Discharges with *ICD-10-CM Principal Diagnosis Code* for ischemic stroke as defined in Appendix A, Table 8.1 for ICD-10 codes

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay > 120 days
- Patients with *Comfort Measures Only* documented on the day of or day after hospital arrival
- Patients admitted for *Elective Carotid Intervention*
- Patients who do not undergo recanalization therapy and are discharged within 12 hours of arrival at this hospital

Data Elements:

- *Admission Date*
- *Birthdate*
- *Comfort Measures Only*
- *Direct Admission*
- *Discharge Date*
- *Discharge Time*
- *ED Patient*
- *Elective Carotid Intervention*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Principal Procedure Code*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

1. Adams HP, del Zoppo G, Alberts MJ, Bhatt DL, Brass L, Furlan A, Grubb RL, Higashida RT, Jauch EC, Kidwell C, Lyden PD, Morgenstern LB, Qureshi AI, Rosenwasser RH, Scott PA, Wijdicks E. Guidelines for the Early Management of Adults with Ischemic Stroke: A Guideline From the American Heart Association/American Stroke Association Stroke Council, Clinical Cardiology Council, Cardiovascular Radiology and Intervention Council, and the Atherosclerotic Peripheral Vascular Disease and Quality of Care Outcomes in Research Interdisciplinary Working Groups. *Stroke*. 2007;38:1664-1666.

2. Cote R, Hachinski VC, Shurell BL, Norris JW, Wolfson C. The Canadian Neurological Scale: a preliminary study in acute stroke. *Stroke*. 1986; 17:731-737.

3. Goldstein LB, Samsa GP. Reliability of the National Institutes of Health Stroke Scale: extension to non-neurologists in the context of a clinical trial. *Stroke*. 1997;28:307-310.

4. Jauch EC, Saver JL, Adams HP Jr, Bruno A, Connors JJ, Demaerschalk BM, Khatri P, et al. Guidelines for the early management of patients with acute ischemic stroke: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. 2013;44:32-36.

5. Kothari KU, Brott T, Broderick JP, Hamilton CA. Emergency physicians: accuracy in the diagnosis of stroke. *Stroke*. 1995;26:2238-2241.

6. Leifer D, Bravata DM, Connors JJ III, Hinchey JA, Jauch EC, Johnston SC, Latchaw R, Likosky W, Ogilvy C, Qureshi AI, Summers D, Sung GY, Williams LS, Zorowitz R, on behalf of the American Heart Association Special Writing Group of the Stroke Council, Atherosclerotic Peripheral Vascular Disease Working Group and Council on Cardiovascular Surgery and Anesthesia, and Council on Cardiovascular Nursing. Metrics for measuring quality of care in comprehensive stroke centers: detailed follow-up to Brain Attack Coalition comprehensive stroke center recommendations: a statement for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. 2011;42:857.

7. Morgenstern LB, Lisabeth LD, Mecozzi AC, Smith MA, Longwell PJ, McFarling DA, Risser JM. A population-based study of acute stroke and TIA diagnosis. *Neurology*. 2004;62:895-900.

8. Powers WJ, Rabinstein AA, Ackerson T, Adeoye OM, Bambakidis NC, Becker K, Biller J, et al; on behalf of

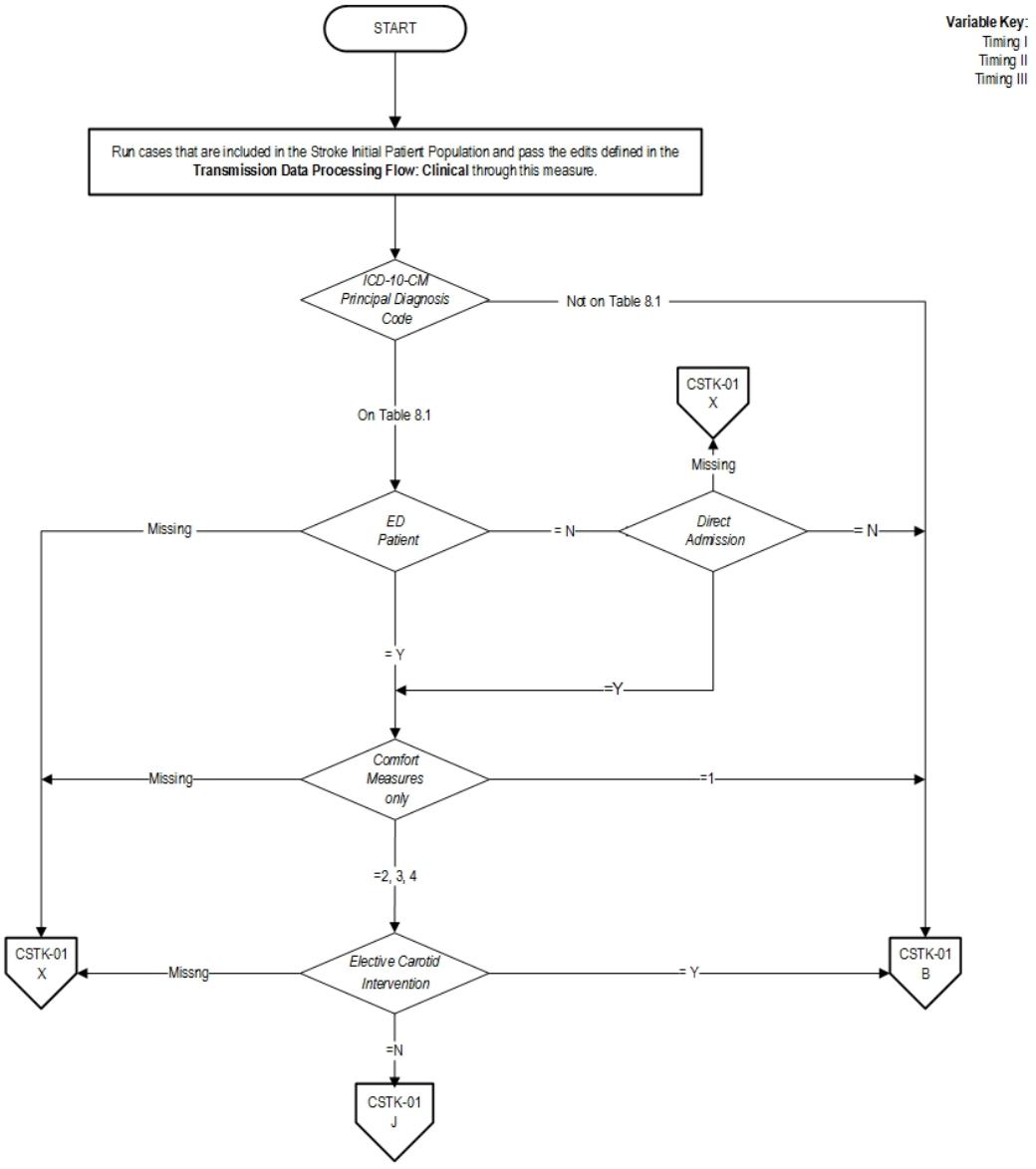
the American Heart Association Stroke Council. 2018 Guidelines for the Early Management of Patients with Acute Ischemic Stroke: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association. *Stroke*. 2018 Jan;49:e11-e12.

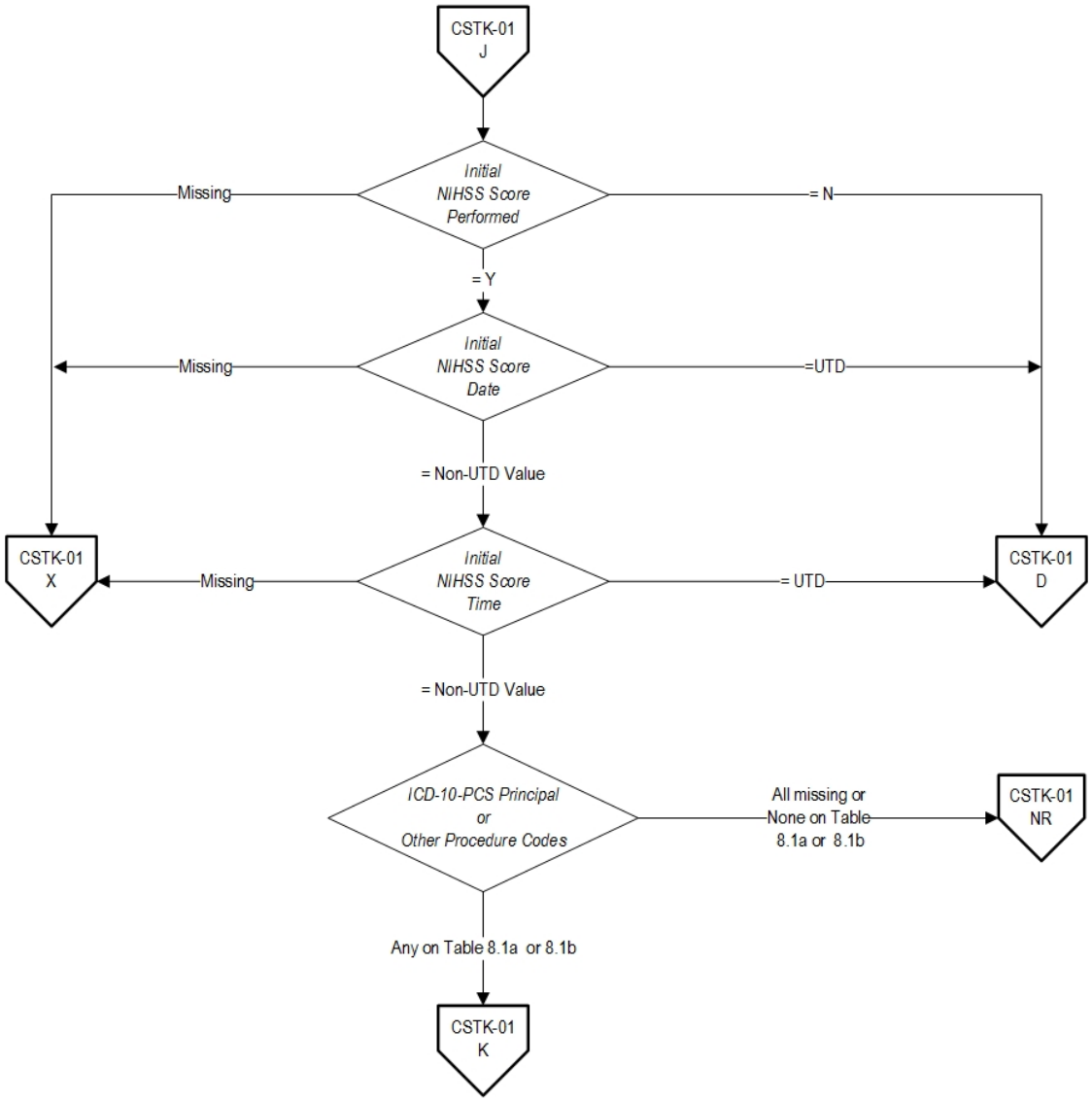
Measure Algorithm:

CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients

Numerator Statement: Ischemic stroke patients for whom a NIHSS score is performed prior to any acute recanalization therapy in patients undergoing recanalization therapy and documented in the medical record, **OR** documented within 12 hours of hospital arrival for patients who do not undergo recanalization therapy

Denominator Statement: Ischemic stroke patients




CSTK-01
J
Initial
NIHSS Score
Performed
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= N
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Initial
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Date
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CSTK-01
X
Initial
NIHSS Score
Time
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or
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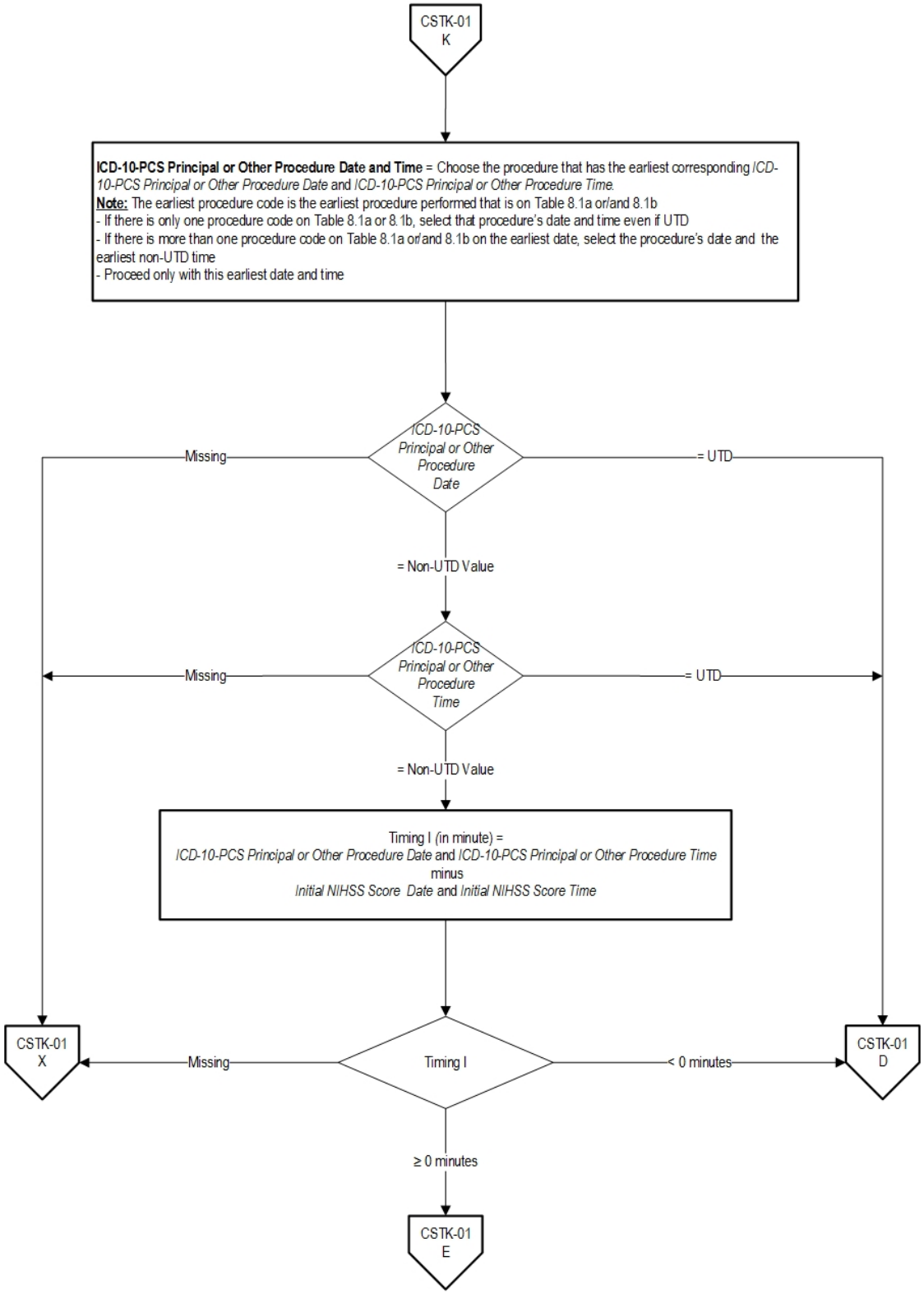
CSTK-01
K


CSTK-01
K
ICD-10-PCS Principal or Other Procedure Date and Time = Choose the procedure that has the earliest corresponding ICD-10-PCS Principal or Other Procedure Date and ICD-10-PCS Principal or Other Procedure Time.
Note: The earliest procedure code is the earliest procedure performed that is on Table 8.1a or/and 8.1b
- If there is only one procedure code on Table 8.1a or 8.1b, select that procedure's date and time even if UTD
- If there is more than one procedure code on Table 8.1a or/and 8.1b on the earliest date, select the procedure's date and the earliest non-UTD time
- Proceed only with this earliest date and time
ICD-10-PCS Principal or Other Procedure Date
Missing
= UTD
= Non-UTD Value
ICD-10-PCS Principal or Other Procedure Time
Missing
= UTD
= Non-UTD Value
Timing I (in minute) =
ICD-10-PCS Principal or Other Procedure Date and ICD-10-PCS Principal or Other Procedure Time
minus
Initial NIHSS Score Date and Initial NIHSS Score Time
CSTK-01
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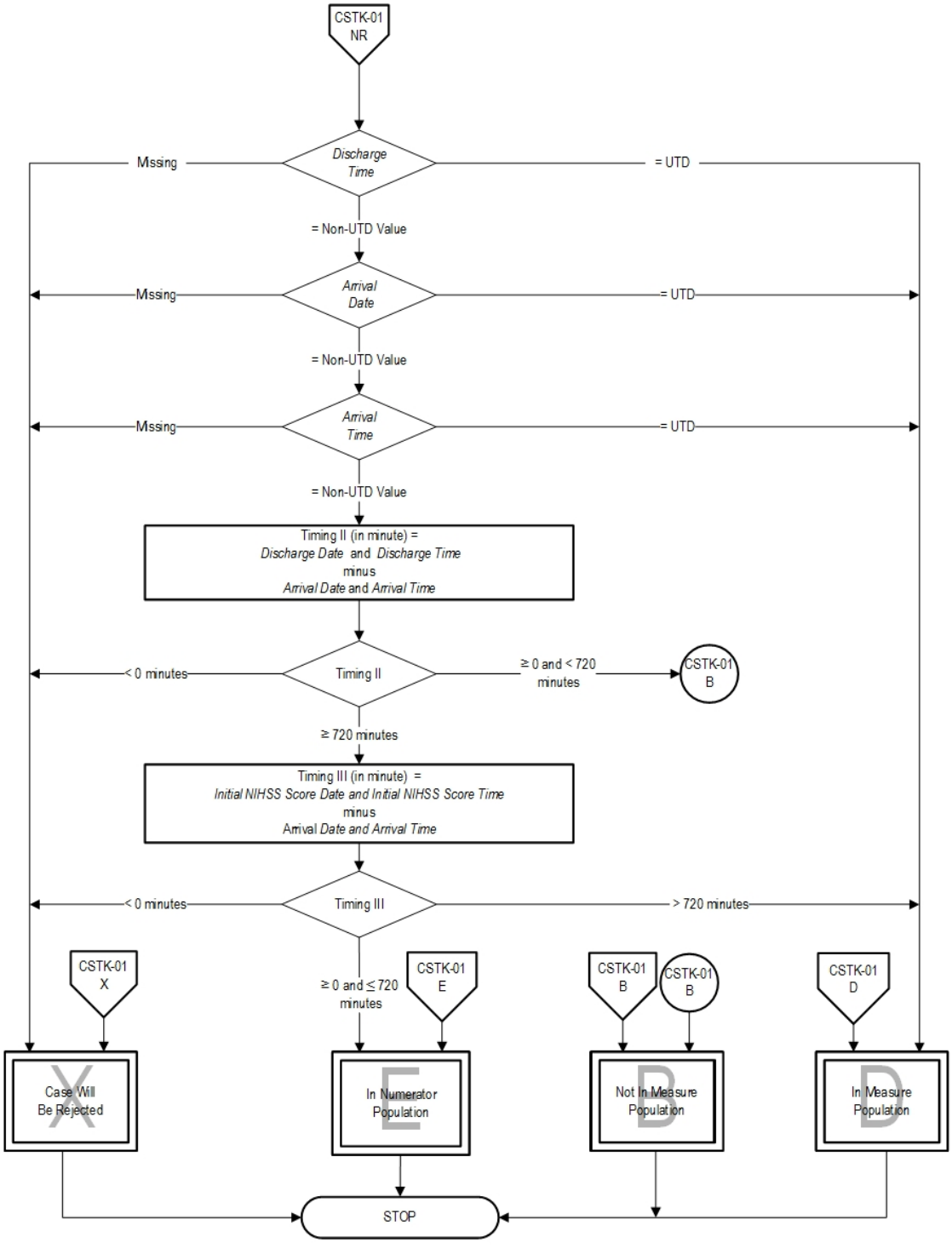
CSTK-01
D
≥ 0 minutes
CSTK-01
E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Discharge
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Arrival
Date
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= Non-UTD Value
Arrival
Time
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= UTD
= Non-UTD Value
Timing II (in minute) =
Discharge Date and Discharge Time
minus
Arrival Date and Arrival Time
Timing II
< 0 minutes
≥ 0 and < 720
minutes
CSTK-01
B
≥ 720 minutes
Timing III (in minute) =
Initial NIHSS Score Date and Initial NIHSS Score Time
minus
Arrival Date and Arrival Time
Timing III
< 0 minutes
> 720 minutes
CSTK-01
X
≥ 0 and ≤ 720
minutes
CSTK-01
E
CSTK-01
B
CSTK-01
B
CSTK-01
D
X
Case Will
Be Rejected
E
In Numerator
Population
D
Not In Measure
Population
D
In Measure
Population
STOP

Measure Information Form

*****SUSPENDED for Comprensive Stroke Centers, Effective January 1, 2018*****

Measure Set: Comprehensive Stroke (CSTK)

Set Measure ID: CSTK-02

Performance Measure Name: Modified Rankin Score (mRS at 90 Days)

Description: Ischemic stroke patients treated with intra-venous (IV) or intra-arterial (IA) alteplase therapy or who undergo mechanical endovascular reperfusion therapy for whom a 90 day (≥75 days and ≤105 days) mRS is obtained via telephone or in-person

Rationale: The Modified Rankin Scale (mRS) is the accepted standard for assessing recovery post-stroke. As such, it has become the most widely used clinical outcome measure for stroke clinical trials. Scores are used to measure the degree of disability or dependence in activities of daily living. Score reliability and reproducibility are improved through use of a structured interview by a trained evaluator. Interviews may be conducted in-person or over the phone. According to guideline recommendations from the American Heart Association/American Stroke Association, standardized interviews to obtain a mRS score should be conducted for acute ischemic stroke patients treated with IV or IA alteplase therapy or mechanical endovascular reperfusion therapy at 3 months (90 days); however, recovery may continue well beyond 3 months for many ischemic stroke patients.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic stroke patients for whom a 90 day (≥75 days and ≤105 days) mRS is obtained via telephone or in-person

> **Included Populations:** As above
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Modified Rankin Score (mRS)*
> - *Modified Rankin Score (mRS) Date*

Denominator Statement: Ischemic stroke patients treated with IV or IA alteplase therapy or who undergo mechanical endovascular reperfusion therapy

> **Included Populations:**
>
> - Discharges with *ICD-10-CM Principal Diagnosis Code* for ischemic stroke as defined in Appendix A, Table 8.1 for ICD-10 codes, **AND**

- Patients with documented thrombolytic (IV or IA alteplase) therapy *(ICD-10-PCS Principal or Other Procedure Codes* as defined in Appendix A, Table 8.1a for ICD-10 codes), **OR**
- Patients with documented Mechanical Endovascular Reperfusion Therapy *(ICD-10-PCS Principal or Other Procedure Codes* as defined in Appendix A, Table 8.1b for ICD-10 codes)

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay > 120 days
- Patients admitted for *Elective Carotid Intervention*
- Patients who expire during the hospital stay

Data Elements:

- *Admission Date*
- *Birthdate*
- *Discharge Date*
- *Discharge Disposition*
- *Elective Carotid Intervention*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Other Procedure Dates*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

1. Adams HP, del Zoppo G, Alberts MJ, Bhatt DL, Brass L, Furlan A, Grubb RL, Higashida RT, Jauch EC, Kidwell C, Lyden PD, Morgenstern LB, Qureshi AI, Rosenwasser RH, Scott PA, Wijdicks E. Guidelines for the Early Management of Adults with Ischemic Stroke: A Guideline From the American Heart Association/American Stroke Association Stroke Council, Clinical Cardiology Council, Cardiovascular Radiology and Intervention

Council, and the Atherosclerotic Peripheral Vascular Disease and Quality of Care Outcomes in Research Interdisciplinary Working Groups. *Stroke*. 2007;38:1675-1678.

2. Banks JL, Marotta CA. Outcomes validity and reliability of the modified Rankin scale: implications for stroke clinical trials: a literature review and synthesis. *Stroke*. 2007:38:2262-2269.

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5. Demchuk AM, Goyal M, Monon BK, Eesa M, Ryckborst KJ, Kamal N, et. al. Endovascular treatment for Small Core and Anterior circulation Proximal occlusion with Emphasis on minimizing CT to recanalization times (ESCAPE) trial: methodology. *Int J Stroke*. 2015 Apr;10(3): 429-38.

6. Jauch EC, Saver JL, Adams HP Jr, Bruno A, Connors JJ, Demaerschalk BM, Khatri P, et al. Guidelines for the early management of patients with acute ischemic stroke: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. 2013;44:32-36.

7. Leifer D, Bravata DM, Connors JJ III, Hinchey JA, Jauch EC, Johnston SC, Latchaw R, Likosky W, Ogilvy C, Qureshi AI, Summers D, Sung GY, Williams LS, Zorowitz R, on behalf of the American Heart Association Special Writing Group of the Stroke Council, Atherosclerotic Peripheral Vascular Disease Working Group and Council on Cardiovascular Surgery and Anesthesia, and Council on Cardiovascular Nursing. Metrics for measuring quality of care in comprehensive stroke centers: detailed follow-up to Brain Attack Coalition comprehensive stroke center recommendations: a statement for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. 2011;42:857.

8. Powers WJ, Rabinstein AA, Ackerson T, Adeoye OM, Bambakidis NC, Becker K, Biller J, et al; on behalf of the American Heart Association Stroke Council. 2018 Guidelines for the Early Management of Patients with Acute Ischemic Stroke: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association. *Stroke*. 2018 Jan;49:e10-e11.

9. Quinn TJ, Dawson J, Walters MR, Lees KR. Reliability of the modified Rankin scale. *Stroke*. 2007:38:e144.

10. Rankin J. Cerebral vascular accidents in patients over the age of 60. *Scott Med J*. 1957;2(5):200-15.

11. Saver JL, Goyal M, Bonafe A, Diener HC, Levy EI, Pereira VM, et. al. Stent-retriever thrombectomy after intravenous t-PA vs. t-PA alone in stroke. *NEJM*. 2015 Apr: 1-11.

12. Schwamm LH, Holloway RG, Amarenco P. Audebert HJ, Bakas T, Chumbler NR, Handschu R, Jauch EC, Knight WA IV, Levine SR, Mayberg M, Meyer BC, Meyers PM, Skalabrin E, Wechsler LR; American Heart Association Stroke Council; Interdisciplinary Council on Peripheral Vascular Disease. A review of the evidence for the use of telemedicine within stroke systems of care: a scientific statement for the American Heart Association/American Stroke Association. *Stroke*. 2009;40:2616-2634.

13. The National Institute of Neurological Disorders and Stroke rt-PA Stroke Study Group. Tissue plasminogen activator for acute ischemic stroke. The National Institute of Neurological Disorders and Stroke rt-PA Stroke Study Group. *New England Journal of Medicine* 1995;333:1581-1587.

14. Turk AS, Frei D, Fiorella D, Mocco J, Baxter B, Siddiqui A, et. al. ADAPT FAST study: a direct aspiration first pass technique for acute stroke thrombectomy. *J Neurointerv Surg*. 2014 May;694): 260-4.

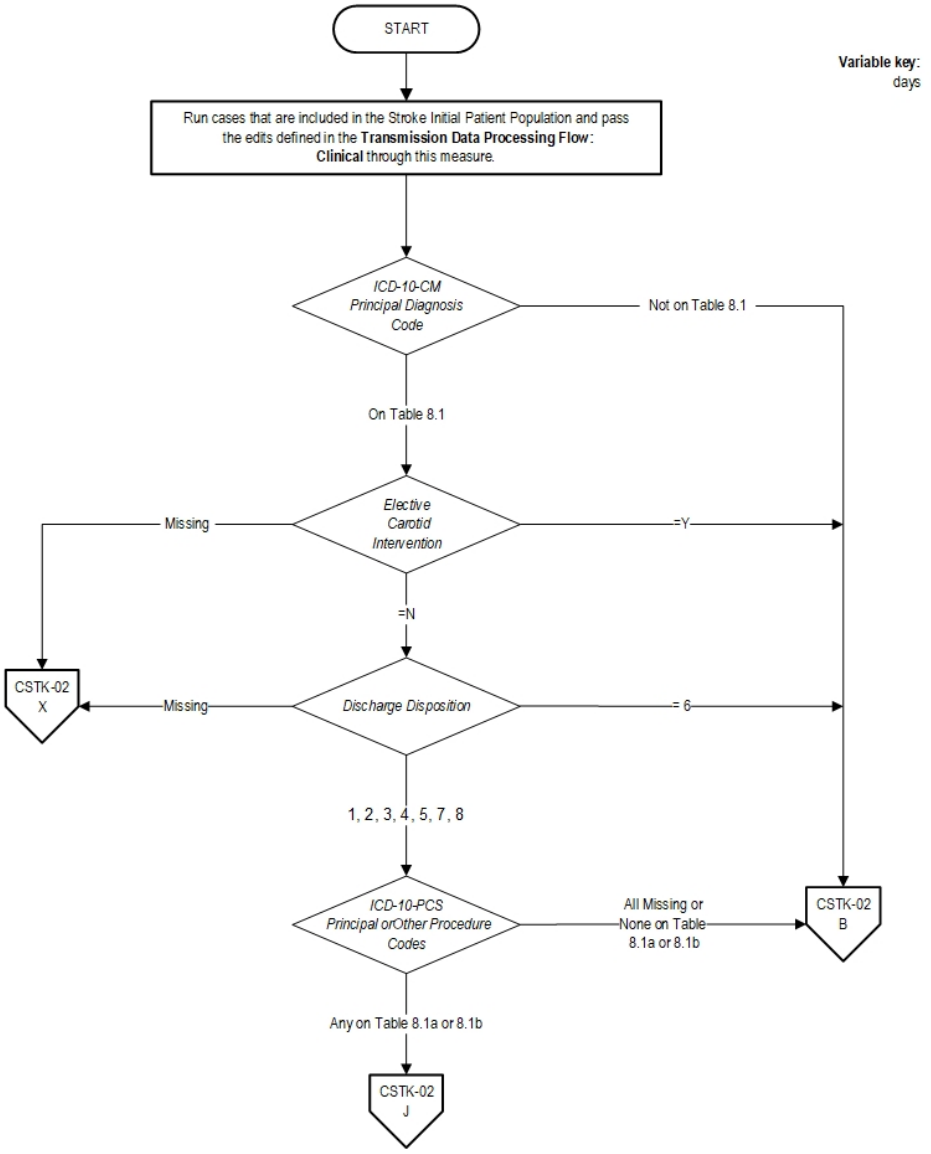
15. Wilson JT, Hareendran A, Hendry A, Potter J. Bone I, Muir KW. Reliability of the modified Rankin scale across multiple raters: benefits of a structured interview. *Stroke*. 2005;36:777-781.

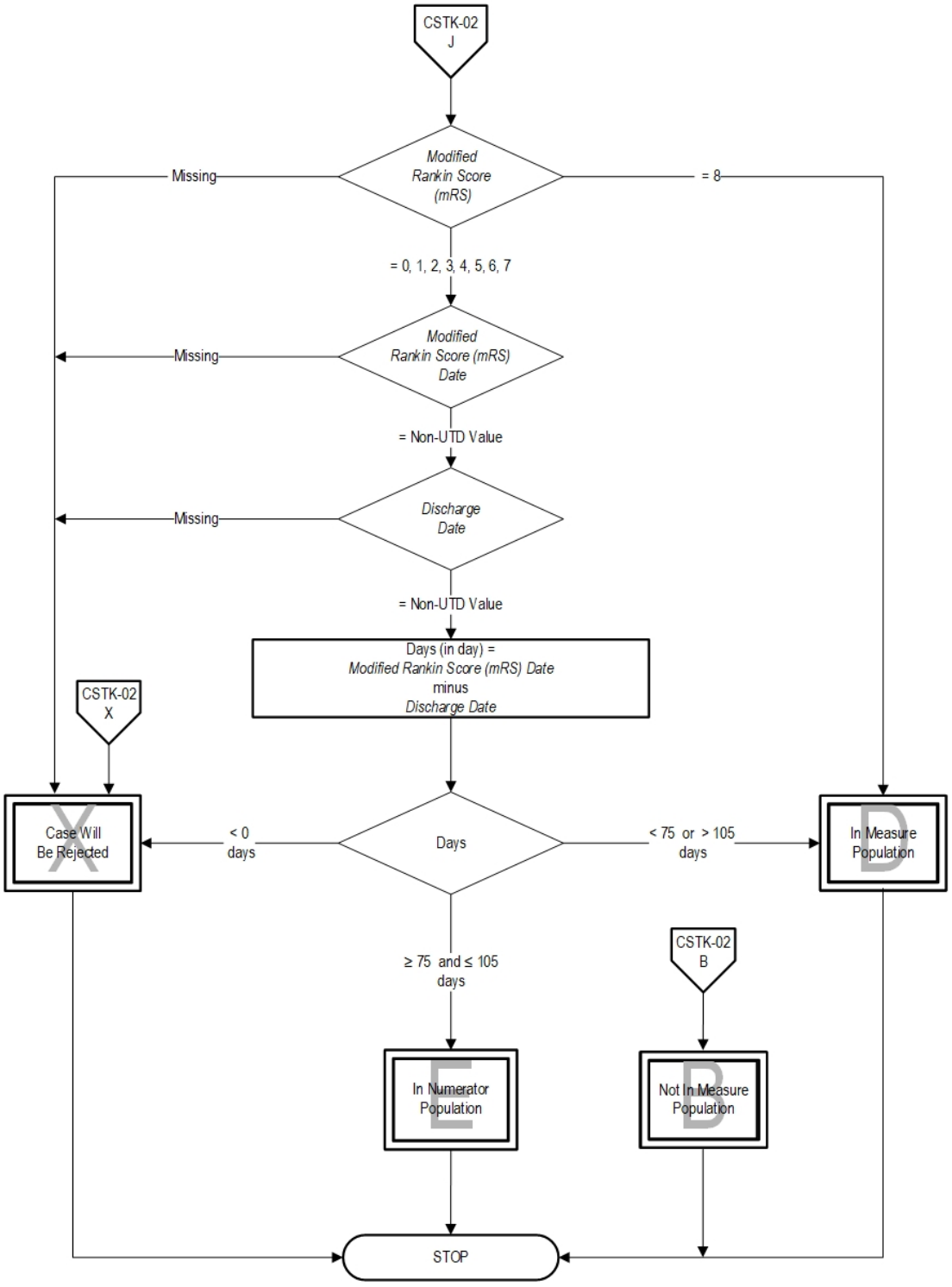
Measure Algorithm:

CSTK-02: Modified Rankin Score (mRS) at 90 days

Numerator Statement: Ischemic stroke patients for whom a 90 day (≥ 75 days and ≤ 105 days) mRS is obtained via telephone or in-person

Denominatort Statement: Ischemic stroke patients treated with IV or IA Alteplase therapy or who undergo mechanical endovascular reperfusion therapy




CSTK-02
J
Modified
Rankin Score
(mRS)
Missing
= 8
= 0, 1, 2, 3, 4, 5, 6, 7
Modified
Rankin Score (mRS)
Date
Missing
= Non-UTD Value
Discharge
Date
Missing
= Non-UTD Value
Days (in day) =
Modified Rankin Score (mRS) Date
minus
Discharge Date
CSTK-02
X
Case Will
Be Rejected
X
< 0
days
Days
< 75 or > 105
days
In Measure
Population
D
≥ 75 and ≤ 105
days
CSTK-02
B
In Numerator
Population
E
Not In Measure
Population
B
STOP

Measure Information Form

Measure Set: Comprehensive Stroke (CSTK)

Set Measure ID: CSTK-03

Set Measure ID	Performance Measure Name
CSTK-03a	Hunt and Hess Scale Performed for SAH Patients
CSTK-03b	ICH Score Performed for ICH Patients

Performance Measure Name: Severity Measurement Performed for SAH and ICH Patients (Overall Rate)

Description: Subarachnoid hemorrhage (SAH) and intracerebral hemorrhage (ICH) stroke patients for whom a severity measurement (i.e., Hunt and Hess Scale for SAH patients or ICH Score for ICH patients) is performed prior to surgical intervention (e.g. clipping, coiling, or any surgical intervention) in patients undergoing surgical intervention and documented in the medical record; **OR** documented within 6 hours of arrival at the hospital emergency department for patients who do not undergo surgical intervention.

CSTK-03 SAH and ICH stroke patients for whom a severity measurement is performed prior to surgical intervention in patients undergoing surgical intervention and documented in the medical record; **OR** documented within 6 hours of hospital arrival for patients who do not undergo surgical intervention.

CSTK-03a SAH stroke patients for whom a severity measurement is performed prior to surgical intervention in patients undergoing surgical intervention and documented in the medical record; **OR** documented within 6 hours of hospital arrival for patients who do not undergo surgical intervention.

CSTK-03b ICH stroke patients for whom a severity measurement is performed prior to surgical intervention in patients undergoing surgical intervention and documented in the medical record; **OR** documented within 6 hours of hospital arrival for patients who do not undergo surgical intervention.

The CSTK-03 measure is reported as an overall rate which includes SAH and ICH stroke patients for whom a severity measurement is performed prior to surgical intervention in patients undergoing surgical intervention and documented in the medical record; **OR** documented within 6 hours of hospital arrival for patients who do not undergo surgical intervention; CSTK-03a and CSTK-03b are subsets of the overall rate, and stratified by the type of stroke patient.

Rationale: Subarachnoid hemorrhage (SAH) and intracerebral hemorrhage (ICH) are medical emergencies requiring rapid diagnosis and assessment. Early deterioration is common in the first few hours after onset, and associated with increased mortality rates of > 75% compared to 30-day mortality rates of 35%-52%. More than half of all deaths from these conditions occur within the first two days. According to the American Heart Association/American Stroke Association, the severity of SAHs should be documented with the Hunt and Hess Scale, and the severity of ICHs should be documented with ICH score to capture the clinical state of the patient. The severity of initial neurological injury should be determined and documented in the

emergency department because it is a useful predictor of outcome and helpful in planning future care with family and physicians. For both severity methodologies, higher scores are associated with increased mortality.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement:
CSTK-03: The number of SAH and ICH stroke patients for whom a severity measurement is performed prior to surgical intervention in patients undergoing surgical intervention and documented in the medical record; **OR** documented within 6 hours of hospital arrival for patients who do not undergo surgical intervention.

CSTK-03a: The number of SAH patients for whom a Hunt and Hess Scale is performed prior to surgical intervention in patients undergoing surgical intervention and documented in the medical record; **OR** documented within 6 hours of hospital arrival for patients who do not undergo surgical intervention.

CSTK-03b: The number of ICH stroke patients for whom an ICH Score is performed prior to surgical intervention in patients undergoing surgical intervention and documented in the medical record; **OR** documented within 6 hours of hospital arrival for patients who do not undergo surgical intervention.

> **Included Populations:** As above
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Arrival Date*
> - *Arrival Time*
> - *ICD-10-PCS Other Procedure Dates*
> - *ICD-10-PCS Other Procedure Times*
> - *ICD-10-PCS Principal Procedure Date*
> - *ICD-10-PCS Principal Procedure Time*
> - *Initial Hunt and Hess Scale Date*
> - *Initial Hunt and Hess Scale Performed*
> - *Initial Hunt and Hess Scale Time*
> - *Initial ICH Score Date*
> - *Initial ICH Score Performed*
> - *Initial ICH Score Time*

Data Elements By Measure

CSTK-03	CSTK-03a	CSTK-03b
Arrival Date	Arrival Date	Arrival Date
Arrival Time	Arrival Time	Arrival Time

CSTK-03	CSTK-03a	CSTK-03b
Initial Hunt and Hess Scale Date	Initial Hunt and Hess Scale Date	Initial ICH Score Date
Initial Hunt and Hess Scale Performed	Initial Hunt and Hess Scale Performed	Initial ICH Score Performed
Initial Hunt and Hess Scale Time	Initial Hunt and Hess Scale Time	Initial ICH Score Time
Initial ICH Score Date		
Initial ICH Score Performed		
Initial ICH Score Time		

Denominator Statement: SAH and ICH stroke patients

> **Included Populations:** Discharges with *ICD-10-CM Principal Diagnosis Code* for hemorrhagic stroke as defined in Appendix A, Table 8.2 for ICD-10 codes (i.e., Table 8.2a and Table 8.2b) with or without aneurysm repair procedure *(ICD-10-PCS Principal or Other Procedure Code* as defined in Appendix A, Table 8.2d for ICD-10 codes) or surgical intervention procedure *(ICD-10-PCS Principal or Other Procedure Code* as defined in Appendix A, Table 8.2e for ICD-10 codes)
>
> **Excluded Populations:**
>
> - Patients less than 18 years of age
> - Patients who have a Length of Stay > 120 days
> - Patients with *Comfort Measures Only* documented on the day of or day after hospital arrival
> - Non-surgical patients discharged within 6 hours of arrival at this hospital
> - Patients with admitting diagnosis of traumatic brain injury (TBI), unruptured arteriovenous malformation (AVM), and non-traumatic subdural hematoma *(ICD-10-CM Other Diagnosis Codes* as defined in Appendix A, Table 8.2f for ICD-10 codes)
> - Patients who have an *ICD-10-CM Principal Diagnosis Code* in Appendix A, Table 8.2a assigned at discharge and documentation of non-aneurysmal SAH or SAH related to head trauma any time during the hospital stay
>
> **Data Elements:**
>
> - *Admission Date*
> - *Birthdate*
> - *Comfort Measures Only*
> - *Direct Admission*
> - *Discharge Date*
> - *Discharge Time*
> - *ED Patient*
> - *ICD-10-CM Other Diagnosis Codes*
> - *ICD-10-CM Principal Diagnosis Code*
> - *ICD-10-PCS Other Procedure Codes*
> - *ICD-10-PCS Principal Procedure Code*

- *Non-aneurysmal*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: Hospitals may wish to identify those patients that did not receive a severity assessment within the specified timeframe(s), or received a severity assessment that did not match their diagnosis, or both, so that efforts can be directed toward improving care.

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

1. Broderick J, Connolly ES, Feldmann E, Hanley D, Kase C, Krieger D, Mayberg M, Morgenstern L, Ogilvy CS, Vespa P, and Zuccarello M. Guidelines for the management of spontaneous intracerebral hemorrhage in adults: 2007 update: a guideline from the American Heart Association/American Stroke Association Stroke Council, High Blood Pressure Research Council, and the Quality of Care and Outcomes in Research Interdisciplinary Working Group: The American Academy of Neurology affirms the value of this guideline as an educational toold for neurologists. *Stroke*. 2007;38:2001-2023.

2. Connolly ES, Rabinstein AA, Carhuapoma JR, Derdeyn CP, Dion J, Higashida RT, Hoh BL, Kirkness CJ, Naidech AM, Ogilvy CS, Patel AB, Thompson BG, Vespa P. Guidelines for the management of aneurysmal subarachnoid hemorrhage: a guidelines for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. 2012;43:1-27.

3. Hemphill JC III, Greenberg SM, Anderson CS, Becker K, Bendok BR, Cushman M, Fung GL, Goldstein JN, Macdonald L, Mitchell PH, Scott PA, Selim MH, Woo D. Guidelines for the management of spontaneous intracerebral hemorrhage:a guideline for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. 2015;46:1-29.

4. Hunt WE, Hess RM. Surgical risk as related to time of intervention in the repair of intracranial aneurysms. *J Neurosurg*. 1968;28:14-20.

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6. Leifer D, Bravata DM, Connors JJ III, Hinchey JA, Jauch EC, Johnston SC, Latchaw R, Likosky W, Ogilvy C, Qureshi AI, Summers D, Sung GY, Williams LS, Zorowitz R, on behalf of the American Heart Association

Special Writing Group of the Stroke Council, Atherosclerotic Peripheral Vascular Disease Working Group and Council on Cardiovascular Surgery and Anesthesia, and Council on Cardiovascular Nursing. Metrics for measuring quality of care in comprehensive stroke centers: detailed follow-up to Brain Attack Coalition comprehensive stroke center recommendations: a statement for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. 2011;42:862-63.

7. Matchett SC, Castaldo J, Wasser TE, Baker K, Mathiesen C, and Rodgers J. Predicting mortality after intracerebral hemorrhage: comparison of scoring systems and influence of withdrawal of care. *J Stroke Cerebrovasc Dis*. 2006 Jul-Aug;15(4):144-50.

8. Morgastern LB, Hemphill JC III, Anderson C, Becker K, Broderick JP, Connolly ES Jr, Greenberg SM, Huang JN, Macdonald RL, Messé SR, Mitchell PH, Selim M, Tamargo RJ; and on behalf of the American Heart Association Stroke Council and Council on Cardiovascular Nursing. Guidelines for the management of spontaneous intracerebral hemorrhage: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. 2010;41:2108-2129.

9. Rosen DS, Macdonald RL. Subarachnoid hemorrhage grading scales: a systematic review. *Neurocritical Care*. 2005;2:110-118.

Measure Algorithm:

CSTK-03: Severity Measurement Performed for SAH and ICH Patients (Overall Rate)

Numerator Statement: The number of SAH and ICH stroke patients for whom a severity measurement is performed prior to surgical intervention in patients undergoing surgical intervention and documented in the medical record **OR** documented within 6 hours of hospital arrival for patients who do not undergo surgical intervention

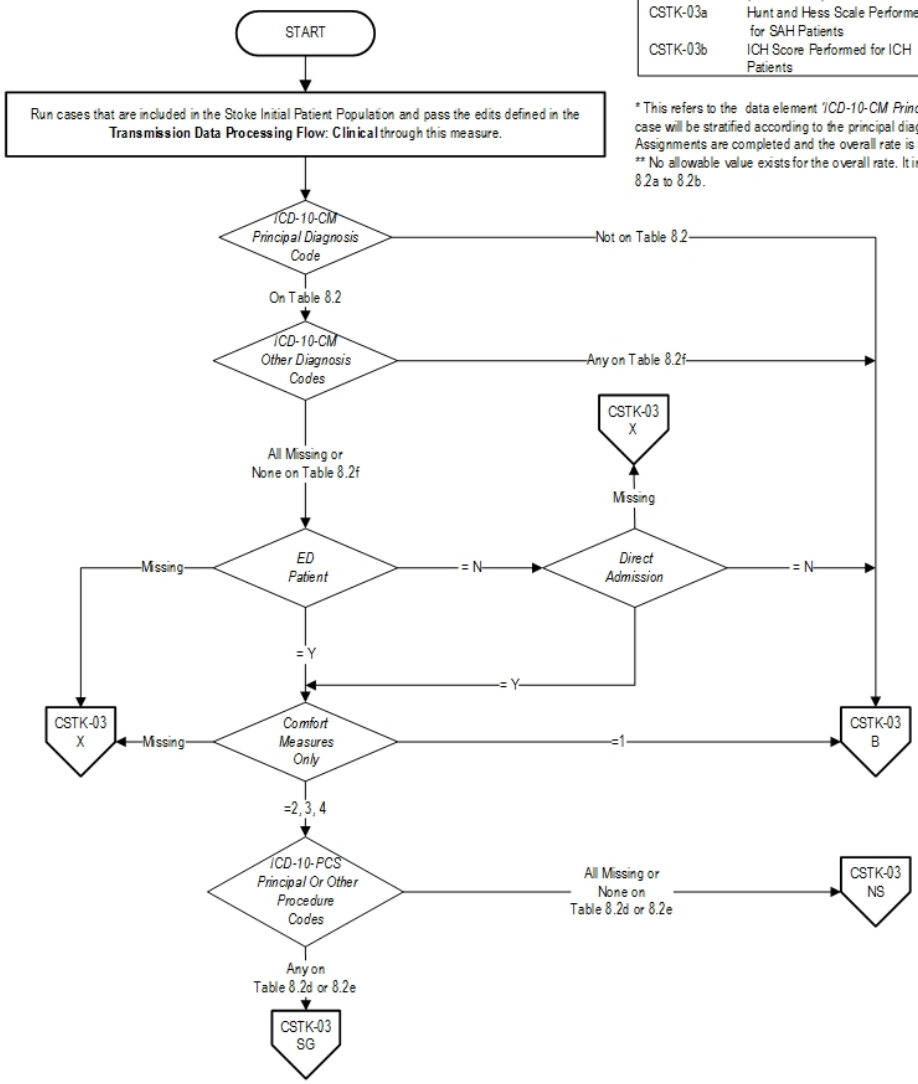
Denominator Statement: SAH and ICH stroke patients

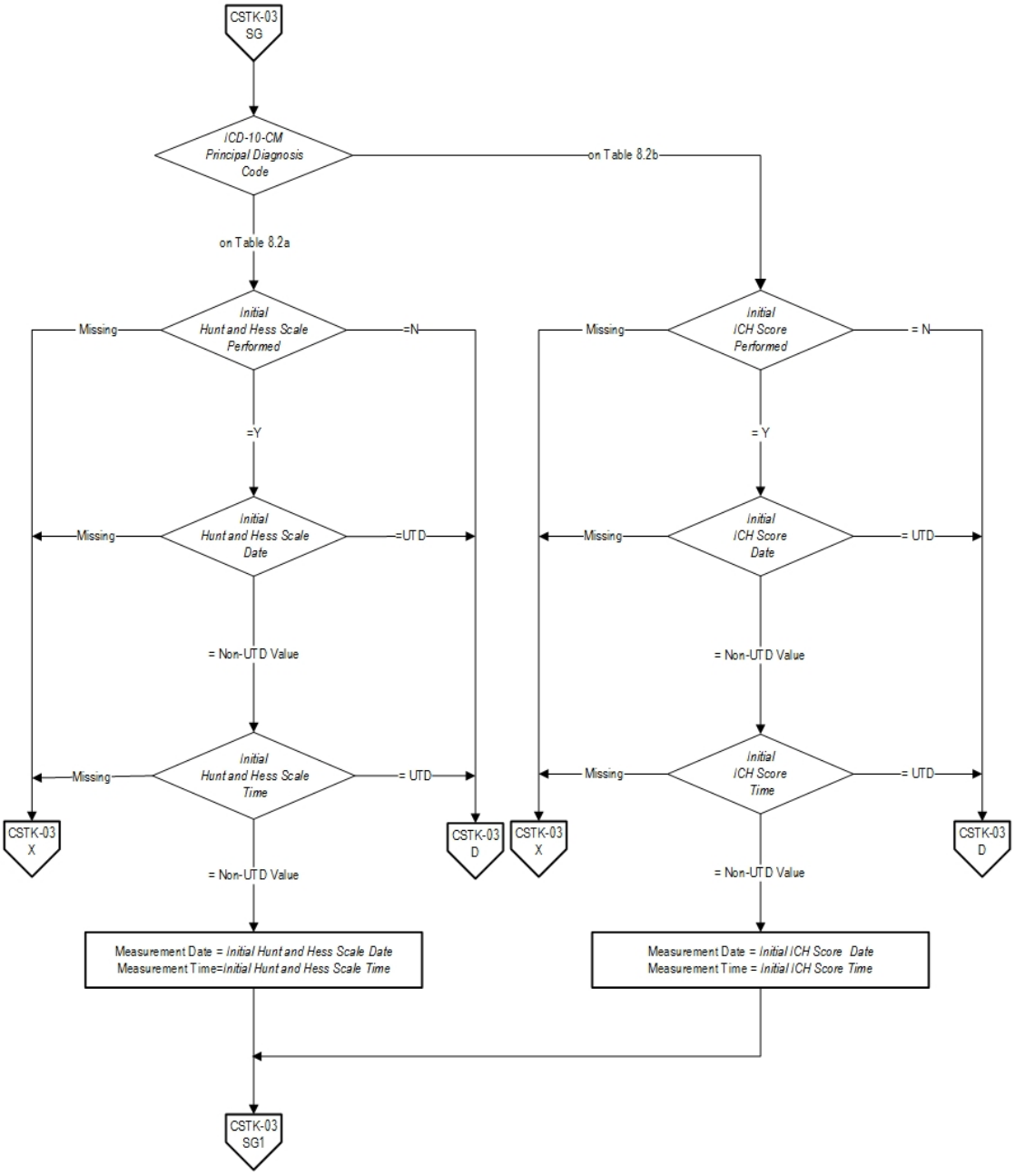
Variable Key
Timing I, Timing II
Timing III, Timing IV
Measurement Date
Measurement Time

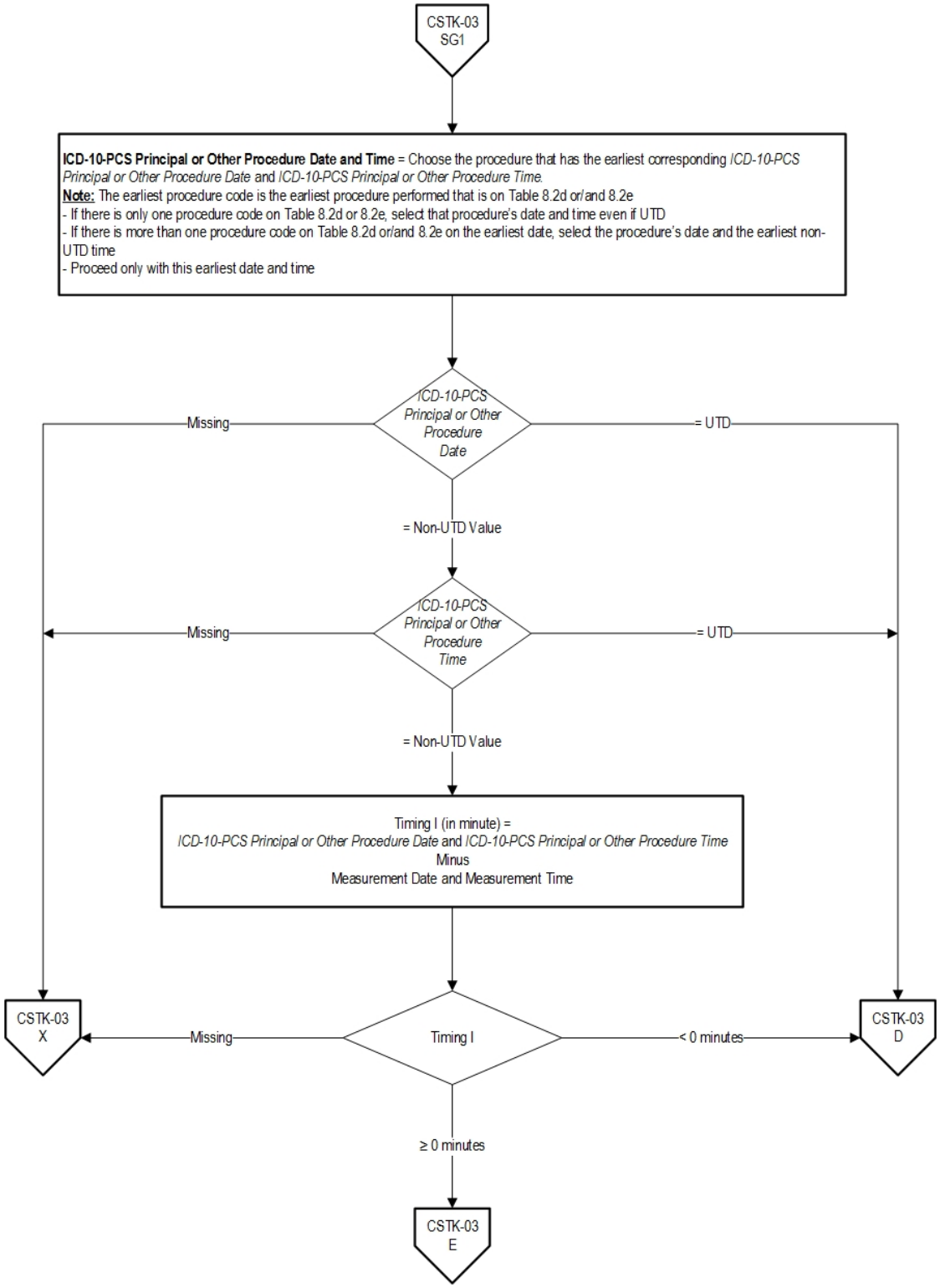
Stratification Table:

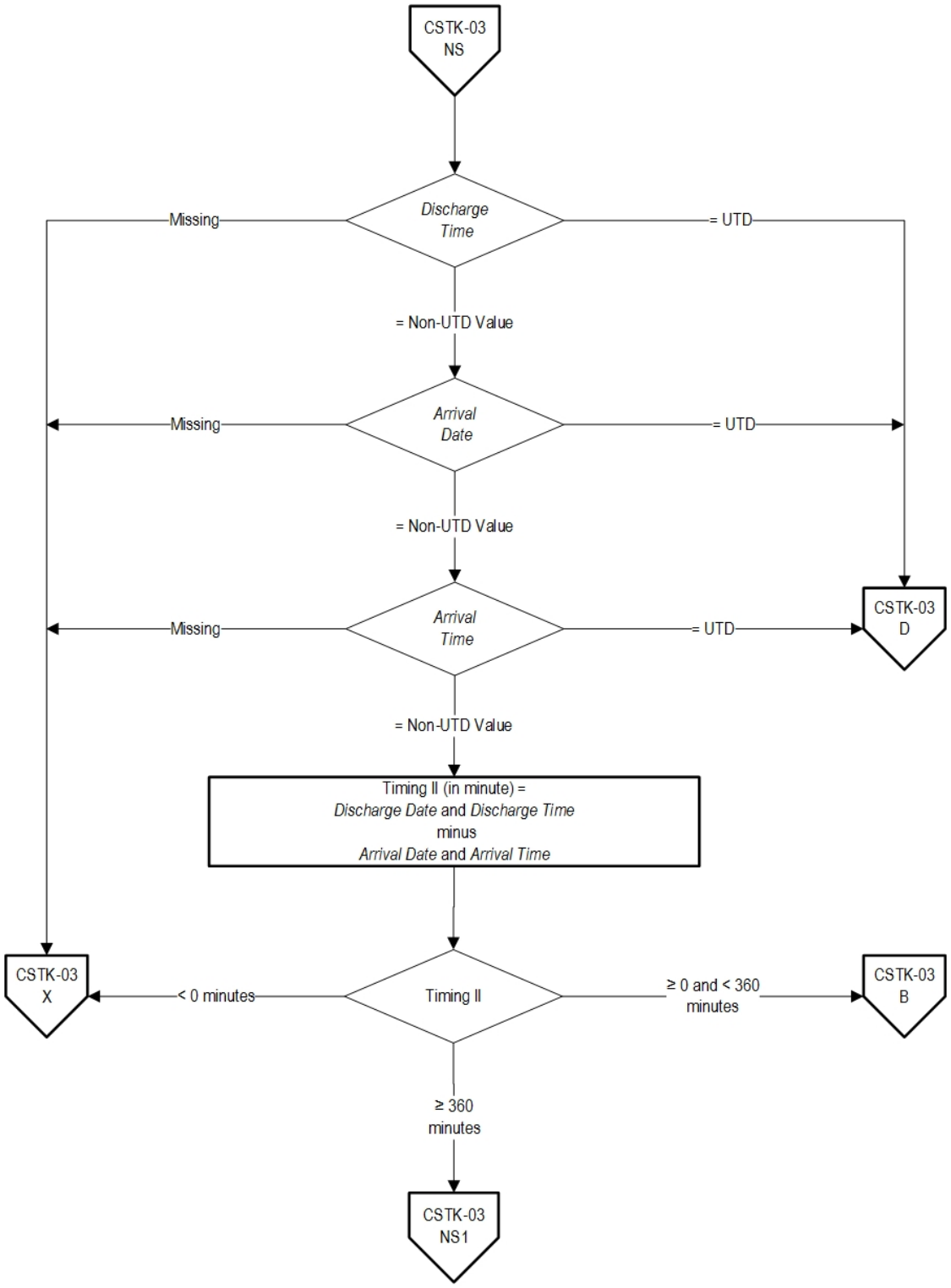
Set#	Stratified By *Principal Diagnosis Code	(Allowable Value)
CSTK03	Severity Measurement Performed for SAH and ICH Patients (Overall Rate)	**
CSTK-03a	Hunt and Hess Scale Performed for SAH Patients	Table 8.2a
CSTK-03b	ICH Score Performed for ICH Patients	Table 8.2b

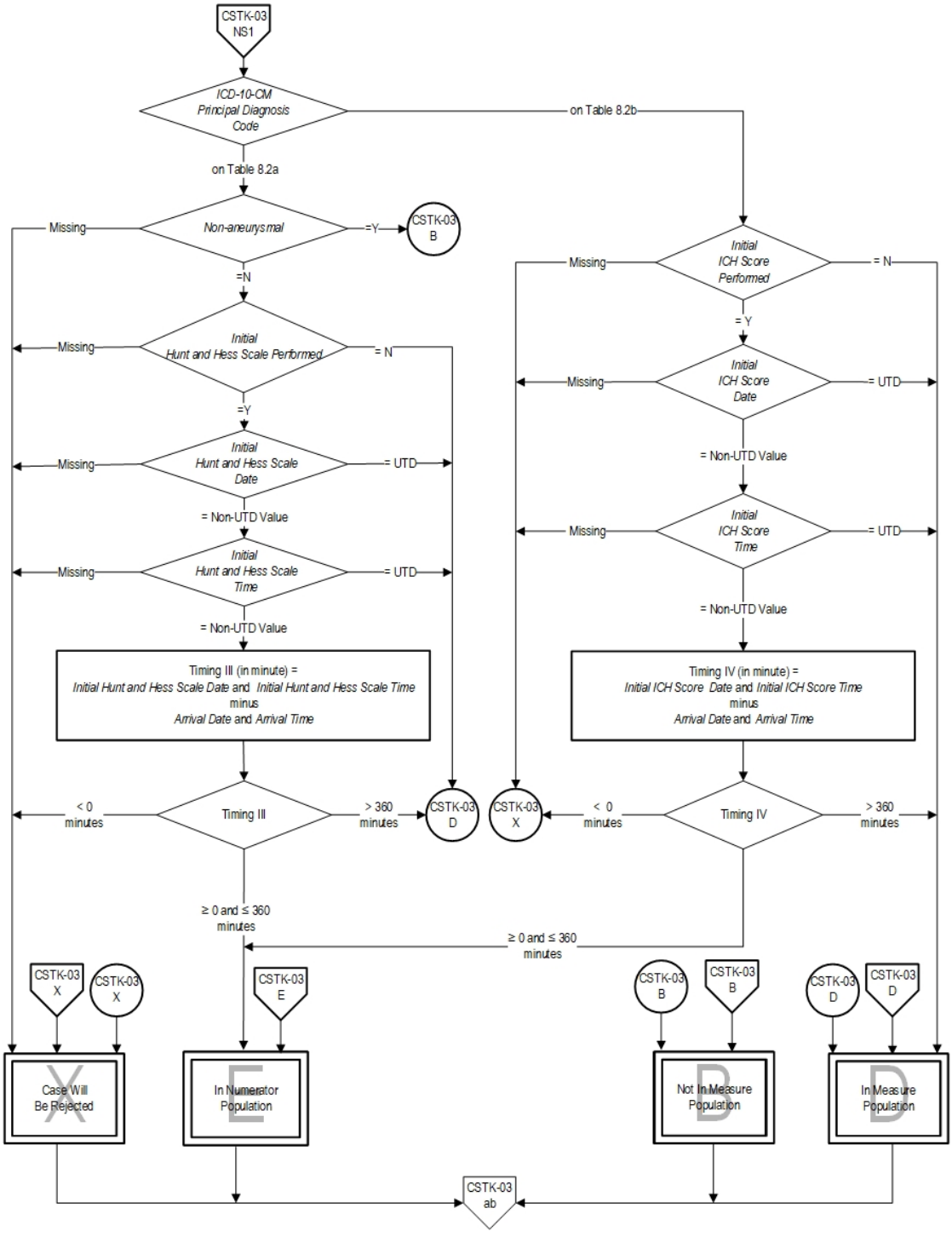
* This refers to the data element *'ICD-10-CM Principal Diagnosis Code'*. Each case will be stratified according to the principal diagnosis code, after the Category Assignments are completed and the overall rate is calculated.
** No allowable value exists for the overall rate. It includes all diagnosis on Tables 8.2a to 8.2b.

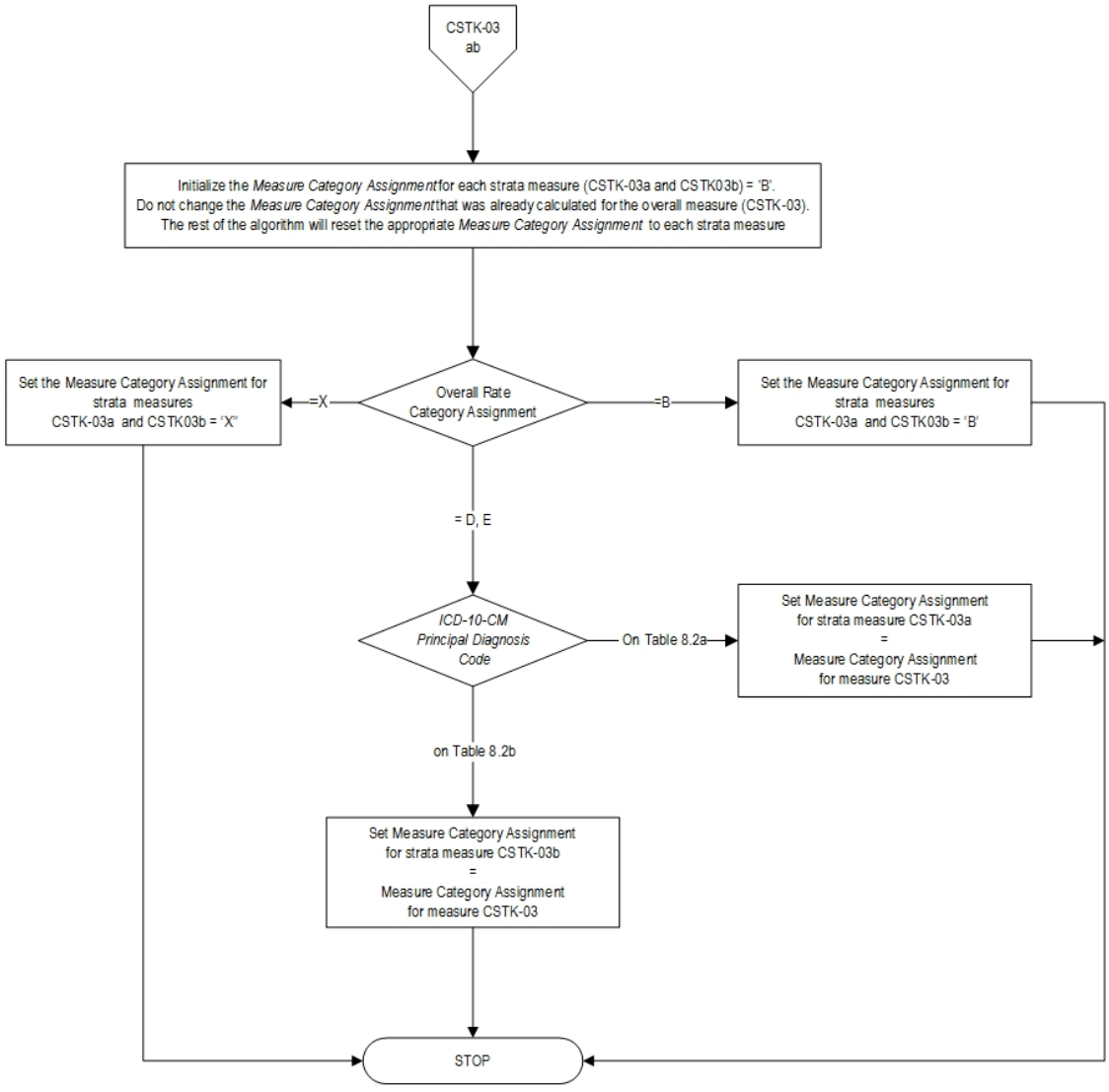



CSTK-03 SG
ICD-10-CM Principal Diagnosis Code
on Table 8.2b
on Table 8.2a
Initial Hunt and Hess Scale Performed
Missing
=N
=Y
Initial Hunt and Hess Scale Date
Missing
=UTD
= Non-UTD Value
Initial Hunt and Hess Scale Time
Missing
= UTD
= Non-UTD Value
Measurement Date = Initial Hunt and Hess Scale Date
Measurement Time=Initial Hunt and Hess Scale Time
Initial ICH Score Performed
Missing
= N
= Y
Initial ICH Score Date
Missing
= UTD
= Non-UTD Value
Initial ICH Score Time
Missing
= UTD
= Non-UTD Value
Measurement Date = Initial ICH Score Date
Measurement Time = Initial ICH Score Time
CSTK-03 X
CSTK-03 D
CSTK-03 X
CSTK-03 D
CSTK-03 SG1


CSTK-03
SG1
ICD-10-PCS Principal or Other Procedure Date and Time = Choose the procedure that has the earliest corresponding *ICD-10-PCS Principal or Other Procedure Date* and *ICD-10-PCS Principal or Other Procedure Time*.
Note: The earliest procedure code is the earliest procedure performed that is on Table 8.2d or/and 8.2e
- If there is only one procedure code on Table 8.2d or 8.2e, select that procedure's date and time even if UTD
- If there is more than one procedure code on Table 8.2d or/and 8.2e on the earliest date, select the procedure's date and the earliest non-UTD time
- Proceed only with this earliest date and time
ICD-10-PCS Principal or Other Procedure Date
Missing
= UTD
= Non-UTD Value
ICD-10-PCS Principal or Other Procedure Time
Missing
= UTD
= Non-UTD Value
Timing I (in minute) =
ICD-10-PCS Principal or Other Procedure Date and *ICD-10-PCS Principal or Other Procedure Time*
Minus
Measurement Date and Measurement Time
CSTK-03
X
Missing
Timing I
< 0 minutes
CSTK-03
D
≥ 0 minutes
CSTK-03
E


CSTK-03
NS
Discharge
Time
Missing
= UTD
= Non-UTD Value
Arrival
Date
Missing
= UTD
= Non-UTD Value
Arrival
Time
Missing
= UTD
CSTK-03
D
= Non-UTD Value
Timing II (in minute) =
Discharge Date and Discharge Time
minus
Arrival Date and Arrival Time
CSTK-03
X
< 0 minutes
Timing II
≥ 0 and < 360
minutes
CSTK-03
B
≥ 360
minutes
CSTK-03
NS1


CSTK-03 NS1
ICD-10-CM Principal Diagnosis Code
on Table 8.2b
on Table 8.2a
Non-aneurysmal
Missing
=Y
CSTK-03 B
=N
Initial Hunt and Hess Scale Performed
Missing
= N
=Y
Initial Hunt and Hess Scale Date
Missing
= UTD
= Non-UTD Value
Initial Hunt and Hess Scale Time
Missing
= UTD
= Non-UTD Value
Timing III (in minute) = Initial Hunt and Hess Scale Date and Initial Hunt and Hess Scale Time minus Arrival Date and Arrival Time
< 0 minutes
Timing III
> 360 minutes
CSTK-03 D
≥ 0 and ≤ 360 minutes
Initial ICH Score Performed
Missing
= N
= Y
Initial ICH Score Date
Missing
= UTD
= Non-UTD Value
Initial ICH Score Time
Missing
= UTD
= Non-UTD Value
Timing IV (in minute) = Initial ICH Score Date and Initial ICH Score Time minus Arrival Date and Arrival Time
CSTK-03 X
< 0 minutes
Timing IV
> 360 minutes
≥ 0 and ≤ 360 minutes
CSTK-03 X
CSTK-03 X
CSTK-03 E
CSTK-03 B
CSTK-03 B
CSTK-03 D
CSTK-03 D
X
Case Will Be Rejected
E
In Numerator Population
B
Not In Measure Population
D
In Measure Population
CSTK-03 ab


CSTK-03
ab
Initialize the *Measure Category Assignment* for each strata measure (CSTK-03a and CSTK03b) = 'B'.
Do not change the *Measure Category Assignment* that was already calculated for the overall measure (CSTK-03).
The rest of the algorithm will reset the appropriate *Measure Category Assignment* to each strata measure
Overall Rate
Category Assignment
=X
Set the Measure Category Assignment for
strata measures
CSTK-03a and CSTK03b = 'X"
=B
Set the Measure Category Assignment for
strata measures
CSTK-03a and CSTK03b = 'B'
= D, E
ICD-10-CM
Principal Diagnosis
Code
On Table 8.2a
Set Measure Category Assignment
for strata measure CSTK-03a
=
Measure Category Assignment
for measure CSTK-03
on Table 8.2b
Set Measure Category Assignment
for strata measure CSTK-03b
=
Measure Category Assignment
for measure CSTK-03
STOP

Measure Information Form

Measure Set: Comprehensive Stroke (CSTK)

Set Measure ID: CSTK-04

Performance Measure Name: Procoagulant Reversal Agent Initiation for Intracerebral Hemorrhage (ICH)

Description: Intracerebral hemorrhage (ICH) stroke patients with an INR value > 1.4 at hospital arrival who are treated with a procoagulant reversal agent (i.e., fresh frozen plasma, recombinant factor VIIa, prothrombin complex concentrates)

Rationale: Intracerebral hemorrhage (ICH) is a life-threatening disorder. Patients receiving oral anticoagulants (OACs), as well as those with an acquired or congenital coagulopathy, are at increased risk for ICH and hemorrhagic expansion with warfarin-associated bleeds comprising 12% to 15% of all spontaneous hemorrhages. Prompt INR reversal with intravenous infusions of vitamin K and fresh-frozen plasma (FFP) has been historically recommended; however, normalization with prothrombin complex concentrates (PCCs) is increasingly recommended because several studies have shown that these agents can rapidly normalize the INR within minutes. According to the European Union Stroke Initiative (EUSI), patients with oral anticoagulation treatment (OAT) associated ICH and an INR above 1.4, should have OAT discontinued and the INR normalized with PCCs or FFP in addition to intravenous infusion of vitamin K.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: ICH stroke patients treated with a procoagulant reversal agent

> **Included Populations:** As above
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Procoagulant Reversal Agent Initiation*
> - *Reason for Not Administering a Procoagulant Reversal Agent*

Denominator Statement: ICH stroke patients with INR value > 1.4 at hospital arrival.

> **Included Populations:**
>
> - Discharges with *ICD-10-CM Principal Diagnosis Code* for hemorrhagic stroke as defined in Appendix A, Table 8.2b for ICD-10 codes,
>   **AND**
> - Patients who have an *Admitting Diagnosis* of primary parenchymal ICH,
>   **AND**

- INR >1.4 performed closest to hospital arrival

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay > 120 days
- Patients with *Comfort Measures Only* documented on day of or after hospital arrival
- Patients enrolled in clinical trials

Data Elements:

- *Admission Date*
- *Admitting Diagnosis*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Date*
- *ICD-10-CM Principal Diagnosis Code*
- *INR Value > 1.4*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

1. Ansell J, Hirsch J, Hylek E, Jacobson A, Crowther M, Palareti G; American College of Chest Physicians. Pharmacology and management of the vitamin K antagonists: American College of Chest Physicians Evidence-Based Clinical Practice Guidleines (8th Edition). *Chest*. 2008;133(suppl):160S-198S.

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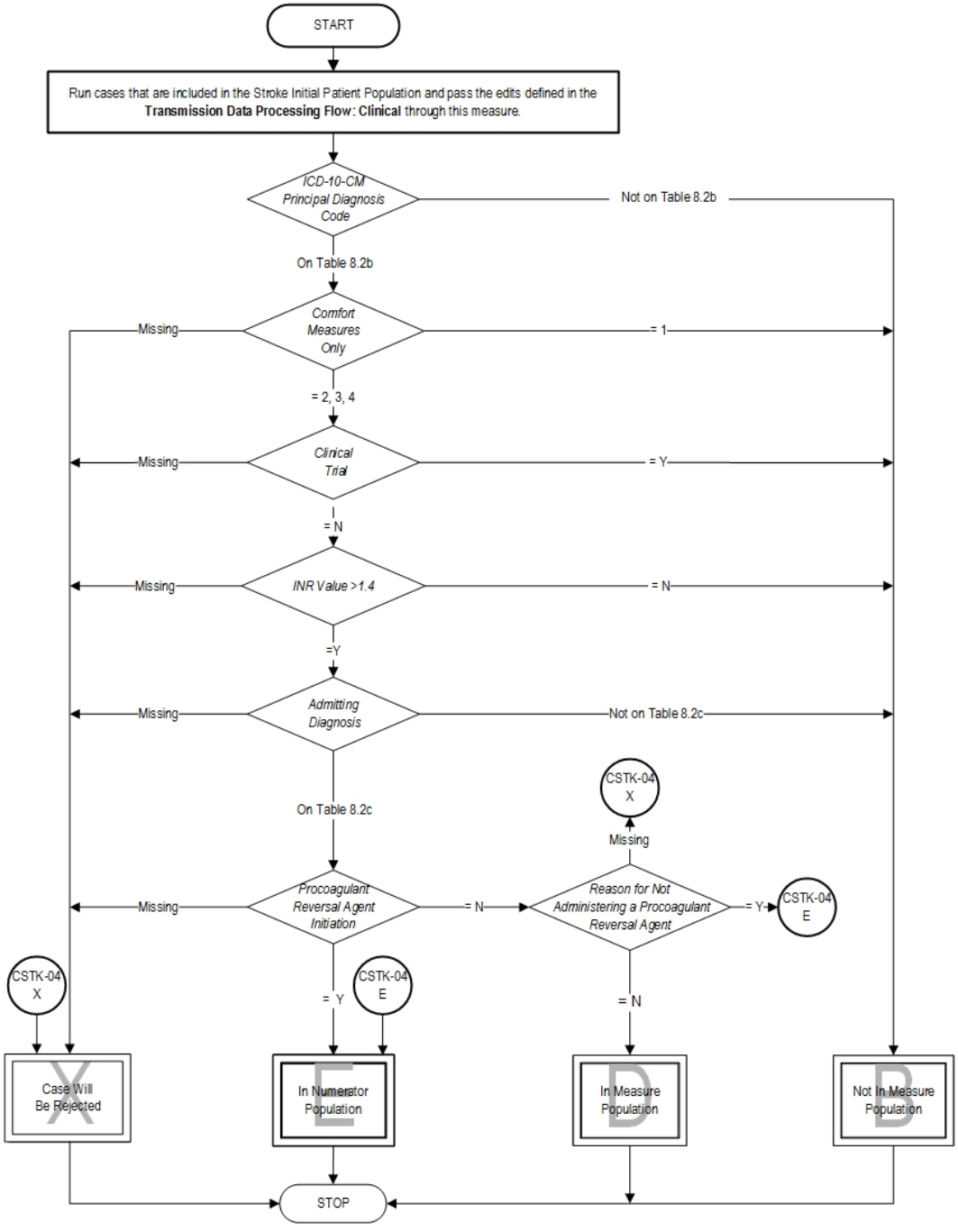
Measure Algorithm:

CSTK-04: Procoagulant Reversal Agent Initiation for Intracerebral Hemorrhage (ICH)
Numerator Statement: ICH stroke patients treated with a procoagulant reversal agent
Denominator Statement: ICH stroke patients with INR value > 1.4 at hospital arrival



Measure Information Form

Measure Set: Comprehensive Stroke (CSTK)

Set Measure ID: CSTK-05

Set Measure ID	Performance Measure Name
CSTK-05a	Hemorrhagic Transformation for Patients Treated with Intra-Venous (IV) Alteplase Therapy Only
CSTK-05b	Hemorrhagic Transformation for Patients Treated with Intra-Arterial (IA) Alteplase Therapy or Mechanical Endovascular Reperfusion Therapy

Performance Measure Name: Hemorrhagic Transformation (Overall Rate)

Description:
CSTK-05 Ischemic stroke patients who develop a symptomatic intracranial hemorrhage (i.e., clinical deterioration ≥ 4 point increase on NIHSS and brain image finding of parenchymal hematoma, or subarachnoid hemorrhage, or intraventricular hemorrhage) within (≤) 36 hours after the onset of treatment with intra-venous (IV) or intra-arterial (IA) alteplase therapy, or mechanical endovascular reperfusion procedure (i.e., mechanical endovascular thrombectomy with a clot retrieval device).

CSTK-05a Ischemic stroke patients who develop a symptomatic intracranial hemorrhage (i.e., clinical deterioration ≥ 4 point increase on NIHSS and brain image finding of parenchymal hematoma, or subarachnoid hemorrhage, or intraventricular hemorrhage) within (≤) 36 hours after the onset of treatment with intra-venous (IV) alteplase therapy only.

CSTK-05b Ischemic stroke patients who develop a symptomatic intracranial hemorrhage (i.e., clinical deterioration ≥ 4 point increase on NIHSS and brain image finding of parenchymal hematoma, or subarachnoid hemorrhage, or intraventricular hemorrhage) within (≤) 36 hours after the onset of treatment with IA alteplase therapy or mechanical endovascular reperfusion therapy (i.e., mechanical endovascular thrombectomy with a clot retrieval device).

The CSTK-05 measure is reported as an overall rate which includes ischemic stroke patients who develop a symptomatic hemorrhage after reperfusion therapy. CSTK-05a and CSTK-05b are subsets of the overall rate, and stratified by the type of therapy.

Rationale: Intravenous (IV) alteplase therapy for acute ischemic stroke was approved by the US Food and Drug Administration in 1996, following findings from the National Institute of Neurological Disorders and Stroke (NINDS) trial which demonstrated favorable outcomes in 31% to 50% of patients treated with recombinant tissue plasminogen activator (r-tPA), as compared to 20% to 38% of patients treated with placebo. Intra-arterial (IA) alteplase therapy has since been used to improve recanalization and clinical outcomes for select patients nonresponsive to IV therapy. Intracranial hemorrhage is the major risk of thrombolytic therapy with similar rates reported for both IV and IA routes. The NINDS trial found that 6.4% of patients treated with IV alteplase experienced symptomatic bleeding. Findings from the Prolyse in Acute

Cerebral Thromboembolism (PROACT II) study found the intracranial hemorrhage with neurological deterioration within 24 hours occurred in 10% of patients treated with IA recombinant prourokinase. In addition to these agents, other available thrombolytic drugs include: streptokinase, p-anisoylated lys-plasminogen-streptokinase activator, and urokinase.

Endovascular reperfusion therapy in acute ischemic stroke comprises a number of pharmacological and mechanical procedures. Mechanical endovascular thrombectomy is a treatment option for patients with large vessel occlusions in whom pharmacological thrombolysis is contraindicated or might be ineffective. For eligible patients, initiation of EVT (e.g., groin puncture) within 6 hours of stroke symptom onset using a stent retriever is preferred (Powers WJ, et. al., 2015). The use of mechanical thrombectomy devices other than stent retrievers as first-line devices for mechanical thrombectomy may be reasonable in some circumstances (Powers WJ, et. al., 2018). Mechanical endovascular thrombectomy devices are intended to improve tissue rescue and diminish reperfusion hemorrhage while broadening the population eligible for therapy. These devices may be used alone or in conjunction with chemical thrombolysis (i.e., IV or IA alteplase).

Type Of Measure: Outcome

Improvement Noted As: Decrease in the rate

Numerator Statement:
CSTK-05 Ischemic stroke patients who develop a symptomatic intracranial hemorrhage ≤ 36 hours after the onset of treatment with IV alteplase therapy, or IA alteplase therapy, or mechanical endovascular reperfusion therapy

CSTK-05a Ischemic stroke patients who develop a symptomatic intracranial hemorrhage ≤ 36 hours after the onset of treatment with IV alteplase therapy only (IVO)

CSTK-05b Ischemic stroke patients who develop a symptomatic intracranial hemorrhage ≤ 36 hours after the onset of treatment with IA alteplase therapy or mechanical endovascular reperfusion therapy

> **Included Populations:** As above
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Arrival Date*
> - *Arrival Time*
> - *Highest NIHSS Score Documented Within 36 Hours Following IA Alteplase or MER Initiation*
> - *Highest NIHSS Score Documented Within 36 Hours Following IV Alteplase Initiation*
> - *IA Alteplase or MER Initiation Date*
> - *IA Alteplase or MER Initiation Time*
> - *IA Route of Alteplase Administration*
> - *IV Alteplase Initiation*
> - *IV Alteplase Initiation Date*

- *IV Alteplase Initiation Time*
- *NIHSS Score Documented Closest to IA Alteplase or MER Initiation*
- *NIHSS Score Documented Closest to IV Alteplase Initiation*
- *Positive Brain Image*
- *Positive Brain Image Date*
- *Positive Brain Image Time*

Data Elements By Measure

CSTK-05	CSTK-05a	CSTK-05b
Arrival Date	Arrival Date	Arrival Date
Arrival Time	Arrival Time	Arrival Time
Highest NIHSS Score Documented Within 36 Hours Following IA Alteplase or MER Initiation	Highest NIHSS Score Documented Within 36 Hours Following IV Alteplase Initiation	Highest NIHSS Score Documented Within 36 Hours Following IA Alteplase or MER Initiation
Highest NIHSS Score Documented Within 36 Hours Following IV Alteplase Initiation	IV Alteplase Initiation	IA Route of Alteplase Administration
IA Route of Alteplase Administration	IV Alteplase Initiation Date	IA Alteplase or MER Initiation Date
IA Alteplase or MER Initiation Date	IV Alteplase Initiation Time	IA Alteplase or MER Initiation Time
IA Alteplase or MER Initiation Time	NIHSS Score Documented Closest to IV Alteplase Initiation	NIHSS Score Documented Closest to IA Alteplase or MER Initiation
IV Alteplase Initiation	Positive Brain Image	Positive Brain Image
IV Alteplase Initiation Date	Positive Brain Date	Positive Brain Image Date
IV Alteplase Initiation Time	Positive Brain Image Time	Positive Brain Image Time
NIHSS Score Documented Closest to IA Alteplase or MER Initiation		
NIHSS Score Documented Closest to IV Alteplase Initiation		
Positive Brain Image		
Positive Brain Image Date		
Positive Brain Image Time		

Denominator Statement: Ischemic stroke patients treated with IV alteplase therapy only (IVO) or IA alteplase therapy, or who undergo mechanical endovascular reperfusion therapy

Included Populations:

- Discharges with *ICD-10-CM Principal Diagnosis Code* for ischemic stroke as defined in Appendix A, Table 8.1 for ICD-10 codes,
  AND
- Patients with documented thrombolytic (IV or IA alteplase) therapy (*ICD-10-PCS Principal or Other Procedure Codes* as defined in Appendix A, Table 8.1a for ICD-10 codes),
  OR
- Patients with documented *Mechanical Endovascular Reperfusion Therapy (ICD-10-PCS Principal or Other Procedure Codes* as defined in Appendix A, Table 8.1b for ICD-10 codes)

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay > 120 days
- Patients admitted for *Elective Carotid Intervention*
- Patients transferred to this hospital following treatment with IV alteplase therapy or IA alteplase therapy or mechanical endovascular reperfusion therapy initiated prior to arrival at this hospital
- Patients who hemorrhage prior to the onset of treatment with IV alteplase or IA thrombolytic alteplase or mechanical endovascular reperfusion therapy

Data Elements:

- *Admission Date*
- *Birthdate*
- *Elective Carotid Intervention*
- *ICD-10-CM Other Diagnosis Codes*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Other Procedure Dates*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*

Risk Adjustment: Yes. This section has been moved to the ORYX Risk Adjustment Guide. This guide is available to the public on the Joint Commission's website and, in addition, it is available to performance measurement systems via the Joint Commission's extranet site for measurement systems (PET).

Data Elements:

- *Admission Date*
- *Hispanic Ethnicity*
- *Race*
- *Sex*
- *Birthdate*
- *Initial Blood Glucose Value at Hospital Arrival*
- *Initial NIHSS Score at Hospital Arrival*
- *Initial Platelet Count at Hospital Arrival*
- *Initial Blood Pressure at Hospital Arrival*

- *IV Alteplase Prior to IA or Mechanical Reperfusion Therapy*
- *ICD-10-CM Other Diagnosis Codes*

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: Hospitals may wish to identify those patients who are at higher risk for hemorrhage following specific therapies, so that efforts can be directed toward improving care.

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

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Measure Algorithm:

CSTK-05: Hemorrhagic Transformation (Overall Rate)

Numerator Statement: Ischemic stroke patients who develop a symptomatic intracranial hemorrhage ≤ 36 hours after the onset of treatment with IV Alteplase therapy, IA Alteplase therapy, or mechanical endovascular reperfusion therapy

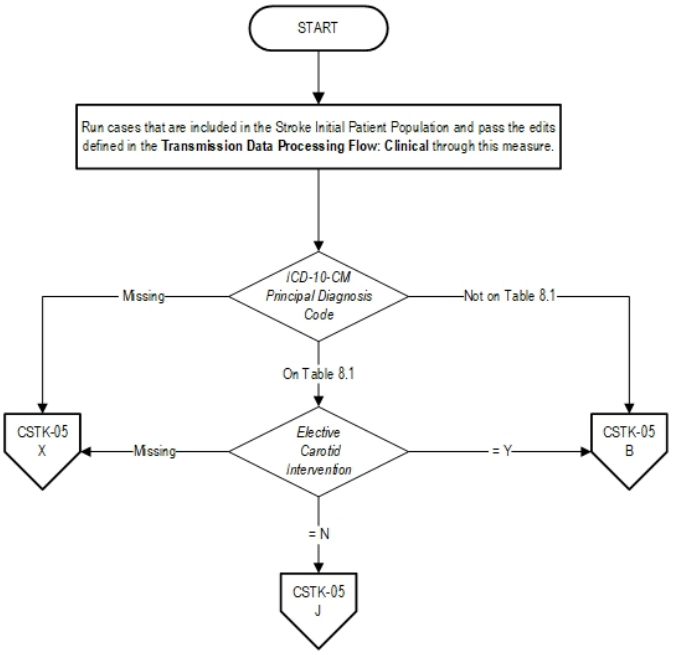
Denominator Statement: Ischemic stroke patients treated with IV or IA Alteplase therapy or who undergo a mechanical endovascular reperfusion therapy

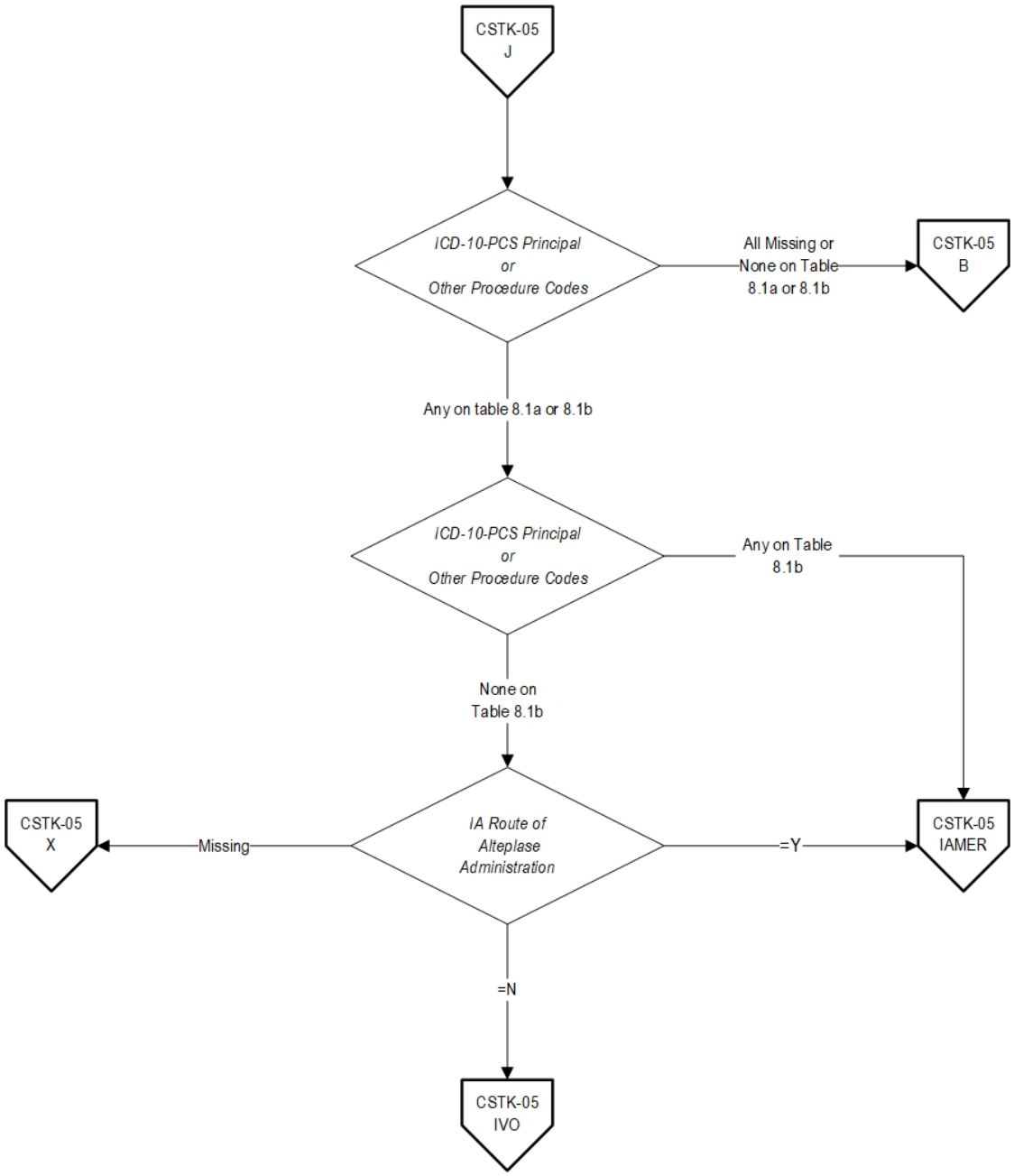
Variable Key:
Timing I, Timing II
Timing III, Timing IV
Deterioration1, Deterioration2

Stratification Table:

Set#	Stratified By	* Procedure Code And ** IA Alteplase (Allowable Value)
CSTK05	Hemorrhagic Transformation Overall Rate	***
CSTK-05a	Hemorrhagic Transformation for Patients Treated with Intra-Venous (IVO) Alteplase Therapy only	Table 8.1a And IA Alteplase = 'N'
CSTK-05b	Hemorrhagic Transformation for Patients Treated with Intra-Arterial (IA) Alteplase Therapy or Mechanical Endovascular Reperfusion Therapy	Table 8.1a And IA Alteplase = 'Y' Or Table 8.1b

* This refers to the data element *'ICD-10-PCS Principal or Other Procedure Code'*. Each case will be stratified according to the principal or other procedure code, after the Category Assignments are completed and the overall rate is calculated.
** This refers to the data element *'IA Route of Alteplase Administration'*
*** No allowable value exists for the overall rate. It includes all procedures on Tables 8.1a to 8.1b and IA Alteplase='Y' or IA Alteplase='N'.

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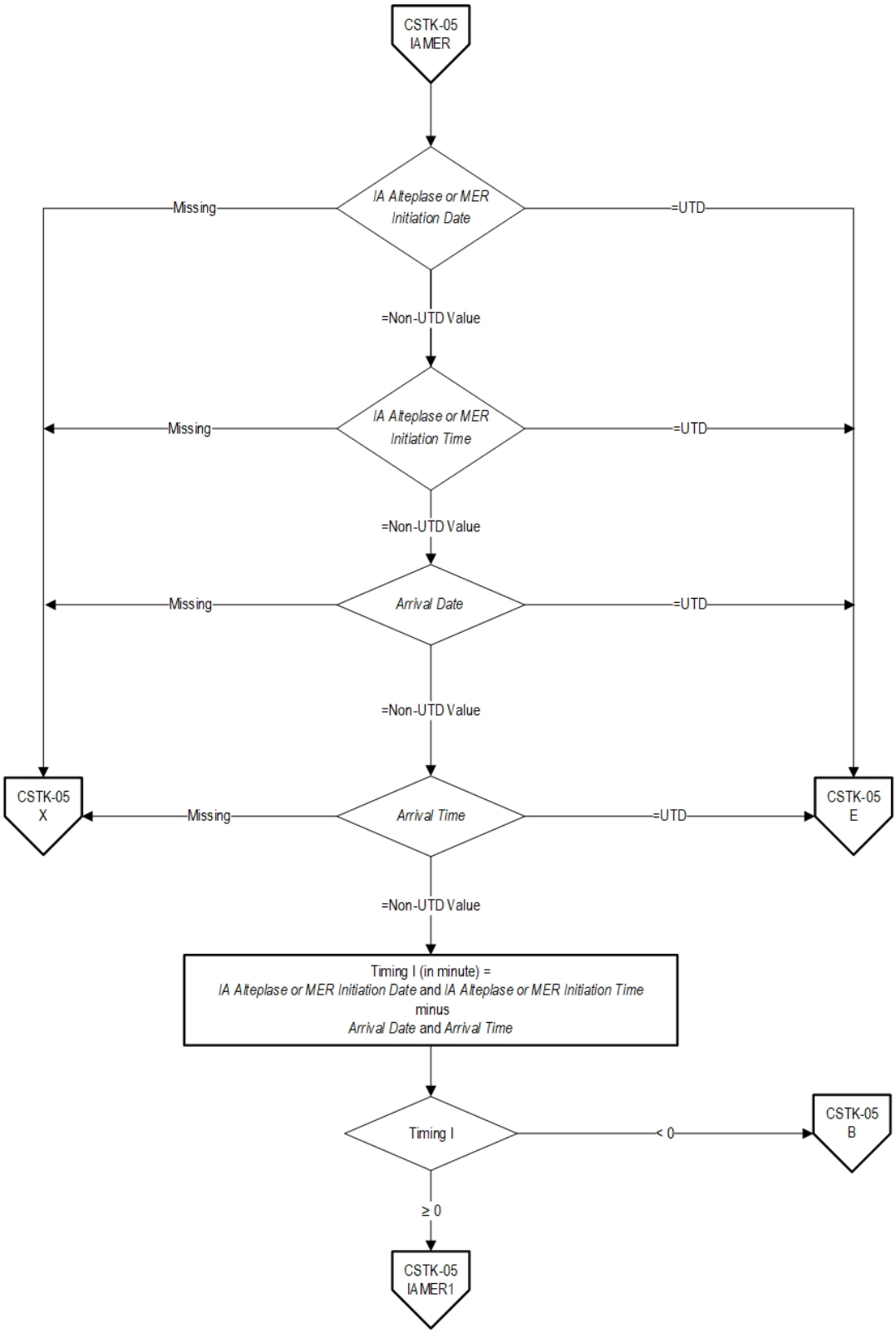
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IA Alteplase or MER Initiation Date and IA Alteplase or MER Initiation Time
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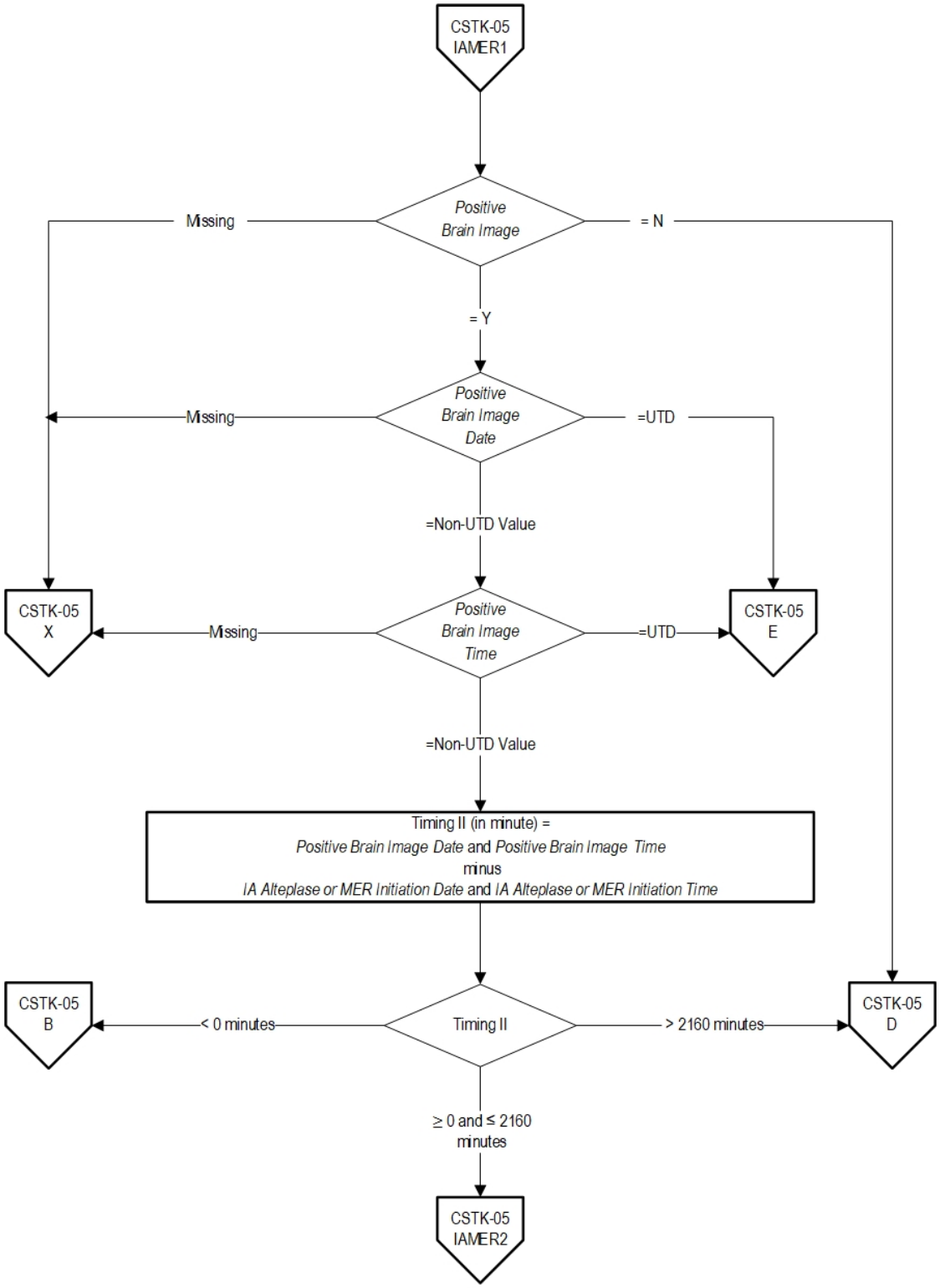
CSTK-05
IAMER1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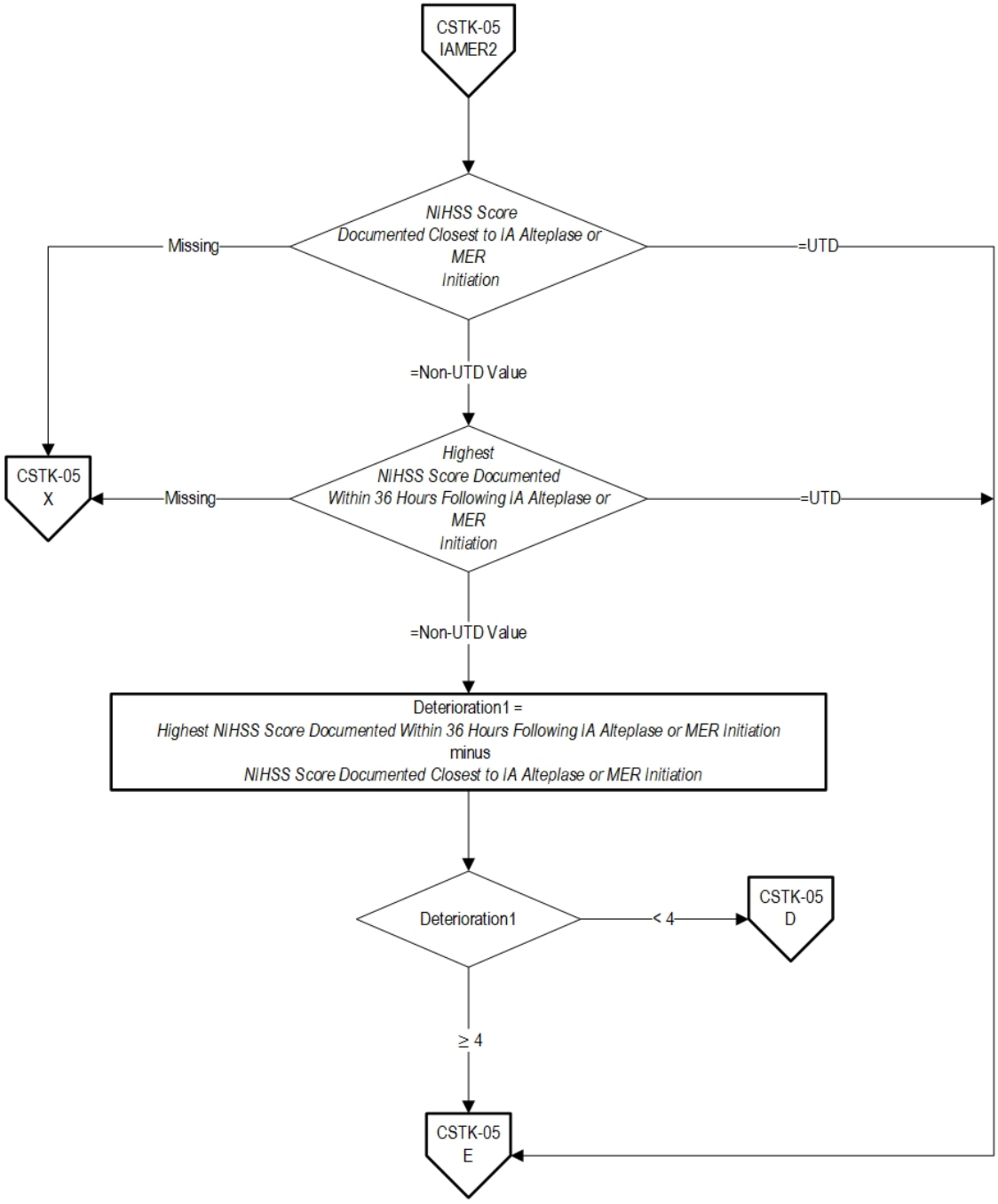
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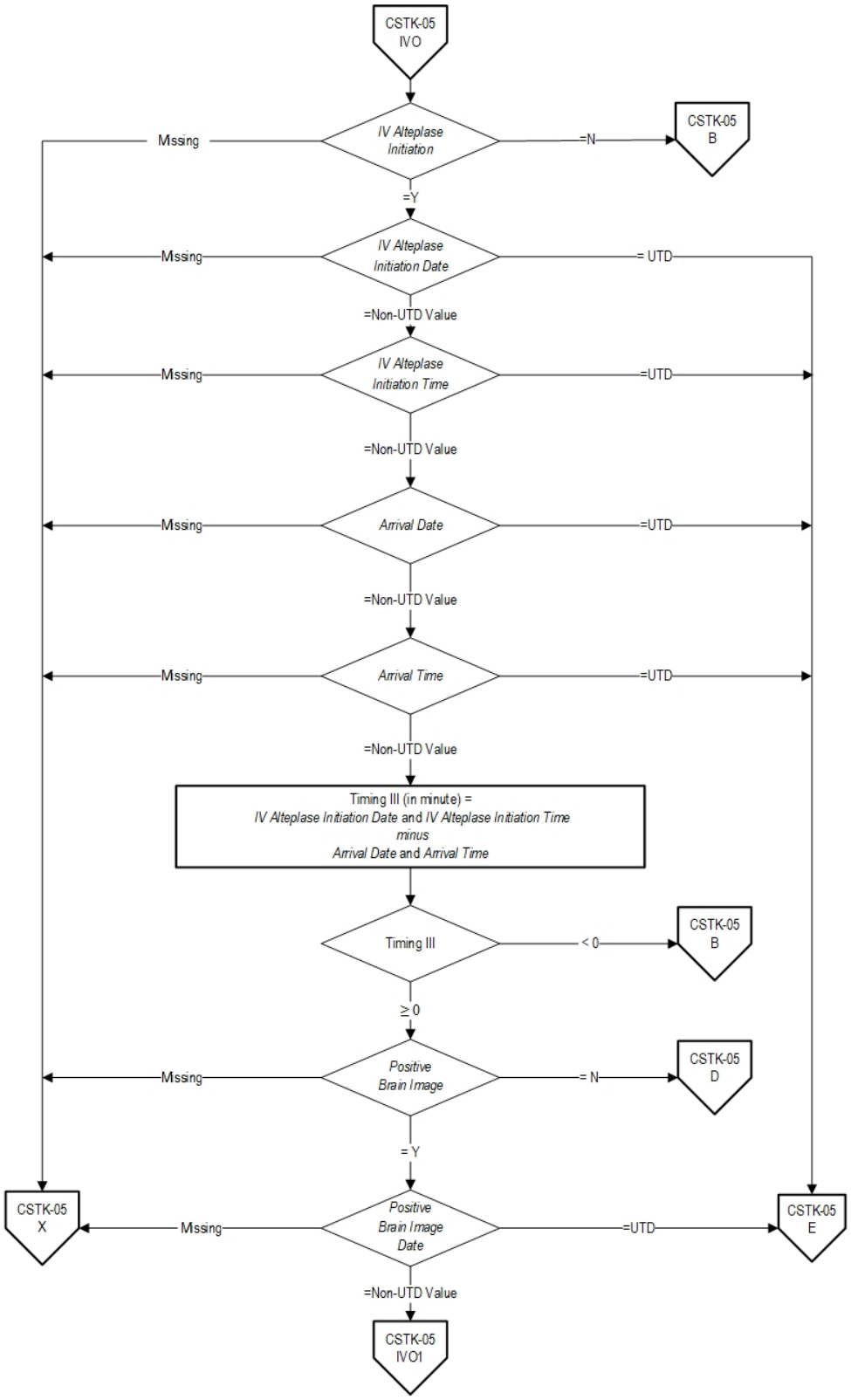
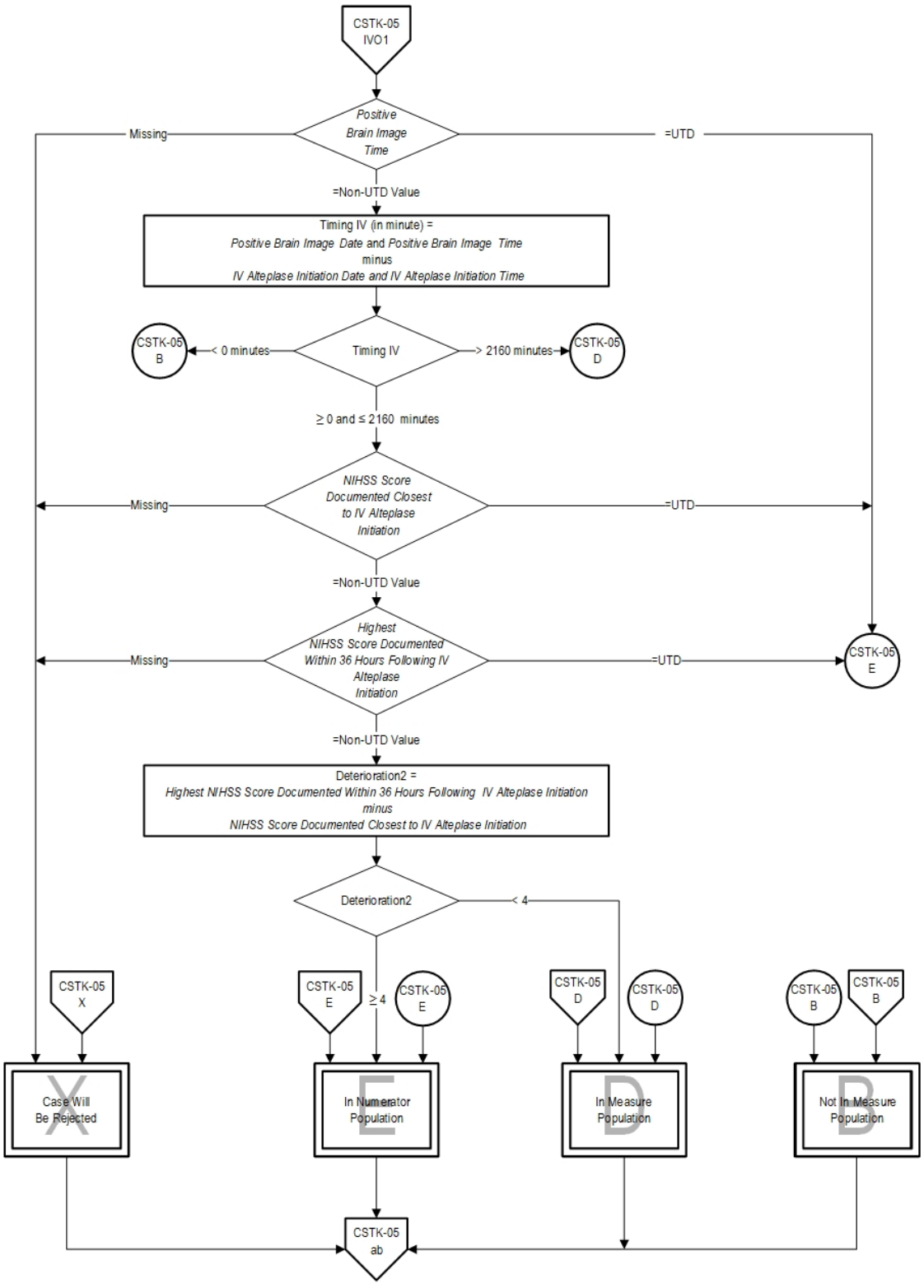
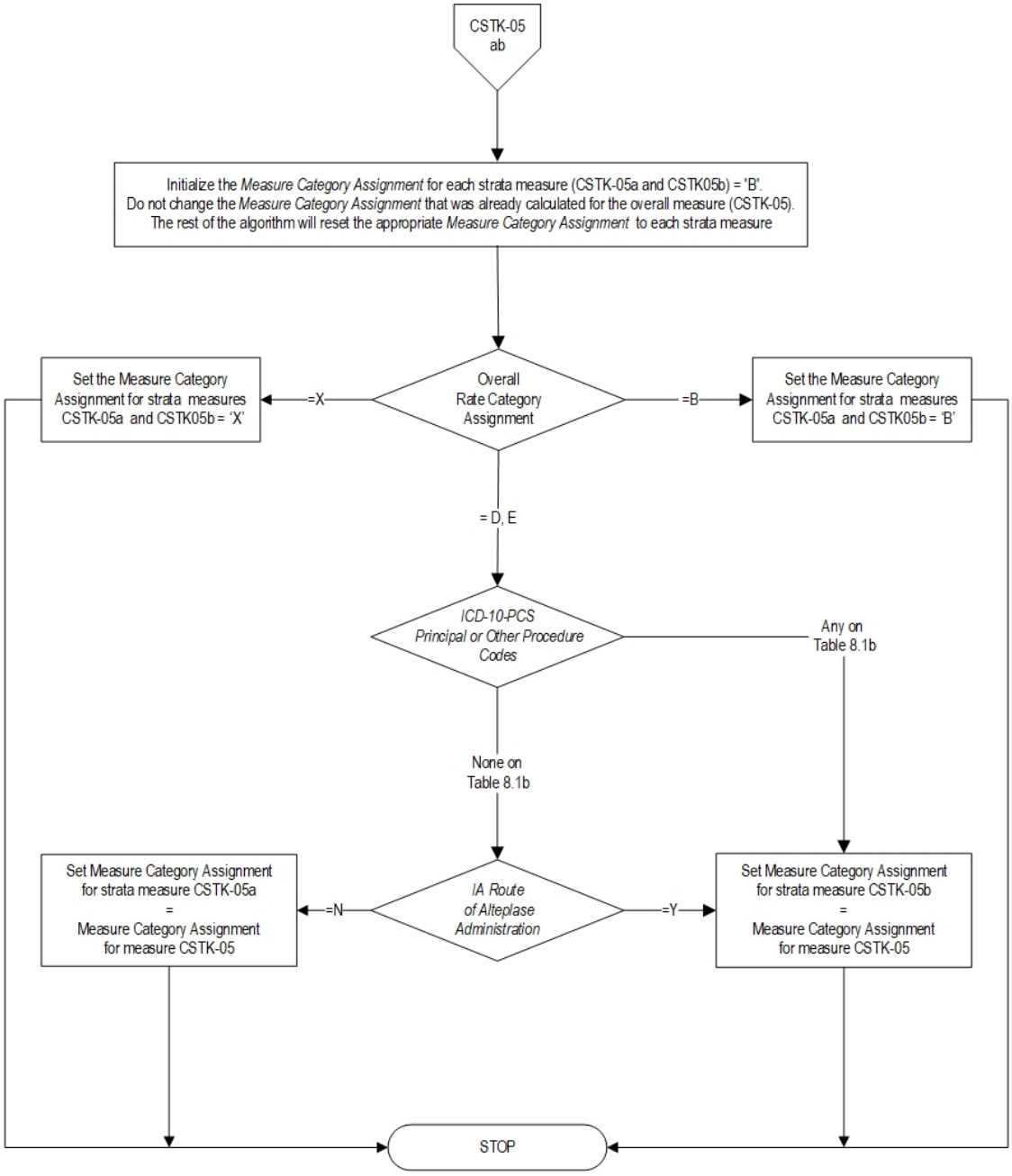
NIHSS Score
Documented Closest to IA Alteplase or
MER
Initiation
Missing
=UTD
=Non-UTD Value
CSTK-05
X
Missing
Highest
NIHSS Score Documented
Within 36 Hours Following IA Alteplase or
MER
Initiation
=UTD
=Non-UTD Value
Deterioration1 =
Highest NIHSS Score Documented Within 36 Hours Following IA Alteplase or MER Initiation
minus
NIHSS Score Documented Closest to IA Alteplase or MER Initiation
Deterioration1
< 4
CSTK-05
D
≥ 4
CSTK-05
E


CSTK-05
IVO
IV Alteplase
Initiation
Mssing
=N
CSTK-05
B
=Y
IV Alteplase
Initiation Date
Mssing
= UTD
=Non-UTD Value
IV Alteplase
Initiation Time
Mssing
=UTD
=Non-UTD Value
Arrival Date
Mssing
=UTD
=Non-UTD Value
Arrival Time
Mssing
=UTD
=Non-UTD Value
Timing III (in minute) =
IV Alteplase Initiation Date and IV Alteplase Initiation Time
minus
Arrival Date and Arrival Time
Timing III
< 0
CSTK-05
B
≥ 0
Positive
Brain Image
Mssing
= N
CSTK-05
D
= Y
CSTK-05
X
Positive
Brain Image
Date
Mssing
=UTD
CSTK-05
E
=Non-UTD Value
CSTK-05
IVO1


CSTK-05 IVO1
Positive Brain Image Time
Missing
=UTD
=Non-UTD Value
Timing IV (in minute) = Positive Brain Image Date and Positive Brain Image Time minus IV Alteplase Initiation Date and IV Alteplase Initiation Time
CSTK-05 B
< 0 minutes
Timing IV
> 2160 minutes
CSTK-05 D
≥ 0 and ≤ 2160 minutes
NIHSS Score Documented Closest to IV Alteplase Initiation
Missing
=UTD
=Non-UTD Value
Highest NIHSS Score Documented Within 36 Hours Following IV Alteplase Initiation
Missing
=UTD
CSTK-05 E
=Non-UTD Value
Deterioration2 = Highest NIHSS Score Documented Within 36 Hours Following IV Alteplase Initiation minus NIHSS Score Documented Closest to IV Alteplase Initiation
Deterioration2
< 4
≥ 4
CSTK-05 X
CSTK-05 E
CSTK-05 E
CSTK-05 D
CSTK-05 D
CSTK-05 B
CSTK-05 B
X
Case Will Be Rejected
E
In Numerator Population
D
In Measure Population
B
Not In Measure Population
CSTK-05 ab


CSTK-05
ab
Initialize the *Measure Category Assignment* for each strata measure (CSTK-05a and CSTK05b) = 'B'.
Do not change the *Measure Category Assignment* that was already calculated for the overall measure (CSTK-05).
The rest of the algorithm will reset the appropriate *Measure Category Assignment* to each strata measure
Overall
Rate Category
Assignment
=X
Set the Measure Category
Assignment for strata measures
CSTK-05a and CSTK05b = 'X'
=B
Set the Measure Category
Assignment for strata measures
CSTK-05a and CSTK05b = 'B'
= D, E
ICD-10-PCS
Principal or Other Procedure
Codes
Any on
Table 8.1b
None on
Table 8.1b
IA Route
of Alteplase
Administration
=N
Set Measure Category Assignment
for strata measure CSTK-05a
=
Measure Category Assignment
for measure CSTK-05
=Y
Set Measure Category Assignment
for strata measure CSTK-05b
=
Measure Category Assignment
for measure CSTK-05
STOP

Measure Information Form

Measure Set: Comprehensive Stroke (CSTK)

Set Measure ID: CSTK-06

Performance Measure Name: Nimodipine Treatment Administered

Description: Subarachnoid hemorrhage (SAH) patients for whom nimodipine treatment was administered within 24 hours of arrival at this hospital

Rationale: Cerebral vasopasm is a serious complication following SAH, occurring in 30% to 70% of patients and accounting for nearly 50% of the deaths in patients surviving to treatment. Constriction of the arterial lumen results in diminished cerebral perfusion distal to the affected artery, which produces a delayed neurological deficit that may progress to cerebral infarction without early management of the ruptured aneurysm. The arterial narrowing that occurs in cerebral vasospasm is typically a transient or temporary event, lasting from a few days up to 3 weeks. Oral nimodipine is a proven and valuable treatment to prevent or limit the severity of cerebral vasospasm.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: SAH patients for whom nimodipine treatment was administered within 24 hours of arrival at this hospital.

> **Included Populations:** As above
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Arrival Date*
> - *Arrival Time*
> - *Nimodipine Administration*
> - *Nimodipine Administration Date*
> - *Nimodipine Administration Time*
> - *Reason for Not Administering Nimodipine Treatment*

Denominator Statement: SAH patients

> **Included Populations:** Discharges with ICD-10-CM Principal Diagnosis Code for subarachnoid hemorrhage as defined in Appendix A, Table 8.2a for ICD-10 codes.

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay > 120 days
- Patients with *Comfort Measures Only* documented on day of or after hospital arrival
- Patients enrolled in clinical trials
- Patients discharged within 24 hours of arrival at this hospital

Data Elements:

- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Date*
- *Discharge Time*
- *ICD-10-CM Principal Diagnosis Code*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

1. Adams HP, del Zoppo G, Alberts MJ, Bhatt DL, Brass L, Furlan A, Grubb RL, Higashida RT, Jauch EC, Kidwell C, Lyden PD, Morgenstern LB, Qureshi AI, Rosenwasser RH, Scott PA, Wijdicks E. Guidelines for the Early Management of Adults with Ischemic Stroke: A Guideline From the American Heart Association/American Stroke Association Stroke Council, Clinical Cardiology Council, Cardiovascular Radiology and Intervention Council, and the Atherosclerotic Peripheral Vascular Disease and Quality of Care Outcomes in Research Interdisciplinary Working Groups. *Stroke*. 2007;38:1686.

2. Allen GS, Ahn HS, Presiosi TJ, Battye R,Boone SC, Cho SN, Kelly DL, Weir BK, Crabbe RA, Lavik PJ, Rosenbloom SB, Dorsey FC, Ingram CR, Mellits DE, Bertsch LA, Boisvert DP, Hundley MB, Johnson RK, Strom JA, Transou CR. Cerebral arterial spasm: a controlled trial of nimodipine in patients with subarachnoid hemorrhage. *N Engl J Med*. 1983;308:619-624.

3. Bederson JB, Connolly ES Jr, Batjer HH, Dacey RG, Dion JE, Diringer MN, Duldner JE Jr, Harbaugh RE, Patel AB, and Rosenwasser RH. Guidelines for the management of aneurysmal subarachnoid hemorrhage: a statement for healthcare professionals from a Special Writing Group of the Stroke Council, American Heart Association. *Stroke*. 2009;40:1008-1011.

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5. Fogelholm R, Palomaki H, Erila T, Rissanen A, Kaste M. Blood pressure, nimodipine, and outcome of ischemic stroke. *Acta Neurol Scand*. 2004;109:200-204.

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8. Leifer D, Bravata DM, Connors JJ III, Hinchey JA, Jauch EC, Johnston SC, Latchaw R, Likosky W, Ogilvy C, Qureshi AI, Summers D, Sung GY, Williams LS, Zorowitz R, on behalf of the American Heart Association Special Writing Group of the Stroke Council, Atherosclerotic Peripheral Vascular Disease Working Group and Council on Cardiovascular Surgery and Anesthesia, and Council on Cardiovascular Nursing. Metrics for measuring quality of care in comprehensive stroke centers: detailed follow-up to Brain Attack Coalition comprehensive stroke center recommendations: a statement for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. 2011;42:863-864.

9. Mayberg MR, Batjer HH, Dacey R, Diringer M, Haley EC, Heros RC, Sternau LL, Torner J, Adams HP Jr, Feinberg W. Guidelines for the management of aneurysmal subarachnoid hemorrhage: a statement for healthcare professionals from a Special Writing Group of the Stroke Council, American Heart Association. *Stroke*. 1994;25:2315-2328.

10. Toyota BD. The efficacy of an abbreviated course of nimodipine in patients with good grade aneurysmal subarachnoid hemorrhage. *JNeurosurg*. 1999;90(2):203-206.

11. Wahlgren NG, MacMahon DG, DeKeyser J, Indredavik B, Ryman T. Intravenous Nimodipine West European Stroke Trial (INWEST) of nimodipine in the treatment of acute ischemic stroke. *Cerebrovasc Dis*. 1994;4:204-210.

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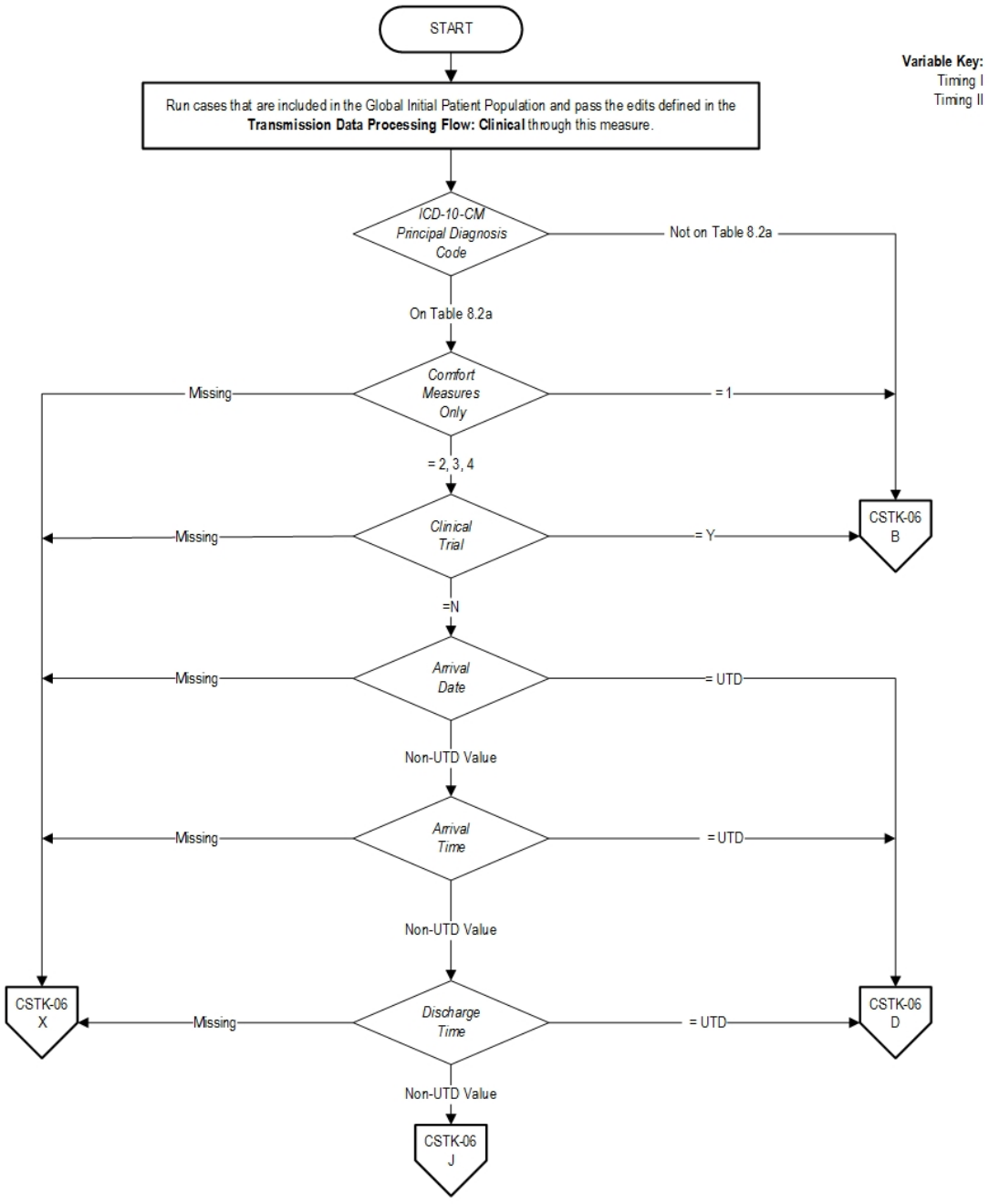
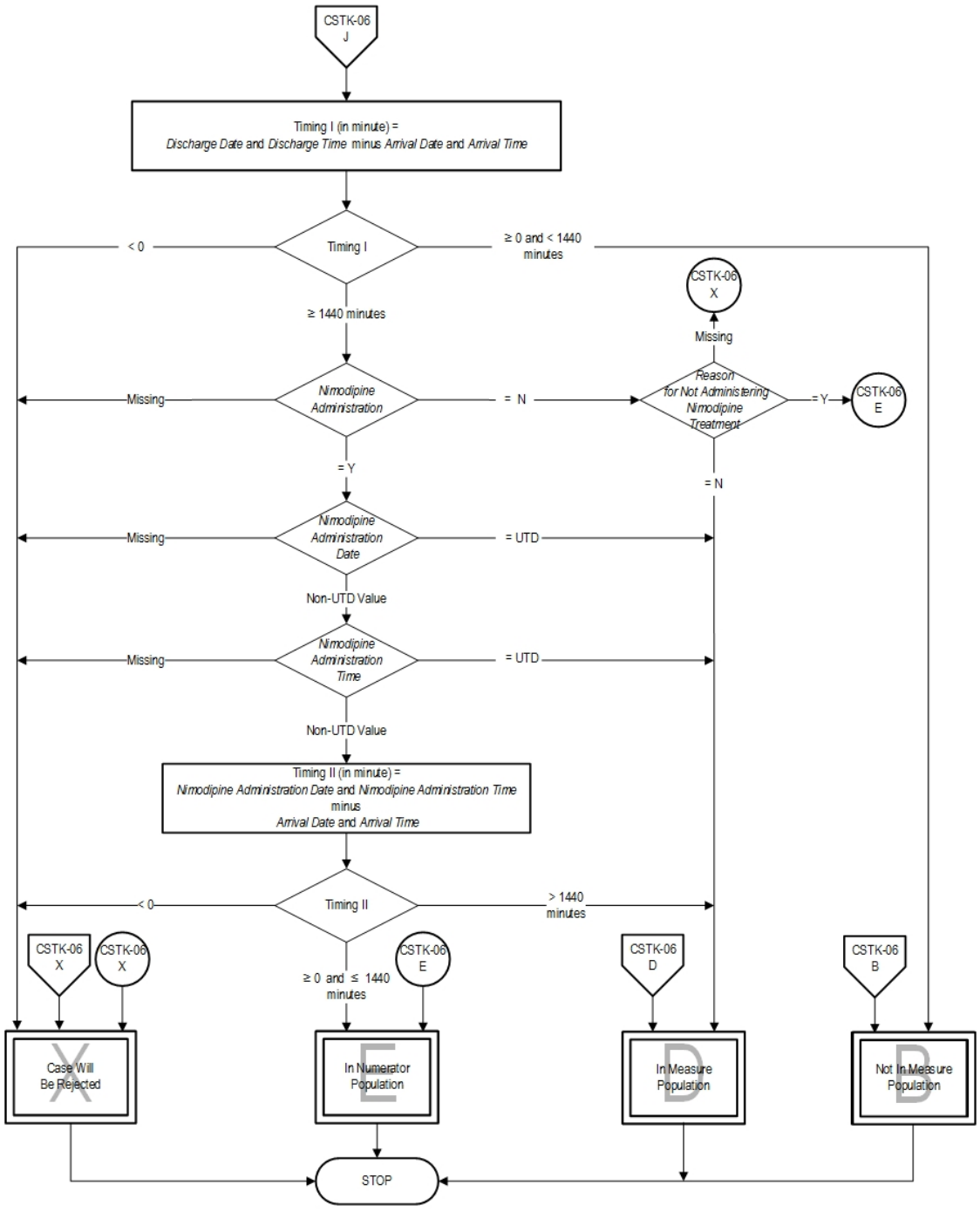
Measure Algorithm:

CSTK-06: Nimodipine Treatment Administered
Numerator Statement: SAH patients for whom nimodipine treatment was administered within 24 hours of arrival at this hospital
Denominator Statement: SAH patients




CSTK-06 J
Timing I (in minute) = Discharge Date and Discharge Time minus Arrival Date and Arrival Time
Timing I
< 0
≥ 0 and < 1440 minutes
≥ 1440 minutes
CSTK-06 X
Missing
Nimodipine Administration
Missing
= N
Reason for Not Administering Nimodipine Treatment
= Y
CSTK-06 E
= Y
= N
Nimodipine Administration Date
Missing
= UTD
Non-UTD Value
Nimodipine Administration Time
Missing
= UTD
Non-UTD Value
Timing II (in minute) = Nimodipine Administration Date and Nimodipine Administration Time minus Arrival Date and Arrival Time
Timing II
< 0
> 1440 minutes
CSTK-06 X
CSTK-06 X
≥ 0 and ≤ 1440 minutes
CSTK-06 E
CSTK-06 D
CSTK-06 B
X
Case Will Be Rejected
E
In Numerator Population
D
In Measure Population
B
Not In Measure Population
STOP

Measure Information Form

****SUSPENDED Effective January 1, 2016*****

Measure Set: Comprehensive Stroke (CSTK)

Set Measure ID: CSTK-07

Performance Measure Name: Median Time to Revascularization

Description: Median time from hospital arrival to the start of an intra-arterial (IA) thrombolytic (t-PA) infusion or the first pass (i.e., deployment) of a mechanical reperfusion device to extract an arterial occlusive lesion and restore blood flow to brain tissue.

Rationale: Timely recanalization of an occluded intracerebral artery is a strong predictor of improved functional outcome and reduced mortality in patients with an acute ischemic stroke. Trials of IA lytic agents and mechanical revascularization devices have historically required start of treatment as long as 6-8 hours for anterior circulation strokes of the middle cerebral artery with extended times from symptom onset for vertebrobasilar occulusions. At this time, administration of intra-venous (IV) tissue plasminogen activator (t-PA) within three hours of time last known well remains the recommended first-line approach. However, the short therapeutic window and low rates of recanalization with IV thrombolytic (t-PA) therapy has prompted the investigation of alternative approaches via intra-arterial infusion of a thrombolytic drug or mechanical recanalization with a clot retrieval device. Endovascular treatment of acute ischemic stroke with intraarterial (IA) thrombolytic agents or mechanical thrombectomy is a consideration in patients whom IV t-PA fails or considered likely to fail, who are excluded from IV t-PA treatment, and/or who present with large vessel occlusion that can be detected directly with brain imaging (e.g., noncontrast CT, CT angiography, magnetic resonance angiography (MRA) or indirectly by a high National Institutes for Stroke Scale (NIHSS) Score greater than 10.

Since “time is brain”, the overall speed of the revascularization process is an important and appropriate measure. In multicenter clinical trials of catheter-directed therapies, the probability of good outcome as defined by a Modified Rankin Score of 0-2 at 90 days decreased as time to angiographic revascularization increased. It is estimated that for every 30-minute delay in time to revascularization, there is a 10% decrease in the likelihood of a good outcome from endovascular reperfusion therapy.

Type Of Measure: Process

Improvement Noted As: Decrease in the median value

Continuous Variable Statement: Time (in minutes) from hospital arrival to the start of an intra-arterial (IA) thrombolytic (t-PA) infusion or the first pass of a mechanical reperfusion device in patients with acute ischemic stroke who undergo revascularization therapy.

> **Included Populations:**
>
> - Discharges with *ICD-10-CM Principal Diagnosis Code* for ischemic stroke as defined in Appendix A, Table 8.1 for ICD-10 codes,

AND

- Patients with documented *Thrombolytic Infusion Therapy (ICD-10-PCS Principal or Other Procedure Codes* as defined in Appendix A, Table 8.1a for ICD-10 codes) **OR** *Mechanical Endovascular Reperfusion Therapy (ICD-10-PCS Principal or Other Procedure Codes* as defined in Appendix A, Table 8.1b for ICD-10 codes).

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay > 120 days
- Patients admitted for *Elective Carotid Intervention*

Data Elements:

- *Admission Date*
- *Arrival Date*
- *Arrival Time*
- *Birthdate*
- *Discharge Date*
- *Elective Carotid Intervention*
- *First Pass Date*
- *First Pass Time*
- *First Pass of a Mechanical Reperfusion Device*
- *IA Route of Alteplase Administration*
- *IA Thrombolytic Initiation*
- *IA Thrombolytic Initiation Date*
- *IA Thrombolytic Initiation Time*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Other Procedure Dates*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate measure of central tendency .

Selected References: 1. Adams HP, Brott TG, Furlan AJ, Gomez CR, Grotta J, Helgason CM, Kwiatkowski T, Lyden PD, Marler JR, Torner J, et. al. Guidelines for thrombolytic therapy for acute stroke: a supplement to the guidelines for the management of patients with acute ischemic stroke. *Circulation*. 1996;94:1167-1174.

2. Antman EM, Anbe DT, Armstrong PW, Bates ER, Green LA, Hand M, et al. ACC/AHA guidelines for the management of patients with ST-elevation myocardial infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Revise the 1999 Guidelines for the Management of Patients With Acute Myocardial Infarction). 2004.

3. Antman EM, Hand M, Armstrong PW, Bates ER, Green LA, Halasyamani LK, et al. 2007 focused update of the ACC/AHA 2004 Guidelines for the Management of Patients With ST-Elevation Myocardial Infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Writing Group to Review New Evidence and Update the ACC/AHA 2004 Guidelines for the Management of Patients With ST-Elevation Myocardial Infarction). *J Am Coll Cardiol*. 2008;51:210—-47.

4. Campbell BCV, Mitchell PJ, Kleinig TJ, Dewey HM, Churilov L, Yassi N, et. al. Endovascular therapy for ischemic stroke with perfusion-imaging selection. *NEJM*. 2015 Mar;372(11): 1009-17.

5. Demchuk AM, Goyal M, Monon BK, Eesa M, Ryckborst KJ, Kamal N, et. al. Endovascular treatment for Small Core and Anterior circulation Proximal occlusion with Emphasis on minimizing CT to recanalization times (ESCAPE) trial: methodology. *Int J Stroke*. 2015 Apr;10(3): 429-38.

6. Furlan A, Higashida R, Wechsler L, et. al. Intra-arterial prourokinase for acute ischemic stroke. The PROACT II study; a randomized controlled trial. Prolyse in Actue Cerebral Thromboembolism. *JAMA.* 1999;282:2003-2011.

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8. Khatari P, Abruzzo T, Yeatts SD, Nichols C, Broderick JP, Tomsick TA; IMS I and II Investigators. Good clinical outcome after ischemic stroke with successful revascularization is time-dependent. *Neurology.* 2009 Sep 29;73(13):1066-72.

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12. Rha JH, Saver JL. The impact of recanalization on ischemic stroke outcome: a meta-analysis. *Stroke*.

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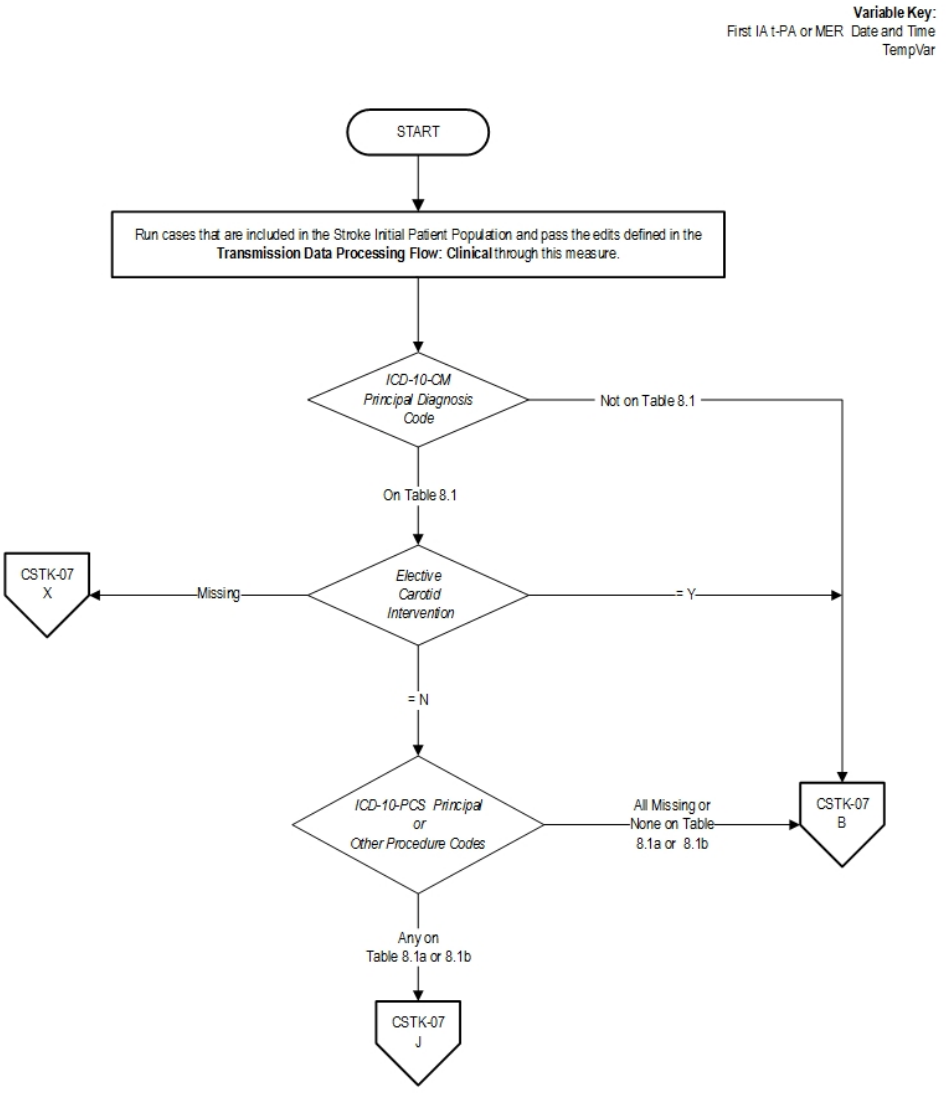
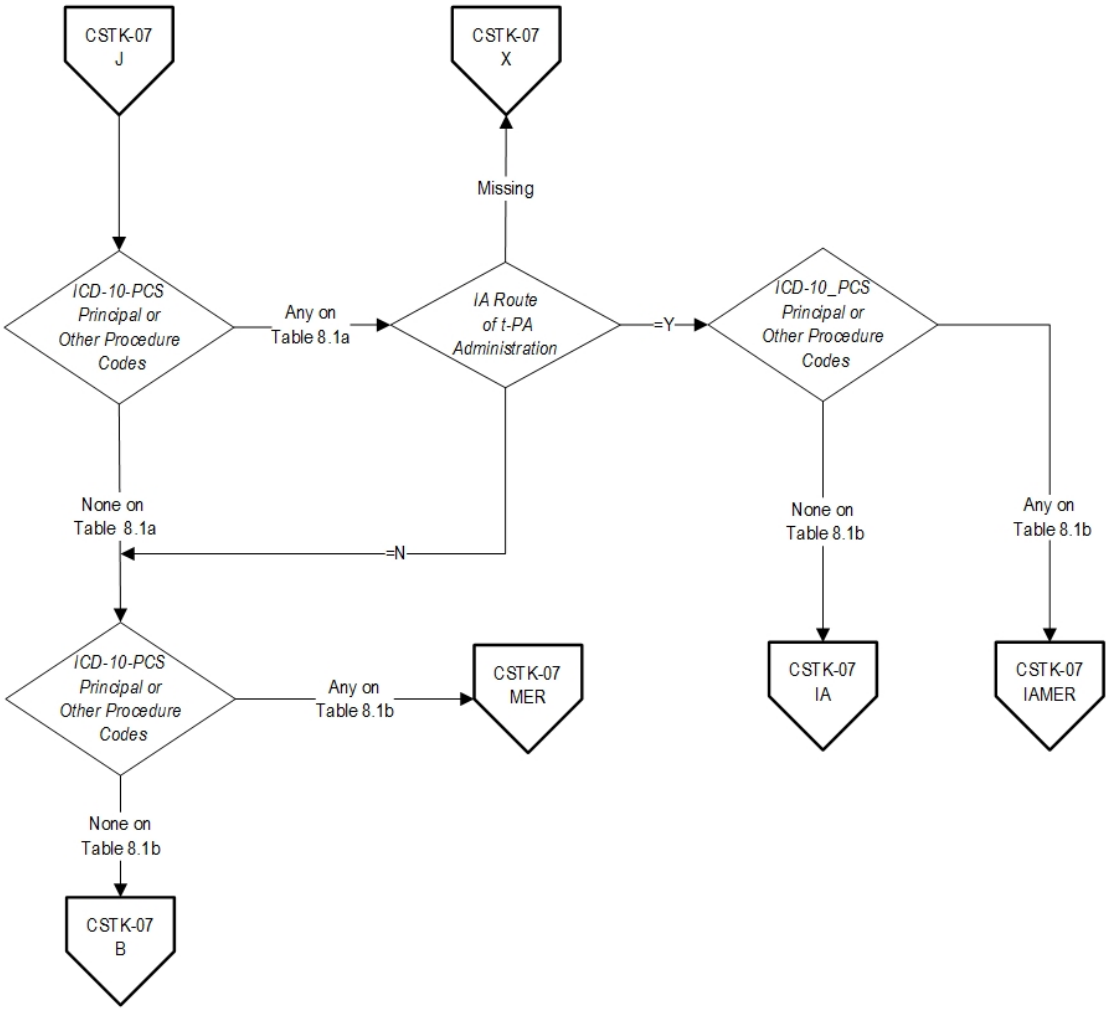
Measure Algorithm:

CSTK-07: Median Time to Revascularization

Continuous Variable Statement: Time (in minutes) from hospital arrival to the start of an intra-arterial (IA) thrombolytic (t-PA) infusion or the first pass of a mechanical reperfusion device in patients with acute ischemic stroke who undergo revascularization therapy




CSTK-07
J
CSTK-07
X
Missing
ICD-10-PCS
Principal or
Other Procedure
Codes
Any on
Table 8.1a
IA Route
of t-PA
Administration
=Y
ICD-10_PCS
Principal or
Other Procedure
Codes
None on
Table 8.1a
=N
None on
Table 8.1b
Any on
Table 8.1b
ICD-10-PCS
Principal or
Other Procedure
Codes
Any on
Table 8.1b
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MER
CSTK-07
IA
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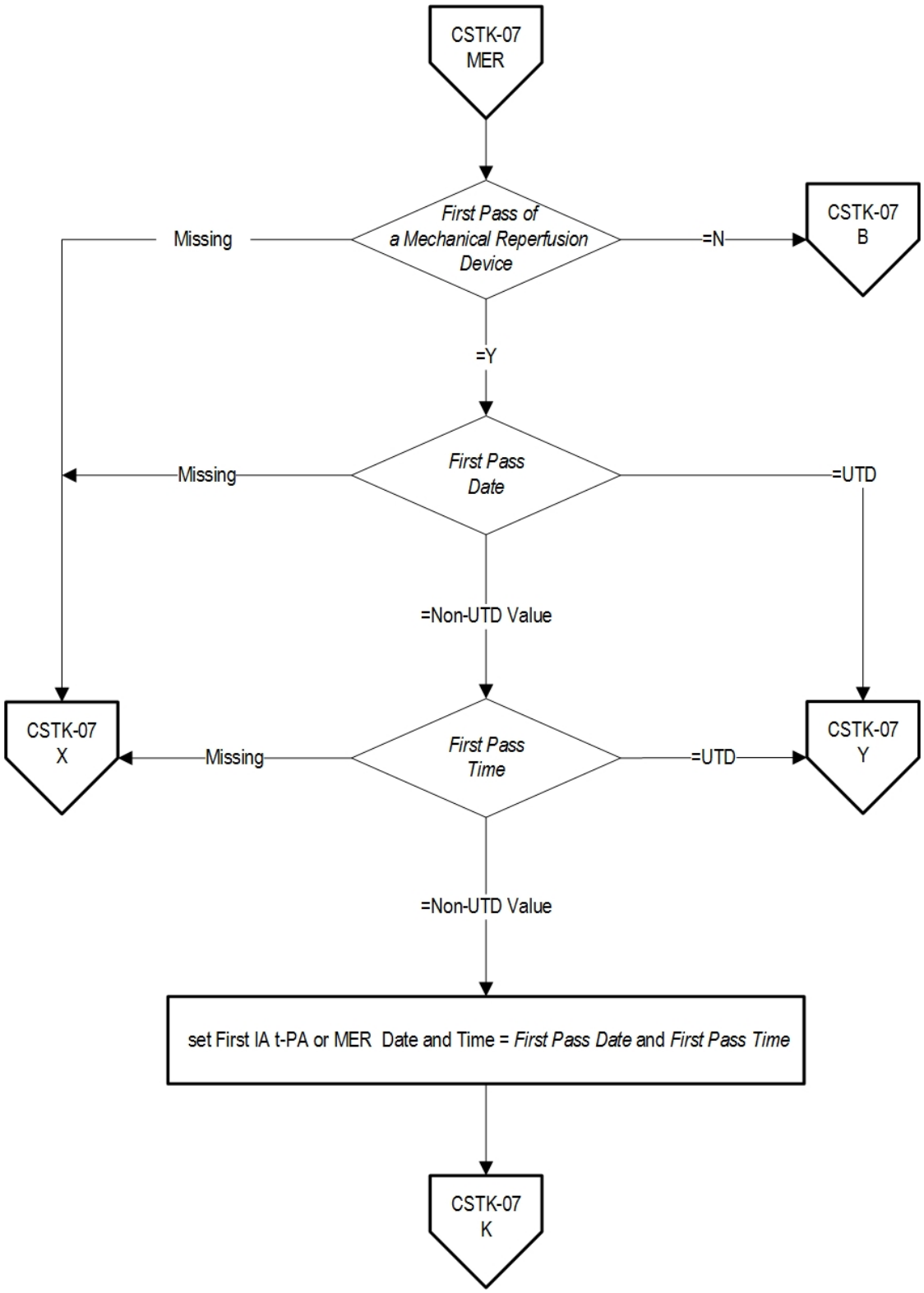
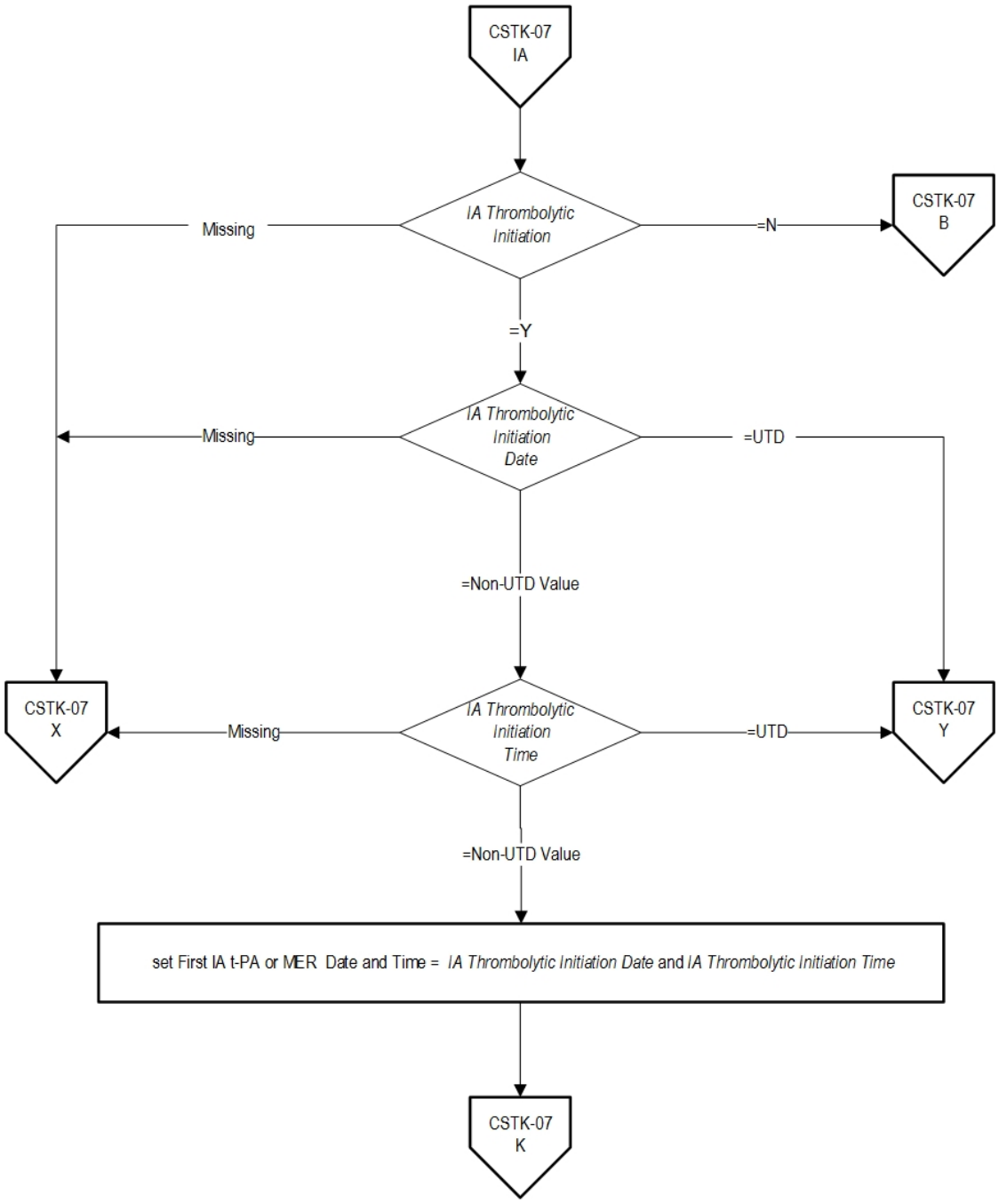
IAMER
None on
Table 8.1b
CSTK-07
B


CSTK-07
MER
First Pass of
a Mechanical Reperfusion
Device
Missing
=N
CSTK-07
B
=Y
First Pass
Date
Missing
=UTD
=Non-UTD Value
CSTK-07
X
Missing
First Pass
Time
=UTD
CSTK-07
Y
=Non-UTD Value
set First IA t-PA or MER Date and Time = First Pass Date and First Pass Time
CSTK-07
K


CSTK-07
IA
IA Thrombolytic Initiation
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=N
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B
=Y
IA Thrombolytic Initiation Date
Missing
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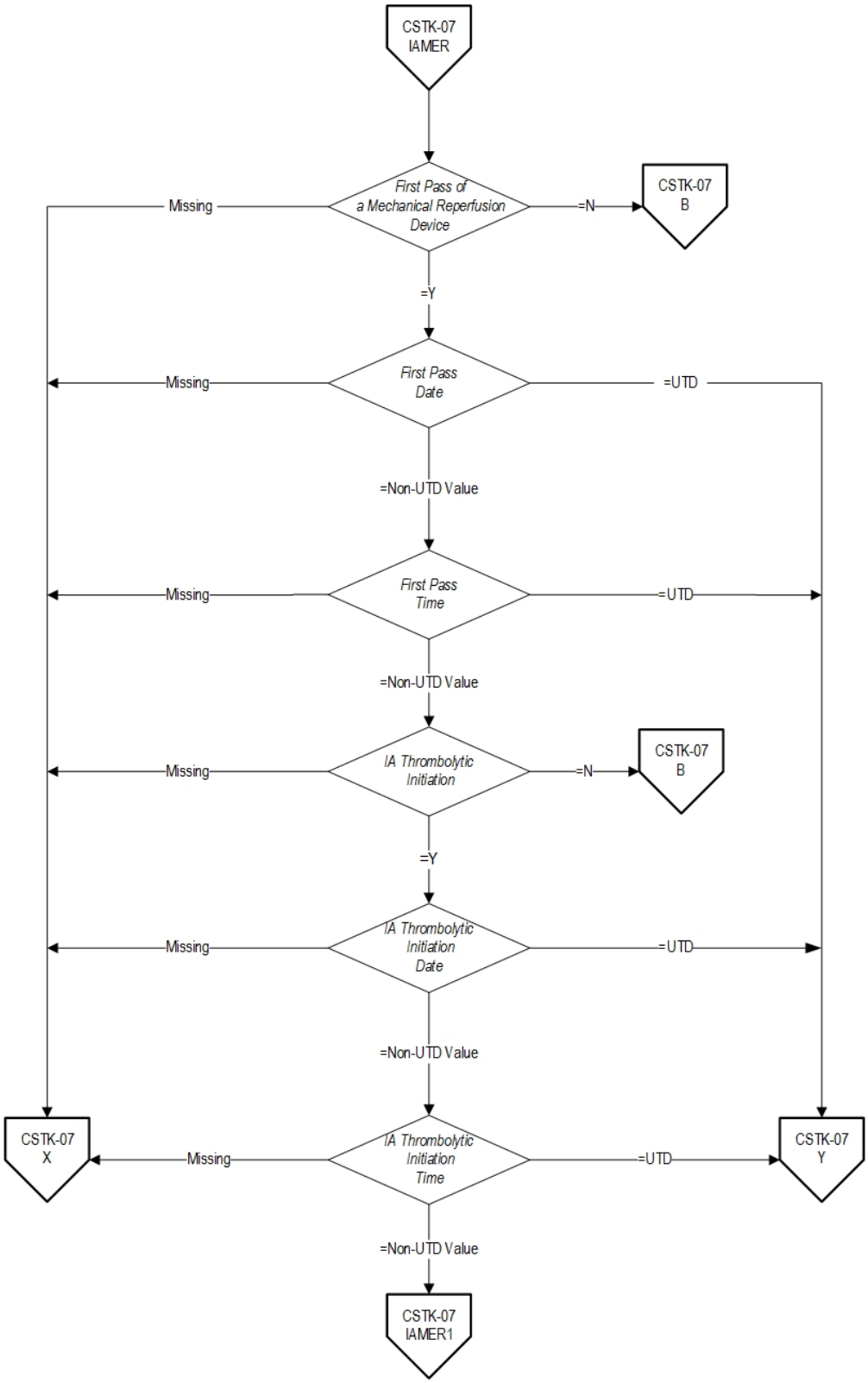
CSTK-07
X
IA Thrombolytic Initiation Time
Missing
=UTD
CSTK-07
Y
=Non-UTD Value
set First IA t-PA or MER Date and Time = IA Thrombolytic Initiation Date and IA Thrombolytic Initiation Time
CSTK-07
K


CSTK-07
IAMER
First Pass of a Mechanical Reperfusion Device
Missing
=N
CSTK-07
B
=Y
First Pass Date
Missing
=UTD
=Non-UTD Value
First Pass Time
Missing
=UTD
=Non-UTD Value
IA Thrombolytic Initiation
Missing
=N
CSTK-07
B
=Y
IA Thrombolytic Initiation Date
Missing
=UTD
=Non-UTD Value
CSTK-07
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IA Thrombolytic Initiation Time
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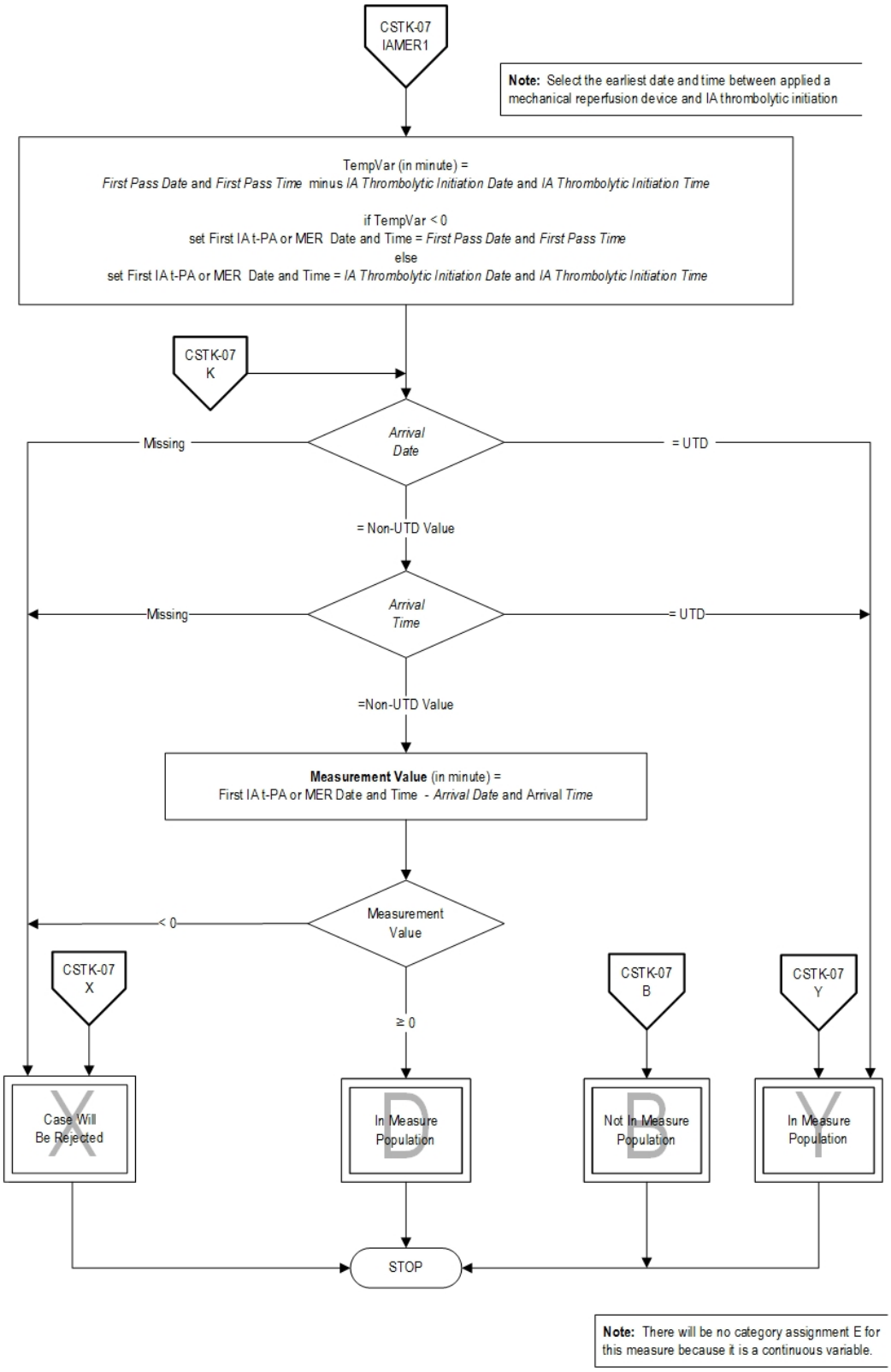
CSTK-07
Y
=Non-UTD Value
CSTK-07
IAMER1


CSTK-07
IAMER1
Note: Select the earliest date and time between applied a mechanical reperfusion device and IA thrombolytic initiation
TempVar (in minute) =
First Pass Date and First Pass Time minus IA Thrombolytic Initiation Date and IA Thrombolytic Initiation Time
if TempVar < 0
set First IA t-PA or MER Date and Time = First Pass Date and First Pass Time
else
set First IA t-PA or MER Date and Time = IA Thrombolytic Initiation Date and IA Thrombolytic Initiation Time
CSTK-07
K
Arrival Date
Missing
= UTD
= Non-UTD Value
Arrival Time
Missing
= UTD
=Non-UTD Value
Measurement Value (in minute) =
First IA t-PA or MER Date and Time - Arrival Date and Arrival Time
Measurement Value
< 0
≥ 0
CSTK-07
X
CSTK-07
B
CSTK-07
Y
X
Case Will Be Rejected
D
In Measure Population
B
Not In Measure Population
Y
In Measure Population
STOP
Note: There will be no category assignment E for this measure because it is a continuous variable.

Measure Information Form

Measure Set: Comprehensive Stroke (CSTK)

Set Measure ID: CSTK-08

Performance Measure Name: Thrombolysis in Cerebral Infarction (TICI Post-Treatment Reperfusion Grade)

Description: Ischemic stroke patients with a post-treatment reperfusion grade of TICI 2B or higher in the vascular territory beyond the target arterial occlusion at the end of treatment with intra-arterial (IA) alteplase therapy and/or mechanical endovascular reperfusion therapy

Rationale: The Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade is used to measure cerebral reperfusion. Four results are possible with this scoring system: 0 (no perfusion); 1 (perfusion past the initial occlusion, but no distal branch filling); 2 (perfusion with incomplete or slow distal branch filling); and , 3 (full perfusion with filling of all distal branches). Reperfusion past the target arterial occlusion and into the distal arterial bed and terminal branches, in conjunction with recanalization of the target arterial occlusion, demonstrates flow restoration or revascularization.

The Interventional Management of Stroke (IMS) I trial suggested that the combined use of reduced-dose intravenous (IV) alteplase therapy, followed by microcatheter delivered intra-arterial (IA) alteplase therapy, was safe and effective in selected ischemic stroke patients, as compared to patients treated with full dose IV alteplase in the National Institute of Neurologic disease and Stroke (NINDS) rt-PA trial. In IMS I, a final TICI 2/3 reperfusion was achieved in 62% of ischemic stroke patients treated.

Endovascular therapy (EVT) is now the standard of care for treatment of acute ischemic stroke due to large-vessel occlusion (LVO). In 2015, the American Heart Association/American Stroke Association published a focused update to the 2013 Guidelines for the Early Management of Patients with Acute Ischemic Stroke regarding endovascular treatment (Powers WJ, et. al., 2015). Endovascular therapy with a stent retriever is recommended for eligible patients. The use of mechanical thrombectomy devices other than stent retrievers as first-line devices for mechanical thrombectomy may be reasonable in some circumstances, but stent retrievers remain the first choice (Powers WJ, et. al., 2018).

Type Of Measure: Outcome

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic stroke patients with a post-treatment reperfusion grade of TICI 2B or higher

> **Included Populations:** As above
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade*

Denominator Statement: Ischemic stroke patients treated with IA alteplase therapy and/or mechanical endovascular reperfusion therapy

> **Included Populations:**
>
> - Discharges with *ICD-10-CM Principal Diagnosis Code* for ischemic stroke as defined in Appendix A, Table 8.1 for ICD-10 codes,
>   **AND**
> - Patients with documented alteplase (IV or IA t-PA) therapy *(ICD-10-PCS Principal or Other Procedure Codes* as defined in Appendix A, Table 8.1a for ICD-10 codes),
>   **OR**
> - Patients with documented *Mechanical Endovascular Reperfusion Therapy (ICD-10-PCS Principal or Other Procedure Codes* as defined in Appendix A, Table 8.1b for ICD-10 codes),
>   **AND**
> - Patients with documented *Failed Attempt at Thrombectomy* (ICD-10-PCS Principal or Other Procedure Codes as defined in Appendix A, Table 8.1c for ICD-10 codes)
>
> **Excluded Populations:**
>
> - Patients less than 18 years of age
> - Patients who have a Length of Stay > 120 days
> - Patients admitted for *Elective Carotid Intervention*
>
> **Data Elements:**
>
> - *Admission Date*
> - *Birthdate*
> - *Discharge Date*
> - *Elective Carotid Intervention*
> - *Failed Attempt at Thrombectomy*
> - *IA Route of Alteplase Administration*
> - *ICD-10-CM Principal Diagnosis Code*
> - *ICD-10-PCS Other Procedure Codes*
> - *ICD-10-PCS Other Procedure Dates*
> - *ICD-10-PCS Principal Procedure Code*
> - *ICD-10-PCS Principal Procedure Date*

Risk Adjustment: Yes. This section has been moved to the ORYX Risk Adjustment Guide. This guide is available to the public on the Joint Commission's website and, in addition, it is available to performance measurement systems via the Joint Commission's extranet site for measurement systems (PET).

> **Data Elements:**
>
> - *Admission Date*
> - *Hispanic Ethnicity*
> - *Race*

- *Sex*
- *Birthdate*
- *Initial Blood Glucose Value at Hospital Arrival*
- *Initial NIHSS Score at Hospital Arrival*
- *Initial Platelet Count at Hospital Arrival*
- *Initial Blood Pressure at Hospital Arrival*
- *IV Alteplase Prior to IA or Mechanical Reperfusion Therapy*
- *Proximal or Distal Occlusion*
- *Site of Primary Vessel Occlusion*
- *ICD-10-CM Other Diagnosis Codes*

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

1. Adams HP, Brott TG, Furlan AJ, Gomez CR, Grotta J, Helgason CM, Kwiatkowski T, Lyden PD, Marler JR, Torner J, et. al. Guidelines for thrombolytic therapy for acute stroke: a supplement to the guidelines for the management of patients with acute ischemic stroke. *Circulation*. 1996;94:1167-1174.

2. Antman EM, Anbe DT, Armstrong PW, Bates ER, Green LA, Hand M, et al. ACC/AHA guidelines for the management of patients with ST-elevation myocardial infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Revise the 1999 Guidelines for the Management of Patients With Acute Myocardial Infarction). 2004.

3. Antman EM, Hand M, Armstrong PW, Bates ER, Green LA, Halasyamani LK, et al. 2007 focused update of the ACC/AHA 2004 Guidelines for the Management of Patients With ST-Elevation Myocardial Infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Writing Group to Review New Evidence and Update the ACC/AHA 2004 Guidelines for the Management of Patients With ST-Elevation Myocardial Infarction). *J Am Coll Cardiol*. 2008;51:210-—47.

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times (ESCAPE) trial: methodology. *Int J Stroke*. 2015 Apr;10(3): 429-38.

6. Jauch EC, Saver JL, Adams HP Jr, Bruno A, Connors JJ, Demaerschalk BM, Khatri P, et al. Guidelines for the early management of patients with acute ischemic stroke: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. 2013;44:32-36.

7. Khatari P, Abruzzo T, Yeatts SD, Nichols C, Broderick JP, Tomsick TA; IMS I and II Investigators. Good clinical outcome after ischemic stroke with successful revascularization is time-dependent. *Neurology*. 2009 Sep 29;73(13):1066-72.

8. Kole M, Amin B, Marin H, Russman A, Sanders W. Intracranial angioplasty and stent placement for direct cerebral revascularization o nonacute intracranial occlusions and near occlusions. *NeuroSurg Focus*. 2009; 26(3): E3.

9. Leifer D, Bravata DM, Connors JJ III, Hinchey JA, Jauch EC, Johnston SC, Latchaw R, Likosky W, Ogilvy C, Qureshi AI, Summers D, Sung GY, Williams LS, Zorowitz R, on behalf of the American Heart Association Special Writing Group of the Stroke Council, Atherosclerotic Peripheral Vascular Disease Working Group and Council on Cardiovascular Surgery and Anesthesia, and Council on Cardiovascular Nursing. Metrics for measuring quality of care in comprehensive stroke centers: detailed follow-up to Brain Attack Coalition comprehensive stroke center recommendations: a statement for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. 2011;42; 857.

10. Menon BK, Saver JL, Prabhakaran S, Reeves M, Liang L, Olson DWM, Peterson ED, Hernandez AF, Fonarow GC, Schwamm LH, Smith EE. Risk score for intracranial hemorrhage in patients with acute ischemic stroke treated with intravenous tissue-type plasminogen activator. *Stroke*. 2012;43: 1-9.

11. Powers WJ, Derdeyn CP, Biller J, Coffey CS, Jauch EC, Johnston KC, Johnston SC, Khalessi AA, Kidwell CS, Meschia JF, Ovbiagele B, Yavagal DR, on behalf of the American Heart Association Stroke Council. 2015 AHA/ASA focused update of the 2013 guidelines for the early management of patients with acute ischemic stroke regarding endovascular treatment: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. 2015;46; 3021-3035.

12. Powers WJ, Rabinstein AA, Ackerson T, Adeoye OM, Bambakidis NC, Becker K, Biller J, et al; on behalf of the American Heart Association Stroke Council. 2018 Guidelines for the Early Management of Patients with Acute Ischemic Stroke: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association. *Stroke*. 2018 Jan;49:e10-e11, e26-e30.

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14. Sacks D, Black CM, Cognard C, Connors III JJ, Frei D, Gupta R, Jovin TG, Kluck B, Meyers PM, Murphy KJ, Ramee S, Rüfenacht DA, Stallmeyer MJB, Vorwerk D. Multisociety consensus quality improvement guidelines for intraarterial catheter-directed treatment of acute ischemic stroke from the American Society of Neuroradiology, Canadian Interventional Radiology Association, Cardiovascular and interventional Radiological Society of Europe, Society for Cardiovascular Angiography and Interventions, Society of Interventional Radiology, Society of NeuroInterventional Surgery, European Society of Minimally Invasive

Neurological Therapy, and Society of Vascular and Interventional Neurology. *J Vasc Interv Radiol.* 2013;24:151-163.

15. Saver JL, Goyal M, Bonafe A, Diener HC, Levy EI, Pereira VM, et. al. Stent-retriever thrombectomy after intravenous t-PA vs. t-PA alone in stroke. *NEJM*. 2015 Apr: 1-11.

16. Sharma VK, Teoh HL, Wong LYH, Su J, Ong BKC, and Chan BLP. Recanalization therapies in acute ischemic stroke: pharmacological agents, devices, and combinations. *Stroke Research and Treatment*. 2010.

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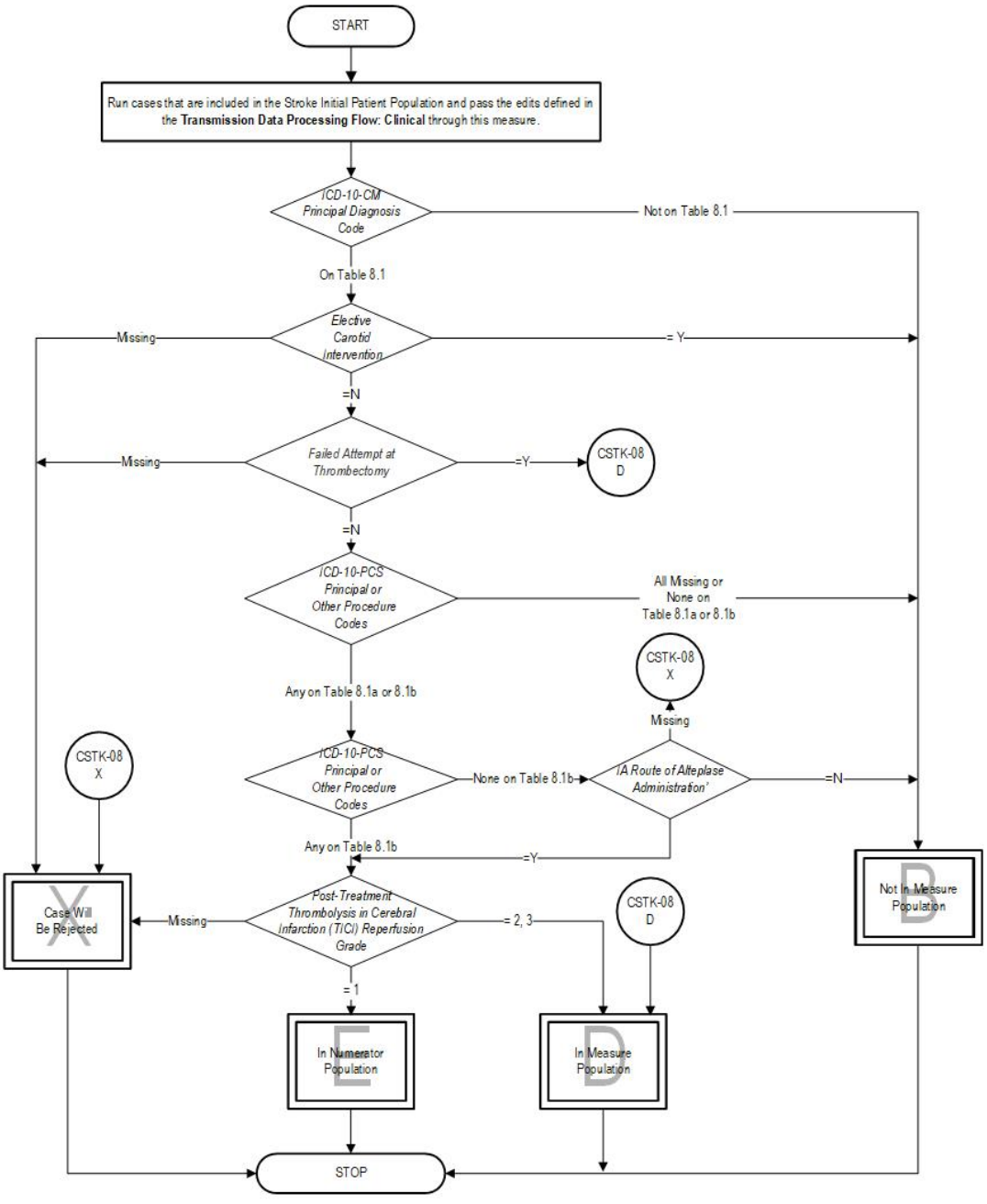
Measure Algorithm:

CSTK-08: Thrombolysis in Cerebral Infarction (TICI) Post-Treatment Reperfusion Grade

Numerator Statement: Ischemic stroke patients with a post-treatment reperfusion grade of TICI 2B or higher

Denominator Statement: Ischemic stroke patients treated with IA Alteplase therapy and/or mechanical endovascular reperfusion therapy



Measure Information Form

Measure Set: Comprehensive Stroke (CSTK)

Set Measure ID: CSTK-09

Performance Measure Name: Arrival Time to Skin Puncture

Description: Median time from hospital arrival to the time of skin puncture to access the artery (e.g., brachial, carotid, femoral, radial) selected for endovascular treatment (EVT), (i.e., intra-arterial (IA) alteplase infusion and/or mechanical embolectomy devices), of acute ischemic stroke.

Rationale: Timely recanalization of an occluded intracerebral artery is a strong predictor of improved functional outcome and reduced mortality in patients with an acute ischemic stroke. Initiation of intra-venous (IV) alteplase within three hours of time last known well is recommended first before attempting other treatment; however, endovascular treatment (EVT) with devices and/or intra-arterial (IA) thrombolysis (alteplase) is also recommended as a second-line therapy after IV thrombolysis failure or lapse of the therapeutic window. For eligible patients, initiation of EVT (e.g., groin puncture) within 6 hours of stroke symptom onset using a stent retriever is preferred (Powers WJ, et. al., 2015). Findings from clinical trials published in 2018 (i.e., DAWN, DEFUSE 3) have reported the benefits of mechanical thrombectomy in the extended window up to 24 hours of last known well for select ischemic stroke patients meeting certain criteria. The use of mechanical thrombectomy devices other than stent retrievers as first-line devices for mechanical thrombectomy may be reasonable in some circumstances, but stent retrievers remain the first choice (Powers WJ, et. al., 2018).

Since “time is brain”, the overall speed of the revascularization process is an important and appropriate measure. In multicenter clinical trials of intra-arterial catheter-directed therapies, the probability of good outcome as defined by a Modified Rankin Score of 0-2 at 90 days decreased as time to angiographic revascularization increased. It is estimated that for every 30-minute delay in time to revascularization, there is a 10% decrease in the likelihood of a good outcome from EVT.

Type Of Measure: Process

Improvement Noted As: Decrease in the median value

Continuous Variable Statement: Time (in minutes) from hospital arrival to skin puncture in patients with acute ischemic stroke who undergo endovascular treatment.

> **Included Populations:**
>
> - Discharges with *ICD-10-CM Principal Diagnosis Code* for ischemic stroke as defined in Appendix A, Table 8.1 for ICD-10 codes,
>
> **AND**
>
> - Patients with documented *Thrombolytic Infusion Therapy (ICD-10-PCS Principal or Other Procedure Codes* as defined in Appendix A, Table 8.1a for ICD-10 codes) **OR** *Mechanical Endovascular*

Reperfusion Therapy (ICD-10-PCS Principal or Other Procedure Codes as defined in Appendix A, Table 8.1b for ICD-10 codes).

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay > 120 days
- Patients admitted for *Elective Carotid Intervention*
- Patients who have a *Delayed Endovascular Rescue Procedure* later than 8 hours after hospital arrival (ICD-10-PCS Principal or Other Procedure Codes as defined in Appendix A, Table 8.1a or Table 8.1b)

Data Elements:

- *Admission Date*
- *Arrival Date*
- *Arrival Time*
- *Birthdate*
- *Delayed Endovascular Rescue Procedure*
- *Discharge Date*
- *Elective Carotid Intervention*
- *IA Route of Alteplase Administration*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Other Procedure Dates*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*
- *Skin Puncture*
- *Skin Puncture Date*
- *Skin Puncture Time*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate measure of central tendency .

Selected References:

1. Adams HP, Brott TG, Furlan AJ, Gomez CR, Grotta J, Helgason CM, Kwiatkowski T, Lyden PD, Marler JR, Torner J, et. al. Guidelines for thrombolytic therapy for acute stroke: a supplement to the guidelines for the management of patients with acute ischemic stroke. *Circulation*. 1996;94:1167-1174.

2. Albers GW, Marks MP, Kemp S, Christensen S, Tsai JP, Ortega-Gutierrez S, et. al. Thrombectomy for stroke at 6 to 16 hours with selection by perfusion imaging. *NEJM*. 2018;378(8): 708-718.

3. Antman EM, Anbe DT, Armstrong PW, Bates ER, Green LA, Hand M, et al. ACC/AHA guidelines for the management of patients with ST-elevation myocardial infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Revise the 1999 Guidelines for the Management of Patients With Acute Myocardial Infarction). 2004.

4. Antman EM, Hand M, Armstrong PW, Bates ER, Green LA, Halasyamani LK, et al. 2007 focused update of the ACC/AHA 2004 Guidelines for the Management of Patients With ST-Elevation Myocardial Infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Writing Group to Review New Evidence and Update the ACC/AHA 2004 Guidelines for the Management of Patients With ST-Elevation Myocardial Infarction). *J Am Coll Cardiol*. 2008;51:210—-47.

5. Campbell BCV, Mitchell PJ, Kleinig TJ, Dewey HM, Churilov L, Yassi N, et. al. Endovascular therapy for ischemic stroke with perfusion-imaging selection. *NEJM*. 2015 Mar;372(11): 1009-17.

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9. Khatari P, Abruzzo T, Yeatts SD, Nichols C, Broderick JP, Tomsick TA; IMS I and II Investigators. Good clinical outcome after ischemic stroke with successful revascularization is time-dependent. *Neurology.* 2009 Sep 29;73(13):1066-72.

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measuring quality of care in comprehensive stroke centers: detailed follow-up to Brain Attack Coalition comprehensive stroke center recommendations: a statement for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. 2011;42; 857.

12. Nogueira RG, Jadhav AP, Haussen DC, Bonafe A, Budzik RF, Bhuva P, et. al. Thrombectomy 6 to 24 hours after stroke with a mismatch between deficit and infarct. *NEJM*. 2018;378(1): 11-21.

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16. Rha JH, Saver JL. The impact of recanalization on ischemic stroke outcome: a meta-analysis. *Stroke*.

17. Sacks D, Black CM, Cognard C, Connors JJ III, Frei D, Gupta R, Jovin TG, Kluck B, Meyers PM, Murphy KJ, Ramee S, Rüfenacht DA, Stallmeyer MJB, Vorwerk D. Multisociety consensus quality improvement guidelines for intraarterial catheter-directed treatment of acute ischemic stroke from the American Society of Neuroradiology, Canadian Interventional Radiology Association, Cardiovascular and interventional Radiological Society of Europe, Society for Cardiovascular Angiography and Interventions, Society of Interventional Radiology, Society of NeuroInterventional Surgery, European Society of Minimally Invasive Neurological Therapy, and Society of Vascular and Interventional Neurology. *J Vasc Interv Radiol.* 2013;24:151-163.

18. Saver JL, Goyal M, Bonafe A, Diener HC, Levy EI, Pereira VM, et. al. Stent-retriever thrombectomy after intravenous t-PA vs. t-PA alone in stroke. *NEJM*. 2015 Apr: 1-11.

19. Sharma VK, Teoh HL, Wong LYH, Su J, Ong BKC, and Chan BLP. Recanalization therapies in acute ischemic stroke: pharmacological agents, devices, and combinations. *Stroke Research and Treatment*. 2010.

20. Smith WS, Sung G, Saver J, et. al. Mechanical thrombectomy for acute ischemic stroke: final results of the Multi MERCI trial. *Stroke.* 2008;39:1205-1212.

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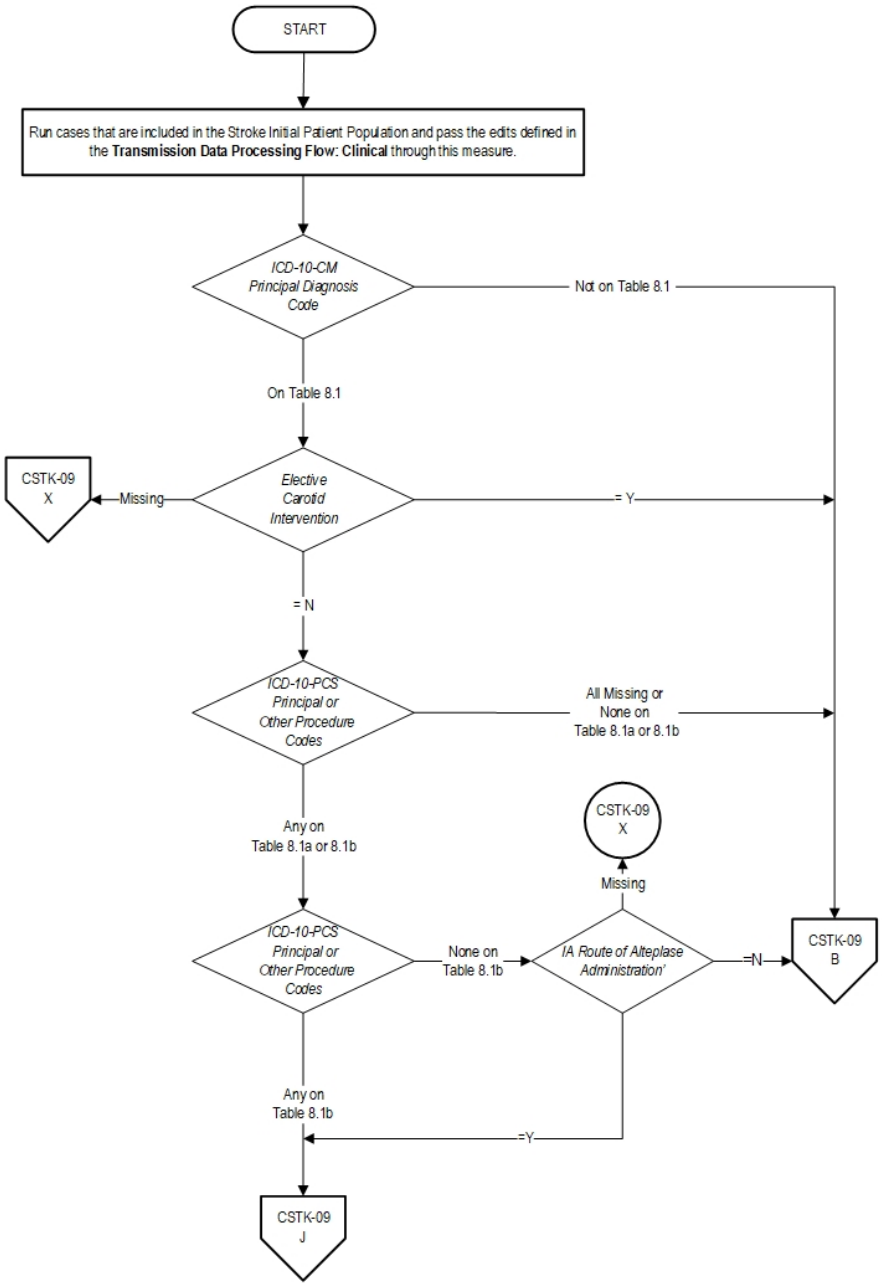
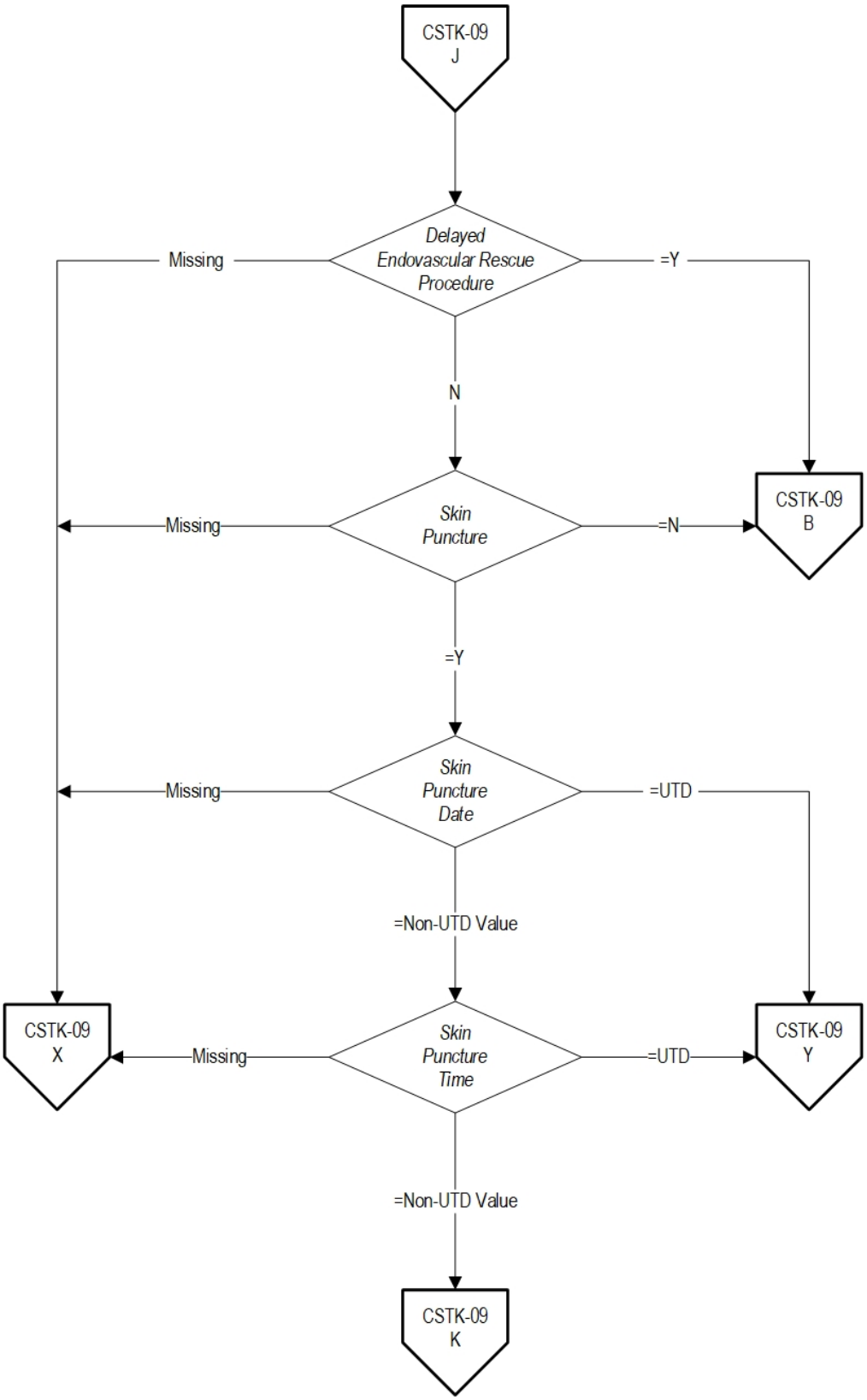
Measure Algorithm:

CSTK-09: Arrival Time to Skin Puncture

Continuous Variable Statement: Time (in minutes) from hospital arrival to skin puncture in patients with acute ischemic stroke who undergo endovascular treatment.




CSTK-09
J
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N
Skin
Puncture
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=N
CSTK-09
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Puncture
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=Non-UTD Value
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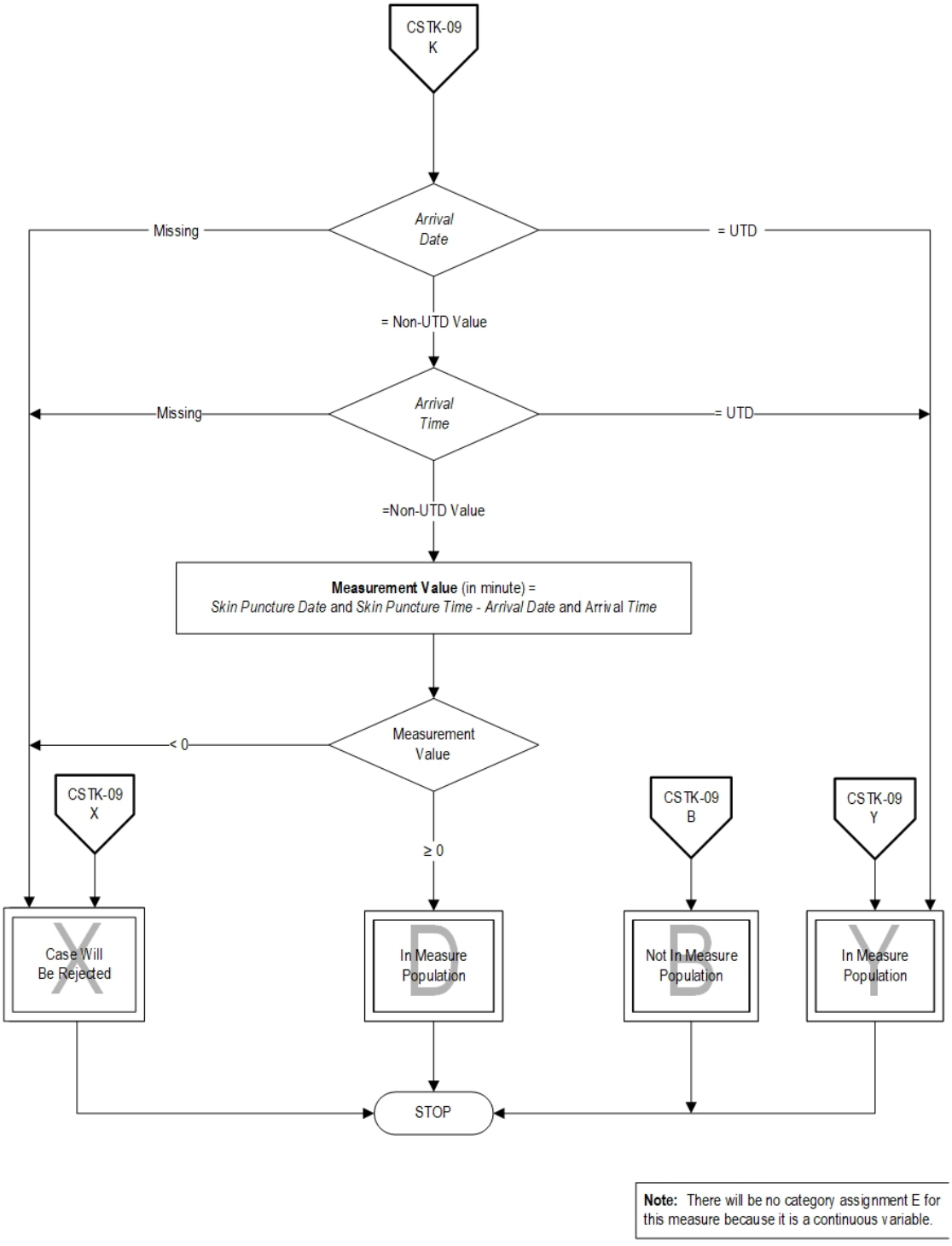
CSTK-09
K


CSTK-09
K
Arrival
Date
Missing
= UTD
= Non-UTD Value
Arrival
Time
Missing
= UTD
=Non-UTD Value
Measurement Value (in minute) =
Skin Puncture Date and Skin Puncture Time - Arrival Date and Arrival Time
Measurement
Value
< 0
≥ 0
CSTK-09
X
CSTK-09
B
CSTK-09
Y
X
Case Will
Be Rejected
D
In Measure
Population
B
Not In Measure
Population
Y
In Measure
Population
STOP
Note: There will be no category assignment E for this measure because it is a continuous variable.

Measure Information Form

Measure Set: Comprehensive Stroke (CSTK)

Set Measure ID: CSTK-10

Performance Measure Name: Modified Rankin Score (mRS at 90 Days: Favorable Outcome)

Description: Ischemic stroke patients treated with intra-venous (IV) or intra-arterial (IA) alteplase therapy or who undergo mechanical endovascular reperfusion therapy and have a mRS less than or equal to 2 at 90 days (≥75 days and ≤105 days)

Rationale: The Modified Rankin Scale (mRS) is the accepted standard for assessing recovery post-stroke. As such, it has become the most widely used clinical outcome measure for stroke clinical trials. Scores are used to measure the degree of disability or dependence in activities of daily living. Score reliability and reproducibility are improved through use of a structured interview by a trained evaluator. Interviews may be conducted in-person or over the phone. According to guideline recommendations from the American Heart Association/American Stroke Association, standardized interviews to obtain a mRS score should be conducted for acute ischemic stroke patients treated with IV or IA alteplase therapy or mechanical endovascular reperfusion therapy at 3 months (90 days); however, recovery may continue well beyond 3 months for many ischemic stroke patients.

Type Of Measure: Outcome

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic stroke patients with a mRS less than or equal to 2 at 90 days (≥75 days and ≤105 days)

> **Included Populations:** As above
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Modified Rankin Score (mRS)*
> - *Modified Rankin Score (mRS) Date*

Denominator Statement: Ischemic stroke patients treated with IV or IA alteplase therapy or who undergo mechanical endovascular reperfusion therapy

> **Included Populations:**
>
> - Discharges with *ICD-10-CM Principal Diagnosis Code* for ischemic stroke as defined in Appendix A, Table 8.1 for ICD-10 codes, **AND**

- Patients with documented thrombolytic (IV or IA alteplase) therapy *(ICD-10-PCS Principal or Other Procedure Codes* as defined in Appendix A, Table 8.1a for ICD-10 codes), **OR**
- Patients with documented Mechanical Endovascular Reperfusion Therapy *(ICD-10-PCS Principal or Other Procedure Codes* as defined in Appendix A, Table 8.1b for ICD-10 codes)

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay > 120 days
- Patients admitted for *Elective Carotid Intervention*
- Patients and their caregivers who cannot be contacted via phone or in-person at 90 days

Data Elements:

- *Admission Date*
- *Birthdate*
- *Discharge Date*
- *Discharge Disposition*
- *Elective Carotid Intervention*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Other Procedure Dates*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*

Risk Adjustment: Yes. This section has been moved to the ORYX Risk Adjustment Guide. This guide is available to the public on the Joint Commission's website and, in addition, it is available to performance measurement systems via the Joint Commission's extranet site for measurement systems (PET).

Data Elements:

- *Admission Date*
- *Hispanic Ethnicity*
- *Race*
- *Sex*
- *Birthdate*
- *Initial Blood Glucose Value at Hospital Arrival*
- *Initial NIHSS Score at Hospital Arrival*
- *Initial Platelet Count at Hospital Arrival*
- *Initial Blood Pressure at Hospital Arrival*
- *IV Alteplase Prior to IA or Mechanical Reperfusion Therapy*
- *ICD-10-CM Other Diagnosis Codes*
- *Pre-Stroke Modified Rankin Score (mRS)*

Data Collection Approach: Retrospective data sources for required data elements include administrative data and, if applicable, medical record documents.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

1. Adams HP, del Zoppo G, Alberts MJ, Bhatt DL, Brass L, Furlan A, Grubb RL, Higashida RT, Jauch EC, Kidwell C, Lyden PD, Morgenstern LB, Qureshi AI, Rosenwasser RH, Scott PA, Wijdicks E. Guidelines for the Early Management of Adults with Ischemic Stroke: A Guideline From the American Heart Association/American Stroke Association Stroke Council, Clinical Cardiology Council, Cardiovascular Radiology and Intervention Council, and the Atherosclerotic Peripheral Vascular Disease and Quality of Care Outcomes in Research Interdisciplinary Working Groups. *Stroke*. 2007;38:1675-1678.

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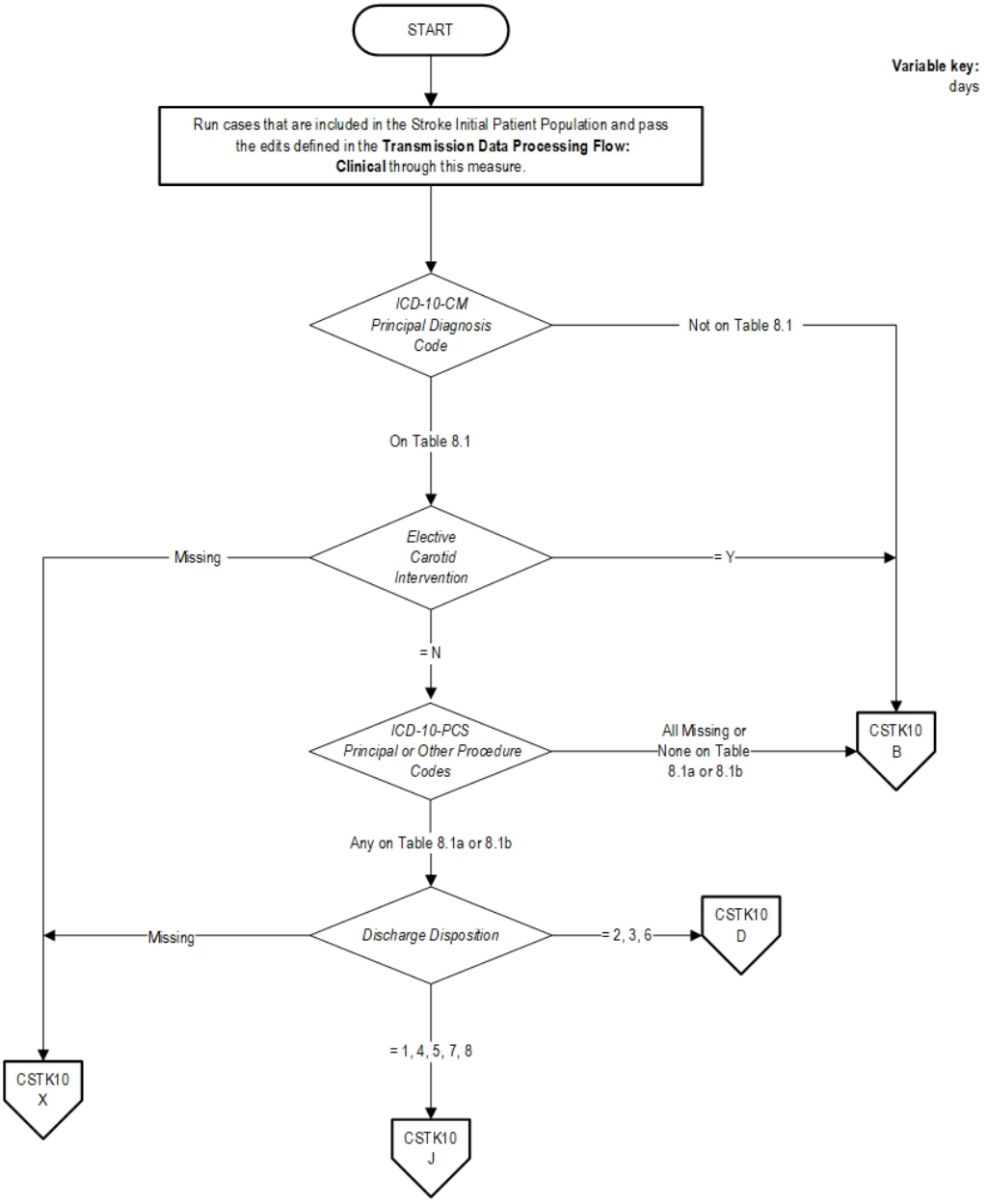
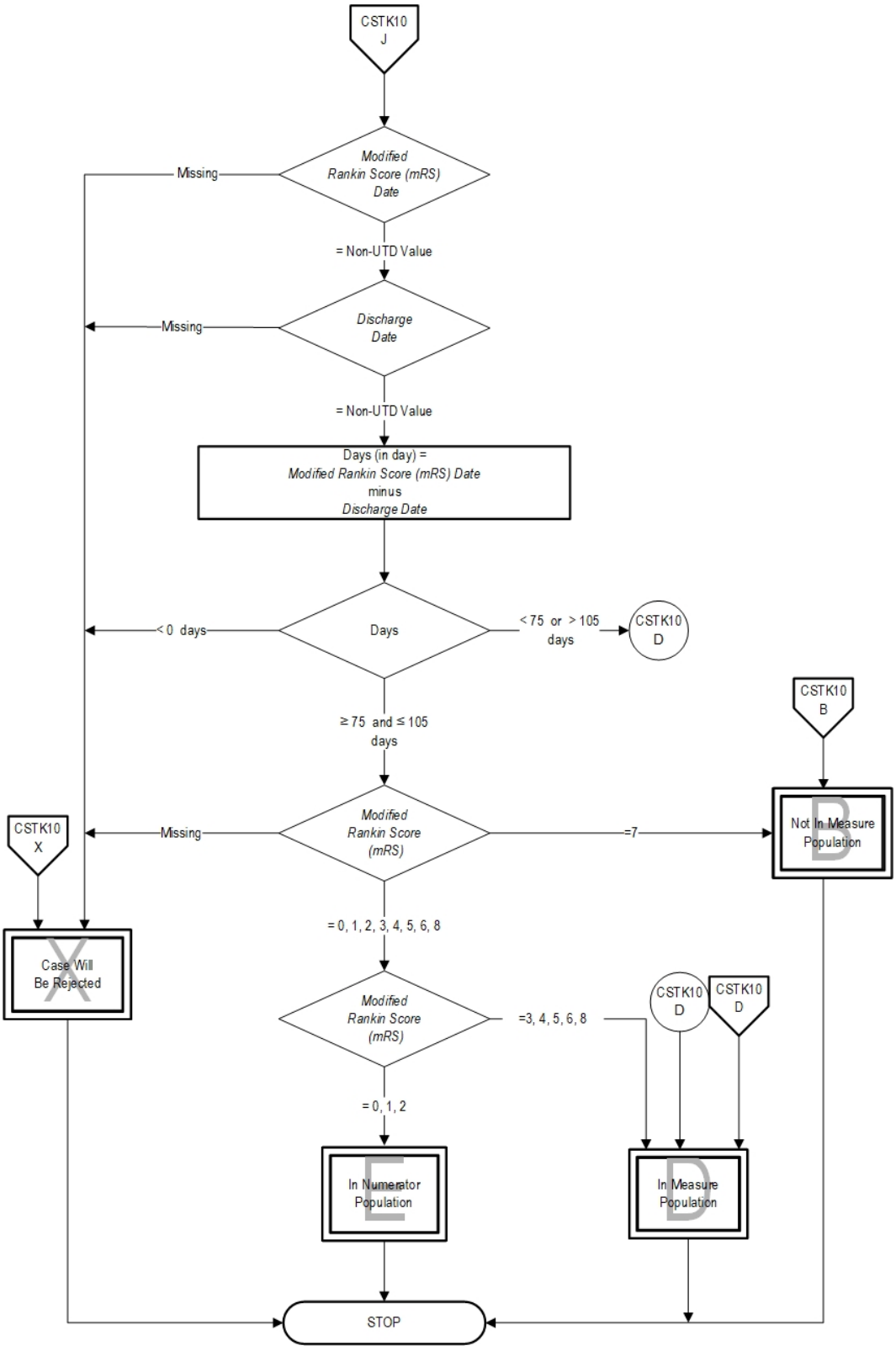
Measure Algorithm:

CSTK10: Modified Rankin Score (mRS) at 90 Days: Favorable Outcome

Numerator Statement: Ischemic stroke patients with a mRS less than or equal to 2 at 90 days (≥75 days and ≤105 days)

Denominator Statement: Ischemic stroke patients treated with IV or IA Alteplase therapy or who undergo mechanical endovascular reperfusion therapy




CSTK10
J
Modified
Rankin Score (mRS)
Date
Missing
= Non-UTD Value
Discharge
Date
Missing
= Non-UTD Value
Days (in day) =
Modified Rankin Score (mRS) Date
minus
Discharge Date
Days
< 0 days
< 75 or > 105
days
CSTK10
D
≥ 75 and ≤ 105
days
CSTK10
B
Modified
Rankin Score
(mRS)
Missing
=7
Not In Measure
Population
B
CSTK10
X
Case Will
Be Rejected
X
= 0, 1, 2, 3, 4, 5, 6, 8
Modified
Rankin Score
(mRS)
=3, 4, 5, 6, 8
CSTK10
D
CSTK10
D
= 0, 1, 2
In Numerator
Population
E
In Measure
Population
D
STOP

Measure Information Form

Measure Set: Comprehensive Stroke (CSTK)

Set Measure ID: CSTK-11

Performance Measure Name: Timeliness of Reperfusion: Arrival Time to TICI 2B or Higher

Description: Ischemic stroke patients with a large vessel cerebral occlusion (i.e., internal carotid artery (ICA) or ICA terminus (T-lesion; T-occlusion), middle cerebral artery (MCA) M1 or M2, basilar artery) who receive mechanical endovascular reperfusion (MER) therapy within 120 minutes (>/= 0 min. and </= 150 min.) of hospital arrival and achieve TICI 2B or higher at the end of treatment

Rationale: The Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade is used to measure cerebral reperfusion. Results with this scoring system range between zero and three: 0 (no perfusion); 1 (perfusion past the initial occlusion, but no distal branch filling); 2 (perfusion with incomplete or slow distal branch filling); and, 3 (full perfusion with filling of all distal branches). Reperfusion past the target arterial occlusion and into the distal arterial bed and terminal branches, in conjunction with recanalization of the target arterial occlusion, demonstrates flow restoration or revascularization.

Endovascular therapy (EVT) is now the standard of care for treatment of acute ischemic stroke due to large-vessel occlusion (LVO). In 2015, the American Heart Association/American Stroke Association published a focused update to the 2013 Guidelines for the Early Management of Patients with Acute Ischemic Stroke regarding endovascular treatment (Powers WJ, et. al., 2015). Endovascular therapy with a stent retriever is recommended for eligible patients. The use of mechanical thrombectomy devices other than stent retrievers as first-line devices for mechanical thrombectomy may be reasonable in some circumstances, but stent retrievers remain the first choice (Powers WJ, et. al., 2018).

To ensure benefit, reperfusion to TICI 2B/3 should be achieved as early as possible and within 6 hours of stroke onset. The DAWN Clinical Trial Investigators (Nogueira RG, et. al., 2018) reported the benefits of mechanical thrombectomy in the extended window up to 24 hours of last known well for select patients meeting certain criteria. As with IV alteplase (t-PA), reduced time from symptom onset to reperfusion with EVT is highly associated with better clinical outcomes. Recent recommendations from the Society of Vascular and Interventional Neurology (SVIN) offer procedural metrics which include time from hospital arrival to groin puncture less than 90 minutes, and time from groin puncture to TICI 2B or better or conclusion of procedure less than 60 minutes (English JD, et. al., 2016).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic stroke patients who achieve TICI 2B or higher for the primary vessel occlusion within 120 minutes (>/= 0 min. and </= 150 min.) of hospital arrival

> **Included Populations:** As above

Excluded Populations: None

Data Elements:

- *Arrival Date*
- *Arrival Time*
- *Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade*
- *Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade Date*
- *Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade Time*

Denominator Statement: Ischemic stroke patients treated with mechanical endovascular reperfusion therapy for a large vessel occlusion (LVO)

Included Populations:

- Discharges with *ICD-10-CM Principal Diagnosis Code* for ischemic stroke as defined in Appendix A, Table 8.1 for ICD-10 codes, **AND**
- Patients with documented Mechanical Endovascular Reperfusion Therapy *(ICD-10-PCS Principal or Other Procedure Codes* as defined in Appendix A, Table 8.1b for ICD-10 codes) **AND**
- Patients with documented *Failed Attempt at Thrombectomy (ICD-10-PCS Principal or Other Procedure Codes* as defined in Appendix A, Table 8.1c for ICD-10 codes)

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay > 120 days
- Patients admitted for *Elective Carotid Intervention*
- Patients who have a *Delayed Endovascular Rescue Procedure* later than 8 hours after hospital arrival *(ICD-10-PCS Principal or Other Procedure Codes* as defined in Appendix A, Table 8.1b for ICD-10 codes)
- Patients who have a primary cerebral occlusion that is not a large vessel occlusion (LVO)

Data Elements:

- *Admission Date*
- *Birthdate*
- *Delayed Endovascular Rescue Procedure*
- *Discharge Date*
- *Elective Carotid Intervention*
- *Failed Attempt at Thrombectomy*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Other Procedure Dates*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*
- *Site of Primary Vessel Occlusion*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

1. Adams HP, Brott TG, Furlan AJ, Gomez CR, Grotta J, Helgason CM, Kwiatkowski T, Lyden PD, Marler JR, Torner J, et. al. Guidelines for thrombolytic therapy for acute stroke: a supplement to the guidelines for the management of patients with acute ischemic stroke. *Circulation*. 1996;94:1167-1174.

2. Albers GW, Marks MP, Kemp S, Christensen S, Tsai JP, Ortega-Gutierrez S, et. al. Thrombectomy for stroke at 6 to 16 hours with selection by perfusion imaging. *NEJM*. 2018;378(8): 708-718.

3. Antman EM, Anbe DT, Armstrong PW, Bates ER, Green LA, Hand M, et al. ACC/AHA guidelines for the management of patients with ST-elevation myocardial infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Revise the 1999 Guidelines for the Management of Patients With Acute Myocardial Infarction). 2004.

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6. Demchuk AM, Goyal M, Monon BK, Eesa M, Ryckborst KJ, Kamal N, et. al. Endovascular treatment for Small Core and Anterior circulation Proximal occlusion with Emphasis on minimizing CT to recanalization times (ESCAPE) trial: methodology. *Int J Stroke*. 2015 Apr;10(3): 429-38.

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13. Nogueira RG, Jadhav AP, Haussen DC, Bonafe A, Budzik RF, Bhuva P, et. al. Thrombectomy 6 to 24 hours after stroke with a mismatch between deficit and infarct. *NEJM*. 2018;378(1): 11-21.

14. Powers WJ, Derdeyn CP, Biller J, Coffey CS, Jauch EC, Johnston KC, Johnston SC, Khalessi AA, Kidwell CS, Meschia JF, Ovbiagele B, Yavagal DR, on behalf of the American Heart Association Stroke Council. 2015 AHA/ASA focused update of the 2013 guidelines for the early management of patients with acute ischemic stroke regarding endovascular treatment: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. 2015;46; 3021-3035.

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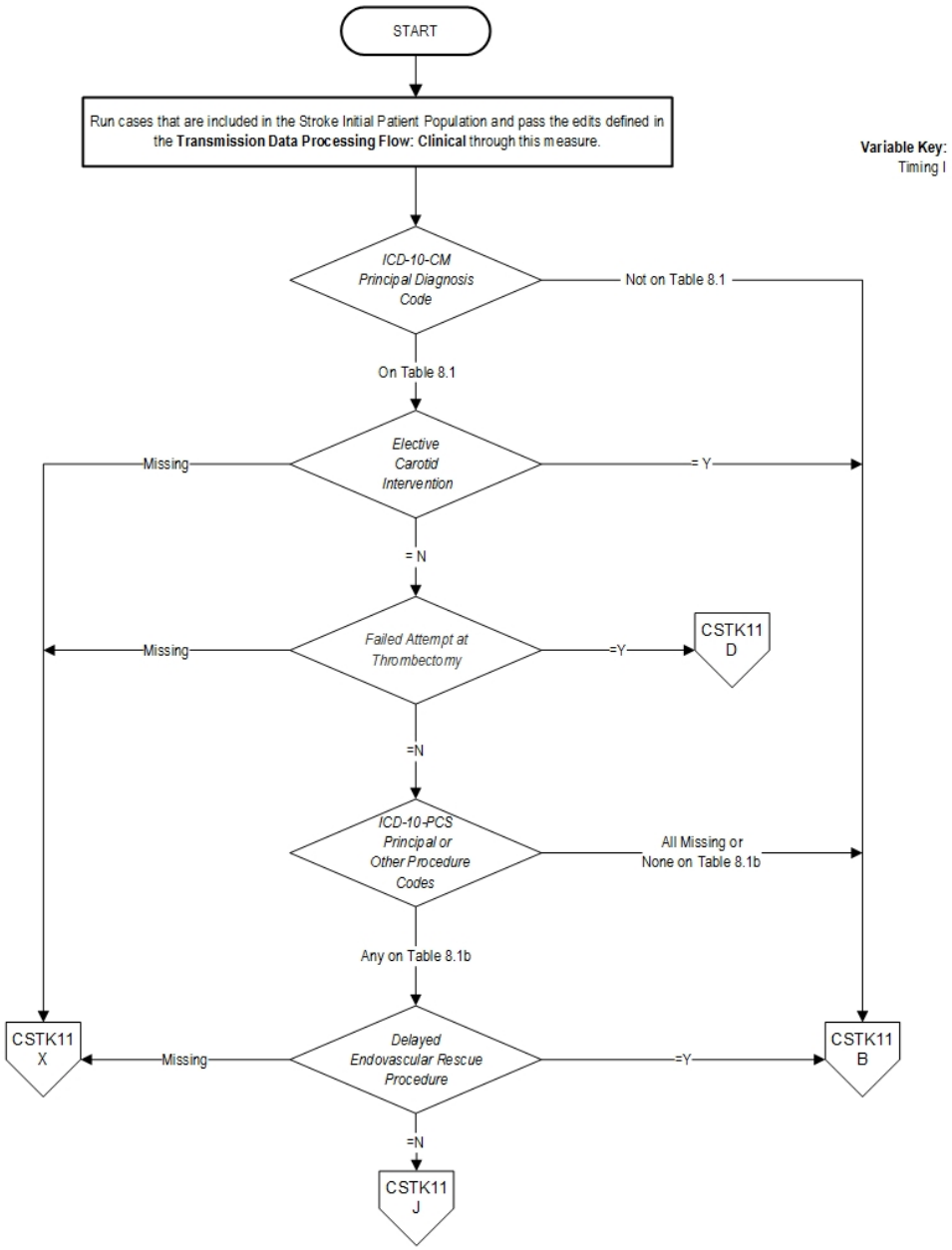
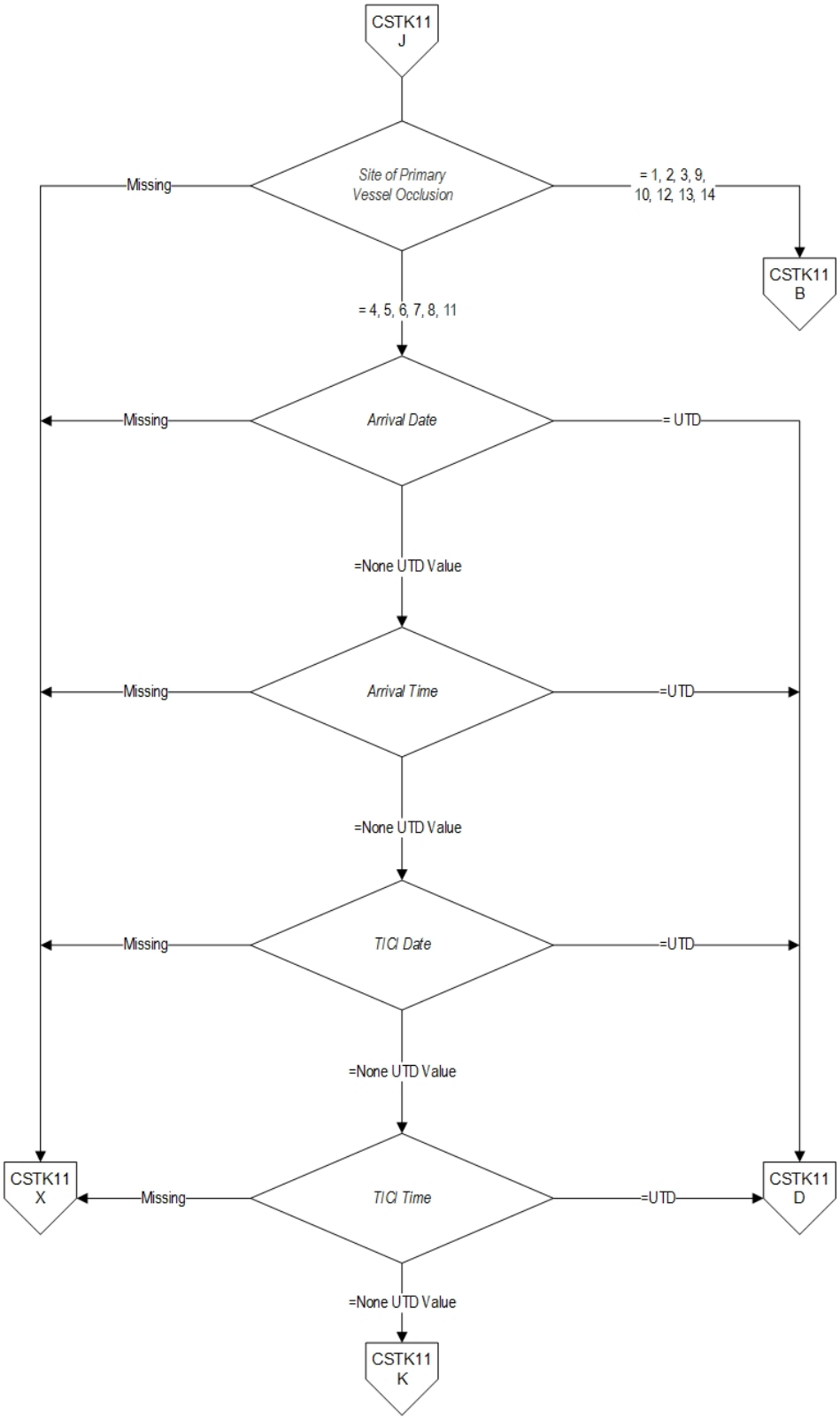
Measure Algorithm:

CSTK-11: Timeliness of Reperfusion: Arrival Time to TICI 2B or Higher

Numerator Statement: Ischemic stroke patients who achieve TICI 2B or higher for the primary vessel occlusion within 120 minutes (>/= 0 min. and </=150 min.) of hospital arrival

Denominator Statement: Ischemic stroke patients treated with mechanical endovascular reperfusion therapy for a large vessel occlusion (LVO)




CSTK11
J
Site of Primary
Vessel Occlusion
Missing
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10, 12, 13, 14
CSTK11
B
= 4, 5, 6, 7, 8, 11
Arrival Date
Missing
= UTD
=None UTD Value
Arrival Time
Missing
=UTD
=None UTD Value
TICI Date
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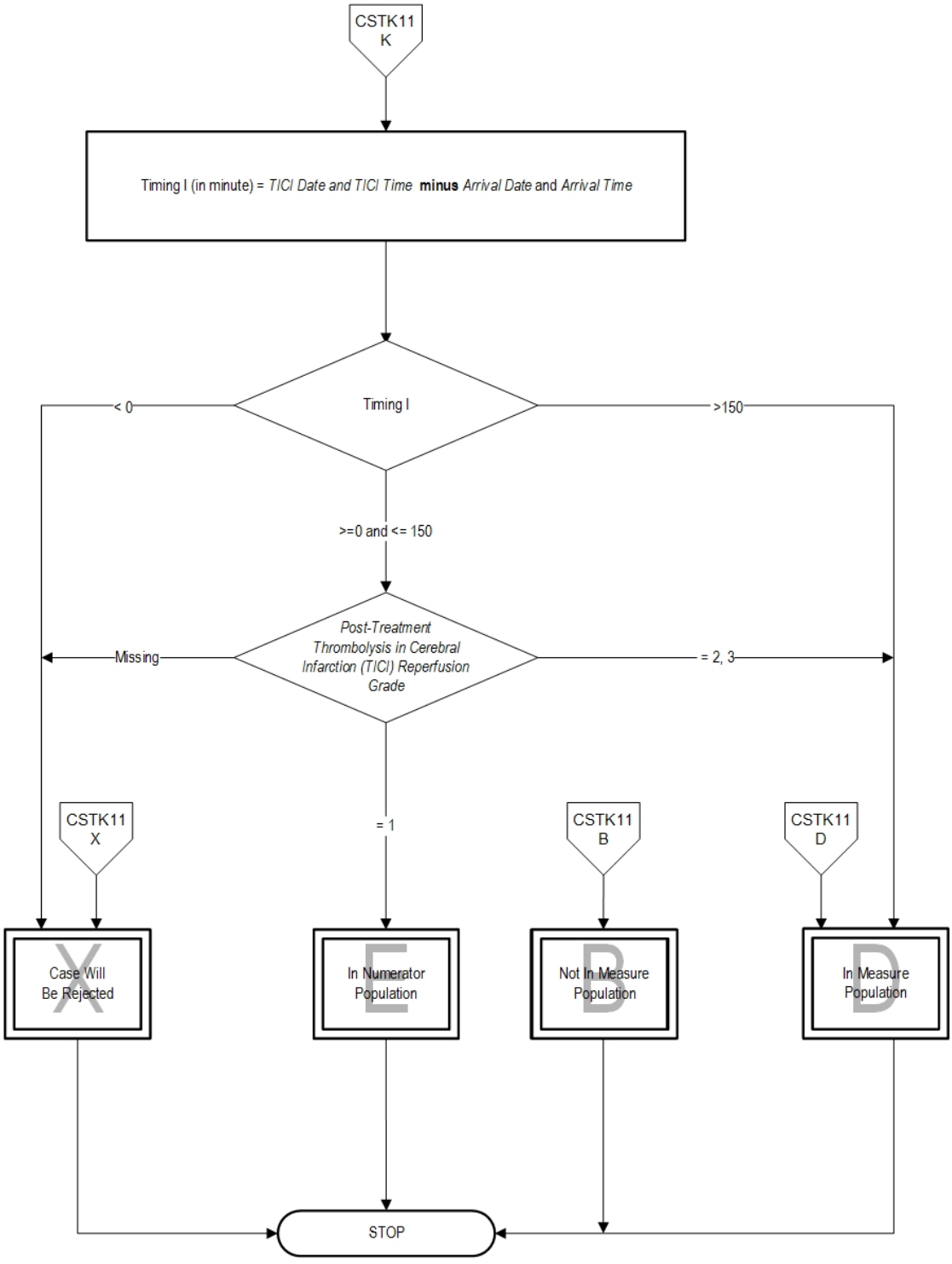
CSTK11
K
Timing I (in minute) = TICI Date and TICI Time minus Arrival Date and Arrival Time
Timing I
< 0
>150
>=0 and <= 150
Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade
Missing
= 2, 3
= 1
CSTK11
X
CSTK11
B
CSTK11
D
X
Case Will Be Rejected
E
In Numerator Population
B
Not In Measure Population
D
In Measure Population
STOP

Measure Information Form

Measure Set: Comprehensive Stroke (CSTK)

Set Measure ID: CSTK-12

Performance Measure Name: Timeliness of Reperfusion: Skin Puncture to TICI 2B or Higher

Description: Ischemic stroke patients with a large vessel cerebral occlusion (i.e., internal carotid artery (ICA) or ICA terminus (T-lesion; T-occlusion), middle cerebral artery (MCA) M1 or M2, basilar artery) who receive mechanical endovascular reperfusion (MER) therapy and achieve TICI 2B or higher less than (<) or equal to 60 minutes from the time of skin puncture.

Rationale: The Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade is used to measure cerebral reperfusion. Results with this scoring system range between zero and three: 0 (no perfusion); 1 (perfusion past the initial occlusion, but no distal branch filling); 2 (perfusion with incomplete or slow distal branch filling); and, 3 (full perfusion with filling of all distal branches). Reperfusion past the target arterial occlusion and into the distal arterial bed and terminal branches, in conjunction with recanalization of the target arterial occlusion, demonstrates flow restoration or revascularization.

Endovascular therapy (EVT) is now the standard of care for treatment of acute ischemic stroke due to large-vessel occlusion (LVO). In 2015, the American Heart Association/American Stroke Association published a focused update to the 2013 Guidelines for the Early Management of Patients with Acute Ischemic Stroke regarding endovascular treatment (Powers WJ, et. al., 2015). Endovascular therapy with a stent retriever is recommended for eligible patients. The use of mechanical thrombectomy devices other than stent retrievers as first-line devices for mechanical thrombectomy may be reasonable in some circumstances, but stent retrievers remain the first choice (Powers WJ, et. al., 2018).

To ensure benefit, reperfusion to TICI 2B/3 should be achieved as early as possible and within 6 hours of stroke onset. The DAWN Clinical Trial Investigators (Nogueira RG, et. al., 2018) reported the benefits of mechanical thrombectomy in the extended window up to 24 hours of last known well for select patients meeting certain criteria. As with IV alteplase (t-PA), reduced time from symptom onset to reperfusion with EVT is highly associated with better clinical outcomes. Recent recommendations from the Society of Vascular and Interventional Neurology (SVIN) offer procedural metrics which include time from hospital arrival to groin puncture less than 90 minutes, and time from groin puncture to TICI 2B or better or conclusion of procedure less than 60 minutes (English JD, et. al., 2016).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic stroke patients who achieve TICI 2B or higher for the primary vessel occlusion less than (<) or equal to 60 minutes from the time of skin puncture

> **Included Populations:** As above

Excluded Populations: None

Data Elements:

- *Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade*
- *Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade Date*
- *Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade Time*
- *Skin Puncture Date*
- *Skin Puncture Time*

Denominator Statement: Ischemic stroke patients treated with mechanical endovascular reperfusion therapy for a large vessel occlusion (LVO)

Included Populations:

- Discharges with *ICD-10-CM Principal Diagnosis Code* for ischemic stroke as defined in Appendix A, Table 8.1 for ICD-10 codes, **AND**
- Patients with documented Mechanical Endovascular Reperfusion Therapy *(ICD-10-PCS Principal or Other Procedure Codes* as defined in Appendix A, Table 8.1b for ICD-10 codes) **AND**
- Patients with documented *Failed Attempt at Thrombectomy (ICD-10-PCS Principal or Other Procedure Codes* as defined in Appendix A, Table 8.1c for ICD-10 codes)

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay > 120 days
- Patients admitted for *Elective Carotid Intervention*
- Patients who have a primary cerebral occlusion that is not a large vessel occlusion (LVO)

Data Elements:

- *Admission Date*
- *Birthdate*
- *Discharge Date*
- *Elective Carotid Intervention*
- *Failed Attempt at Thrombectomy*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Other Procedure Dates*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*
- *Site of Primary Vessel Occlusion*
- *Skin Puncture*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

1. Adams HP, Brott TG, Furlan AJ, Gomez CR, Grotta J, Helgason CM, Kwiatkowski T, Lyden PD, Marler JR, Torner J, et. al. Guidelines for thrombolytic therapy for acute stroke: a supplement to the guidelines for the management of patients with acute ischemic stroke. *Circulation*. 1996;94:1167-1174.

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3. Antman EM, Anbe DT, Armstrong PW, Bates ER, Green LA, Hand M, et al. ACC/AHA guidelines for the management of patients with ST-elevation myocardial infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Revise the 1999 Guidelines for the Management of Patients With Acute Myocardial Infarction). 2004.

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15. Powers WJ, Rabinstein AA, Ackerson T, Adeoye OM, Bambakidis NC, Becker K, Biller J, et al; on behalf of the American Heart Association Stroke Council. 2018 Guidelines for the Early Management of Patients with Acute Ischemic Stroke: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association. *Stroke*. 2018 Jan;49:e26-e30.

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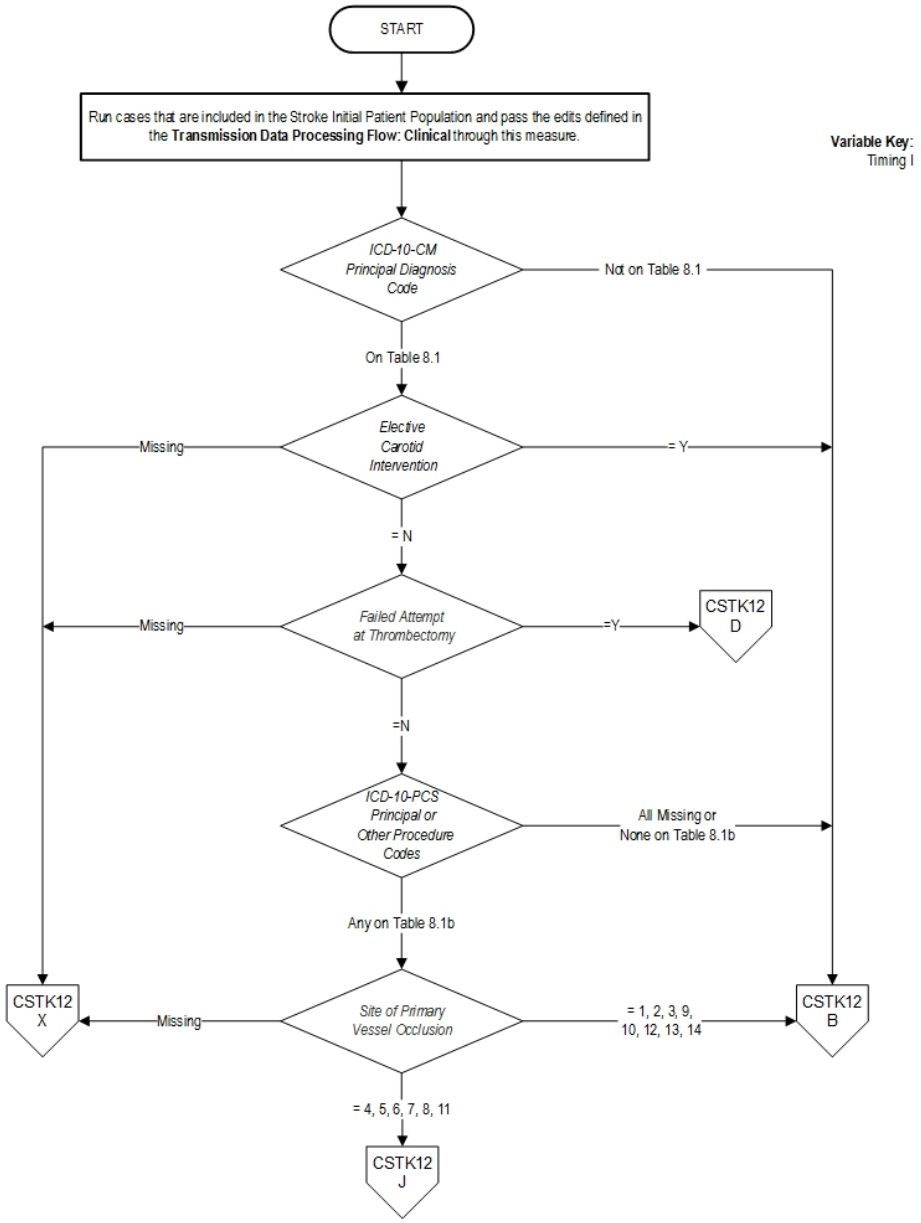
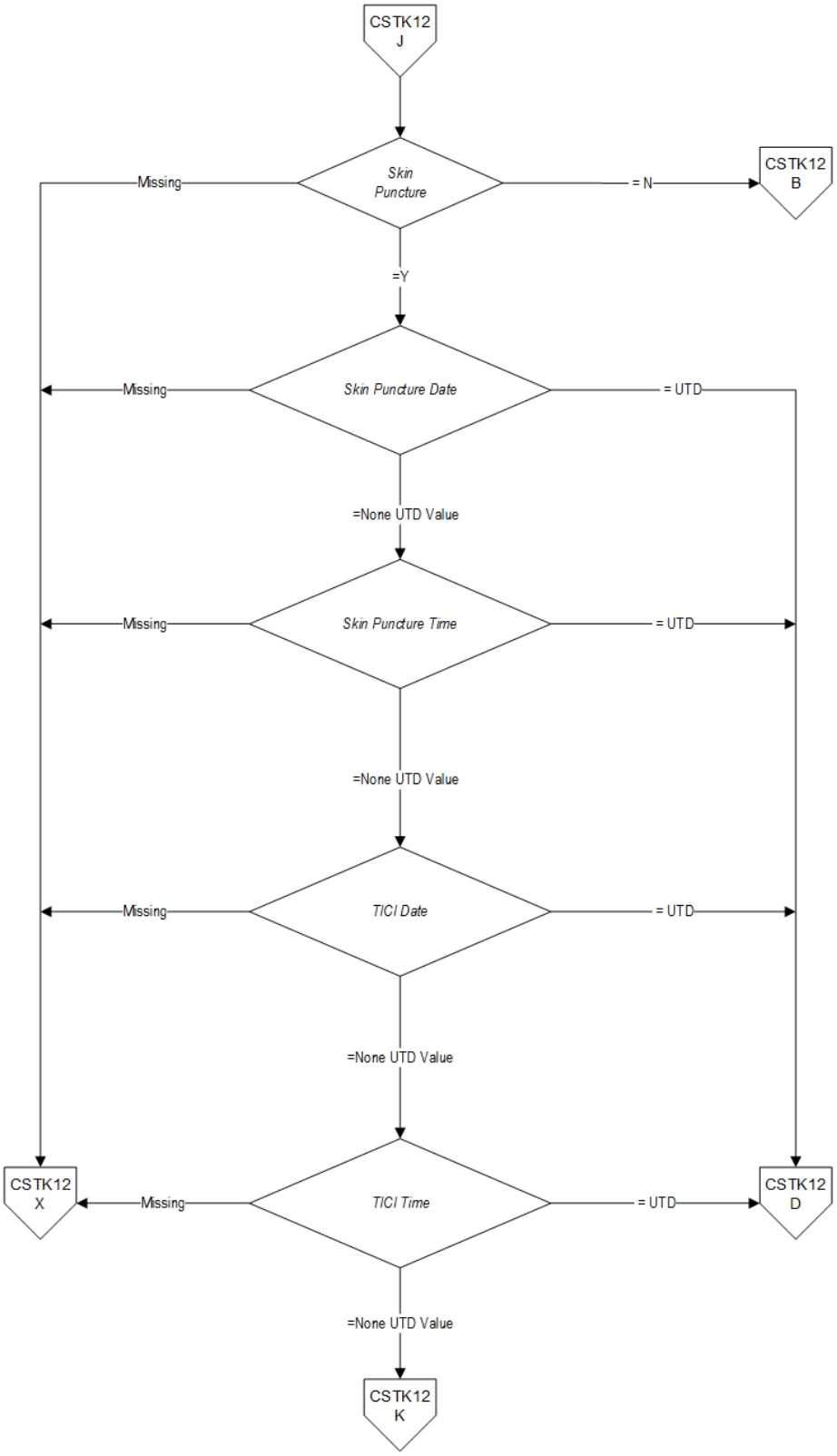
Measure Algorithm:

CSTK-12: Timeliness of Reperfusion: Skin Puncture to TICI 2B or Higher

Numerator Statement: Ischemic stroke patients who achieve TICI 2B or higher for the primary vessel occlusion ≤ 60 minutes from the time of skin puncture

Denominator Statement: Ischemic stroke patients treated with mechanical endovascular reperfusion therapy for a large vessel occlusion (LVO)




CSTK12
J
Skin
Puncture
Missing
= N
CSTK12
B
=Y
Skin Puncture Date
Missing
= UTD
=None UTD Value
Skin Puncture Time
Missing
= UTD
=None UTD Value
TICI Date
Missing
= UTD
=None UTD Value
TICI Time
CSTK12
X
Missing
= UTD
CSTK12
D
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CSTK12
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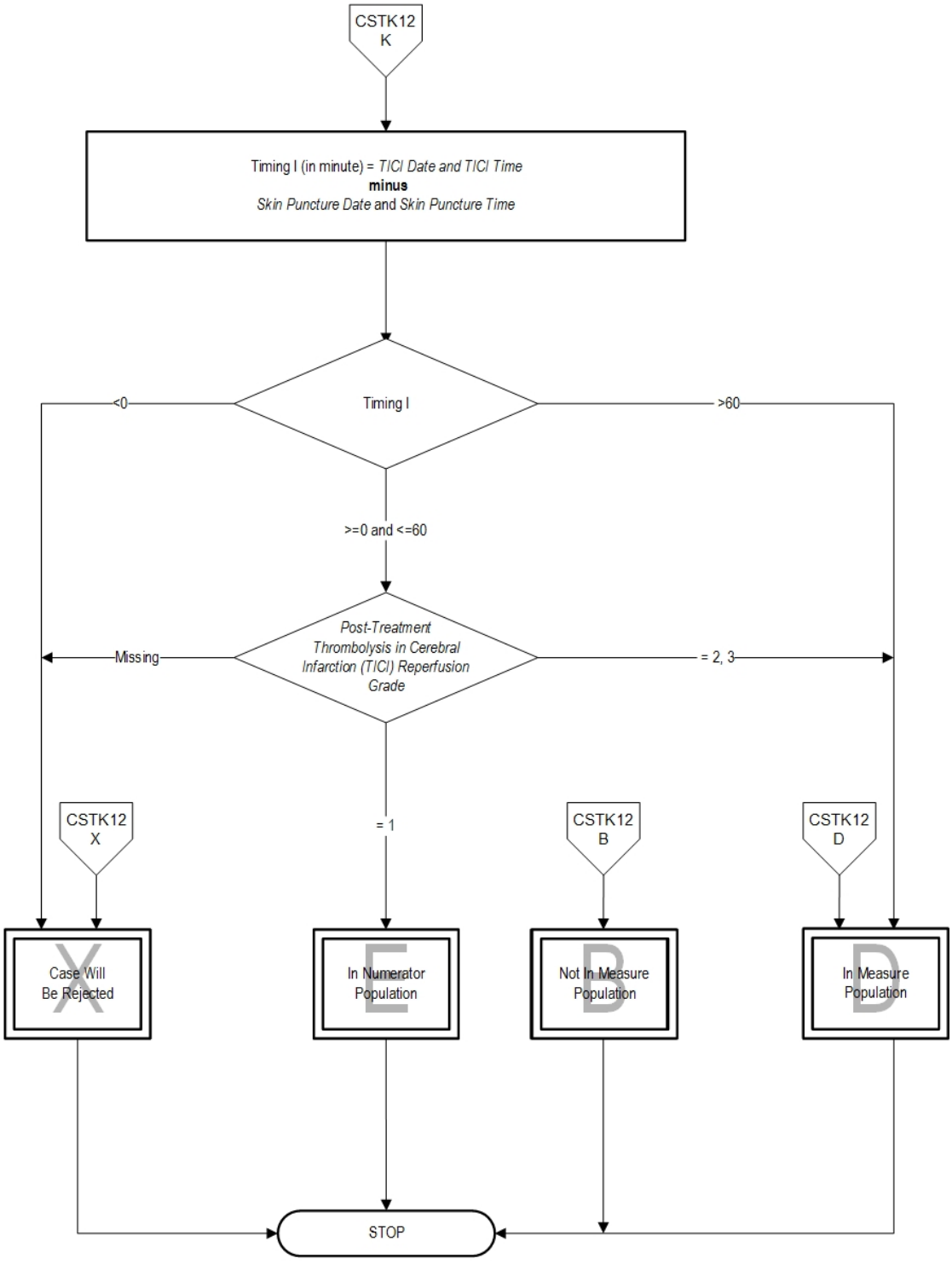

CSTK12
K
Timing I (in minute) = TICI Date and TICI Time
minus
Skin Puncture Date and Skin Puncture Time
Timing I
<0
>60
>=0 and <=60
Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade
Missing
= 2, 3
= 1
CSTK12
X
CSTK12
B
CSTK12
D
X
Case Will Be Rejected
E
In Numerator Population
B
Not In Measure Population
D
In Measure Population
STOP

Palliative Care (PAL)

Set Measures

Set Measure ID	Measure Short Name
PAL-01	Pain Screening
PAL-02	Pain Assessment
PAL-03	Dyspnea Screening
PAL-04	Treatment Preferences and Goals of Care
PAL-05	Treatment Preferences Discharge Document

General Data Elements

Element Name	Collected For
Admission Date	All Records,
Birthdate	All Records,
Discharge Date	All Records, Not collected for HBIPS-2 and HBIPS-3
Sex	All Records,

Measure Set Specific Data Elements

Element Name	Collected For
Discharge Disposition	PAL-05
Dyspnea Severity	PAL-03
Goals of Care	PAL-04
Initial Encounter	PAL
Initial Encounter Date	PAL
Pain Character	PAL-02
Pain Duration	PAL-02

Element Name	Collected For
Pain Effect	PAL-02
Pain Factors	PAL-02
Pain Frequency	PAL-02
Pain Location	PAL-02
Pain Severity	PAL-01, PAL-02
Treatment Preferences	PAL-04
Treatment Preferences Document	PAL-05

Palliative Care (PAL) Initial Patient Population

The PAL Measure Set Population (common to all PAL measures) is defined as all patients who have received a consultation with any member of the palliative care service team. “Consultation” indicates that the patient received a face to face encounter visit with any member of the palliative care core interdisciplinary team. The core interdisciplinary team is comprised of the following: Physician(s); Registered nurse(s) or advanced practice nurse(s); Chaplain(s) or, spiritual care professional(s); Social worker(s).

The population of the PAL measure set can be identified by using data elements that are common to all of the performance measures in the set:

- Discharge Date
- Initial Encounter

While not required for the identification of the initial patient population or the calculation of the measures, the following data elements are collected for purposes of case identification:

- Admission Date
- Birthdate
- Sex

Note – General Data Elements:

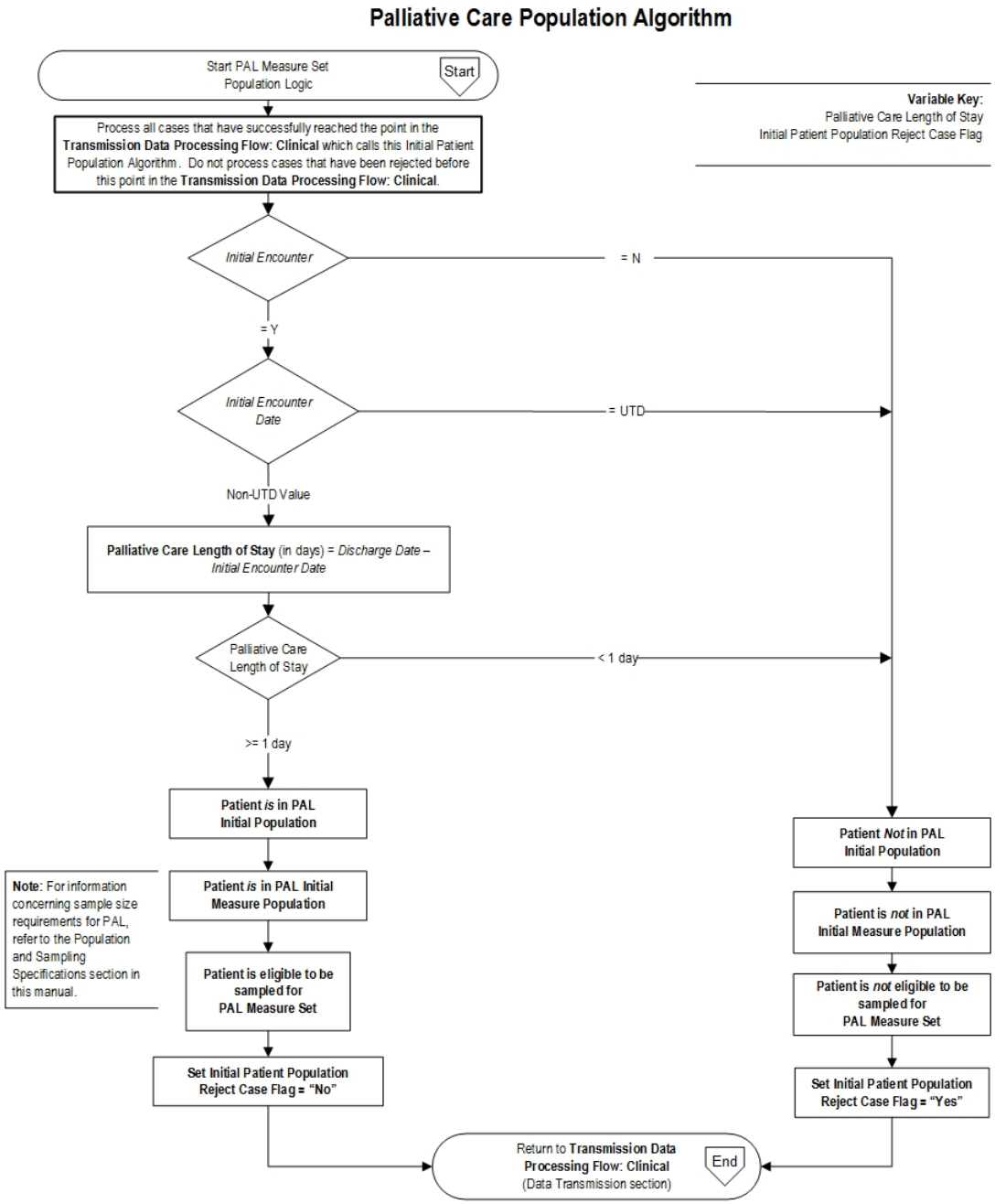
The following General Data Elements are optional for the PAL measure set. Collection of these data elements is not currently required for the identification of the initial patient population or the calculation of the measures for purposes of measure submission for certification.

Optional General Data Elements:

- Hispanic Ethnicity
- ICD-10-CM Other Diagnosis Codes

- ICD-10-CM Principal Diagnosis Code
- ICD-10-PCS Other Procedure Codes
- ICD-10-PCS Principal Procedure Code
- Payment Source
- Postal Code
- Race

Initial Patient Population Algorithm



Sampling / Sample Size Requirements

Sampling Methodology

Sampling is a process of selecting a representative part of a population to estimate the organization's performance without collecting data for its entire population. Using a statistically valid sample, an organization can measure its performance in an effective and efficient manner. Sampling is a particularly useful technique for performance measures that require primary data collection from a source, such as the medical record. Sampling should not be used unless the organization has a large number of cases in the measure population, because a fairly large number of sample cases is needed to achieve a representative sample of the population of interest. To obtain statistically valid sample data, the sample size should be carefully determined, and the sample cases should be randomly selected in such a way that the individual cases in the population have an equal chance of being selected. Only when the sample data truly represent the whole population can the sample-based performance measure data be meaningful and useful.

Sampling Approaches

Simple random sampling - selecting a sample size (n) from a population of size (N) in such a way that every case has the same chance of being selected. Systematic random sampling - selecting every kth record from a population of size N in such a way that a sample size of n is obtained, where k ≤ N/n. The first sample record (i.e., the starting point) must be randomly selected before taking every kth record. This is a two-step process: a) Randomly select the starting point by choosing a number between one and k using a table of random numbers or a computer-generated random number; and b) Then select every kth record thereafter until the selection of the sample size is completed. As an example, say the site has 33 cases for the month. These 33 cases would then be put on a list and numbered from 1 to 33. First we calculate the sampling interval k as 33/10 which rounds to 3. The site would then randomly choose a number between 1 and 3 to use as the starting point on the list, sample this case, and then from this point sample every 3rd case on the list until they come to the end of the list to create their sample.

Monthly Sample Size

Monthly Patient Volume (number of discharges)"	Monthly Sample Size (number of medical records)
1 - 9	100%
10 - 49	10 cases
50 - 99	20%
=> 100	20 cases

Measure Information Form

Measure Set: Palliative Care (PAL)

Set Measure ID: PAL-01

Performance Measure Name: Pain Screening

Description: Proportion of palliative care patients who were screened for pain during the palliative care initial encounter.

Rationale: As described from the University of Chapel Hill PEACE Measure Set project, pain is prevalent and undertreated for many populations of seriously ill patients, including those patients nearing the end of life. Poor screening, assessment, and undertreatment of pain is more common for patients with serious illness who are also of minority race ethnicity. Use of the Pain Screening and Pain Assessment quality measures will increase reporting and efforts to improve awareness of the presence of pain (screening) and assessment of severity, etiology and effect on function (assessment) which are the essential first steps required for quality pain management and treatment. The prevalence of pain ranges from 40-80% in seriously ill patient populations. As detailed in a systematic review from AHRQ and the American Pain Society Quality of Care guidelines, pain screening and assessment are the essential steps required to ensure that pain is detected by clinicians and appropriate treatment implemented. (Wells et al., 2008; Gordon et al. 2005; as cited by PEACE) Failure to screen, assess, and treat pain results in functional limitations, physiologic stress, and psychological harms such as social withdrawal and depression. The current quality of pain screening, assessment, and treatment is poor, as documented in systematic pain prevalence and treatment studies from hospital, outpatient, cancer and nursing home settings. (Reynolds et al., 2002; Deandria et al., 2008; Mularski et al., 2006; Erdek et al., 2004; as cited by PEACE) In a systematic review of quality of pain care for diverse patient populations, Gordon reported high average pain severity (6.17-8.37 on 10 point scale) and moderate rates of pain severity screening or other assessment (47%-96%). These findings did not vary by underlying diagnosis. (Gordon et al., 2002) (PEACE, 2015)

The National Consensus Project for Quality Palliative Care (2013) guidelines recommend that the interdisciplinary team assesses and manages pain in a safe and timely manner to a level acceptable to the patient or surrogate and that symptom assessment, treatment, side effect and treatment outcome information should be recorded in the medical record.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients who are screened for the presence or absence of pain and its severity using a standardized quantitative tool during the initial encounter for palliative care.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None

Data Elements:

- *Pain Severity*

Denominator Statement: Patients receiving specialty palliative care in an acute hospital setting for one (1) or more days

Included Populations:

Excluded Populations:

- Palliative care program length of stay less than 1 day

Data Elements:

- *Initial Encounter*
- *Initial Encounter Date*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative/billing data and medical records. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal or other ICD-10CM/PCS diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10CM/PCS codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications Section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

- CMS Hospice Item Set, http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Hospice-Quality-Reporting/Hospice-Item-Set-HIS.html
- Deandria S, Montanri M, Moja L et al. Prevalence of undertreatment of cancer pain: a review of published literature. Ann Oncol 2008; 19:1985-91.
- Erdek MA, Pronovost PA. Improving assessment and treatment of pain in the critically ill. Int J Qual Health Care 2004; 16:59-64.
- Gordon DB, Dahl JL, Miaskowski C et al. American Pain Society recommendations for improving the quality of acute and cancer pain management. Arch Intern Med 2005; 165:1574-1580.

- Gordon DB, Pelliano TA, Miaskowski C et al. A 10-year review of quality improvement monitoring in pain management: recommendations for standardized outcome measures. Pain Manage Nurs 2002; 4:116-130.
- Measuring What Matters, http://aahpm.org/quality/measuring-what-matters
- Mularski R, White-Chu F, Overbay D et al. Measuring pain as the 5th vital sign does not improve quality of pain management. J Gen Intern Med 2006; 6:607-612.
- National Consensus Project for Quality Palliative Care. Clinical Practice Guidelines for Quality Palliative Care. 3rd ed. Pittsburgh, PA: Author; 2013. http://www.nationalconsensusproject.org/NCP_Clinical_Practice_Guidelines_3rd_Edition.pdf
- PEACE Hospice and Palliative Care Quality Measures, http://www.med.unc.edu/pcare/resources/PEACE-Quality-Measures
- Reynolds K, Henderson M, Schulman A, Hanson LC. Needs of the dying in nursing homes. J Pall Med 2002; 5:895-901.
- Wells N, Pasero C, McCaffery M. Improving the Quality of Care through Pain Assessment and Management. In: Hughes RG, editor. Patient Safety and Quality: An Evidence-Based Handbook for Nurses. Rockville (MD): Agency for Healthcare Research and Quality (US); 2008 Apr. Chapter 17.

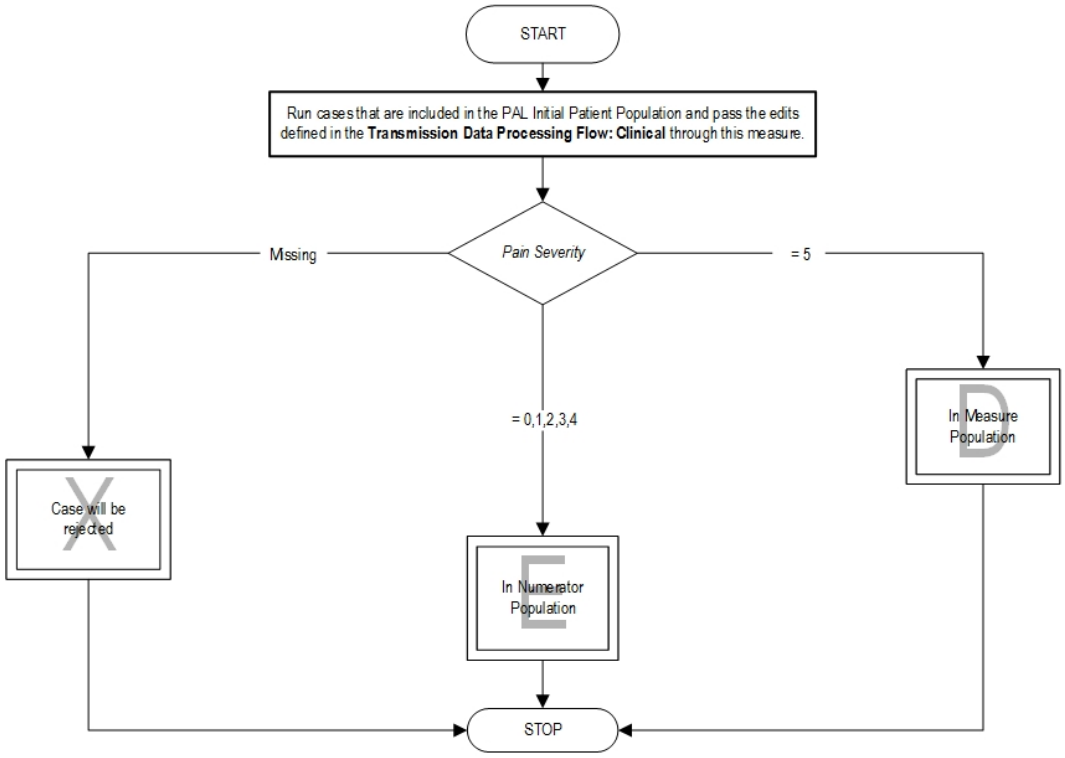
Original Performance Measure Source / Developer:
American Academy of Hospice and Palliative Care (AAHPM) and Hospice and Palliative Nurses Association (HPNA) Measuring What Matters Project Top Ten Measures That Matter List
CMS Hospice Item Set
PEACE Hospice and Palliative Care Quality Measures Set

Measure Algorithm:

PAL–01: Pain Screening

Numerator: Patients who are screened for the presence or absence of pain and its severity using a standardized quantitative tool during the initial encounter for palliative care.

Denominator: Patients receiving specialty palliative care in an acute hospital setting for one (1) or more days.



Measure Information Form

Measure Set: Palliative Care (PAL)

Set Measure ID: PAL-02

Performance Measure Name: Pain Assessment

Description: Proportion of palliative care patients who screened positive for pain during the palliative care initial encounter and received a clinical assessment of pain, which included at least five of seven components, within one (1) day of screening.

Rationale: As described from the University of Chapel Hill PEACE Measure Set project, pain is prevalent and undertreated for many populations of seriously ill patients, including those patients nearing the end of life. Poor screening, assessment, and undertreatment of pain is more common for patients with serious illness who are also of minority race ethnicity. Use of the Pain Screening and Pain Assessment quality measures will increase reporting and efforts to improve awareness of the presence of pain (screening) and assessment of severity, etiology and effect on function (assessment) which are the essential first steps required for quality pain management and treatment. The prevalence of pain ranges from 40-80% in seriously ill patient populations. As detailed in a systematic review from AHRQ and the American Pain Society Quality of Care guidelines, pain screening and assessment are the essential steps required to ensure that pain is detected by clinicians and appropriate treatment implemented. (Wells et al., 2008; Gordon et al. 2005; as cited by PEACE) Failure to screen, assess, and treat pain results in functional limitations, physiologic stress, and psychological harms such as social withdrawal and depression. The current quality of pain screening, assessment, and treatment is poor, as documented in systematic pain prevalence and treatment studies from hospital, outpatient, cancer and nursing home settings. (Reynolds et al., 2002; Deandria et al., 2008; Mularski et al., 2006; Erdek et al., 2004; as cited by PEACE) In a systematic review of quality of pain care for diverse patient populations, Gordon reported high average pain severity (6.17-8.37 on 10 point scale) and moderate rates of pain severity screening or other assessment (47%-96%). These findings did not vary by underlying diagnosis. (Gordon et al., 2002) (PEACE, 2015)

The National Consensus Project for Quality Palliative Care (2013) guidelines recommend that the interdisciplinary team assesses and manages pain in a safe and timely manner to a level acceptable to the patient or surrogate and that symptom assessment, treatment, side effect and treatment outcome information should be recorded in the medical record.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients who received a comprehensive clinical assessment, which included at least five of seven components, within one (1) day of screening positive for pain.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None

Data Elements:

- *Pain Character*
- *Pain Duration*
- *Pain Effect*
- *Pain Factors*
- *Pain Frequency*
- *Pain Location*
- *Pain Severity*

Denominator Statement: Patients receiving specialty palliative care in an acute hospital setting who report pain when pain screening is done on the initial palliative care encounter.

Included Populations:

Excluded Populations:

- Palliative care program length of stay less than 1 day

Data Elements:

- *Initial Encounter*
- *Initial Encounter Date*
- *Pain Severity*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative/billing data and medical records. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal or other ICD-10CM/PCS diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10CM/PCS codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications Section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

- CMS Hospice Item Set, http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Hospice-Quality-Reporting/Hospice-Item-Set-HIS.html
- Deandria S, Montanri M, Moja L et al. Prevalence of undertreatment of cancer pain: a review of published literature. Ann Oncol 2008; 19:1985-91.
- Erdek MA, Pronovost PA. Improving assessment and treatment of pain in the critically ill. Int J Qual Health Care 2004; 16:59-64.
- Gordon DB, Dahl JL, Miaskowski C et al. American Pain Society recommendations for improving the quality of acute and cancer pain management. Arch Intern Med 2005; 165:1574-1580.
- Gordon DB, Pelliano TA, Miaskowski C et al. A 10-year review of quality improvement monitoring in pain management: recommendations for standardized outcome measures. Pain Manage Nurs 2002; 4:116-130.
- Measuring What Matters, http://aahpm.org/quality/measuring-what-matters
- Mularski R, White-Chu F, Overbay D et al. Measuring pain as the 5th vital sign does not improve quality of pain management. J Gen Intern Med 2006; 6:607-612.
- National Consensus Project for Quality Palliative Care. Clinical Practice Guidelines for Quality Palliative Care. 3rd ed. Pittsburgh, PA: Author; 2013. http://www.nationalconsensusproject.org/NCP_Clinical_Practice_Guidelines_3rd_Edition.pdf
- PEACE Hospice and Palliative Care Quality Measures, http://www.med.unc.edu/pcare/resources/PEACE-Quality-Measures
- Reynolds K, Henderson M, Schulman A, Hanson LC. Needs of the dying in nursing homes. J Pall Med 2002; 5:895-901.
- Wells N, Pasero C, McCaffery M. Improving the Quality of Care through Pain Assessment and Management. In: Hughes RG, editor. Patient Safety and Quality: An Evidence-Based Handbook for Nurses. Rockville (MD): Agency for Healthcare Research and Quality (US); 2008 Apr. Chapter 17.

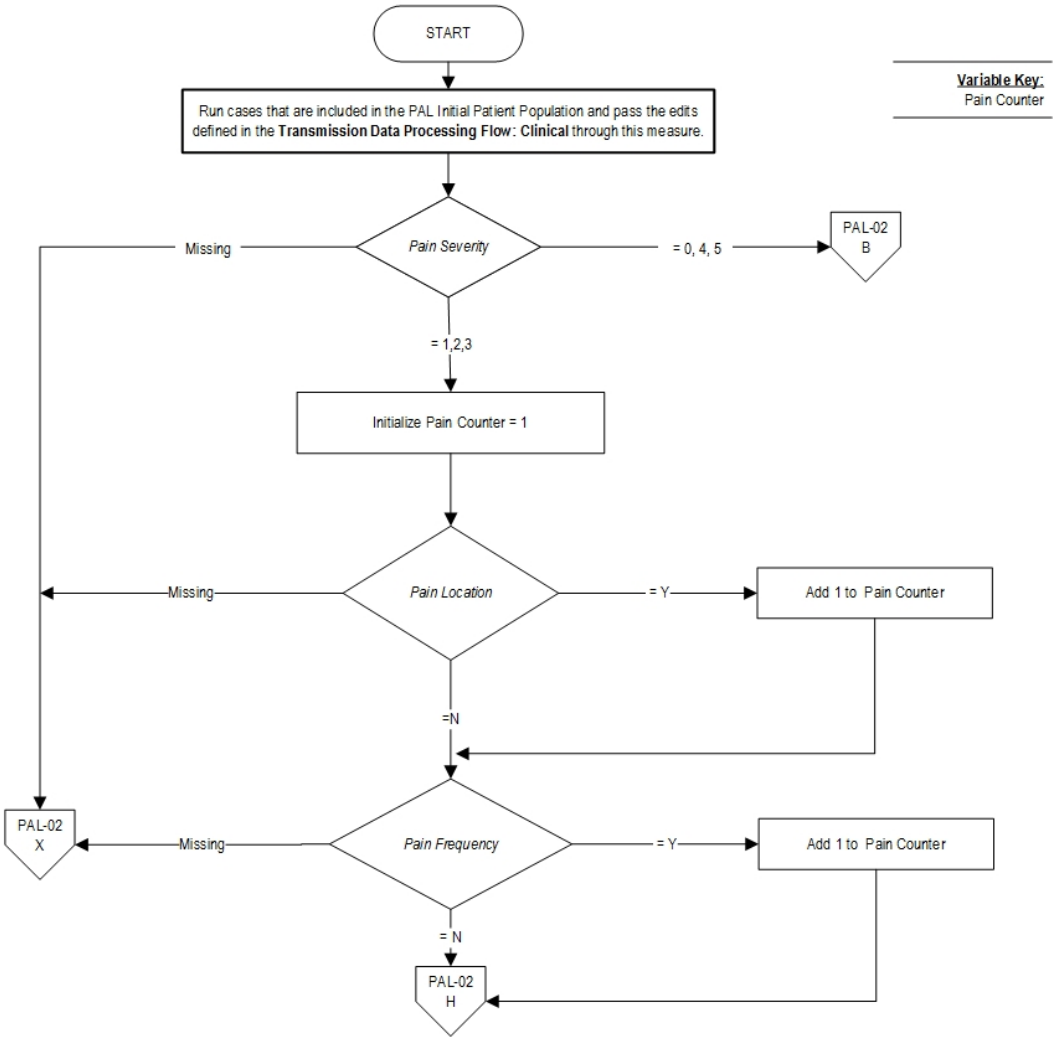
Original Performance Measure Source / Developer:
American Academy of Hospice and Palliative Care (AAHPM) and Hospice and Palliative Nurses Association (HPNA) Measuring What Matters Project Top Ten Measures That Matter List
CMS Hospice Item Set
PEACE Hospice and Palliative Care Quality Measures Set

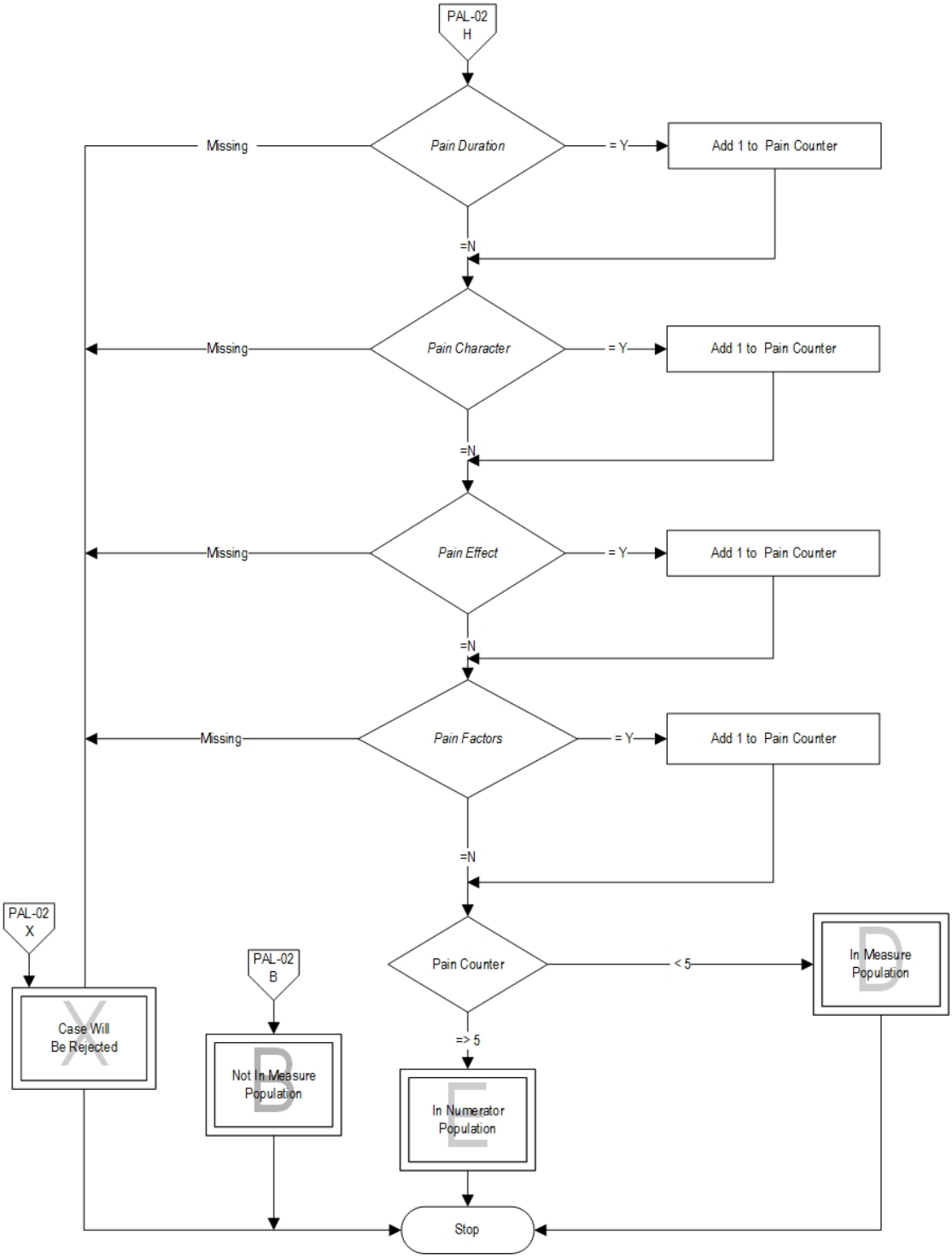
Measure Algorithm:

PAL–02: Pain Assessment

Numerator: Patients who received a comprehensive clinical assessment, which included at least five of seven components, within one (1) day of screening positive for pain.

Denominator: Patients receiving specialty palliative care in an acute hospital setting who report pain when pain screening is done on the initial palliative care encounter.




PAL-02
H
Pain Duration
Missing
= Y
Add 1 to Pain Counter
=N
Pain Character
Missing
= Y
Add 1 to Pain Counter
=N
Pain Effect
Missing
= Y
Add 1 to Pain Counter
=N
Pain Factors
Missing
= Y
Add 1 to Pain Counter
=N
PAL-02
X
Pain Counter
< 5
In Measure
Population
PAL-02
B
Case Will
Be Rejected
=> 5
Not In Measure
Population
In Numerator
Population
Stop

Measure Information Form

Measure Set: Palliative Care (PAL)

Set Measure ID: PAL-03

Performance Measure Name: Dyspnea Screening

Description: Proportion of palliative care patients who were screened for dyspnea during the palliative care initial encounter.

Rationale: As described from the University of Chapel Hill PEACE Measure Set project, dyspnea is prevalent and undertreated for many populations of seriously ill patients, including those patients nearing the end of life. Screening for dyspnea is necessary to determine its presence and severity, and forms the basis for treatment decision-making. Unlike pain, structured clinical assessment of the symptom is less well-defined, yet similar to pain, effective treatment is available to alleviate symptom distress. Prevalence of dyspnea in advanced cancer ranges from 50-70%. Among COPD patients with advanced illness enrolled in the SUPPORT Study, dyspnea which was moderate to severe at least half of the time was present for at least 65% of patients throughout the 6 months preceding death. Effective treatment for dyspnea is available, but not consistently administered. Evidence-based treatments include pharmacologic interventions such as opioids and inhaled bronchodilators, and non-pharmacologic interventions including oxygen for hypoxic patients, pulmonary rehabilitation and exercise in COPD, and drainage of pleural effusion. (PEACE, 2015)

National Consensus Project for Quality Palliative Care (2013) guidelines recommend that the interdisciplinary team assesses and manages pain in a safe and timely manner to a level acceptable to the patient or surrogate and that symptom assessment, treatment, side effect and treatment outcome information should be recorded in the medical record

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients who are screened for the presence or absence of Dyspnea and its severity during the initial encounter for palliative care.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Dyspnea Severity*

Denominator Statement: Patients receiving specialty palliative care in an acute hospital setting for one (1) or more days

Included Populations:

Excluded Populations:

- Palliative care program length of stay less than one (1) day

Data Elements:

- *Initial Encounter*
- *Initial Encounter Date*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal or other ICD-10CM/PCS diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10CM/PCS codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications Section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

- Bausewin C, Booth S, Gysels M et al. Non-pharmacologic interventions for breathlessness in advanced stages of malignant and nonmalignant diseases. Cochrane Database Syst Rev 2009. Apr 16; 2:CD005623.
- Ben-Aharon I, Gafter-Gvili A, Paul M et al. Interventions for alleviating cancer-related dyspnea: a systematic review. J Clin Oncol 2008; 26:2396-2404.
- CMS Hospice Item Set, http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Hospice-Quality-Reporting/Hospice-Item-Set-HIS.html
- Currow DC, Ward AM, Abernethy AP. Advances in the pharmacologic management of breathlessness. Current Opin Supp Pall Care 2009; 3:103-106.
- Dy SM, Lorenz KA, Naeim A et al. Evidence-based recommendations for cancer fatigue, anorexia, depression and dyspnea. J Clin Onc 2008; 26:3886-3895.
- Lorenz KA, Lynn J, Dy SM et al. Evidence for improving palliative care at the end of life: a systematic review. Ann Intern Med 2008; 148:147-159.
- Luce JM, Luce JA. Management of dyspnea in patients with far-advanced lung disease. JAMA 2001; 285:1331-1337.

- Measuring What Matters, http://aahpm.org/quality/measuring-what-matters
- National Consensus Project for Quality Palliative Care. Clinical Practice Guidelines for Quality Palliative Care. 3rd ed. Pittsburgh, PA: Author; 2013. http://www.nationalconsensusproject.org/NCP_Clinical_Practice_Guidelines_3rd_Edition.pdf
- PEACE Hospice and Palliative Care Quality Measures, http://www.med.unc.edu/pcare/resources/PEACE-Quality-Measures
- Roberts DK, Thorne SE, Pearson C. Cancer Nurs 1993; 16:310-320.

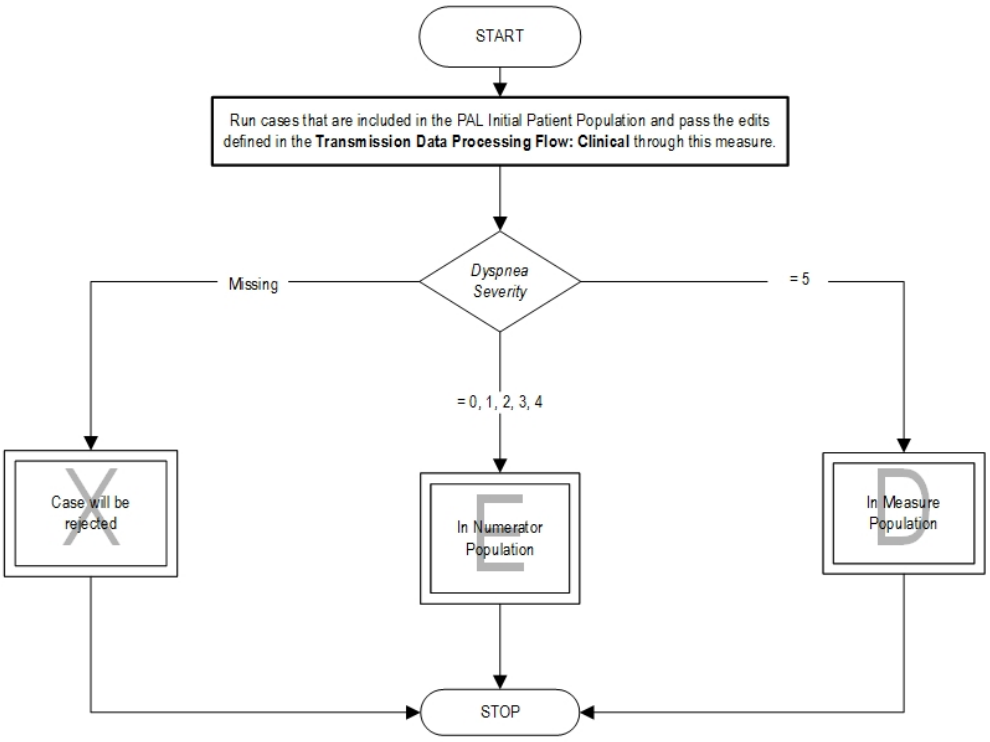
Original Performance Measure Source / Developer:
American Academy of Hospice and Palliative Care (AAHPM) and Hospice and Palliative Nurses Association (HPNA) Measuring What Matters Project Top Ten Measures That Matter List
CMS Hospice Item Set
PEACE Hospice and Palliative Care Quality Measures Set

Measure Algorithm:

PAL–03: Dyspnea Screening

Numerator: Patients who are screened for the presence or absence of Dyspnea and its severity during the initial encounter for palliative care.

Denominator: Patients receiving specialty palliative care in an acute hospital setting for one (1) or more days.



Measure Information Form

Measure Set: Palliative Care (PAL)

Set Measure ID: PAL-04

Performance Measure Name: Treatment Preferences and Goals of Care

Description: Proportion of palliative care patients with medical record documentation of treatment preferences and goals of care.

Rationale: Seriously ill and dying patients who are given the opportunity to express life-sustaining treatment preferences are more likely to receive care consistent with their values, and patient and family satisfaction outcomes improve. Patients and physicians alike hesitate to initiate discussions, while acknowledging their value and desirability. Use of the Treatment Preferences quality measure will improve attention to this important practice, in order to enhance patient autonomy, facilitate patient-centered decision-making, and communicate patient preferences via documentation to other treating providers. Poor communication about patient preferences has been identified as a major quality concern in palliative and end-of-life care since an early, comprehensive Institute of Medicine report.(Field et al., 1997; as cited by PEACE) The SUPPORT Study found marked discrepancies between patient report of treatment preferences and provider awareness of or use of these preferences to guide treatment.(1995; as cited by PEACE) Patients and families prioritize communication with providers and control over treatment choices when faced with serious or life-threatening illness.(Steinhauser et al., 2001; as cited by PEACE) However, physicians and other providers fail to open the door to these discussions at critical time points in illness progression.(Gysels et al., 2004; as cited by PEACE) A recent systematic review of communication research found a consistent discrepancy between the quality and content of communication providers believed they provided, and the quality and content of communication experienced by seriously ill patients and their families. (Hancock et al., 2007; as cited by PEACE)

The National Consensus Project for Quality Palliative Care (2013) guidelines recommend that patient or surrogate's goals, preferences, and choices be respected and used as the basis for the plan of care within the limits of laws and standards of care. The palliative care interdisciplinary team discusses achievable goals with the patient and family using a patient-centered approach that includes the patient values and preferences and assists with advance care planning documents to communicate patient preferences across care settings.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients with medical record documentation of treatment preferences and goals of care.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None

Data Elements:

- *Goals of Care*
- *Treatment Preferences*

Denominator Statement: Patients receiving specialty palliative care in an acute hospital setting for one (1) or more days

Included Populations:

Excluded Populations:

- Palliative care program length of stay less than one (1) day

Data Elements:

- *Initial Encounter*
- *Initial Encounter Date*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal or other ICD-10CM/PCS diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10CM/PCS codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications Section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

- CMS Hospice Item Set, http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Hospice-Quality-Reporting/Hospice-Item-Set-HIS.html
- Field MJ, Cassell CK eds. Approaching Death: Improving Care at the End of Life. Washington, DC: National Academy Press, 1997.
- Gysels M, Richardson A, Higginson I. Communication training for health professionals who care for patients with cancer: a systematic review of effectiveness. Support Care Cancer 2004; 12:692-700.

- Hancock K, Clayton JM, Parker SM et al. Discrepant perceptions of end-of-life communication: a systematic review. J Pain Symptom Manage 2007; 34: 190-200.
- Measuring What Matters, http://aahpm.org/quality/measuring-what-matters
- PEACE Hospice and Palliative Care Quality Measures, http://www.med.unc.edu/pcare/resources/PEACE-Quality-Measures
- Steinhauser KE, Christakis NA, Clipp EC et al. Preparing for the end of life: references of patients, families, physicians and other care providers. J Pain Symptom Manage 2001; 22:727-737.
- SUPPORT Principal Investigators. A controlled trial to improve care for seriously ill hospitalized patients: the Study to Understand Prognosis and Preferences for Outcomes and Risks of Treatments (SUPPORT). JAMA 1995; 274:1591-1598.
- National Consensus Project for Quality Palliative Care. Clinical Practice Guidelines for Quality Palliative Care. 3rd ed. Pittsburgh, PA: Author; 2013. http://www.nationalconsensusproject.org/NCP_Clinical_Practice_Guidelines_3rd_Edition.pdf

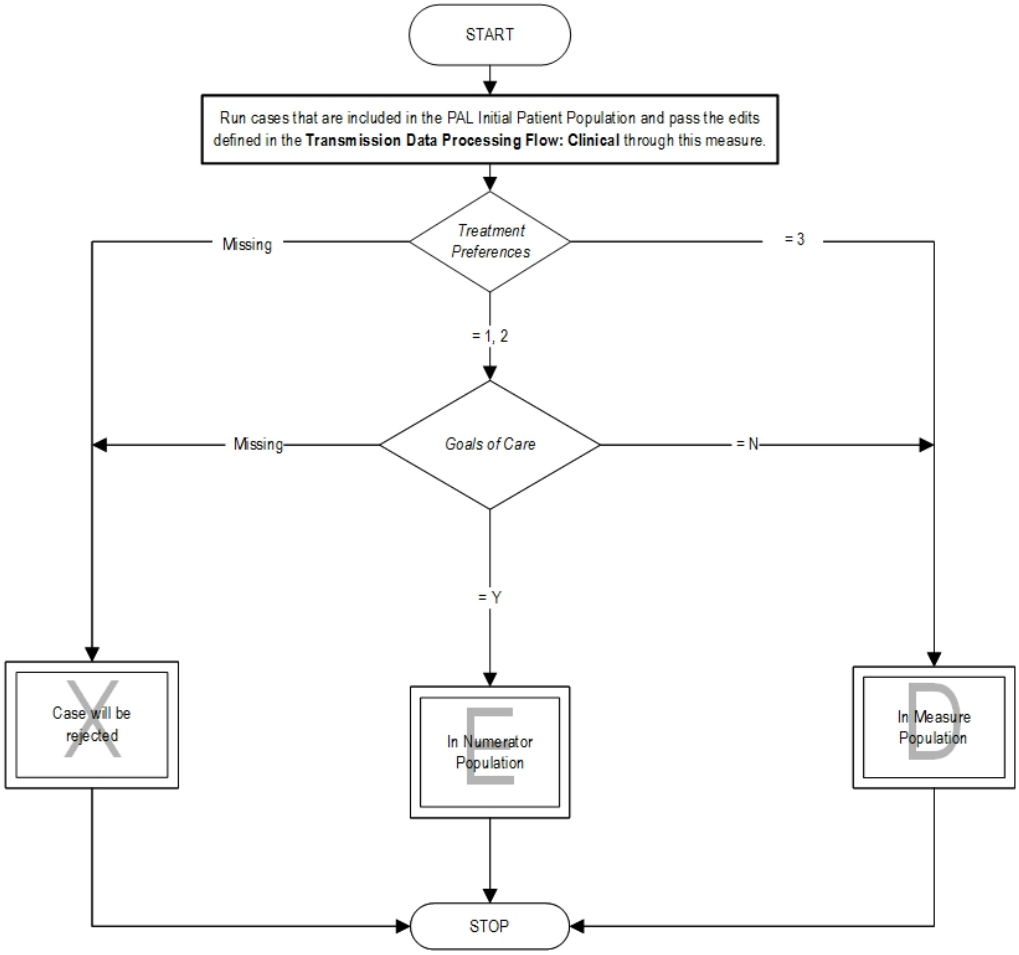
Original Performance Measure Source / Developer:
American Academy of Hospice and Palliative Care (AAHPM) and Hospice and Palliative Nurses Association (HPNA) Measuring What Matters Project Top Ten Measures That Matter List
CMS Hospice Item Set
PEACE Hospice and Palliative Care Quality Measures Set

Measure Algorithm:

PAL–04: Treatment Preferences and Goals of Care

Numerator: Patients with medical record documentation of treatment preferences and goals of care.

Denominator: Patients receiving specialty palliative care in an acute hospital setting for one (1) or more days.



Measure Information Form

Measure Set: Palliative Care (PAL)

Set Measure ID: PAL-05

Performance Measure Name: Treatment Preferences Discharge Document

Description: Proportion of patients for whom a transition of care document containing information regarding goals of care and treatment preferences is completed and accompanies the patient to the next level of care at discharge.

Rationale: Seriously ill and dying patients who are given the opportunity to express life-sustaining treatment preferences are more likely to receive care consistent with their values, and patient and family satisfaction outcomes improve. Patients and physicians alike hesitate to initiate discussions, while acknowledging their value and desirability. According to the PEACE project the use of a Treatment Preferences quality measure will improve attention to this important practice, in order to enhance patient autonomy, facilitate patient-centered decision-making, and communicate patient preferences via documentation to other treating providers. Poor communication about patient preferences has been identified as a major quality concern in palliative and end-of-life care since an early, comprehensive Institute of Medicine report.(Field et al., 1997; as cited by PEACE) The SUPPORT Study found marked discrepancies between patient report of treatment preferences and provider awareness of or use of these preferences to guide treatment.(1995; as cited by PEACE) Patients and families prioritize communication with providers and control over treatment choices when faced with serious or life-threatening illness.(Steinhauser et al., 2001; as cited by PEACE) However, physicians and other providers fail to open the door to these discussions at critical time points in illness progression.(Gysels et al., 2004; as cited by PEACE) A recent systematic review of communication research found a consistent discrepancy between the quality and content of communication providers believed they provided, and the quality and content of communication experienced by seriously ill patients and their families. (Hancock et al., 2007; as cited by PEACE)

The National Consensus Project for Quality Palliative Care (2013) guidelines recommend that patient's or surrogate's goals, preferences, and choices be respected and used as the basis for the plan of care within the limits of laws and standards of care. The palliative care interdisciplinary team discusses achievable goals with the patient and family using a patient-centered approach that includes the patient values and preferences and assists with advance care planning documents to communicate patient preferences across care settings

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients for whom a transition of care document containing information regarding treatment preferences and goals of care is completed and accompanies the patient to the next level of care at discharge.

> **Included Populations:** Not applicable

> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Treatment Preferences Document*

Denominator Statement: Patients receiving specialty palliative care in an acute hospital setting for one (1) or more days

> **Included Populations:**
>
> **Excluded Populations:**
>
> - Patients with discharge disposition of expired or left against medical advice/AMA
>
> **Data Elements:**
>
> - *Discharge Disposition*
> - *Initial Encounter*
> - *Initial Encounter Date*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal or other ICD-10CM/PCS diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10CM/PCS codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications Section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

- CMS Hospice Item Set, http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Hospice-Quality-Reporting/Hospice-Item-Set-HIS.html
- Field MJ, Cassell CK eds. Approaching Death: Improving Care at the End of Life. Washington, DC: National Academy Press, 1997.

- Gysels M, Richardson A, Higginson I. Communication training for health professionals who care for patients with cancer: a systematic review of effectiveness. Support Care Cancer 2004; 12:692-700.
- Hancock K, Clayton JM, Parker SM et al. Discrepant perceptions of end-of-life communication: a systematic review. J Pain Symptom Manage 2007; 34: 190-200.
- Measuring What Matters, http://aahpm.org/quality/measuring-what-matters
- PEACE Hospice and Palliative Care Quality Measures, http://www.med.unc.edu/pcare/resources/PEACE-Quality-Measures
- Steinhauser KE, Christakis NA, Clipp EC et al. Preparing for the end of life: references of patients, families, physicians and other care providers. J Pain Symptom Manage 2001; 22:727-737.
- SUPPORT Principal Investigators. A controlled trial to improve care for seriously ill hospitalized patients: the Study to Understand Prognosis and Preferences for Outcomes and Risks of Treatments (SUPPORT). JAMA 1995; 274:1591-1598.
- National Consensus Project for Quality Palliative Care. Clinical Practice Guidelines for Quality Palliative Care. 3rd ed. Pittsburgh, PA: Author; 2013. http://www.nationalconsensusproject.org/NCP_Clinical_Practice_Guidelines_3rd_Edition.pdf

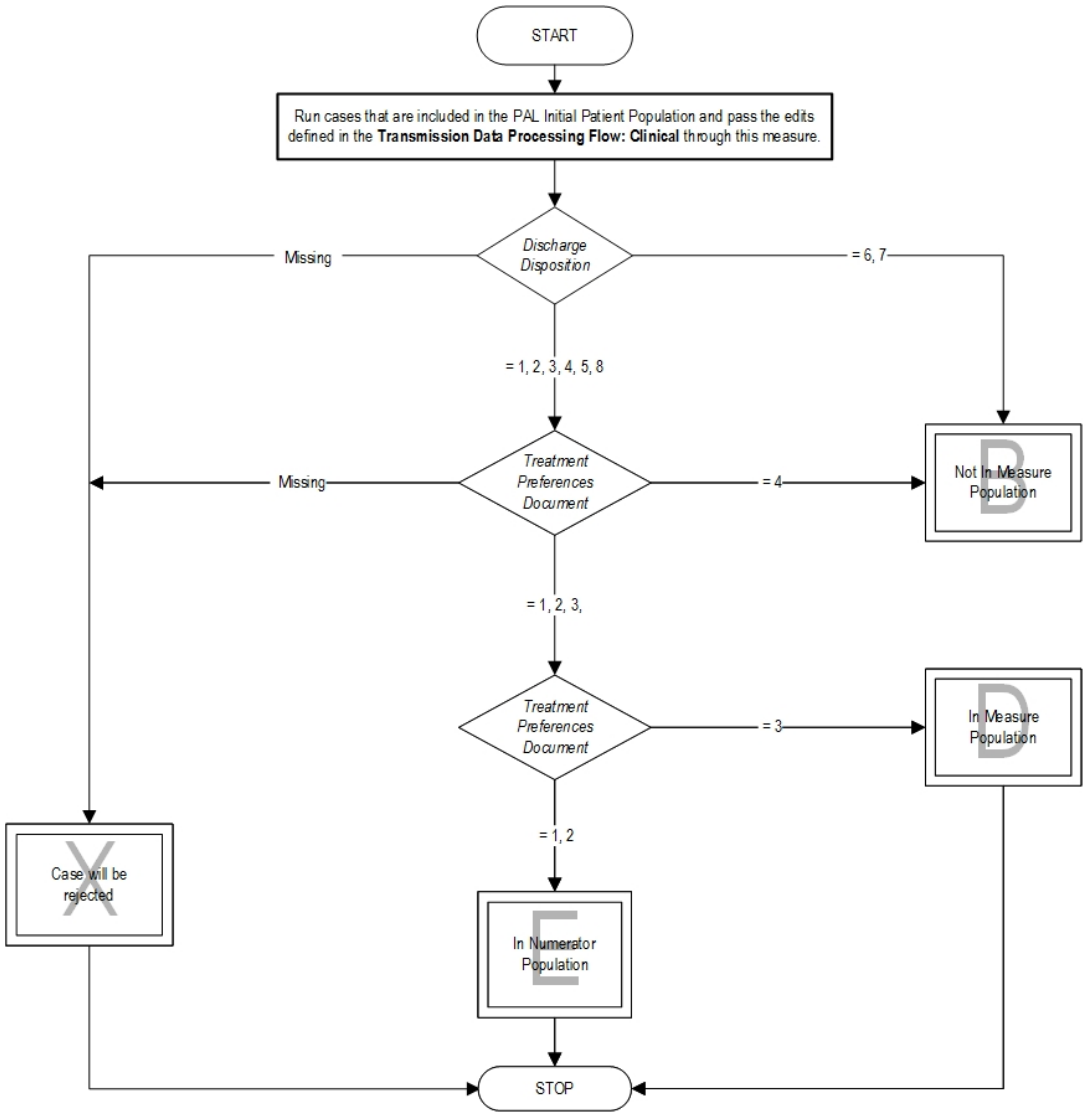
Original Performance Measure Source / Developer:
American Academy of Hospice and Palliative Care (AAHPM) and Hospice and Palliative Nurses Association (HPNA) Measuring What Matters Project Top Ten Measures That Matter List
PEACE Hospice and Palliative Care Quality Measures Set

Measure Algorithm:

PAL–05: Treatment Preferences Discharge Document

Numerator: Patients for whom a transition of care document containing information regarding treatment preferences and goals of care is completed and accompanies the patient to next level of care at discharge.

Denominator: Patients receiving specialty palliative care in an acute hospital setting for one (1) or more days.



Stroke (STK)

Set Measures

Set Measure ID	Measure Short Name
STK-1	Venous Thromboembolism (VTE Prophylaxis)
STK-10	Assessed for Rehabilitation
STK-2	Discharged on Antithrombotic Therapy
STK-3	Anticoagulation Therapy for Atrial Fibrillation/Flutter
STK-4	Thrombolytic Therapy
STK-5	Antithrombotic Therapy By End of Hospital Day Two
STK-6	Discharged on Statin Medication
STK-8	Stroke Education

General Data Elements

Element Name	Collected For
Admission Date	All Records,
Birthdate	All Records,
Discharge Date	All Records, Not collected for HBIPS-2 and HBIPS-3
Health Care Organization Identifier	All Records, Patient Population Data File, Hospital Clinical Data File,
Hispanic Ethnicity	All Records,
ICD-10-CM Other Diagnosis Codes	All Records, Optional for HBIPS-2, HBIPS-3
ICD-10-CM Principal Diagnosis Code	All Records, Optional for HBIPS-2, HBIPS-3
ICD-10-PCS Other Procedure Codes	All Records, Optional for All HBIPS Records
ICD-10-PCS Other Procedure Dates	All Records, Optional for All HBIPS Records
ICD-10-PCS Principal Procedure Code	All Records, Optional for All HBIPS Records
ICD-10-PCS Principal Procedure Date	All Records, Optional for All HBIPS Records

Element Name	Collected For
Payment Source	All Records, Optional for HBIPS-2 and HBIPS-3
Race	All Records,
Sex	All Records,

Measure Set Specific Data Elements

Element Name	Collected For
Anticoagulation Therapy Prescribed at Discharge	STK-3
Antithrombotic Therapy Administered by End of Hospital Day 2	STK-5
Antithrombotic Therapy Prescribed at Discharge	STK-2
Arrival Date	STK-4, STK-5
Arrival Time	STK-4
Assessed for Rehabilitation Services	STK-10
Atrial Fibrillation/Flutter	STK-3
Clinical Trial	STK
Comfort Measures Only	STK-1, STK-10, STK-2, STK-3, STK-5, STK-6, STK-8
Date Last Known Well	STK-4
Discharge Disposition	STK-10, STK-2, STK-3, STK-6, STK-8
ED Patient	STK-4
Education Addresses Activation of Emergency Medical System	STK-8
Education Addresses Follow-up After Discharge	STK-8
Education Addresses Medication Prescribed at Discharge	STK-8
Education Addresses Risk Factors for Stroke	STK-8
Education Addresses Warning Signs and Symptoms of Stroke	STK-8
Elective Carotid Intervention	STK
IV Alteplase Initiation	STK-4
IV Alteplase Initiation Date	STK-4
IV Alteplase Initiation Time	STK-4

Element Name	Collected For
IV OR IA Alteplase Administered at This Hospital or Within 24 Hours Prior to Arrival	STK-5
Last Known Well	STK-4
Reason for Extending the Initiation of IV Alteplase	STK-4
Reason for No VTE Prophylaxis – Hospital Admission	STK-1
Reason for Not Administering Antithrombotic Therapy by End of Hospital Day 2	STK-5
Reason for Not Initiating IV Alteplase	STK-4
Reason for Not Prescribing **Anticoagulation** Therapy at Discharge	STK-3
Reason for Not Prescribing **Antithrombotic** Therapy at Discharge	STK-2
Reason for Not Prescribing Statin Medication at Discharge	STK-6
Reason for Oral Factor Xa Inhibitor	STK-1
Statin Medication Prescribed at Discharge	STK-6
Time Last Known Well	STK-4
VTE Prophylaxis	STK-1
VTE Prophylaxis Date	STK-1

Related Materials

Document Name
Acknowledgment and Conditions of Use
Appendix A - ICD-10 Code Tables
Appendix C - Medication Tables
Appendix D - Glossary of Terms
Appendix E - Overview of Measure Information Form and Flowchart Formats
Appendix G - Resources
Appendix H - Miscellaneous Tables
Cover Page for the Joint Commission Manual
Data Dictionary

Document Name
Introduction to the Manual
Missing and Invalid Data
Sampling
Table of Contents
Transmission Alpha Data Dictionary
Transmission Data Processing Flow: Clinical
Transmission Data Processing Flow: Population and Sampling
Transmission of Data
Using the The Joint Commission's National Measure Specifications Manual

Stroke (STK) Initial Patient Population

The STK measure set is unique in that there are two distinct Initial Patient Populations (or sub-populations) within the measure set, each identified by a specific group of diagnosis codes, or lack thereof. The patients in each sub-population are counted in the Initial Patient Population of multiple measures. Hospitals utilizing STK for Joint Commission certification purposes will be required to use both the Ischemic and Hemorrhagic sub-populations.

The population of the STK measure set is identified using 4 data elements:

- ICD-10-CM Principal Diagnosis Code
- Admission Date
- Birthdate
- Discharge Date

The following is the STK Initial Patient Population's measure breakdown:

Measures	Initial Patient Population definition
STK-2, 3, 4, 5, and 6	The count of all patients in sub-population 1
STK-1, 8, and 10	The count of all patients in sub-population 1 and 2

STK-1, 2, 3, 4, 5, 6, 8 and 10 are used for TJC Certification program.

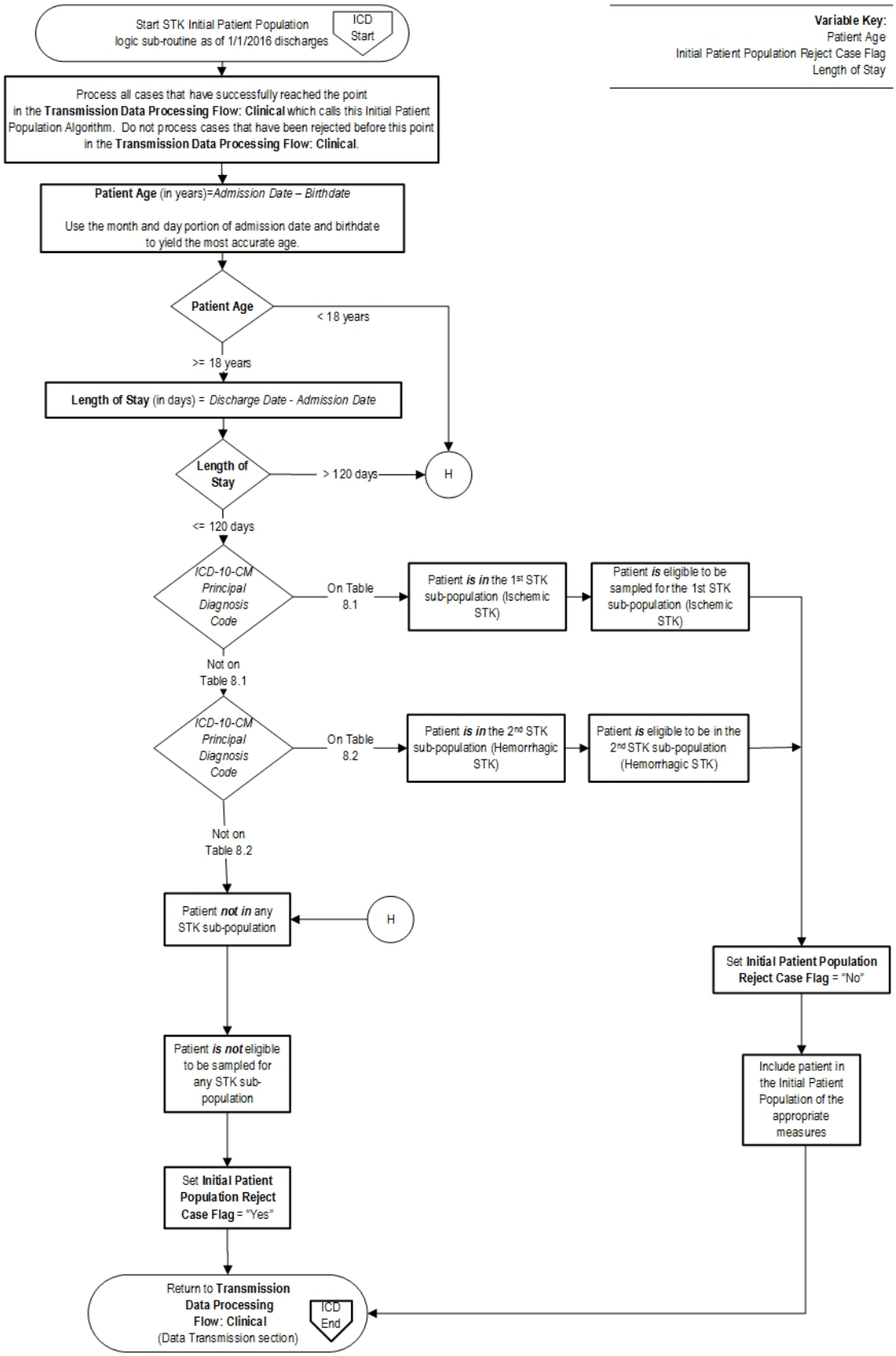
Patients admitted to the hospital for inpatient acute care are included in one of the STK ICD sub-populations and are eligible to be sampled if they have:

1 – **Ischemic sub-population** – Patients with an ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.1, a Patient Age (Admission Date minus Birthdate) greater than or equal to 18

years and a Length of Stay (Discharge Date minus Admission Date) less than or equal to 120 days are included in the STK Initial Patient Population and are eligible to be sampled.

2 – **Hemorrhagic sub-population** – Patients with an ICD-10-CM Principal Diagnosis Code for hemorrhagic stroke as defined in Appendix A, Table 8.2, a Patient Age (Admission Date minus Birthdate) greater than or equal to 18 years and a Length of Stay (Discharge Date minus Admission Date) less than or equal to 120 days are included in the STK Initial Patient Population and are eligible to be sampled.

NOTE: For Joint Commission certification purposes, hospitals will be abstracting and submitting data on all measures in the STK set; therefore, both sub-population 1 (Ischemic patients) and 2 (Hemorrhagic patients) will be identified by the STK Initial Patient Population to be eligible for sampling.


Variable Key:
Patient Age
Initial Patient Population Reject Case Flag
Length of Stay
Start STK Initial Patient Population logic sub-routine as of 1/1/2016 discharges
ICD Start
Process all cases that have successfully reached the point in the Transmission Data Processing Flow: Clinical which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Transmission Data Processing Flow: Clinical.
Patient Age (in years)=Admission Date – Birthdate
Use the month and day portion of admission date and birthdate to yield the most accurate age.
Patient Age
< 18 years
>= 18 years
Length of Stay (in days) = Discharge Date - Admission Date
Length of Stay
> 120 days
H
<= 120 days
ICD-10-CM Principal Diagnosis Code
On Table 8.1
Patient is in the 1st STK sub-population (Ischemic STK)
Patient is eligible to be sampled for the 1st STK sub-population (Ischemic STK)
Not on Table 8.1
ICD-10-CM Principal Diagnosis Code
On Table 8.2
Patient is in the 2nd STK sub-population (Hemorrhagic STK)
Patient is eligible to be in the 2nd STK sub-population (Hemorrhagic STK)
Not on Table 8.2
Patient not in any STK sub-population
H
Patient is not eligible to be sampled for any STK sub-population
Set Initial Patient Population Reject Case Flag = "Yes"
Set Initial Patient Population Reject Case Flag = "No"
Include patient in the Initial Patient Population of the appropriate measures
Return to Transmission Data Processing Flow: Clinical (Data Transmission section)
ICD End

Stroke (STK) Initial Patient Population Algorithm Narrative

Variable Key: Patient Age, Initial Patient Population Reject Case Flag, and Length of Stay.

1. Start STK Initial Patient Population logic sub-routine. Process all cases that have successfully reached the point in the Transmission Data Processing Flow: Clinical which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Transmission Data Processing Flow: Clinical.
2. Calculate Patient Age. Patient Age, in years, is equal to the Admission Date minus the Birthdate. Use the month and day portion of admission date and birthdate to yield the most accurate age.
3. Check Patient Age:
    a. If the Patient Age is less than 18 years, the patient is not in the STK Initial Patient Population and is not eligible to be sampled for the STK measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
    b. If the Patient Age is greater than or equal to 18 years, continue processing and proceed to Length of Stay Calculation.
4. Calculate the Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.
5. Check Length of Stay:
    a. If the Length of Stay is greater than 120 days, the patient is not in the STK Initial Patient Population and is not eligible to be sampled for the STK measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
    b. If the Length of Stay is less than or equal to 120 days, continue processing and proceed to ICD-10-CM Principal Diagnosis Code Check.
6. Check ICD-10-CM Principal Diagnosis Code
    a. If the ICD-10-CM Principal Diagnosis Code is on Table 8.1, the patient is in the first Ischemic Stroke sub-population and is eligible to be sampled for the first STK sub-population. Set the Initial Patient Population Reject Case Flag to equal No. Include the patient in the Initial Patient Population for the appropriate measures. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
    b. **For Joint Commission Only, if submitting data for STK Certification Program:** If the ICD-10-CM Principal Diagnosis Code is on Table 8.2, the patient is in the second Hemorrhagic Stroke sub-population and is eligible to be sampled for the second STK sub-population. Set the Initial Patient Population Reject Case Flag to equal No. Include the patient in the Initial Patient Population for the appropriate measures. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

STK Sample Size Requirements

Hospitals that choose to sample have the option of sampling quarterly or sampling monthly. A hospital may choose to use a larger sample size than is required.

Hospitals whose Initial Patient Population size is less than the minimum number of cases per quarter/month for the sub-population cannot sample that sub-population. Hospitals utilizing this measure set with the Joint

Commission for certification purposes and have five or fewer discharges for the two combined STK sub-populations (both Medicare and non-Medicare combined) in a quarter are not required to submit STK patient level data to the Joint Commission's Data Warehouse.

Regardless of the option used, hospital samples must be monitored to ensure that sampling procedures consistently produce statistically valid and useful data. Due to exclusions, hospitals selecting sample cases MUST submit AT LEAST the minimum required sample size.

The following sample size tables for each option automatically build in the number of cases needed to obtain the required sample sizes. For information concerning how to perform sampling, refer to the Population and Sampling Specifications section in this manual.

Quarterly Sampling

A modified sampling procedure is required for hospitals performing quarterly sampling for STK. The measure set contains two independent sub-populations: Ischemic STK patients and Hemorrhagic STK patients. The two sub-populations must be sampled independently from each other.

Joint Commission certification purposes: To determine if a hospital may choose to not submit STK patient level data, the count of the discharges, for the quarter, for the two sub-populations must be five or less (i.e., the combined count of discharges equals the count of all patients in the Ischemic Patient Sub-population [1] plus the count of all patients in the Hemorrhagic Patient Sub-population [2].

1.Hospitals selecting sample cases for the Ischemic sub-population must ensure that its Initial Patient Population and sample size for the Ischemic sub-population meets the following conditions:

Quarterly Sample Size
Based on Initial Patient Population Size
for Ischemic Patient Sub-Population
Hospital's Measure

Average Quarterly Initial Patient Population "N"	Minimum Required Sample Size "n"
≥ 900	180
226-899	20% of the Initial Patient Population
45-225	45
6 - 44	No sampling; 100% of the Initial Patient Population is required
0 - 5	Submission of patient level data is not required; if submission occurs, 100% Initial Patient Population required.

2.Hospitals submitting STK data for Joint Commission certification purposes will select sample cases for the Hemorrhagic sub-population, ensuring that its Initial Patient Population and sample size for the Hemorrhagic sub-population meets the following conditions:

Quarterly Sample Size
Based on Initial Patient Population Size
for Hemorrhagic Patient Sub-Population
Hospital's Measure

Average Quarterly Initial Patient Population "N"	Minimum Required Sample Size "n"
≥ 900	180
226-899	20% of the Initial Patient Population
45-225	45
6 - 44	No sampling; 100% of the Initial Patient Population is required
0 - 5	Submission of patient level data is not required; if submission occurs, 100% Initial Patient Population required.

Monthly Sampling A modified sampling procedure is required for hospitals performing monthly sampling for STK. The measure set contains two independent sub-populations: Ischemic STK patients and Hemorrhagic STK patients. The two sub-populations must be sampled independently from each other.

1. Hospitals selecting sample cases for the Ischemic sub-population must ensure that its Initial Patient Population and sample size for the Ischemic sub-population meets the following conditions:

Monthly Sample Size
Based on Initial Patient Population Size
for Ischemic Patient Sub-Population
Hospital's Measure

Average Monthly Initial Patient Population "N"	Minimum Required Sample Size "n"
≥ 300	60
76-299	20% of the Initial Patient Population
15-75	15
< 15	No sampling; 100% Initial Patient Population required

2. Hospitals submitting STK data for Joint Commission certification purposes will select sample cases for the Hemorrhagic sub-population, ensuring that its Initial Patient Population and sample size for the Hemorrhagic sub-population meets the following conditions:

Monthly Sample Size
Based on Initial Patient Population Size
for Hemorrhagic Patient Sub-Population
Hospital's Measure

Average Monthly Initial Patient Population "N"	Minimum Required Sample Size "n"
≥ 300	60
76-299	20% of the Initial Patient Population
15-75	15
< 15	No sampling; 100% Initial Patient Population required

Sample Size Examples

Note: Hospitals utilizing STK for Joint Commission certification purposes must include all sampled STK sub-populations in the calculation of all STK measures. All of the STK measures' specific exclusion criteria are used to filter out cases that do not belong in the measure denominator.

Quarterly sampling

- Quarterly sampling for the Ischemic sub-population:
    - A hospital's Ischemic sub-population is 392 during the first quarter. Using the quarterly sampling table for the Ischemic sub-population, the sample size required is 20% of this sub-population, or 79 cases for the quarter (twenty percent of 392 equals 78.4 rounded up to the next whole number equals 79)
    - A hospital's Ischemic sub-population is 100 during the first quarter. The required quarterly sample is 45 cases.
    - If the hospital chooses to submit patient level data: A hospital's Ischemic sub-population is 5 patients during the first quarter. Using the quarterly sampling table for the Ischemic sub-population, the sample size is less than the minimum required quarterly sample size, so 100% of this sub-population is sampled.
- Quarterly sampling for the Hemorrhagic sub-population for Joint Commission certification purposes:
    - A hospital's Hemorrhagic sub-population is 392 during the first quarter. Using the quarterly sampling table for the Hemorrhagic sub-population, the sample size required is 20% of this sub-population, or 79 cases for the quarter (twenty percent of 392 equals 78.4 rounded up to the next whole number equals 79).
    - A hospital's Hemorrhagic sub-population is 3 patients during the first quarter. Using the quarterly sampling table for the Hemorrhagic sub-population, the sample size is less than the minimum required quarterly sample size, so 100% of this sub-population is sampled.
    - A hospital's Hemorrhagic sub-population is 100 during the first quarter. The required quarterly sample is 45 cases.
- Quarterly sampling for the two combined populations for Joint Commission certification purposes.
    - The STK Initial Patient Population sizes for a hospital are 392 and 5 patients respectively per the sub-populations for the quarter. Since the total Initial Patient Population for STK is 397, the hospital must submit patient level data. The required quarterly sample sizes for each sub-population would be 79 and 5.
        - The Ischemic sub-population has 392 patients per quarter, which requires a 20% sample size, or 79 cases (twenty percent of 392 equals 78.4 rounded to the next highest whole number equals 79).

        - The Hemorrhagic sub-population is less than the minimum required quarterly sample size, so 100% of this sub-population is sampled.
    - The STK Initial Patient Population sizes for a hospital are 1 and 3 patients respectively per the sub-populations for the quarter. Since the total Initial Patient Population for STK is 4, the hospital may choose to not submit patient level data. If the hospital chooses to submit patient level data:
        - The Joint Commission: the required quarterly sample size would be 100% of the patient population or 4 cases for the quarter.

Monthly Sampling

- Monthly sampling for the Ischemic sub-population:
    - A hospital's Ischemic sub-population is 228 during March. Using the monthly sampling table for the Ischemic sub-population, the sample size required is 20% of this sub-population, or 46 cases for the quarter (twenty percent of 228 equals 45.6 rounded up to the next whole number equals 46).
    - A hospital's Ischemic sub-population is 316 during January. The required quarterly sample is 60 cases.
    - A hospital's Ischemic sub-population is 5 patients during February. Using the monthly sampling table for the Ischemic sub-population, the sample size is less than the minimum required monthly sample size, so 100% of this sub-population is sampled.
- Monthly sampling for the Hemorrhagic sub-population for Joint Commission certification purposes:
    - A hospital's Hemorrhagic sub-population is 228 during March. Using the monthly sampling table for the Hemorrhagic sub-population, the sample size required is 20% of this sub-population, or 46 cases for the quarter (twenty percent of 228 equals 45.6 rounded up to the next whole number equals 46).
    - A hospital's Hemorrhagic sub-population is 3 patients during January. Using the monthly sampling table for the Hemorrhagic sub-population, the sample size is less than the minimum required quarterly sample size, so 100% of this sub-population is sampled.
    - A hospital's Hemorrhagic sub-population is 316 during February. The required monthly sample is 60 cases.

Measure Information Form

Measure Set: Stroke (STK)

Set Measure ID: STK-1

Performance Measure Name: Venous Thromboembolism (VTE Prophylaxis)

Description: Ischemic or hemorrhagic stroke patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after hospital admission

Rationale: Stroke patients are at increased risk of developing venous thromboembolism (VTE). One study noted proximal deep vein thrombosis in more than a third of patients with moderately severe stroke. Reported rates of occurrence vary depending on the type of screening used. Prevention of VTE, through the use of prophylactic therapies, in at risk patients is a noted recommendation in numerous clinical practice guidelines. For acutely ill stroke patients who are confined to bed, thromboprophylaxis with low-molecular-weight heparin (LMWH), low-dose unfractionated heparin (LDUH), or fondaparinux is recommended if there are no contraindications. Aspirin alone is not recommended as an agent to prevent VTE.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic or hemorrhagic stroke patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given on the day of or the day after hospital admission.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Reason for No VTE Prophylaxis – Hospital Admission*
> - *Reason for Oral Factor Xa Inhibitor*
> - *VTE Prophylaxis*
> - *VTE Prophylaxis Date*

Denominator Statement: Ischemic or hemorrhagic stroke patients

> **Included Populations:** Discharges with an ICD-10-CM Principal Diagnosis Code for ischemic or hemorrhagic stroke as defined in Appendix A, Table 8.1 or Table 8.2.
>
> **Excluded Populations:**

- Patients less than 18 years of age
- Patients who have a Length of Stay less than 2 days
- Patients who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented on day of or day after hospital arrival
- Patients enrolled in clinical trials
- Patients admitted for Elective Carotid Intervention

Data Elements:

- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Date*
- *Elective Carotid Intervention*
- *ICD-10-CM Principal Diagnosis Code*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal or other ICD-10 diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

- Adams, H.P., G. del Zoppo, M. J. Alberts, D. L. Bhatt, L. Brass, A. Furlan, R. L. Grubb, et al. "Guidelines for the Early Management of Adults with Ischemic Stroke: A Guideline from the American Heart Association/American Stroke Association Stroke Council, Clinical Cardiology Council, Cardiovascular Radiology and Intervention Council, and the Atherosclerotic Peripheral Vascular Disease and Quality of Care Outcomes in Research Interdisciplinary Working Groups." Stroke 38 (2007): 1655-711.
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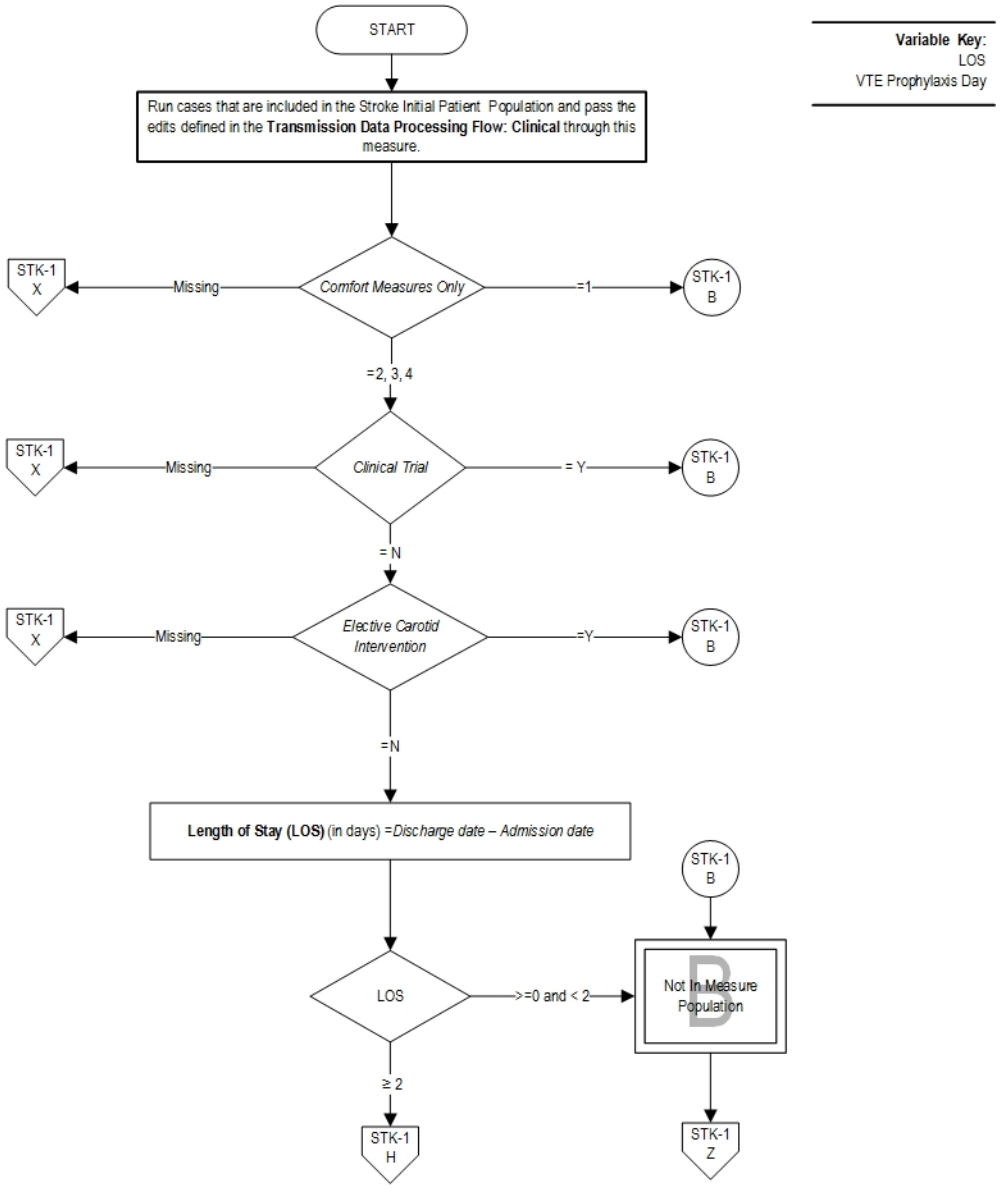
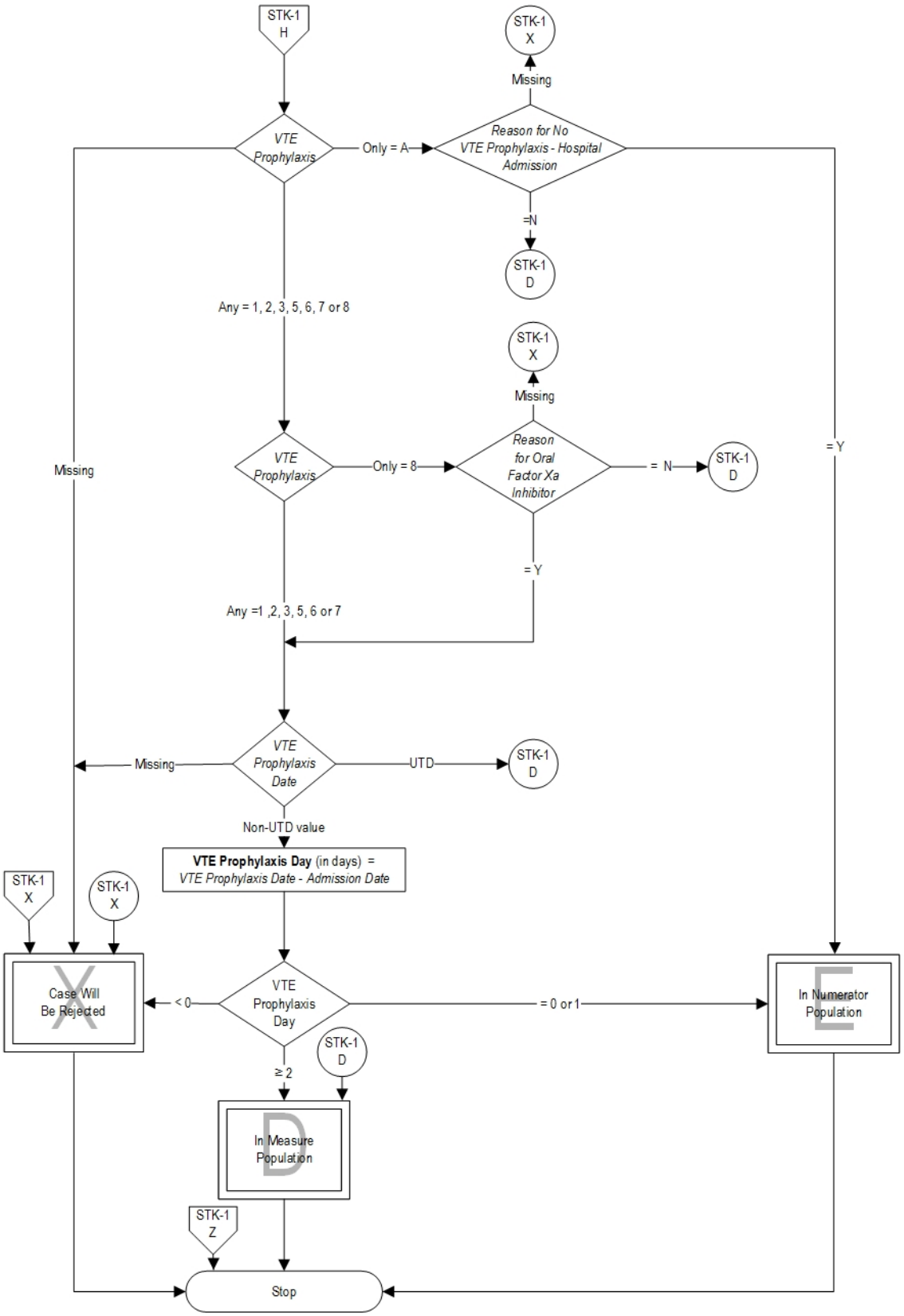
Measure Algorithm:

STK-1: Venous Thromboembolism Prophylaxis

Numerator: Ischemic or hemorrhagic stroke patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given on the day of day after hospital admission.

Denominator: Ischemic or hemorrhagic stroke patients




STK-1 H
STK-1 X
Missing
VTE Prophylaxis
Only = A
Reason for No VTE Prophylaxis - Hospital Admission
=N
STK-1 D
= Y
Any = 1, 2, 3, 5, 6, 7 or 8
STK-1 X
Missing
VTE Prophylaxis
Only = 8
Reason for Oral Factor Xa Inhibitor
= N
STK-1 D
Missing
= Y
Any =1 ,2, 3, 5, 6 or 7
VTE Prophylaxis Date
Missing
UTD
STK-1 D
Non-UTD value
VTE Prophylaxis Day (in days) = VTE Prophylaxis Date - Admission Date
STK-1 X
STK-1 X
Case Will Be Rejected
X
< 0
VTE Prophylaxis Day
= 0 or 1
In Numerator Population
E
STK-1 D
≥ 2
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D
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Stop

Measure Information Form

Measure Set: Stroke (STK)

Set Measure ID: STK-10

Performance Measure Name: Assessed for Rehabilitation

Description: Ischemic or hemorrhagic stroke patients who were assessed for rehabilitation services.

Rationale: Each year about 700,000 people experience a new or recurrent stroke, which is the nation's third leading cause of death. Approximately two thirds of these individuals survive and require rehabilitation. Stroke is a leading cause of serious, long-term disability in the United States, with about 4.4 million stroke survivors alive today. Forty percent of stroke patients are left with moderate functional impairment and 15 to 30 percent with severe disability. More than 60% of those who have experienced stroke, serious injury, or a disabling disease have never received rehabilitation. Stroke rehabilitation should begin as soon as the diagnosis of stroke is established and life-threatening problems are under control. Among the high priorities for stroke are to mobilize the patient and encourage resumption of self-care activities as soon as possible. A considerable body of evidence indicates better clinical outcomes when patients with stroke are treated in a setting that provides coordinated, multidisciplinary stroke-related evaluation and services. Effective rehabilitation interventions initiated early following stroke can enhance the recovery process and minimize functional disability. The primary goal of rehabilitation is to prevent complications, minimize impairments, and maximize function.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic or hemorrhagic stroke patients assessed for or who received rehabilitation services.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Assessed for Rehabilitation Services*

Denominator Statement: Ischemic or hemorrhagic stroke patients.

> **Included Populations:** Discharges with an ICD-10-CM Principal Diagnosis Code for ischemic or hemorrhagic stroke as defined in Appendix A, Table 8.1 or Table 8.2.

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in clinical trials
- Patients admitted for Elective Carotid Intervention
- Patients discharged to another hospital
- Patients who left against medical advice
- Patients who expired
- Patients discharged to home for hospice care
- Patients discharged to a health care facility for hospice care

Data Elements:

- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Discharge Date*
- *Discharge Disposition*
- *Elective Carotid Intervention*
- *ICD-10-CM Principal Diagnosis Code*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal or other ICD-10 diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

- Bates, B., J. Y. Choi, P. W. Duncan, J. J. Glasberg, G. D. Graham, R. C. Katz, K. Lamberty, et al. "Veterans Affairs/Department of Defense Clinical Practice Guideline for the Management of Adult Stroke Rehabilitation Care: Executive Summary." [In eng]. Stroke 36, no. 9 (Sep 2005): 2049-56.

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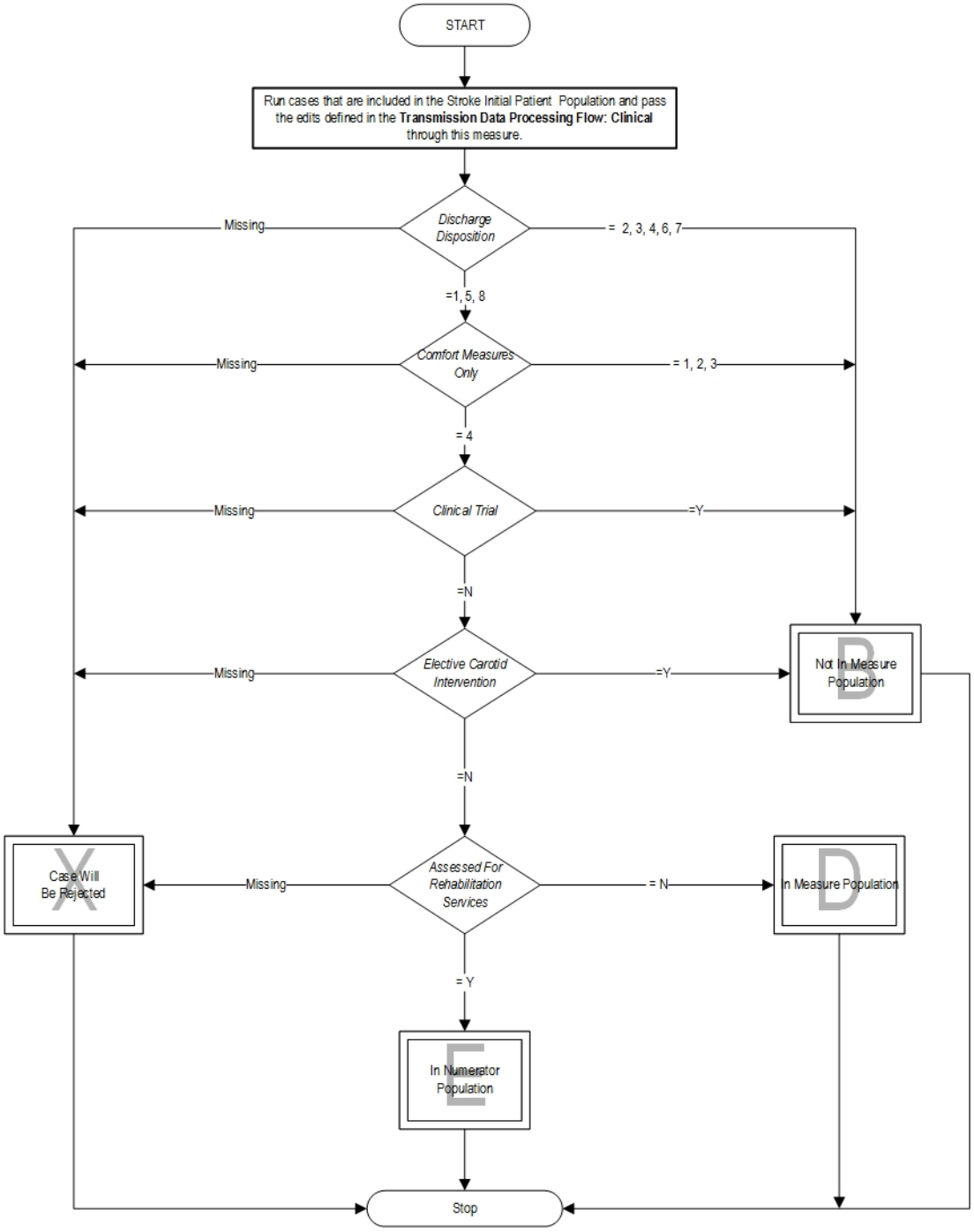
Measure Algorithm:

STK - 10: Assessed for Rehabilitation

Numerator: Ischemic or hemorrhagic stroke patients assessed for or who received rehabilitation services.

Denominator: Ischemic or hemorrhagic stroke patients.



Measure Information Form

Measure Set: Stroke (STK)

Set Measure ID: STK-2

Performance Measure Name: Discharged on Antithrombotic Therapy

Description: Ischemic stroke patients prescribed antithrombotic therapy at hospital discharge

Rationale: The effectiveness of antithrombotic agents in reducing stroke mortality, stroke-related morbidity and recurrence rates has been studied in several large clinical trials. While the use of these agents for patients with acute ischemic stroke and transient ischemic attacks continues to be the subject of study, substantial evidence is available from completed studies. Data at this time suggest that antithrombotic therapy should be prescribed at discharge following acute ischemic stroke to reduce stroke mortality and morbidity as long as no contraindications exist.

For patients with a stroke due to a cardioembolic source (e.g., atrial fibrillation, mechanical heart valve), warfarin is recommended unless contraindicated. In recent years, novel oral anticoagulants (NOACs) have been developed and approved by the U.S. Food and Drug Administration (FDA) for stroke prevention, and may be considered as an alternative to warfarin for select patients. Anticoagulation therapy is not generally recommended for secondary stroke prevention in patients presumed to have a non-cardioembolic stroke.

Anticoagulants at doses to prevent venous thromboembolism are insufficient antithrombotic therapy to prevent recurrent ischemic stroke or TIA.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic stroke patients prescribed antithrombotic therapy at hospital discharge.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Antithrombotic Therapy Prescribed at Discharge*

Denominator Statement: Ischemic stroke patients.

> **Included Populations:** Discharges with an ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.1.

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in clinical trials
- Patients admitted for Elective Carotid Intervention
- Patients discharged to another hospital
- Patients who left against medical advice
- Patients who expired
- Patients discharged to home for hospice care
- Patients discharged to a health care facility for hospice care
- Patients with a documented Reason For Not Prescribing Antithrombotic Therapy at Discharge

Data Elements:

- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Date*
- *Discharge Disposition*
- *Elective Carotid Intervention*
- *ICD-10-CM Principal Diagnosis Code*
- *Reason for Not Prescribing **Antithrombotic** Therapy at Discharge*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal or other ICD-10 diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

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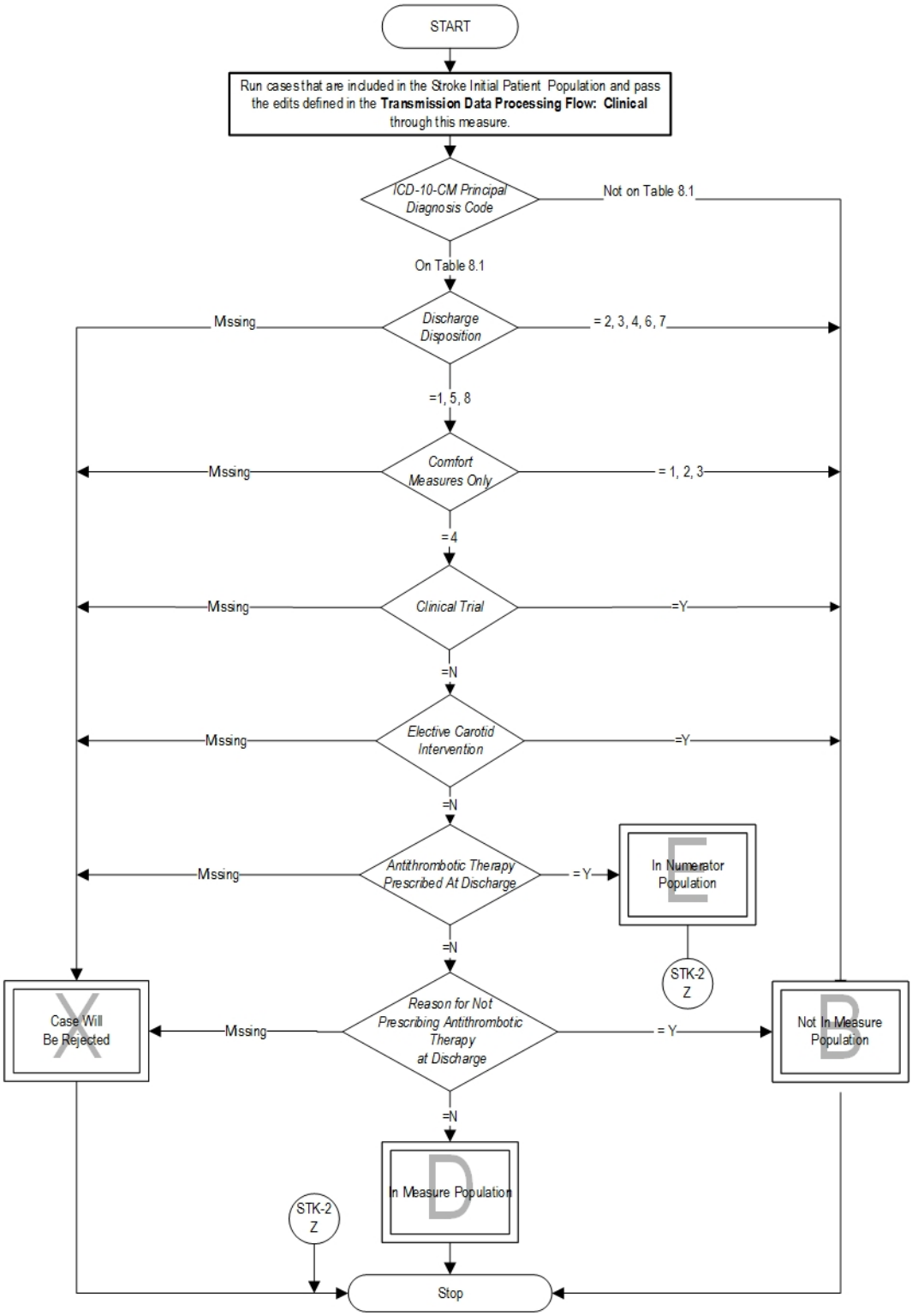
Measure Algorithm:

STK-2: Discharged on Antithrombotic Therapy

Numerator: Ischemic stroke patients prescribed antithrombotic therapy at hospital discharge

Denominator: Ischemic stroke patients.



Measure Information Form

Measure Set: Stroke (STK)

Set Measure ID: STK-3

Performance Measure Name: Anticoagulation Therapy for Atrial Fibrillation/Flutter

Description: Ischemic stroke patients with atrial fibrillation/flutter who are prescribed anticoagulation therapy at hospital discharge.

Rationale: Nonvalvular atrial fibrillation (NVAF) is a common arrhythmia and an important risk factor for stroke. It is one of several conditions and lifestyle factors that have been identified as risk factors for stroke. It has been estimated that over 2 million adults in the United States have NVAF. While the median age of patients with atrial fibrillation is 75 years, the incidence increases with advancing age. For example, The Framingham Heart Study noted a dramatic increase in stroke risk associated with atrial fibrillation with advancing age, from 1.5% for those 50 to 59 years of age to 23.5% for those 80 to 89 years of age. Furthermore, a prior stroke or transient ischemic attack (TIA) are among a limited number of predictors of high stroke risk within the population of patients with atrial fibrillation. Therefore, much emphasis has been placed on identifying methods for preventing recurrent ischemic stroke as well as preventing first stroke. Prevention strategies focus on the modifiable risk factors such as hypertension, smoking, and atrial fibrillation. Analysis of five placebo-controlled clinical trials investigating the efficacy of warfarin in the primary prevention of thromboembolic stroke, found the relative risk of thromboembolic stroke was reduced by 68% for atrial fibrillation patients treated with warfarin. In recent years, novel oral anticoagulant agents (NOACs) have been developed and approved by the U.S. Food and Drug Administration (FDA) for stroke prevention, and may be considered as an alternative to warfarin for select patients. The administration of anticoagulation therapy, unless there are contraindications, is an established effective strategy in preventing recurrent stroke in high stroke risk-atrial fibrillation patients with TIA or prior stroke.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic stroke patients prescribed anticoagulation therapy at hospital discharge.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Anticoagulation Therapy Prescribed at Discharge*

Denominator Statement: Ischemic stroke patients with documented atrial fibrillation/flutter.

Included Populations:

- Discharges with an ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.1
- Patients with documented Atrial Fibrillation/Flutter

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in clinical trials
- Patients admitted for Elective Carotid Intervention
- Patients discharged to another hospital
- Patients who left against medical advice
- Patients who expired
- Patients discharged to home for hospice care
- Patients discharged to a health care facility for hospice care
- Patients with a documented Reason For Not Prescribing Anticoagulation Therapy

Data Elements:

- *Admission Date*
- *Atrial Fibrillation/Flutter*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Date*
- *Discharge Disposition*
- *Elective Carotid Intervention*
- *ICD-10-CM Principal Diagnosis Code*
- *Reason for Not Prescribing **Anticoagulation** Therapy at Discharge*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal or other ICD-10 diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

- Berge, E., M. Abdelnoor, P. H. Nakstad, and P. M. Sandset. "Low Molecular-Weight Heparin Versus Aspirin in Patients with Acute Ischaemic Stroke and Atrial Fibrillation: A Double-Blind Randomised Study. Haest Study Group. Heparin in Acute Embolic Stroke Trial." [In eng]. Lancet 355, no. 9211 (Apr 8 2000): 1205-10.
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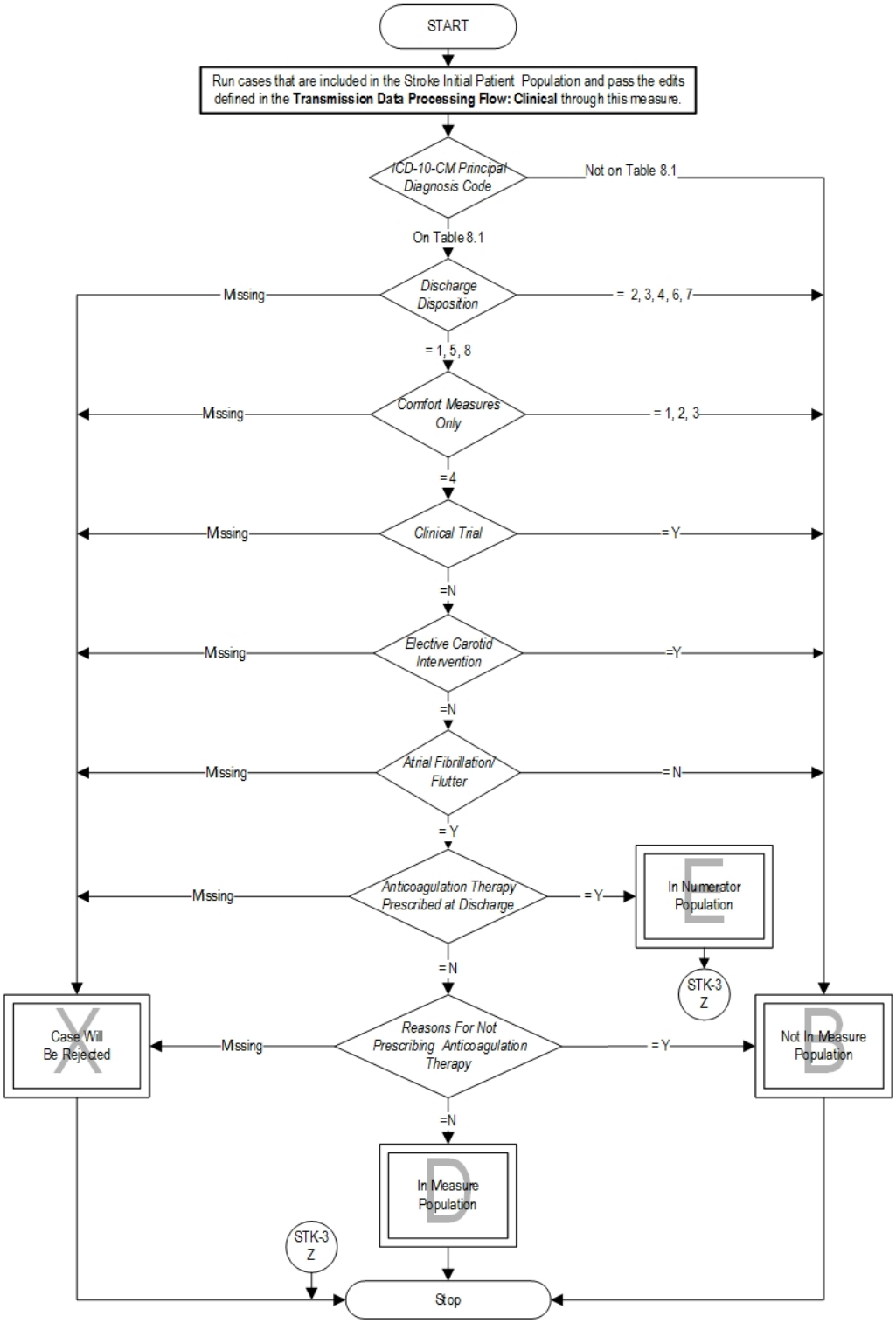
Measure Algorithm:

STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter

Numerator: Ischemic stroke patients prescribed anticoagulation therapy at hospital discharge.

Denominator: Ischemic stroke patients with documented atrial fibrillation/flutter.



Measure Information Form

Measure Set: Stroke (STK)

Set Measure ID: STK-4

Performance Measure Name: Thrombolytic Therapy

Description: Acute ischemic stroke patients who arrive at this hospital within 2 hours of time last known well and for whom IV alteplase was initiated at this hospital within 3 hours of time last known well.

Rationale: The administration of IV alteplase to carefully screened, eligible patients with acute ischemic stroke has been shown to be beneficial in several clinical trials. These included two positive randomized controlled trials in the United States: The National Institute of Neurological Disorders and Stroke (NINDS) Studies, Part I and Part II. Based on the results of these studies, the Food and Drug Administration (FDA) approved the use of intravenous alteplase for the treatment of acute ischemic stroke when given within 3 hours of stroke symptom onset. A large meta-analysis controlling for factors associated with stroke outcome confirmed the benefit of IV alteplase in patients treated within 3 hours of symptom onset. Physicians with experience and skill in stroke management and the interpretation of CT scans should supervise treatment.

The European Cooperative Acute Stroke Study (ECASS) III trial indicated that intravenous rtPA can be given safely to, and can improve outcomes for, carefully selected patients treated 3 to 4.5 hours after stroke; however, as the NINDS investigators concluded, the earlier that IV thrombolytic therapy is initiated, the better the patient outcome. Therefore, the target for IV alteplase initiation remains within 3 hours of time last known well. The administration of IV alteplase beyond 3 hours of stroke symptom onset has not been FDA approved.

Although the benefit of IV alteplase has been well established, only a minority of patients with acute ischemic stroke actually receive this medication across the United States. Recent recommendations from the American Heart Association/American Stroke Association and FDA remove or make less specific many previous contraindications and warnings for therapy.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Acute ischemic stroke patients for whom IV alteplase was initiated at this hospital within 3 hours (less than or equal to 180 minutes) of time last known well.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None

Data Elements:

- *Date Last Known Well*
- *IV Alteplase Initiation*
- *IV Alteplase Initiation Date*
- *IV Alteplase Initiation Time*
- *Time Last Known Well*

Denominator Statement: Acute ischemic stroke patients whose time of arrival is within 2 hours (less than or equal to 120 minutes) of time last known well.

Included Populations: Discharges with an ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.1

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Patients enrolled in clinical trials
- Patients admitted for Elective Carotid Intervention
- Time Last Known Well to arrival in the emergency department greater than 2 hours
- Patients with a documented Reason For Extending the Initiation of IV Alteplase
- Patients with a documented Reason For Not Initiating IV Alteplase

Data Elements:

- *Admission Date*
- *Arrival Date*
- *Arrival Time*
- *Birthdate*
- *Clinical Trial*
- *Date Last Known Well*
- *Discharge Date*
- *ED Patient*
- *Elective Carotid Intervention*
- *ICD-10-CM Principal Diagnosis Code*
- *Last Known Well*
- *Reason for Extending the Initiation of IV Alteplase*
- *Reason for Not Initiating IV Alteplase*
- *Time Last Known Well*

Risk Adjustment: Yes.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service.

However, complete documentation includes the principal or other ICD-10 diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

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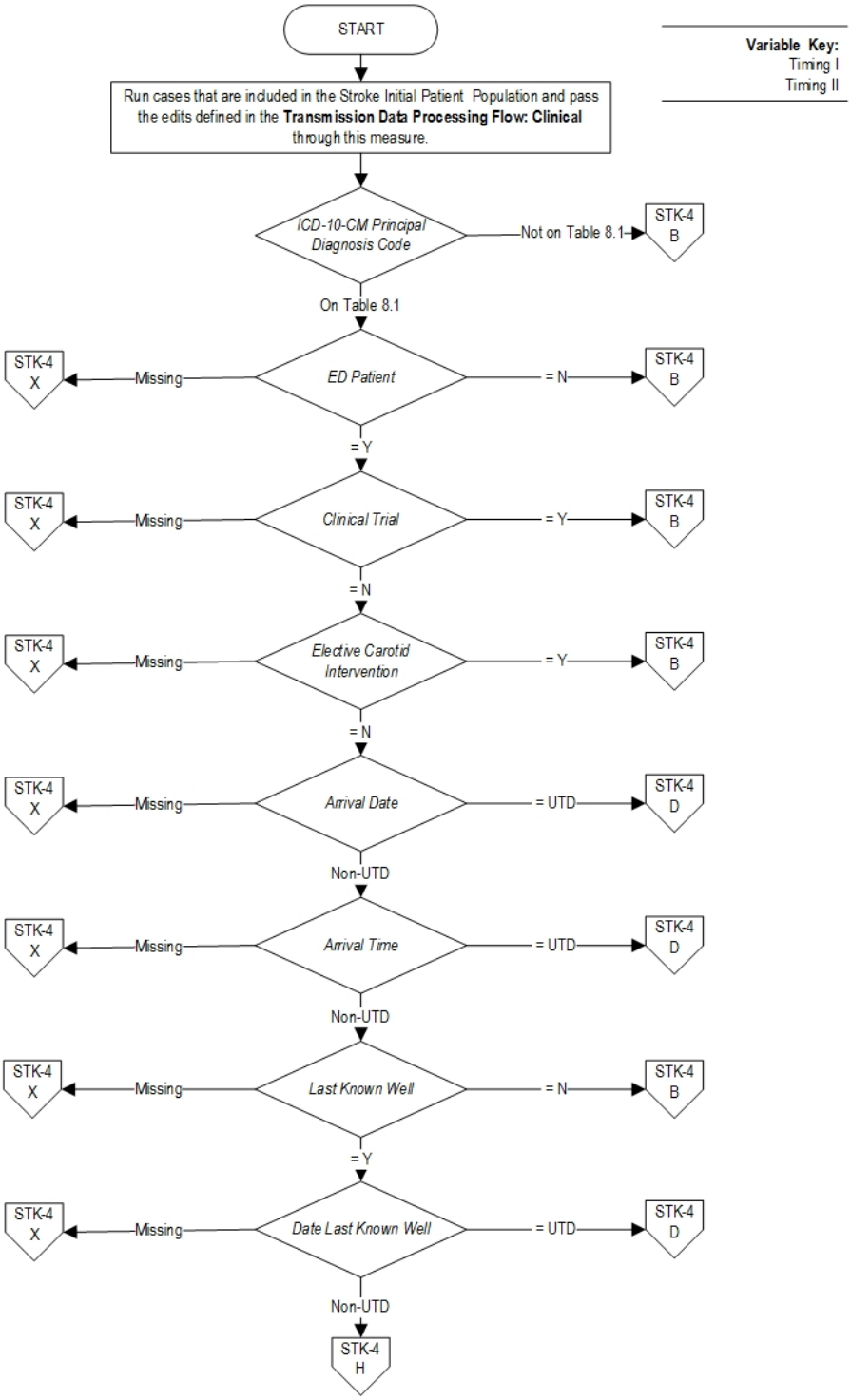
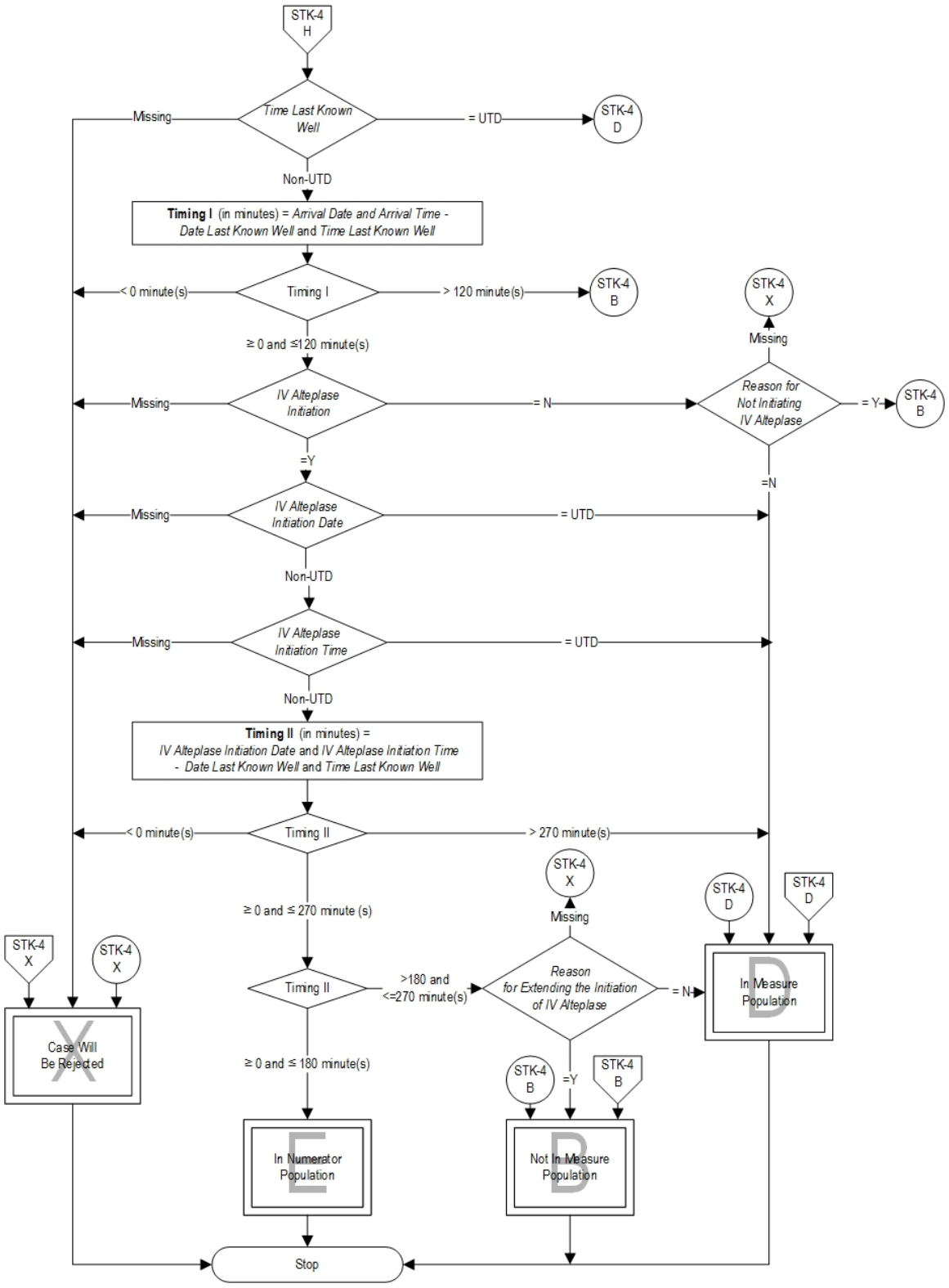
Measure Algorithm:

STK - 4: Thrombolytic Therapy

Numerator: Acute ischemic stroke patients for whom IV alteplase therapy was initiated at this hospital within 3 hours (≤ 180 minutes) of time last known well.

Denominator: Acute ischemic stroke patients whose time of arrival is within 2 hours (≤ 120 minutes) of time last known well.




STK-4 H
Time Last Known Well
Missing
= UTD
STK-4 D
Non-UTD
Timing I (in minutes) = Arrival Date and Arrival Time - Date Last Known Well and Time Last Known Well
Timing I
< 0 minute(s)
> 120 minute(s)
STK-4 B
≥ 0 and ≤120 minute(s)
IV Alteplase Initiation
Missing
= N
Reason for Not Initiating IV Alteplase
STK-4 X
Missing
= Y
STK-4 B
=Y
=N
IV Alteplase Initiation Date
Missing
= UTD
Non-UTD
IV Alteplase Initiation Time
Missing
= UTD
Non-UTD
Timing II (in minutes) = IV Alteplase Initiation Date and IV Alteplase Initiation Time - Date Last Known Well and Time Last Known Well
Timing II
< 0 minute(s)
> 270 minute(s)
≥ 0 and ≤ 270 minute (s)
STK-4 X
Missing
STK-4 D
STK-4 D
STK-4 X
STK-4 X
Timing II
>180 and <=270 minute(s)
Reason for Extending the Initiation of IV Alteplase
= N
In Measure Population
D
Case Will Be Rejected
X
≥ 0 and ≤ 180 minute(s)
STK-4 B
=Y
STK-4 B
In Numerator Population
E
Not In Measure Population
B
Stop

Measure Information Form

Measure Set: Stroke (STK)

Set Measure ID: STK-5

Performance Measure Name: Antithrombotic Therapy By End of Hospital Day Two

Description: Ischemic stroke patients administered antithrombotic therapy by the end of hospital day 2.

Rationale: The effectiveness of antithrombotic agents in reducing stroke mortality, stroke-related morbidity and recurrence rates has been studied in several large clinical trials. While the use of these agents for patients with acute ischemic stroke and transient ischemic attacks continues to be the subject of study, substantial evidence is available from completed studies. Data at this time suggest that antithrombotic therapy should be administered within 2 days of symptom onset in acute ischemic stroke patients to reduce stroke mortality and morbidity as long as no contraindications exist.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic stroke patients who had antithrombotic therapy administered by end of hospital day 2.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Antithrombotic Therapy Administered by End of Hospital Day 2*

Denominator Statement: Ischemic stroke patients.

> **Included Populations:** Discharges with an ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.1.
>
> **Excluded Populations:**
>
> - Patients less than 18 years of age
> - Patients who have a Duration of Stay less than 2 days
> - Patients who have a Length of Stay greater than 120 days
> - Patients with Comfort Measures Only documented on day of or day after arrival
> - Patients enrolled in clinical trials

- Patients admitted for Elective Carotid Intervention
- Patients discharged prior to the end of hospital day 2
- Patients with IV OR IA Alteplase Administered at This Hospital or Within 24 Hours Prior to Arrival
- Patients with a documented Reason for Not Administering Antithrombotic Therapy by End of Hospital Day 2

Data Elements:

- *Admission Date*
- *Arrival Date*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Date*
- *Elective Carotid Intervention*
- *ICD-10-CM Principal Diagnosis Code*
- *IV OR IA Alteplase Administered at This Hospital or Within 24 Hours Prior to Arrival*
- *Reason for Not Administering Antithrombotic Therapy by End of Hospital Day 2*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal or other ICD-10 diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

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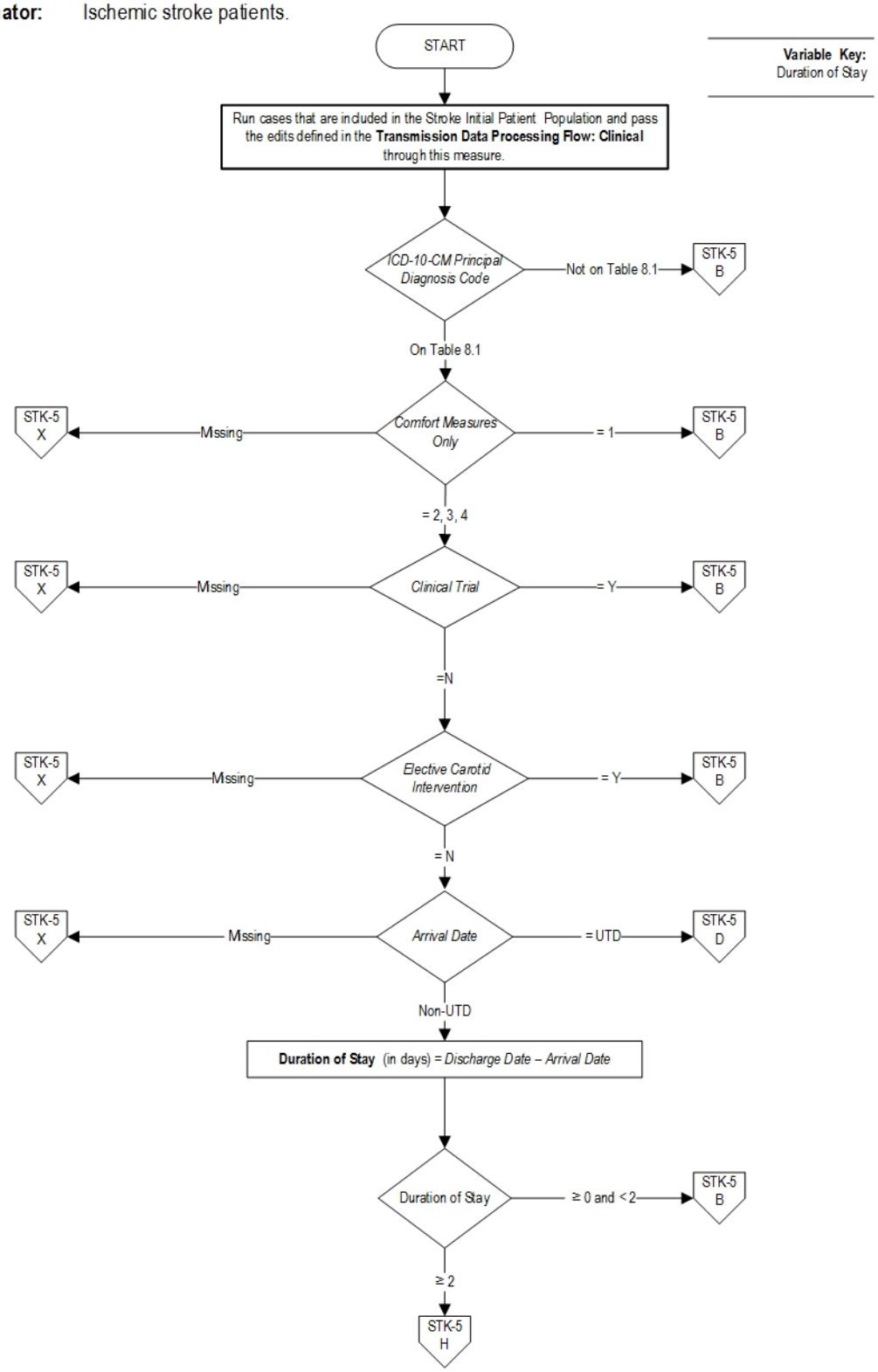
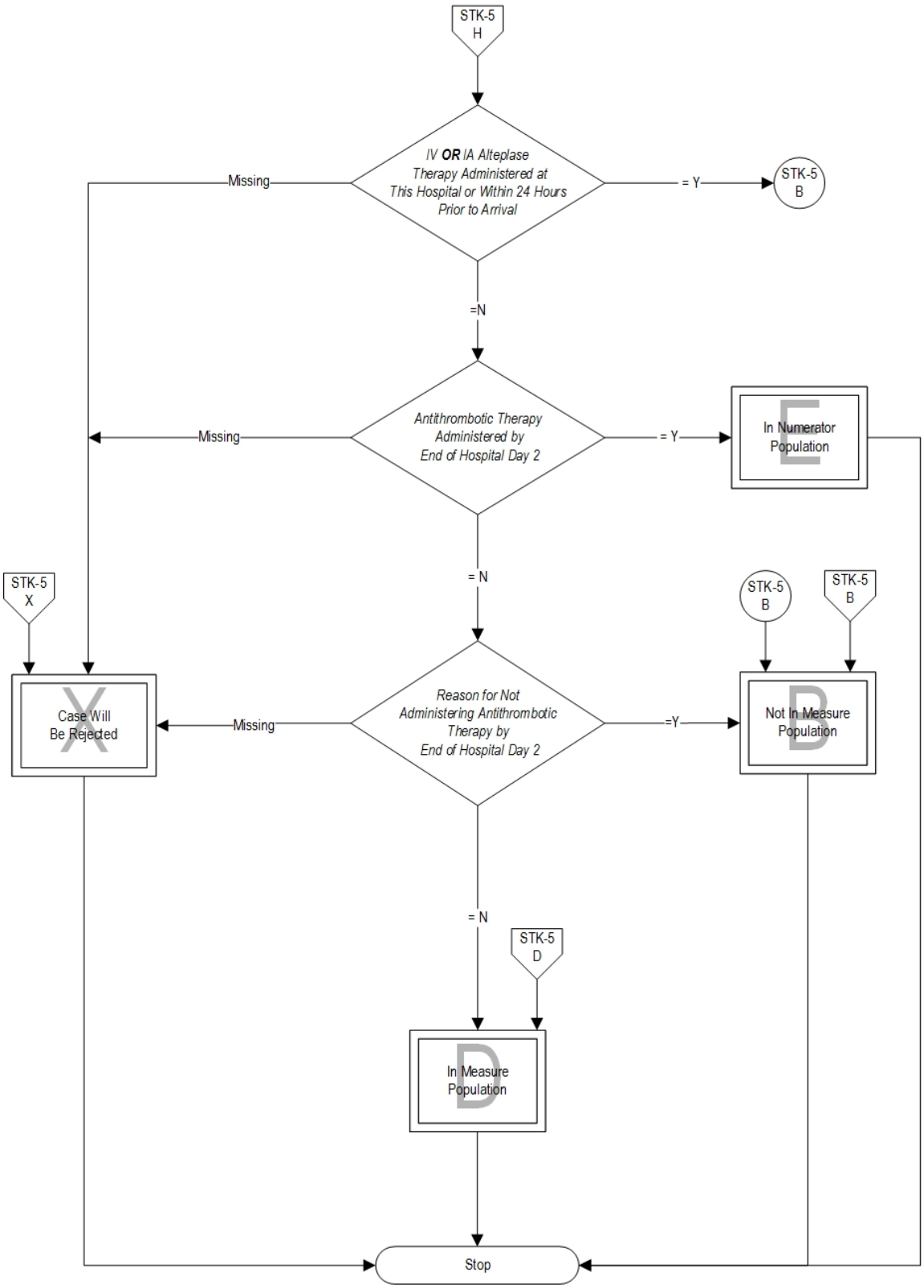
Measure Algorithm:

STK - 5: Antithrombotic Therapy By End of Hospital Day 2

Numerator: Ischemic stroke patients who had antithrombotic therapy administered by end of hospital day 2.

Denominator: Ischemic stroke patients.




STK-5
H
IV OR IA Alteplase Therapy Administered at This Hospital or Within 24 Hours Prior to Arrival
Missing
= Y
STK-5
B
=N
Antithrombotic Therapy Administered by End of Hospital Day 2
Missing
= Y
E
In Numerator Population
STK-5
X
= N
STK-5
B
STK-5
B
X
Case Will Be Rejected
Missing
Reason for Not Administering Antithrombotic Therapy by End of Hospital Day 2
=Y
B
Not In Measure Population
= N
STK-5
D
D
In Measure Population
Stop

Measure Information Form

Measure Set: Stroke (STK)

Set Measure ID: STK-6

Performance Measure Name: Discharged on Statin Medication

Description: Ischemic stroke patients who are prescribed statin medication at hospital discharge.

Rationale: There is an extensive and consistent body of evidence supporting the use of statins for secondary prevention in patients with clinically evident atherosclerotic cardiovascular disease (ASCVD), which includes individuals with ischemic stroke due to large artery atherosclerosis, individuals with ischemic stroke due to intrinsic small vessel disease, and individuals with ischemic stroke not directly due to atherosclerosis but with clinically evident atherosclerotic disease in an uninvolved cerebral or noncerebral bed. Both women and men with clinical ASCVD are at increased risk for recurrent ASCVD and ASCVD death. High-intensity statin therapy should be initiated or continued as first-line therapy in women and men less than or equal to 75 years of age who have clinical ASCVD, unless contraindicated. In patients with clinical ASCVD and a contraindication to high-intensity statin therapy, moderate-intensity therapy should be considered as an alternative if it can be tolerated. In individuals greater than 75 years of age, the potential for ASCVD risk reduction benefits, adverse effects, drug-drug interactions, and patient preferences should be considered, and statin therapy individualized based on these considerations (Stone, 2013).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic stroke patients prescribed statin medication at hospital discharge.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Statin Medication Prescribed at Discharge*

Denominator Statement: Ischemic stroke patients

> **Included Populations:** Discharges with an ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.1
>
> **Excluded Populations:**

- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in clinical trials
- Patients admitted for Elective Carotid Intervention
- Patients discharged to another hospital
- Patients who left against medical advice
- Patients who expired
- Patients discharged to home for hospice care
- Patients discharged to a health care facility for hospice care
- Patients with a Reason for Not Prescribing Statin Medication at Discharge

Data Elements:

- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Date*
- *Discharge Disposition*
- *ICD-10-CM Principal Diagnosis Code*
- *Reason for Not Prescribing Statin Medication at Discharge*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical record documents. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal or other ICD-10 diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

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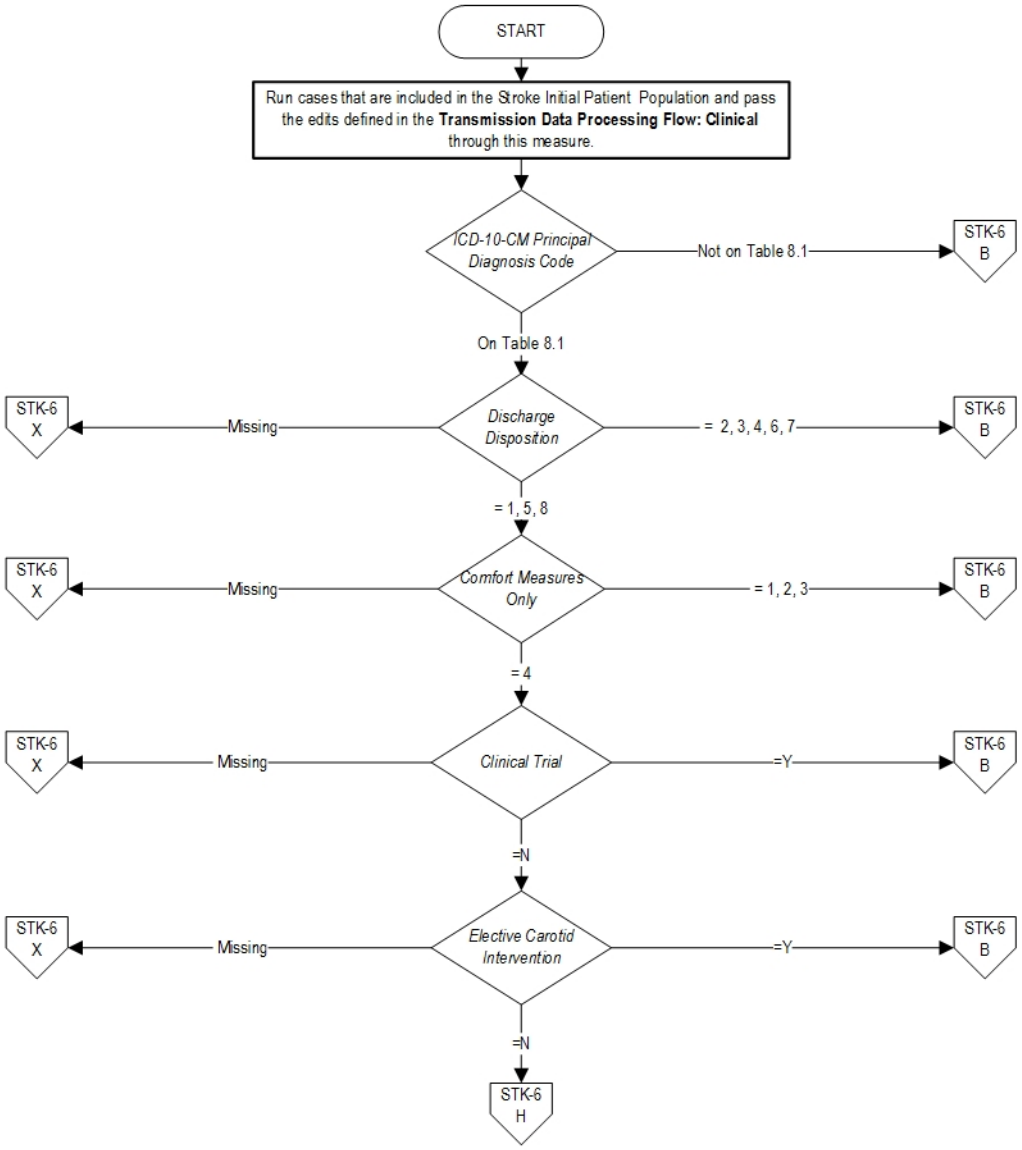
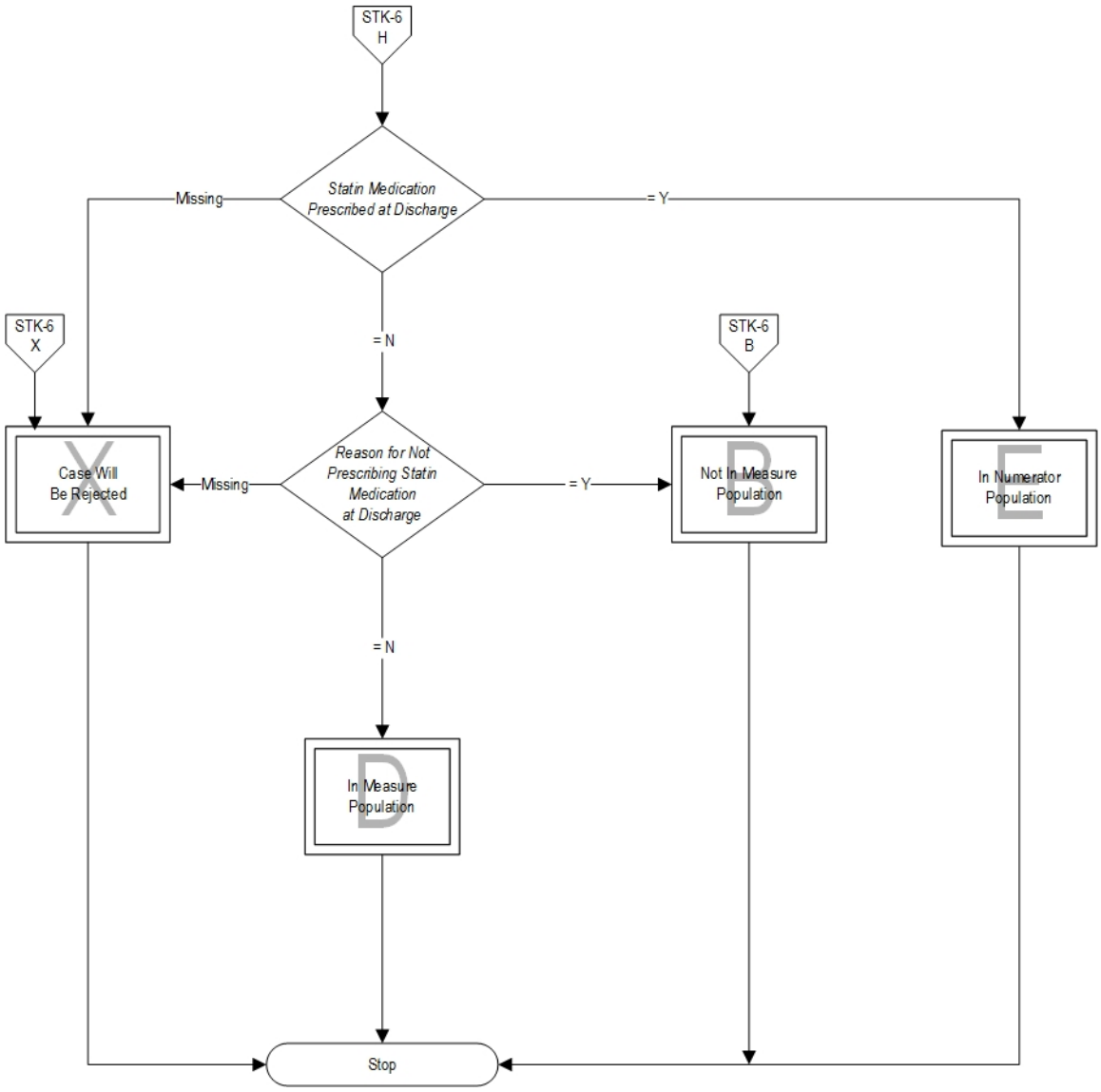
Measure Algorithm:

STK - 6: Discharged on Statin Medication

Numerator: Ischemic stroke patients prescribed statin medication at hospital discharge.

Denominator: Ischemic stroke patients.




STK-6
H
Statin Medication Prescribed at Discharge
Missing
= Y
= N
STK-6
X
STK-6
B
X
Case Will Be Rejected
Missing
Reason for Not Prescribing Statin Medication at Discharge
= Y
D
Not In Measure Population
E
In Numerator Population
= N
D
In Measure Population
Stop

Measure Information Form

Measure Set: Stroke (STK)

Set Measure ID: STK-8

Performance Measure Name: Stroke Education

Description: Ischemic or hemorrhagic stroke patients or their caregivers who were given educational materials during the hospital stay addressing all of the following: activation of emergency medical system, need for follow-up after discharge, medications prescribed at discharge, risk factors for stroke, and warning signs and symptoms of stroke.

Rationale: There are many examples of how patient education programs for specific chronic conditions have increased healthful behaviors, improved health status, and/or decreased health care costs of their participants. Clinical practice guidelines include recommendations for patient and family education during hospitalization as well as information about resources for social support services. Some clinical trials have shown measurable benefits in patient and caregiver outcomes with the application of education and support strategies. The type of stroke experienced and the resulting outcomes will play a large role in determining not only the course of treatment but also what education will be required. Patient education should include information about the event (e.g., cause, treatment, and risk factors), the role of various medications or strategies, as well as desirable lifestyle modifications to reduce risk or improve outcomes. Family/caregivers will also need guidance in planning effective and realistic care strategies appropriate to the patient's prognosis and potential for rehabilitation.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic or hemorrhagic stroke patients with documentation that they or their caregivers were given educational material addressing all of the following:
1. Activation of emergency medical system
2. Follow-up after discharge
3. Medications prescribed at discharge
4. Risk factors for stroke
5. Warning signs and symptoms of stroke

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Education Addresses Activation of Emergency Medical System*
> - *Education Addresses Follow-up After Discharge*
> - *Education Addresses Medication Prescribed at Discharge*

- *Education Addresses Risk Factors for Stroke*
- *Education Addresses Warning Signs and Symptoms of Stroke*

Denominator Statement: Ischemic stroke or hemorrhagic stroke patients discharged home.

Included Populations:

- Discharges with an ICD-10-CM Principal Diagnosis Code for ischemic or hemorrhagic stroke as defined in Appendix A, Table 8.1 or Table 8.2.

AND

- A discharge to home, home care or court/law enforcement

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in clinical trials
- Patients admitted for Elective Carotid Intervention

Data Elements:

- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Discharge Date*
- *Discharge Disposition*
- *Elective Carotid Intervention*
- *ICD-10-CM Principal Diagnosis Code*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal or other ICD-10 diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:

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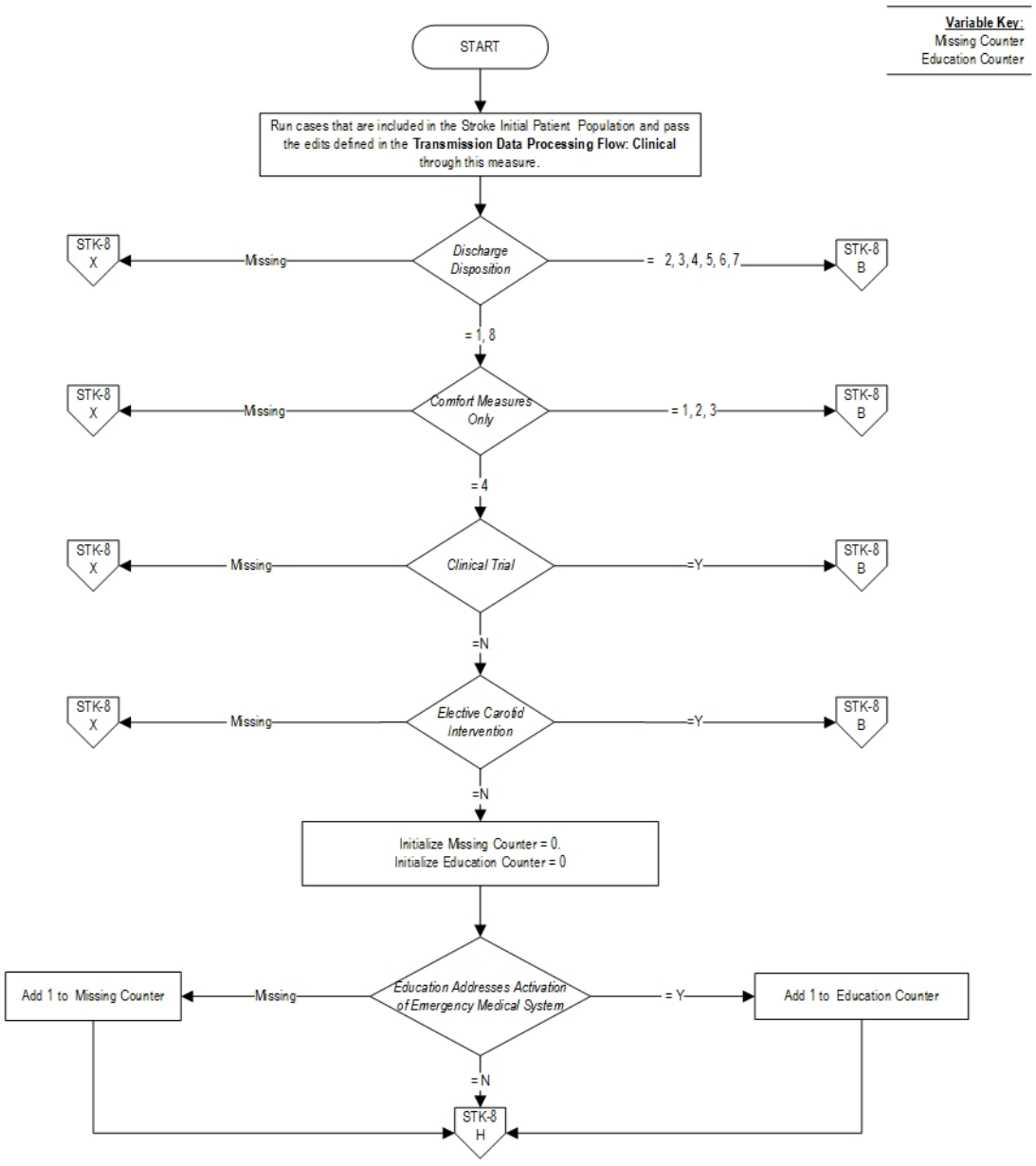
Measure Algorithm:

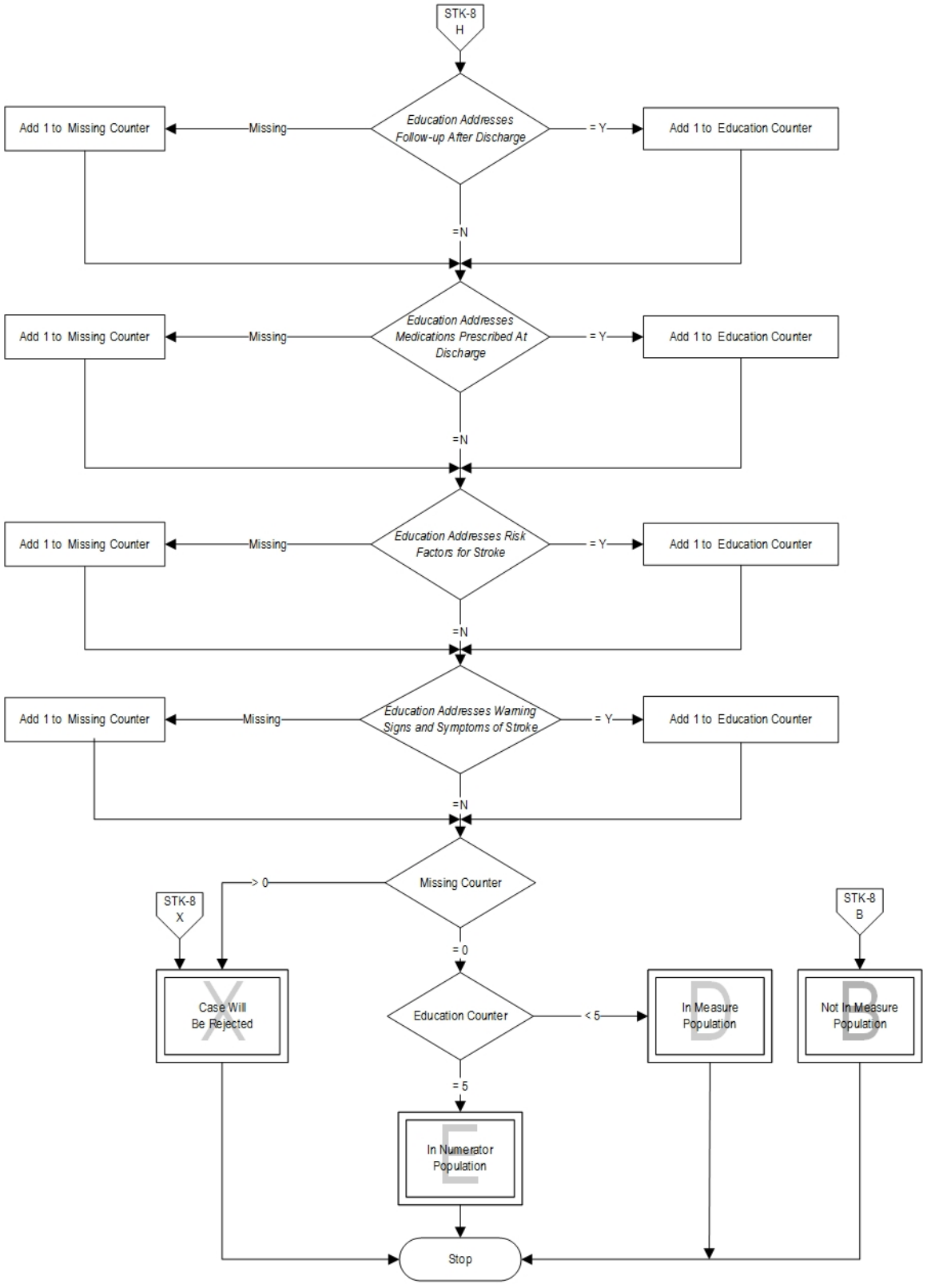
STK - 8: Stroke Education

Numerator: Ischemic or hemorrhagic stroke patients with documentation that they or their caregivers were given educational material addressing **all** of the following:

1. Activation of emergency medical system
2. Follow-up after discharge
3. Medications prescribed at discharge
4. Risk factors for stroke
5. Warning signs and symptoms of stroke

Denominator: Ischemic stroke or hemorrhagic stroke patients discharged home.




STK-8
H
Education Addresses Follow-up After Discharge
Missing
Add 1 to Missing Counter
= Y
Add 1 to Education Counter
=N
Education Addresses Medications Prescribed At Discharge
Missing
Add 1 to Missing Counter
= Y
Add 1 to Education Counter
=N
Education Addresses Risk Factors for Stroke
Missing
Add 1 to Missing Counter
= Y
Add 1 to Education Counter
=N
Education Addresses Warning Signs and Symptoms of Stroke
Missing
Add 1 to Missing Counter
= Y
Add 1 to Education Counter
=N
Missing Counter
> 0
STK-8
X
Case Will Be Rejected
X
= 0
Education Counter
< 5
In Measure Population
D
STK-8
B
Not In Measure Population
D
= 5
In Numerator Population
E
Stop

Stroke Outpatient (STK-OP)

Set Measures

Set Measure ID	Measure Short Name
STK-OP-1	Door to Transfer to Another Hospital

General Data Elements

Element Name	Collected For
Birthdate	All Records,
Hispanic Ethnicity	All Records,
ICD-10-CM Principal Diagnosis Code	All Records, Optional for HBIPS-2, HBIPS-3
Payment Source	All Records, Optional for HBIPS-2 and HBIPS-3
Race	All Records,
Sex	All Records,

Measure Set Specific Data Elements

Element Name	Collected For
Arrival Time	STK-OP-1
Comfort Measures Only	STK-OP-1
Discharge Code	STK-OP-1
E/M Code	STK-OP-1
ED Departure Date	STK-OP-1
ED Departure Time	STK-OP-1
IV Alteplase Initiation	STK-OP-1
Large Vessel Occlusion (LVO)	STK-OP-1
MER Eligibility	STK-OP-1

Element Name	Collected For
Outpatient Encounter Date	STK-OP-1

Related Materials

Document Name
Acknowledgment and Conditions of Use
Appendix A - ICD-10 Code Tables
Appendix D - Glossary of Terms
Appendix E - Overview of Measure Information Form and Flowchart Formats
Appendix G - Resources
Cover Page for the Joint Commission Manual
Data Dictionary
Introduction to the Manual
Missing and Invalid Data
Sampling
Table of Contents
Transmission Alpha Data Dictionary
Transmission Data Processing Flow: Clinical
Transmission Data Processing Flow: Population and Sampling
Transmission of Data
Using the The Joint Commission's National Measure Specifications Manual

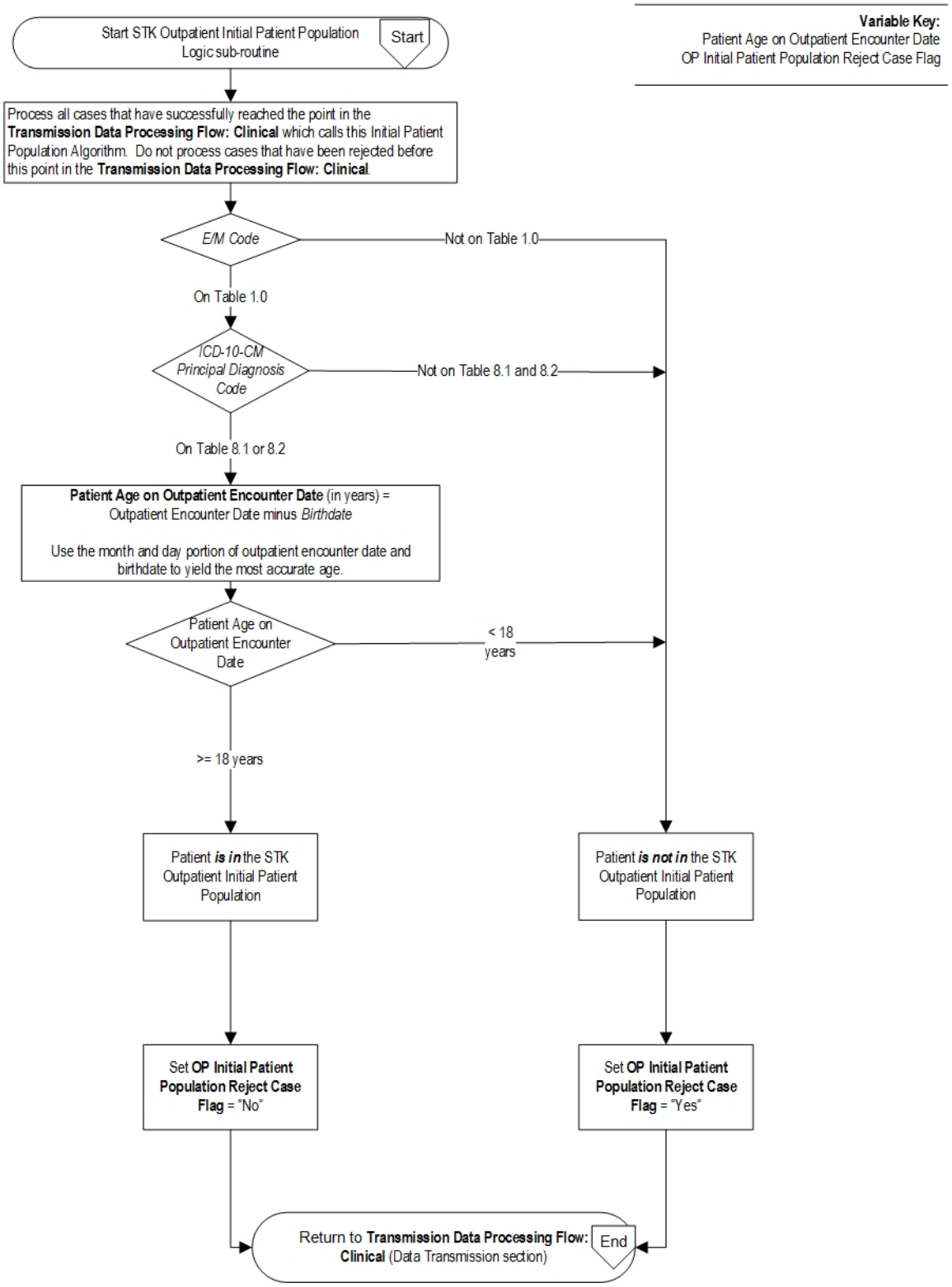
STK-OP Initial Patient Population

The population of the STK-OP measure set is identified using 4 data elements:

- EM Code
- ICD-10-CM Principal Diagnosis Code
- Outpatient Encounter Date
- Birthdate

Patients admitted to the hospital for outpatient acute care with an EM Code as defined in Appendix A, Table 1.0, and an ICD-10-CM Principal Diagnosis Code for ischemic or hemorrhagic stroke as defined in Appendix A, Table 8.1 or Table 8.2, and a Patient Age (Outpatient Encounter Date minus Birthdate) greater than or equal to 18 years are included in the STK-OP Initial Patient Population.

Stroke Outpatient (STK-OP) Initial Patient Population Algorithm



Measure Information Form

Measure Set: Stroke Outpatient (STK-OP)

Set Measure ID: STK-OP-1

Set Measure ID	Performance Measure Name
STK-OP-1b	Hemorrhagic Stroke
STK-OP-1c	Ischemic Stroke; IV Alteplase Prior to Transfer (Drip and Ship)
STK-OP-1d	Ischemic Stroke; No IV Alteplase Prior to Transfer, LVO and MER Eligible
STK-OP-1e	Ischemic Stroke; No IV Alteplase Prior to Transfer, LVO and NOT MER Eligible
STK-OP-1f	Ischemic Stroke; No IV Alteplase Prior to Transfer, No LVO
STK-OP-1a	Overall Rate (Not Reported)

Performance Measure Name: Door to Transfer to Another Hospital

Description: Median time from hospital arrival in the emergency department to transfer of a hemorrhagic stroke patient or an ischemic stroke patient to another hospital.

Rationale: Hemorrhagic stroke is a life-threatening condition caused by a rupture in a weakened blood vessel in the brain. Surgical intervention to repair a ruptured aneurysm may be indicated and necessitate urgent transfer of the patient, if the hospital is unable to provide advanced neurological treatments and services.

The benefits of both IV altelplase and mechanical thrombectomy for the treatment of acute ischemic stroke are time dependent. The earlier the treatment within the time window, the greater the benefit to patients. Initiation of IV alteplase at a primary stroke center (PSC) and rapid transport to an advanced center capable of performing endovascular treatment may lead to faster and more complete reperfusion for certain patients eligible for these treatments (Powers, 2018).

The Brain Attack Coalition recommends that such transfers occur within 2 hours of patient arrival at the transferring stroke center (Alberts, 2013). Reducing the time stroke patients remain in the emergency department (ED) can improve access to a higher-level of stroke care and surgical intervention or advanced intra-arterial endovascular treatments, and increase quality of care. For those stroke patients who are not transferred to a TSC or CSC, inpatient admission within 3 hours, preferably to a formal stroke unit, is recommended (Jauch, 2013).

Type Of Measure: Process

Improvement Noted As: Decrease in the median value

Continuous Variable Statement:
STK-OP-1b Time (in minutes) from ED arrival to transfer of a hemorrhagic stroke patient to another hospital

STK-OP-1c Time (in minutes) from ED arrival to transfer of an ischemic stroke patient (drip and ship) to another hospital

STK-OP-1d Time (in minutes) from ED arrival to transfer of an ischemic stroke patient (no IV t-PA prior to transfer, LVO and MER eligible) to another hospital

STK-OP-1e Time (in minutes) from ED arrival to transfer of an ischemic stroke patient (no IV t-PA given prior to transfer, LVO and not MER eligible) to another hospital

STK-OP-1f Time (in minutes) from ED arrival to transfer of an ischemic stroke patient (no IV t-PA given prior to transfer, no LVO) to another hospital

> **Included Populations:**
>
> - Patients with an *ICD-10-CM Principal Diagnosis Code* for ischemic or hemorrhagic stroke as defined in Appendix A, Table 8.1 or Table 8.2
>
> **AND**
>
> - Patients who are transferred to another hospital
>
> **AND**
>
> - An E/M Code for emergency department encounter as defined in Appendix A, Table 1.0
>
> **Excluded Populations:**
>
> - Patients less than 18 years of age
> - Patients with Comfort Measures Only documented on day of or day after arrival
> - Patients who expired in the emergency department
> - Discharges to dispositions other than an acute care facility
>
> **Data Elements:**
>
> - *Arrival Time*
> - *Birthdate*
> - *Comfort Measures Only*
> - *Discharge Code*
> - *E/M Code*
> - *ED Departure Date*
> - *ED Departure Time*
> - *ICD-10-CM Principal Diagnosis Code*
> - *IV Alteplase Initiation*
> - *Large Vessel Occlusion (LVO)*
> - *MER Eligibility*
> - *Outpatient Encounter Date*

Risk Adjustment: No.

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal or other ICD-10 diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10 codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: No.

Data Reported As: Aggregate measure of central tendency .

Selected References:

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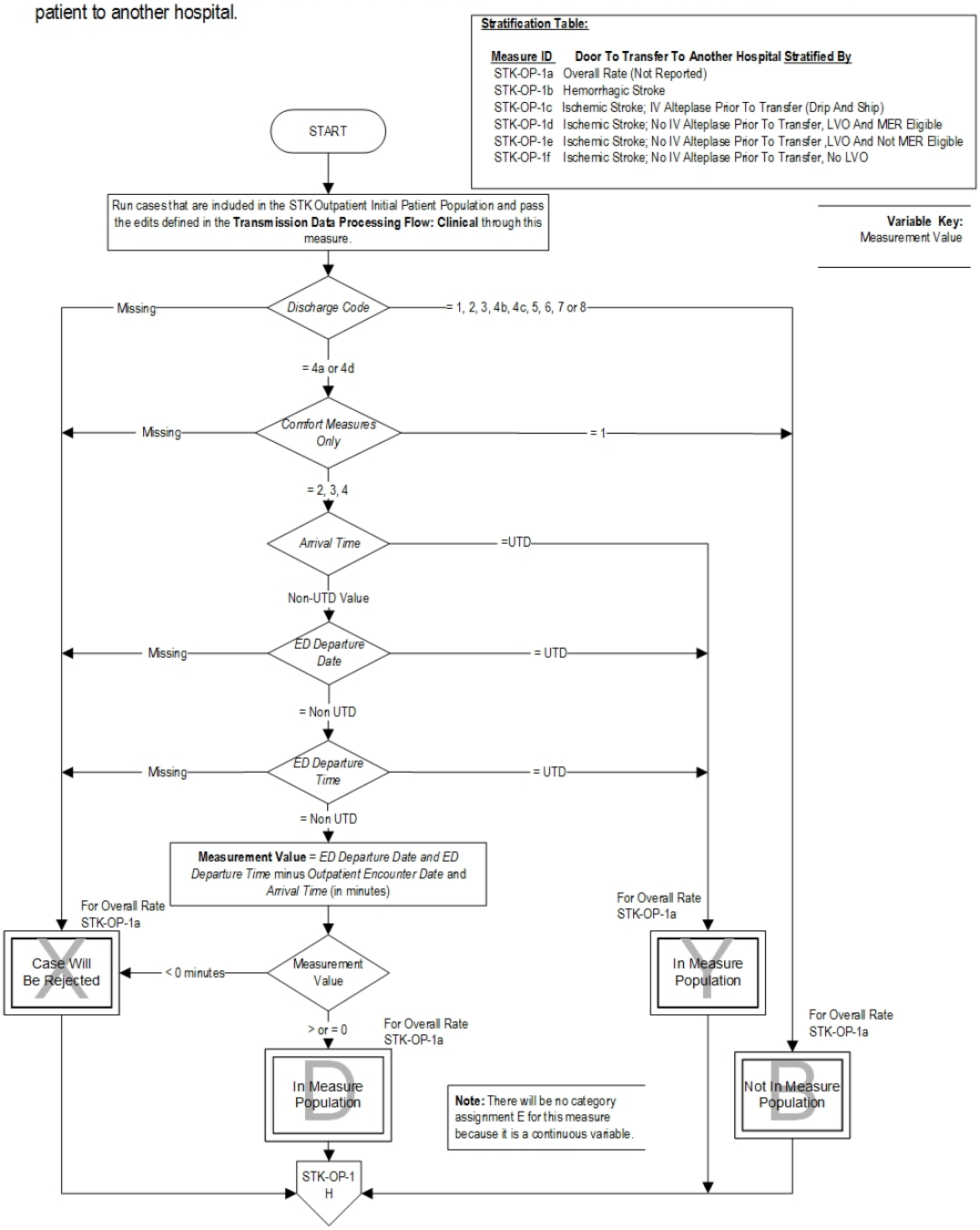
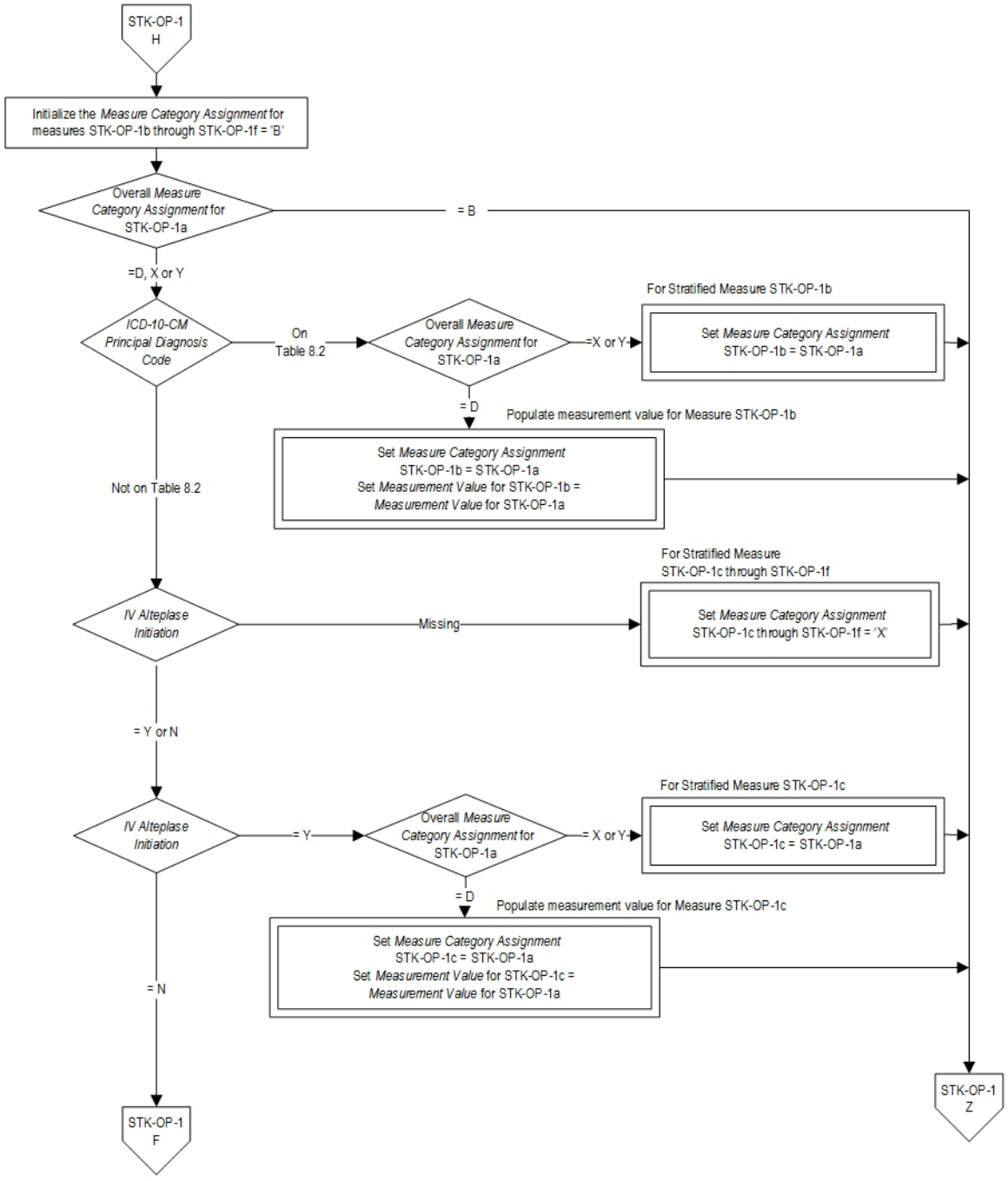
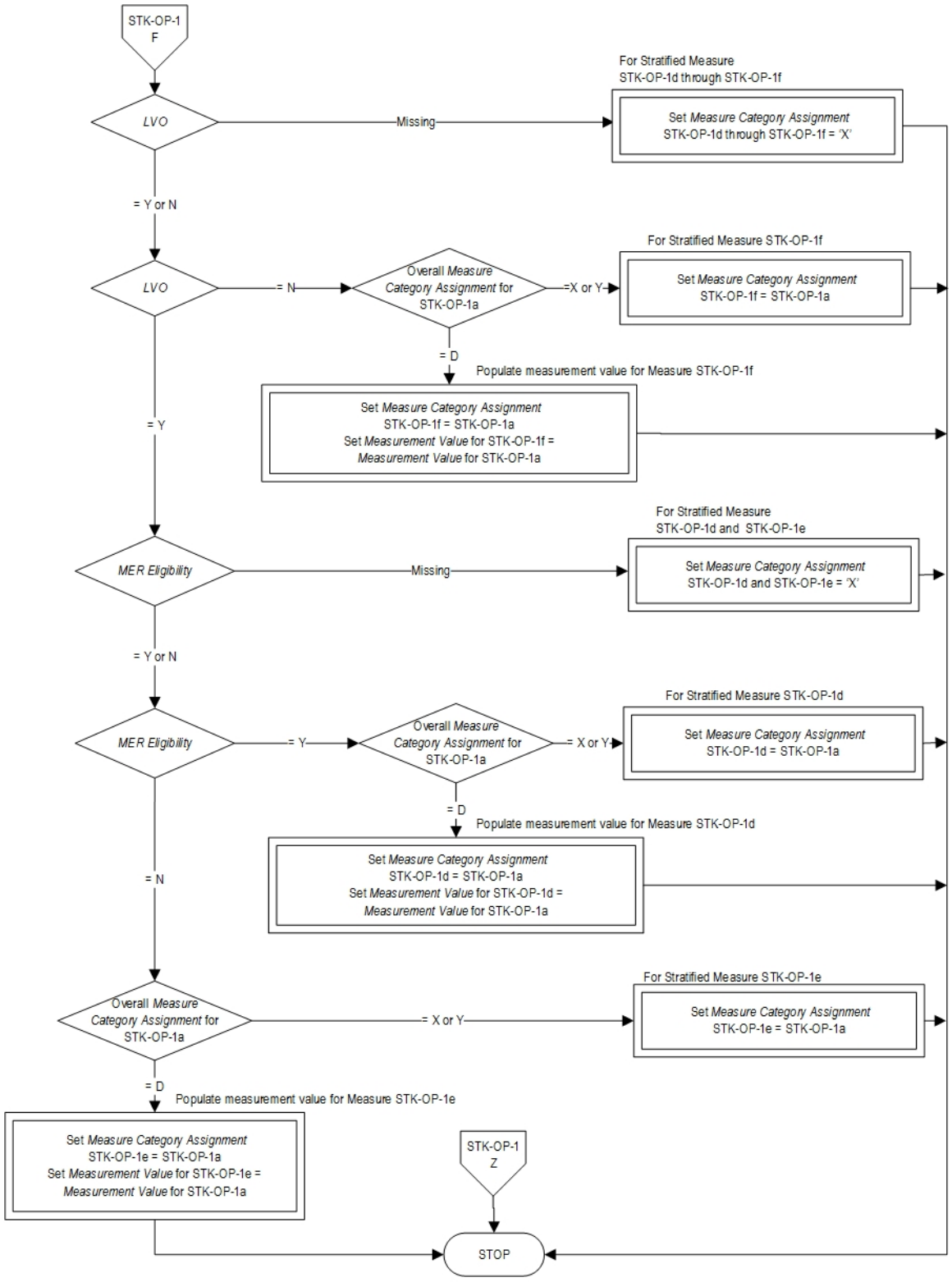
Measure Algorithm:

STK–OP–1 : Door to Transfer to Another Hospital

Continuous Variable Statement: Time (in minutes) from ED arrival to transfer of an ischemic or hemorrhagic stroke patient to another hospital.




STK-OP-1
H
Initialize the *Measure Category Assignment* for measures STK-OP-1b through STK-OP-1f = 'B'
Overall *Measure Category Assignment* for STK-OP-1a
= B
=D, X or Y
ICD-10-CM Principal Diagnosis Code
On Table 8.2
Overall *Measure Category Assignment* for STK-OP-1a
=X or Y
For Stratified Measure STK-OP-1b
Set *Measure Category Assignment* STK-OP-1b = STK-OP-1a
= D
Populate measurement value for Measure STK-OP-1b
Set *Measure Category Assignment* STK-OP-1b = STK-OP-1a
Set *Measurement Value* for STK-OP-1b = *Measurement Value* for STK-OP-1a
Not on Table 8.2
IV Alteplase Initiation
Missing
For Stratified Measure STK-OP-1c through STK-OP-1f
Set *Measure Category Assignment* STK-OP-1c through STK-OP-1f = 'X'
= Y or N
IV Alteplase Initiation
= Y
Overall *Measure Category Assignment* for STK-OP-1a
= X or Y
For Stratified Measure STK-OP-1c
Set *Measure Category Assignment* STK-OP-1c = STK-OP-1a
= D
Populate measurement value for Measure STK-OP-1c
Set *Measure Category Assignment* STK-OP-1c = STK-OP-1a
Set *Measurement Value* for STK-OP-1c = *Measurement Value* for STK-OP-1a
= N
STK-OP-1
F
STK-OP-1
Z


STK-OP-1
F
LVO
Missing
For Stratified Measure
STK-OP-1d through STK-OP-1f
Set Measure Category Assignment
STK-OP-1d through STK-OP-1f = 'X'
= Y or N
LVO
= N
Overall Measure
Category Assignment for
STK-OP-1a
=X or Y
For Stratified Measure STK-OP-1f
Set Measure Category Assignment
STK-OP-1f = STK-OP-1a
= D
Populate measurement value for Measure STK-OP-1f
Set Measure Category Assignment
STK-OP-1f = STK-OP-1a
Set Measurement Value for STK-OP-1f =
Measurement Value for STK-OP-1a
= Y
For Stratified Measure
STK-OP-1d and STK-OP-1e
MER Eligibility
Missing
Set Measure Category Assignment
STK-OP-1d and STK-OP-1e = 'X'
= Y or N
MER Eligibility
= Y
Overall Measure
Category Assignment for
STK-OP-1a
= X or Y
For Stratified Measure STK-OP-1d
Set Measure Category Assignment
STK-OP-1d = STK-OP-1a
= D
Populate measurement value for Measure STK-OP-1d
Set Measure Category Assignment
STK-OP-1d = STK-OP-1a
Set Measurement Value for STK-OP-1d =
Measurement Value for STK-OP-1a
= N
Overall Measure
Category Assignment for
STK-OP-1a
= X or Y
For Stratified Measure STK-OP-1e
Set Measure Category Assignment
STK-OP-1e = STK-OP-1a
= D
Populate measurement value for Measure STK-OP-1e
Set Measure Category Assignment
STK-OP-1e = STK-OP-1a
Set Measurement Value for STK-OP-1e =
Measurement Value for STK-OP-1a
STK-OP-1
Z
STOP

Data Dictionary Introduction

Introduction

This section of the manual describes the data elements required to calculate category assignments and measurements for The Joint Commission's National Quality Measures. It includes information necessary for defining and formatting the data elements, as well as the allowable values for each data element. This information is intended to assist in processing patient level data elements for The Joint Commission's National Quality Measures.

It is of primary importance that all health care organizations using The Joint Commission's National Quality Measures gather and utilize the data elements as defined in this section. This will ensure that the data are standardized and comparable across organizations.

Regardless of which measure sets are selected by a hospital, certain general data elements must be collected by the hospital and submitted for **every** patient that falls into **any** of the selected Initial Patient Populations. These data elements are considered "general" to each patient's episode of care.

These data elements include:

- *Admission Date*
- *Birthdate*
- *Health Care Organization Identifier* [2]
- *Hispanic Ethnicity*
- *Measure Set* [1,2]
- *Performance Measure Identifier* [1,2]
- *Race*
- *Sample* [1]
- *Sex*
- *Vendor Tracking ID* [1,2]

Data elements that are general for every patient that fall into measures that are reported at time of discharge include:

- *Discharge Date*
- *ICD-10-CM Other Diagnosis Codes*
- *ICD-10-PCS Other Procedure Codes* (Optional for all HBIPS measures)
- *ICD-10-PCS Other Procedure Dates* (Optional for all HBIPS measures)
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Principal Procedure Code* (Optional for all HBIPS measures)
- *ICD-10-PCS Principal Procedure Date* (Optional for all HBIPS measures)
- *Payment Source*

Data elements that are general for every patient that falls into measures that are reported at the time of the event include:

- *Event Date* (HBIPS measures only)
- *Event Type* (HBIPS measures only)
- *Psychiatric Care Setting* (HBIPS measures only)

Data elements that are general for every patient that falls into specific measures that are reported at the time of discharge include:

- *Discharge Disposition*

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[1] Transmission Data Element

[2] These data elements are defined in the Transmission Data Dictionary within the Joint Commission National Quality Measures Data Transmission section of this manual

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Episode of Care

An Episode of Care (EOC) is defined as the health care services given during a certain period of time, usually during a hospital stay (e.g., from the day of arrival or admission to the day of discharge). The medical record should be abstracted as it was billed. In the event that there are multiple ED visits within the inpatient medical record, for the same episode of care, it is recommended that the ED visit resulting in the admission to observation or inpatient status be utilized for the purposes of abstraction.

If a patient is transferred from an acute care hospital to another acute care hospital, which is within the same healthcare system and shares the same Joint Commission *Health Care Organization Identifier* (HCO ID), this should be abstracted as one episode of care.

Data integrity

Editing Zero Values

Verification mechanisms are necessary to assure that zero is the intended data value rather than an initialization value for those data elements which have an allowable value of zero (i.e., 0.0, 0000, 0).

Missing and Invalid Data

Each data element that is applicable per the algorithm for each of the measures within a topic must be touched by the abstractor. While this is the expectation, it is recognized that in certain situations information may not be available (e.g., dates, times, codes, etc.). After due diligence in reviewing all allowable data sources within the medical record, if the abstractor determines that a value is not documented, i.e. missing,

or is unable to determine if a value is documented, the abstractor should select the UTD - Unable to Determine, value. The data elements *Admission Date*, *Discharge Date* and *Birthdate* require an actual date for submission of discharge measure information into the Joint Commission's Data Warehouse, and UTD cannot be selected as an allowable value. For Yes/No values the allowable value No incorporates the UTD into the definition. For data elements containing more than two categorical values and for numerical data elements (i.e., dates, times, etc.), a UTD option is included as an allowable value and is classified in the same category as not documented. Files that contain any invalid and/or missing data will be rejected from the Joint Commission's Data Warehouse. For additional details on the proper handling of missing and/or invalid data, please refer to the Missing and Invalid Data section of this manual.

Interpreting Data Element Definitions and Allowable Values

Every attempt has been made to comprehensively define The Joint Commission's National Quality Measure data elements and allowable values in a manner that obviates the need for interpretation. If, after reviewing the General Abstraction Guidelines, the data element definition, including the notes and guidelines for abstraction, an abstractor cannot clearly assign an allowable value, refer to the Resource section of this manual for additional contact information.

Interpretation of Data Dictionary Terms

Data elements fall into three broad categories in order to support a specific measure set. They include:

- *General Data Elements* – data elements that must be collected by health care organizations for each patient record
    - data elements required for each episode of care (EOC) record submitted
    - data elements used to identify the health care organization on each patient record required for each patient-level record submitted
    - patient demographic data required for each episode of care record submitted and used for risk adjustment analysis (where applicable)
- *Measure-Specific Data Elements* – data elements used by one specific measure or several measures in one specific measure set, such as in the HBIPS measures
- *Algorithm Output Data Elements* Refer to ORYX® Technical guide

Data Element Dictionary Terms

Term	Definition
Data Element Name:	A short phrase identifying the data element. For each of identification the data element name is *italicized*.
Collected For:	Identifies the measure(s) that utilize this data element or specifies that the data element is used for data transmission or verification.
Definition:	A detailed explanation of the data element. *A vendor may include this information in data collection software*.

Term	Definition
Suggested Data Collection Question:	A suggested wording for a data element question in a data abstraction tool.
Format:	**Length** = number of characters or digits allowed for the data element **Type** = type of information the data element contains (e.g., numeric, alphanumeric, date, character, or time) **Occurs** = the number of times the data element occurs in a single episode of care record
Allowable Values:	A list of acceptable responses for this data element
Notes for Abstraction:	Provided to assist abstractor in the selection of appropriate value for a data element
Suggested Data Sources:	Source document from which data can be identified such as administrative or medical record. Some data elements also list excluded data sources that are unacceptable sources for collecting information.
Guidelines for Abstraction:	Designed to assist abstractors in determining how a data element should be answered **Note:** Element specific notes and guidelines should take precedence over the General Abstraction Guidelines.

General Abstraction Guidelines

The General Abstraction Guidelines are a resource designed to assist abstractors in determining how a question should be answered. The abstractor should first refer to the specific notes and guidelines under each data element. These instructions should take precedence over the following General Abstraction Guidelines. All of the allowable values for a given data element are outlined, and notes and guidelines are often included which provide the necessary direction for abstracting a data element. It is important to utilize the information found in the notes and guidelines when entering or selecting the most appropriate answer.

Medical Record Documentation

The intent of abstraction is to use only documentation that was part of the medical record during the hospitalization (is present upon discharge) and that is present at the time of abstraction. There are instances where an addendum or late entry is added after discharge. This late entry or addendum can be used, for abstraction purposes, as long as it has been added within 30 days of discharge, [Refer to the Medicare Conditions of Participation for Medical Records, 42CFR482.24(c)(2)(viii)], unless otherwise specified in the data element. Documents containing amendments, corrections, or delayed entries must employ the following widely accepted record keeping principles (CMS Medicare Program Integrity Manual Chapter 3, Section 3.3.2.4):

- Clearly and permanently identify any amendments, corrections or addenda;
- Clearly indicate the date and author of any amendments, corrections, or addenda; and

- Clearly identify all original content.

It is not the intent to have documentation added at the time of abstraction to ensure the passing of a measure.

Prenatal forms which are available during the hospitalization and become a permanent part of the patient's medical record (electronic health record/EHR or paper) for the current hospitalization may be used for abstraction.

Important Note: There are several data elements where abstraction of data from documentation dated/timed after discharge is restricted, and these exceptions are published on the respective data element pages of the data dictionary. Data element specific notes and guidelines always take precedence over the General Abstraction Guidelines.

All documentation in the medical record must be legible and must be timed, dated and authenticated. However, documentation that is not timed, dated or authenticated may still be used for abstraction if not required by the specific data element. When abstracting a medical record, if a handwritten document is determined to be not legible, other documentation should be reviewed in an attempt to obtain the answer. If no other source document is able to verify the handwritten documentation, only then is the abstractor to answer unable to determine from the medical record documentation, unless otherwise specified in the data element. Authentication may include written signatures, initials, computer key, or other codes.

Data element information should be retrieved from the current medical record, covering the admission and discharge date, or reporting period for event measures being abstracted. Information ascertainable from previous history (e.g., failed trials of monotherapy) AND determined to be part of the current medical record may be used in abstraction. For example, if the patient had previously failed three or more trials of monotherapy and this information is available in the current chart being abstracted (e.g., a note made in the continuing care plan), this information should be used. Previous history information used in abstraction should be information that was part of the medical record during hospitalization, when care was being delivered.

The medical record must be abstracted as documented (taken at face value). When the value documented is obviously in error (not a valid format/range or outside of the parameters for the data element) **and** no other documentation is found that provides this information, the abstractor should select UTD. Example:

- Patient expires on 02-12-20XX and documentation indicates the Event Date was 03-12-20XX. Other documentation in the medical record supports the date of death as being accurate. Since the Event Date is after the Discharge Date (death), it is outside of the parameter of care and the abstractor should select UTD.

Note: Hospitals should use abbreviations according to their policy. Frequently flow sheets or other documentation contain a 'key or legend' that explains what the abbreviation or symbol stands for, especially if unique to that facility.

Suggested Data Sources

- Suggested Data Sources are listed in alphabetical order, NOT priority order, unless otherwise specified in the data element.
- Suggested Data Sources are designed to provide guidance to the abstractor as to the locations/sources where the information needed to abstract a data element will likely be found. However, the abstractor is not limited to these sources for abstracting the information and must review the entire medical record unless otherwise specified in the data element.
- In some instances, a data element may restrict the sources that may be used to gain the information, list a priority in which the sources should be used or may restrict documentation by only physician/advanced practice nurse/physician assistant. If so, these sources will be identified and labeled as Excluded Data Sources. "ONLY ACCEPTABLE SOURCES", "Priority Source", or "PHYSICIAN/APN/PA DOCUMENTATION ONLY".
- If, after due diligence, the abstractor determines that a value is not documented or is not able to determine the answer value, the abstractor must select Unable to Determine (UTD) as the answer.
- Hospitals often label forms and reports with unique names or titles. Suggested Data Sources are listed by commonly used titles; however, information may be abstracted from any source that is equivalent to those listed.
    - **Example:**
      If the nursing admission assessment is listed as a suggested source, an acceptable alternative might be titled nurses initial assessment or nursing data base.
      Note:
      Element specific notes and guidelines should take precedence over the General Abstraction Guidelines.

Inclusions/Exclusions

- Inclusions are acceptable terms that should be abstracted as **positive findings** (e.g., Yes).
- Inclusion lists are limited to those terms that are believed to be most commonly used in medical record documentation. **The list of inclusions should not be considered all-inclusive, unless otherwise specified in the data element.**
- Exclusions are unacceptable terms that should be abstracted as **negative findings** (e.g., No).
- Exclusion lists are limited to those terms an abstractor may most frequently question whether or not to abstract as a positive finding for a particular element (e.g., cardiomyopathy is an unacceptable term for heart failure and should be abstracted as "No"). **The list of exclusions should not be considered all-inclusive, unless otherwise specified in the data element.**
- When both an inclusion and exclusion are documented in a medical record, the inclusion takes precedence over the exclusion and would be abstracted as a positive finding (e.g., answer Yes), unless otherwise specified in the data element.

Physician/Advanced Practice Nurse/ Physician Assistant Documentation

- Advanced Practice Nurse (APN, APRN) titles may vary among state and clinical specialties. Some common titles that represent the advanced practice nurse role are:
    - Nurse Practitioner (NP)
    - Certified Registered Nurse Anesthetist (CRNA)
    - Clinical Nurse Specialist (CNS)
    - Certified Nurse Midwife (CNM)

- When a physician/advanced practice nurse/ physician assistant (physician/APN/PA) signs a form or report (e.g., ED sheet with triage and nursing information and a physician/APN/PA has signed somewhere on the form), information on that form/report should be considered physician/APN/PA documentation.
- Rubber stamped physician/advanced practice nurse/physician assistant (physician/APN/PA) signatures are not acceptable on any document within the medical record. Handwritten, electronic signatures, facsimiles of original written or electronic signatures are acceptable.
- Resident and intern notes should be considered physician documentation. Medical student notes must be co-signed by a physician.
- For the purposes of abstraction, telephone or verbal physician/APN/PA orders (TO/VO) in the medical record are considered physician/APN/PA documentation at the time they were written regardless of whether or not they were authenticated by the physician/APN/PA at the time of abstraction.

Pharmacist Documentation

Pharmacist titles may vary. Some common titles that represent the pharmacist role are:

- Doctor of Pharmacy (Pharm.D. or D.Ph.)
- Registered Pharmacist (R.Ph.)

Medications:

- The approved medication tables contained in the dictionaries may not be inclusive lists of all available therapeutic agents acceptable for a particular data element. Discrepancies must be reported. See Appendix G (resource section) of this manual for contact information.
- Whether or not a medication has been administered to a patient is often clear when using medical record sources such as medication administration records, but documentation can be more ambiguous in other sources, namely, physician orders, ED records, and ambulance records. To make a determination using these sources, use the following criteria:
    - For EHRs only accept documentation that reflects the actual administration of the medication in the context of the chart.
    - If a medication in the physician orders has been initialed and signed off with a time, do NOT presume that the medication was administered. The documentation MUST indicate that the medication was actually given.
    - For an ED or ambulance record, there is no need for documentation indicating that the medication was actually given.
        - **Example:**
          If the ED or ambulance record reflects ASA 325mg po 13:00 and no other documentation exists indicating that the medication was actually given (e.g., given or administered), this is acceptable documentation to abstract.

- When determining whether or not a patient was discharged on a specific medication (e.g., antipsychotic medication):
    - If discharge medications are noted using only references such as continue home meds, continue previous medications, resume other meds, same medications, or continue meds, rather than lists of the names of the discharge medications, the abstractor should include the

medication in the count if the patient was on the medication in question prior to arrival, unless documentation suggests otherwise.
    - If discharge medications are noted using only references such as continue current medications or continue present meds rather than lists of the names of the discharge medications, the abstractor should include the medication in the count if the medication in question was listed as a medication on the day of discharge, unless documentation indicates it was to be discontinued at discharge or suggests otherwise
    - If discharge medications are noted using general references such as continue home meds, continue previous medications, continue current meds, continue present meds, resume other meds, or continue meds, but a list of the names of the discharge medications also in the record gives conflicting information about what medications the patient was actually discharged on, the abstractor should consider the list most accurate and use only the list in determining whether or not a patient was discharged on a specific medication.
- Hospitals may allow a patient (or his or her caregiver/support person where appropriate) to self-administer both hospital-issued medications and the patient's own medications brought into the hospital. Hospitals must document the administration of each medication, as reported by the patient (or the patient's caregiver/support person where appropriate), in the patient's medical record [42CFR482.23(c)(6)].

Nursing Care Plans, Standing Orders and Protocols

- Per Medicare Conditions of Participation [42CFR482.23(b)(4)] hospitals have the option of having a stand-alone nursing care plan or a single interdisciplinary care plan that addresses nursing and other disciplines.
- Hospitals may use pre-printed and electronic standing orders, order sets, and protocols for patient orders if such orders and protocols are dated, timed, and authenticated promptly in the patient's medical record by the ordering practitioner responsible for the care of the patient [42CFR482.24(c)(3)].

Diagnostic/Laboratory Tests

Whether or not a diagnostic or laboratory test has been done is usually clear when using medical record sources such as diagnostic test reports, laboratory reports, or progress notes (where a physician might note test findings), but documentation can be more ambiguous in other sources, namely, physician orders and ED records. To make a determination using these sources, use the following criteria:

- If a test in the physician orders has been initialed and signed off with a time, do NOT presume that the test was done. The documentation MUST indicate that the test was actually done (e.g., accompanied by a word such as done).
- For an ED record, there is no need for explicit documentation indicating that the test was actually done. For example, if an ED record notes Lipid profile, and this is followed by a signature and/or a time, the abstractor should presume the test was performed.

Grids

Instructions for reading values recorded on grids: Measure from the midpoint of the symbol, number and letter. If the value falls between two lines on the grid, abstract the earliest value.

Alphabetical List of All Data Elements

Data Element Name	Collection Notes	Associated Measures
ACEI Prescribed for LVSD in the Outpatient Setting		ACHFOP-02
ARB Prescribed for LVSD in the Outpatient Setting		ACHFOP-02
Activity Recommendation — Duration of Activity		ACHFOP-05
Activity Recommendation — Intensity of Activity		ACHFOP-05
Activity Recommendation — Type of Activity		ACHFOP-05
Admission Date	All Records	ACHF, ASR-IP, CSTK, HBIPS, PAL, PC, STK
Admission to NICU		PC-05
Admitting Diagnosis		CSTK-04
Advance Directive Executed		ACHF-05, ACHFOP-07
Aldosterone Receptor Antagonist Prescribed for LVSD in the Outpatient Setting		ACHFOP-03
Antenatal Steroids Initiated		PC-03
Anticoagulation Therapy Prescribed at Discharge		STK-3
Antithrombotic Therapy Administered by End of Hospital Day 2		ASR-IP-2, STK-5
Antithrombotic Therapy Prescribed at Discharge		ASR-IP-3, STK-2
Appropriate Justification for Multiple Antipsychotic Medications		HBIPS-5
Arrival Date		ASR-IP-1, ASR-IP-2, CSTK-01, CSTK-03, CSTK-05, CSTK-06, CSTK-07, CSTK-09, CSTK-11, STK-4, STK-5
Arrival Time		ASR-IP-1, ASR-OP-1, ASR-OP-2, CSTK-01, CSTK-03, CSTK-05, CSTK-06, CSTK-07, CSTK-09, CSTK-11, STK-4, STK-OP-1
Assessed for Rehabilitation Services		STK-10

Data Element Name	Collection Notes	Associated Measures
Atrial Fibrillation/Flutter		STK-3
Birth Weight	Risk Adjustment	PC-04, PC-06
Birthdate	All Records	ACHF, ACHFOP, ASR-IP, ASR-OP, CSTK, HBIPS, PAL, PC, STK, STK-OP
Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD in the Outpatient Setting		ACHFOP-01
Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate Prescribed for LVSD at Discharge		ACHF-01
Bloodstream Infection Confirmed		PC-04
Bloodstream Infection Present on Admission		PC-04
Care Transition Record Transmitted		ACHF-03
Care Transition Record-Discharge Medications		ACHF-03
Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed		ACHF-03
Care Transition Record-Procedures Performed During Hospitalization		ACHF-03
Care Transition Record-Reason for Hospitalization		ACHF-03
Care Transition Record-Treatment(s)/Service(s) Provided		ACHF-03
Clinical Trial		ACHF-01, ACHF-02, ACHF-03, ACHF-06, ACHFOP-01, ACHFOP-02, ACHFOP-03, ACHFOP-04, ACHFOP-05, CSTK-04, CSTK-06, STK
Comfort Measures Only		ACHF, ASR-IP-2, ASR-IP-3, ASR-OP-2, CSTK-01, CSTK-03, CSTK-04, CSTK-06, STK-1, STK-10, STK-2, STK-3, STK-5, STK-6, STK-8, STK-OP-1
Date Last Known Well		ASR-IP-1, ASR-OP-1, STK-4
Delayed Endovascular Rescue Procedure		CSTK-09, CSTK-11
Direct Admission		CSTK-01, CSTK-03
Discharge Code		ACHFOP, ASR-OP-2, STK-OP-1

Data Element Name	Collection Notes	Associated Measures
Discharge Date	All Records	ACHF, ASR-IP-1, ASR-IP-2, CSTK, HBIPS-1, HBIPS-5, PAL, PC, STK
Discharge Disposition		ACHF, ASR-IP-3, CSTK-02, CSTK-10, HBIPS-5, PAL-05, PC-04, PC-05, PC-06, STK-10, STK-2, STK-3, STK-6, STK-8
Discharge Time		CSTK-01, CSTK-03, CSTK-06
Discussion of Advance Directives/Advance Care Planning		ACHF-04, ACHFOP-06
Dyspnea Severity		PAL-03
E/M Code		ACHFOP, ASR-OP-1, ASR-OP-2, STK-OP-1
ED Departure Date		ASR-OP-2, STK-OP-1
ED Departure Time		ASR-OP-2, STK-OP-1
ED Patient		ASR-IP-1, CSTK-01, CSTK-03, STK-4
Education Addresses Activation of Emergency Medical System		STK-8
Education Addresses Follow-up After Discharge		STK-8
Education Addresses Medication Prescribed at Discharge		STK-8
Education Addresses Risk Factors for Stroke		STK-8
Education Addresses Warning Signs and Symptoms of Stroke		STK-8
Elective Carotid Intervention		CSTK-01, CSTK-02, CSTK-05, CSTK-07, CSTK-08, CSTK-09, CSTK-10, CSTK-11, CSTK-12, STK
Event Date		HBIPS-2, HBIPS-3
Event Type		HBIPS-2, HBIPS-3
Exclusive Breast Milk Feeding		PC-05
Failed Attempt at Thrombectomy		CSTK-08, CSTK-11, CSTK-12
First Pass Date		CSTK-07
First Pass Time		CSTK-07
First Pass of a Mechanical Reperfusion Device		CSTK-07

Data Element Name	Collection Notes	Associated Measures
Gestational Age		PC-01, PC-02, PC-03
Goals of Care		PAL-04
Health Care Organization Identifier	All Records, Patient Population Data File, Hospital Clinical Data File	HBIPS, PC, STK
Highest NIHSS Score Documented Within 36 Hours Following IA Alteplase or MER Initiation		CSTK-05
Highest NIHSS Score Documented Within 36 Hours Following IV Alteplase Initiation		CSTK-05
Hispanic Ethnicity	All Records	ACHF, ASR-IP, ASR-OP, CSTK, HBIPS, PC, STK, STK-OP
History of Stillbirth		PC-01
IA Alteplase or MER Initiation Date		CSTK-05
IA Alteplase or MER Initiation Time		CSTK-05
IA Route of Alteplase Administration		CSTK-05, CSTK-07, CSTK-08, CSTK-09
IA Thrombolytic Initiation		CSTK-07
IA Thrombolytic Initiation Date		CSTK-07
IA Thrombolytic Initiation Time		CSTK-07
ICD-10-CM Other Diagnosis Codes	All Records	CSTK-05, HBIPS-1, HBIPS-5, PC, STK
ICD-10-CM Principal Diagnosis Code	All Records	ACHF, ACHFOP, ASR-IP, ASR-OP, CSTK, HBIPS-1, HBIPS-5, PC, STK, STK-OP
ICD-10-PCS Other Procedure Codes	All Records	ACHF, ACHFOP, CSTK-01, CSTK-02, CSTK-03, CSTK-05, CSTK-07, HBIPS, PC, STK
ICD-10-PCS Other Procedure Dates	All Records	CSTK-01, CSTK-02, CSTK-03, CSTK-05, CSTK-07, HBIPS, PC, STK
ICD-10-PCS Other Procedure Times		CSTK-01, CSTK-03
ICD-10-PCS Principal Procedure Code	All Records	ACHF, ACHFOP, CSTK-01, CSTK-02, CSTK-03, CSTK-05, CSTK-07, HBIPS, PC, STK
ICD-10-PCS Principal Procedure Date	All Records	ACHF-05, ACHF-05a, ACHFOP, CSTK-01, CSTK-02, CSTK-03, CSTK-05, CSTK-07, HBIPS, PC, STK
ICD-10-PCS Principal Procedure Time		CSTK-01, CSTK-03

Data Element Name	Collection Notes	Associated Measures
INR Value > 1.4		CSTK-04
IV Alteplase Initiation		ASR-IP-1, ASR-OP-1, ASR-OP-2, CSTK-05, STK-4, STK-OP-1
IV Alteplase Initiation Date		ASR-IP-1, ASR-OP-1, CSTK-05, STK-4
IV Alteplase Initiation Time		ASR-IP-1, ASR-OP-1, CSTK-05, STK-4
IV Alteplase Prior to IA or Mechanical Reperfusion Therapy		CSTK-05, CSTK-08, CSTK-10
IV OR IA Alteplase Administered at This Hospital or Within 24 Hours Prior to Arrival		ASR-IP-2, STK-5
Initial Blood Glucose Value at Hospital Arrival		CSTK-05, CSTK-08, CSTK-10
Initial Blood Pressure at Hospital Arrival		CSTK-05, CSTK-08, CSTK-10
Initial Encounter		PAL
Initial Encounter Date		PAL
Initial Hunt and Hess Scale Date		CSTK-03
Initial Hunt and Hess Scale Performed		CSTK-03
Initial Hunt and Hess Scale Time		CSTK-03
Initial ICH Score Date		CSTK-03
Initial ICH Score Performed		CSTK-03
Initial ICH Score Time		CSTK-03
Initial NIHSS Score Date		CSTK-01
Initial NIHSS Score Performed		CSTK-01
Initial NIHSS Score Time		CSTK-01
Initial NIHSS Score at Hospital Arrival		CSTK-05, CSTK-08, CSTK-10
Initial Platelet Count at Hospital Arrival		CSTK-05, CSTK-08, CSTK-10
LVSD < 40%		ACHF-01, ACHFOP-01, ACHFOP-02, ACHFOP-03
Labor		PC-01
Large Vessel Occlusion (LVO)		CSTK, STK-OP-1
Last Known Well		ASR-IP-1, ASR-OP-1, STK-4
MER Eligibility		CSTK, STK-OP-1

Data Element Name	Collection Notes	Associated Measures
Minutes of Physical Restraint		HBIPS-2
Minutes of Seclusion		HBIPS-3
Modified Rankin Score (mRS)		CSTK-02, CSTK-10
Modified Rankin Score (mRS) Date		CSTK-02, CSTK-10
NIHSS Score Documented Closest to IA Alteplase or MER Initiation		CSTK-05
NIHSS Score Documented Closest to IV Alteplase Initiation		CSTK-05
New York Heart Association (NYHA) Classification		ACHFOP-04
Nimodipine Administration		CSTK-06
Nimodipine Administration Date		CSTK-06
Nimodipine Administration Time		CSTK-06
Non-aneurysmal		CSTK-03
Number of Antipsychotic Medications Prescribed at Discharge		HBIPS-5
Outpatient Encounter Date		ACHFOP, ASR-OP-1, ASR-OP-2, STK-OP-1
Pain Character		PAL-02
Pain Duration		PAL-02
Pain Effect		PAL-02
Pain Factors		PAL-02
Pain Frequency		PAL-02
Pain Location		PAL-02
Pain Severity		PAL-01, PAL-02
Patient Status at Discharge		HBIPS-5
Patient Strengths		HBIPS-1
Payment Source	All Records	ASR-IP, ASR-OP, CSTK, HBIPS, PC, STK, STK-OP
Positive Brain Image		CSTK-05
Positive Brain Image Date		CSTK-05
Positive Brain Image Time		CSTK-05

Data Element Name	Collection Notes	Associated Measures
Post-Discharge Appointment Scheduled Within 7 Days		ACHF-02
Post-Discharge Evaluation Conducted Within 72 Hours		ACHF-06
Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade		CSTK-08, CSTK-11, CSTK-12
Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade Date		CSTK-11, CSTK-12
Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade Time		CSTK-11, CSTK-12
Pre-Stroke Modified Rankin Score (mRS)		CSTK-10
Previous Live Births		PC-02
Prior Uterine Surgery		PC-01
Procoagulant Reversal Agent Initiation		CSTK-04
Proximal or Distal Occlusion		CSTK-08
Psychiatric Care Setting	All Records	HBIPS-1, HBIPS-2, HBIPS-3, HBIPS-5
Psychiatric Inpatient Days - Medicare Only		HBIPS-2, HBIPS-3
Psychiatric Inpatient Days-Non-Medicare Only		HBIPS-2, HBIPS-3
Psychological Trauma History		HBIPS-1
Race	All Records	ACHF, ASR-IP, ASR-OP, CSTK, HBIPS, PC, STK, STK-OP
Reason for Extending the Initiation of IV Alteplase		ASR-IP-1, ASR-OP-1, STK-4
Reason for No ACEI and No ARB Prescribed for LVSD in Outpatient Setting		ACHFOP-02
Reason for No Activity Recommendations in the Outpatient Setting		ACHFOP-05
Reason for No Aldosterone Receptor Antagonist Prescribed for LVSD in the Outpatient Setting		ACHFOP-03
Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD in the Outpatient Setting		ACHFOP-01

Data Element Name	Collection Notes	Associated Measures
Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate Prescribed for LVSD at Discharge		ACHF-01
Reason for No Post-Discharge Appointment Within 7 Days		ACHF-02
Reason for No VTE Prophylaxis – Hospital Admission		STK-1
Reason for Not Administering Antithrombotic Therapy by End of Hospital Day 2		ASR-IP-2, STK-5
Reason for Not Administering Nimodipine Treatment		CSTK-06
Reason for Not Administering a Procoagulant Reversal Agent		CSTK-04
Reason for Not Initiating Antenatal Steroids		PC-03
Reason for Not Initiating IV Alteplase		ASR-IP-1, ASR-OP-1, STK-4
Reason for Not Prescribing **Anticoagulation** Therapy at Discharge		STK-3
Reason for Not Prescribing **Antithrombotic** Therapy at Discharge		ASR-IP-3, STK-2
Reason for Not Prescribing Statin Medication at Discharge		STK-6
Reason for Oral Factor Xa Inhibitor		STK-1
Sex	All Records	ACHF, ASR-IP, ASR-OP, CSTK, HBIPS, PAL, PC, STK, STK-OP
Site of Primary Vessel Occlusion		CSTK-08, CSTK-11, CSTK-12
Skin Puncture		CSTK-09, CSTK-12
Skin Puncture Date		CSTK-09, CSTK-12
Skin Puncture Time		CSTK-09, CSTK-12
Statin Medication Prescribed at Discharge		STK-6
Substance Use		HBIPS-1
Term Newborn		PC-05, PC-06
Time Last Known Well		ASR-IP-1, ASR-OP-1, STK-4
Total Leave Days - Medicare Only		HBIPS-2, HBIPS-3

Data Element Name	Collection Notes	Associated Measures
Total Leave Days-Non-Medicare Only		HBIPS-2, HBIPS-3
Treatment Preferences		PAL-04
Treatment Preferences Document		PAL-05
VTE Prophylaxis		STK-1
VTE Prophylaxis Date		STK-1
Violence Risk to Others		HBIPS-1
Violence Risk to Self		HBIPS-1

Name: *ACEI Prescribed for LVSD in the Outpatient Setting*

Collected For: ACHFOP-02

Definition: Documentation that an angiotensin converting enzyme inhibitor (ACEI) was prescribed for LVSD in the outpatient setting. ACEIs widen or dilate blood vessels, lowering blood pressure and making it easier for the heart to pump blood. They also inhibit the adverse effects of neurohormonal activation on the heart. These effects help reduce the risk of adverse outcomes such as death or hospitalization.

Question: Was an angiotensin converting enzyme inhibitor (ACEI) prescribed for LVSD in the outpatient setting?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

- Y (Yes) ACEI was prescribed for LVSD in the outpatient setting, or the patient is currently on an ACEI.
- N (No) ACEI was not prescribed for LVSD in the outpatient setting, or unable to determine from medical record documentation.

Notes for Abstraction:

- All medications prescribed in the outpatient setting should be reviewed and taken into account by the abstractor.
- If the patient is currently on an ACEI, select “Yes”.

Suggested Data Sources:

- Discharge summary
- Discharge instruction sheet
- Outpatient medical record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Refer to Appendic C, Table 1.2 for a comphrehensive list of ACEIs.	None.

Name: *Activity Recommendation — Duration of Activity*

Collected For: ACHFOP-05

Definition: Written instructions or other documentation that individualized activity recommendations including the duration of activity recommended was given to the patient/caregiver.

Question: Were the written instructions or other documentation that activity recommendation including the duration of activity tailored to the patient's needs given to the patient/caregiver?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) Written instructions or other documentation that individualized activity recommendations including the duration of activity tailored to the patient's needs were given to the patient/caregiver.

N (No) Written instructions or other documentation that individualized activity recommendations including the duration of activity tailored to the patient's needs was not given to the patient/caregiver, or unable to determine from medical record documentation.

Notes for Abstraction: Documentation must clearly convey that the patient/caregiver was given written recommendations including the duration of activity

- If the patient/caregiver refused written instructions which address recommendations for activity including the duration of activity, select "Yes".
- A caregiver is defined as the patient's family or any other person (e.g.,home health, VNA provider, prison official or other law enforcement personnel) who will be responsible for the care of the patient.
- If duration of activity is not documented, select "No".

Suggested Data Sources:

- Discharge summary
- Outpatient record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Activity Recommendation — Intensity of Activity*

Collected For: ACHFOP-05

Definition: Written instructions or other documentation that individualized activity recommendations including the intensity of activity recommended is given to the patient/caregiver.

Question: Were the written instructions or other documentation that activity recommendation including the intensity of activity tailored to the patient's needs was given to the patient/caregiver?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) Written instructions or other documentation that individualized activity recommendations including the intensity of activity tailored to the patient's needs was given to the patient/caregiver.

N (No) Written instructions or other documentation that individualized activity recommendations including the intensity of activity tailed to the patient's needs was not given to the patient/caregiver, or unable to determine from medical record documentation.

Notes for Abstraction: Documentation must clearly convey that the patient/caregiver was given written activity recommendations including the intensity of activity

- If the patient/caregiver refused written instructions which address recommendations for activity including the intensity of activity, select “Yes”.
- A caregiver is defined as the patient's family or any other person (e.g.,home health, VNA provider, prison official or other law enforcement personnel) who will be responsible for the care of the patient.
- If intensity of the activity is not documented, select "No".

Suggested Data Sources:

- Discharge summary
- Outpatient record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Activity Recommendation — Type of Activity*

Collected For: ACHFOP-05

Definition: Written instructions or other documentation that individualized activity recommendations including the type of activity recommended is given to the patient/caregiver.

Question: Were the written instructions or other documentation that activity recommendation including type of activity tailored to the patient's needs given to the patient/caregiver?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) Written instructions or other documentation that individualized activity recommendations including the type of activity tailed to the patient's needs was given to the patient/caregiver.

N (No) Written instructions or other documentation that individualized activity recommendations including the type of activity tailed to the patient's needs was not given to the patient/caregiver, or unable to determine from medical record documentation.

Notes for Abstraction: Documentation must clearly convey that the patient/caregiver was given written recommendations including the type of activity.

- If the patient/caregiver refused written instructions which address recommendations for activity recommendations including the type of activity, select “Yes”.
- A caregiver is defined as the patient's family or any other person (e.g.,home health, VNA provider, prison official or other law enforcement personnel) who will be responsible for the care of the patient.
- If type of activity is not documented, select "No”.

Suggested Data Sources:

- Discharge summary
- Outpatient record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Admission Date*

Collected For: All Records

Definition: The month, day, and year of admission to acute inpatient care.

Question: What is the date the patient was admitted to acute inpatient care?

Format:
Length: 10 — MM-DD-YYYY (includes dashes)
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (20xx)

Notes for Abstraction:

- The intent of this data element is to determine the date that the patient was actually admitted to acute inpatient care. Because this data element is critical in determining the population for all measures, the abstractor should NOT assume that the claim information for the admission date is correct. If the abstractor determines through chart review that the date is incorrect, for purposes of abstraction, she/he should correct and override the downloaded value.
- If using claim information, the "Statement Covers Period" is not synonymous with the "Admission Date" and should not be used to abstract this data element. These are two distinctly different identifiers:
  - The Admission Date is purely the date the patient was admitted as an inpatient to the facility.
  - The Statement Covers Period ("From" and "Through" dates) identifies the span of service dates included in a particular claim. The "From" Date is the earliest date of service on the claim.
- For patients who are admitted to Observation status and subsequently admitted to acute inpatient care, abstract the date that the determination was made to admit to acute inpatient care and the order was written. Do not abstract the date that the patient was admitted to Observation.

Example: Medical record documentation reflects that the patient was admitted to observation on 04-05-20xx. On 04-06-20xx the physician writes an order to admit to acute inpatient effective 04-05-20xx. The *Admission Date* would be abstracted as 04-06-20xx; the date the determination was made to admit to acute inpatient care and the order was written.

- The admission date should not be abstracted from the earliest admission order without regards to substantiating documentation. If documentation suggests that the earliest admission order does not reflect the date the patient was admitted to inpatient care, this date should not be used.

Example: Preoperative Orders are dated as 04-06-20xx with an order to admit to Inpatient. Postoperative Orders, dated 05-01-20xx, state to admit to acute inpatient. All other documentation supports that the patient presented to the hospital for surgery on 05-01-20xx. The *Admission Date* would be abstracted 05-01-20xx.

- If there are multiple inpatient orders, use the order that most accurately reflects the date that the patient was admitted.
- For newborns that are born within this hospital, the *Admission Date* is the date the baby was born.

Suggested Data Sources:

ONLY ALLOWABLE SOURCES

- Physician orders
- Face sheet
- UB-04

Note: The physician order is the priority data source for this data element. If there is not a physician order in the medical record, use the other only allowable sources to determine the *Admission Date*.

Excluded Data Sources

- UB-04, "From" and "Through" dates

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• None	• Admit to observation • Arrival date

Name: *Admission to NICU*

Collected For: PC-05

Definition: Documentation that the newborn was admitted to the Neonatal Intensive Care Unit (NICU) at this hospital any time during the hospitalization.

Question: Was the newborn admitted to the NICU at this hospital at any time during the hospitalization?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation that the newborn was admitted to the NICU at this hospital at any time during the hospitalization.

N (No) There is no documentation that the newborn was admitted to the NICU at this hospital at any time during the hospitalization or unable to determine from medical record documentation.

Notes for Abstraction: A NICU is defined as a hospital unit providing critical care services which is organized with personnel and equipment to provide continuous life support and comprehensive care for extremely high-risk newborn infants and those with complex and critical illness (source: American Academy of Pediatrics). Names of NICUs may vary from hospital to hospital. Level designations and capabilities also vary from region to region and cannot be used alone to determine if the nursery is a NICU.

If the newborn is admitted to the NICU for observation or transitional care, select allowable value “no”. Transitional care is defined as a stay of 4 hours or less in the NICU. There is no time limit for admission to observation.

If an order to admit to the NICU is not found in the medical record, there must be supporting documentation present in the medical record indicating that the newborn received critical care services in the NICU in order to answer “yes”. Examples of supporting documentation include, but are not limited to the NICU admission assessment and NICU flow sheet.

If your hospital does not have a NICU, you must always select Value "no" regardless of any reason a newborn is admitted to a nursery.

Suggested Data Sources:
- Nursing notes
- Discharge summary
- Physician progress notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion

• None	• None

Name: *Admitting Diagnosis*

Collected For: CSTK-04

Definition: The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code associated with the diagnosis established at the time of the patient's admission to the hospital.

Question: What was the ICD-10-CM diagnosis code selected as the admitting diagnosis for this record?

Format:
Length: 3-7 (without decimal point or dot; upper or lower case)
Type: Character
Occurs: 1

Allowable Values:

Any valid diagnosis code as per the CMS ICD-10-CM master code table (Code Descriptions in Tabular Order):
https://www.cms.gov/Medicare/Coding/ICD10/index.html

Notes for Abstraction: The admitting diagnosis is defined as the initial working diagnosis documented by the patient's admitting or attending physician who determined that inpatient care was necessary.

Suggested Data Sources:
- Face sheet
- Admission form
- Code List
- Problem List

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Advance Directive Executed*

Collected For: ACHF-05, ACHFOP-07

Definition: Documentation in the medical record that the patient has an advance directive. An advance directive is instructions given by individuals specifying what actions should be taken for their health in the event that they are no longer able to make decisions due to illness or incapacity, and therefore appoints a person to make such decisions on their behalf.

Question: Was documentation present in the medical record that the patient has an advance directive?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There was documentation present in the medical record of an advance directive.

N (No) There was no documentation present in the medical record of an advance directive, or unable to determine from medical record documentation.

Notes for Abstraction:
- If there is documentation of an advance directive present in the medical record, select “Yes”.
- If the only documentation in the medical record is that the patient was asked if they have an advance directive and the patient response is no, select No.
- If there is documentation that the patient has an advance directive but a copy is not present in the medical record, select Yes.
- See inclusion list for acceptable documentation of advance directive.

Suggested Data Sources:
- History and physical
- Progress notes
- Discharge summary
- Care Transition Record
- Consultation form
- Discharge planning form
- MOLST/POLST Forms
- Hospice referral
- Outpatient medical record

Additional Notes:
- Collected for both inpatient and outpatient

Guidelines for Abstraction:

Inclusion	Exclusion
• Advance care plan • Advance decision • Advance directive • Advance healthcare directive • Health care proxy	• DNR orders • Do Not Resuscitate Orders

• Living will • MOLST (Medical Orders for Life-Sustaining Treatment) • Personal directive • POLST (Physician Orders for Life-Sustaining Treatment) • Power of attorney for healthcare	

Name: *Aldosterone Receptor Antagonist Prescribed for LVSD in the Outpatient Setting*

Collected For: ACHFOP-03

Definition: Documentation that aldosterone receptor antagonist was prescribed for LVSD in the outpatient setting. The main action of aldosterone is to increase sodium re-absorption by the kidneys. At the same time it increases the excretion of hydrogen and potassium ions. Aldosterone receptor antagonists block the effects of aldosterone, therefore decreasing sodium re-absorption and water retention by the kidneys and consequently lead to a decrease in blood pressure. Aldosterone receptor antagonists are used to treat hypertension.

Question: Was an aldosterone receptor antagonist prescribed for LVSD in the outpatient setting?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) An aldosterone receptor antagonist was prescribed for LVSD in the outpatient setting, or the patient is currently on this medication.

N (No) An aldosterone receptor antagonist was not prescribed for LVSD in the outpatient setting or unable to determine from medical record documentation.

Notes for Abstraction:
- All medication documentation available in the chart should be reviewed and taken into account by the abstractor.
- If the patient is currently on an aldosterone receptor antagonist, answer “Yes”.
- If the patient does not have LVSD or an ejection fraction <40%, select "No".

Suggested Data Sources:
- Discharge summary
- Discharge instruction sheet
- Outpatient medical record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Spironolactone • Eplerenone	All other aldosterone receptor antagonist medications other than those listed as inclusions.

Name: *Antenatal Steroids Initiated*

Collected For: PC-03

Definition: Documentation that antenatal steroids were initiated before delivery.

Initial antenatal steroids are 12mg betamethasone IM or 6mg dexamethasone IM.

Question: Is there documentation that antenatal steroids were initiated before delivery?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation that antenatal steroids were initiated before delivery.

N (No) There is no documentation that antenatal steroids were initiated before delivery OR unable to determine from medical record documentation.

Notes for Abstraction: If there is documentation that antenatal steroids were initiated prior to current hospitalization (e.g., doctor's office, clinic, birthing center, prior hospitalization before delivery), select allowable value "yes".

If antenatal steroids were initiated during this hospital episode, the name of the medication and dose must be documented in the medical record in order to select allowable value "yes".

Suggested Data Sources:
- History and physical
- Progress notes
- Medication administration record (MAR)
- Prenatal forms

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Refer to Appendix C, Table 11.0 Antenatal Steroid Medications	None

Name: *Anticoagulation Therapy Prescribed at Discharge*

Collected For: STK-3

Definition: Documentation that anticoagulation therapy was prescribed or continued at hospital discharge. Anticoagulant medications prevent the clotting of blood.

Question: Was anticoagulation therapy prescribed at hospital discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) Anticoagulation therapy was prescribed at hospital discharge.

N (No) Anticoagulation therapy was not prescribed at hospital discharge, OR unable to determine from the medical record documentation.

Notes for Abstraction:

- If there is documentation in the medical record that an anticoagulant medication was prescribed at discharge, then select "Yes". Documentation that the patient should **continue to take an anticoagulant medication** that was administered during the hospital stay or taken prior to hospital admission (e.g., home medication) is also acceptable. At minimum, the name of the anticoagulant medication must be documented.
- In determining whether anticoagulation therapy was prescribed at discharge, it is not uncommon to see conflicting documentation amongst different medical record sources. For example, the discharge summary may list an anticoagulant that is not included in any of the other discharge medication sources (e.g., discharge orders). All discharge medication documentation available in the chart should be reviewed and taken into account by the abstractor.
  - In cases where there is an anticoagulant in one source that is not mentioned in other sources, it should be interpreted as a discharge medication (select "Yes") unless documentation elsewhere in the medical record suggests that it was NOT prescribed at discharge - **Consider it a discharge medication in the absence of contradictory documentation.**
  - If documentation is contradictory (e.g., physician noted “d/c Coumadin” in the discharge orders, but Coumadin is listed in the discharge summary’s discharge medication list), or after careful examination of circumstances, context, timing, etc., documentation raises enough questions, the case should be deemed "unable to determine" (select "No").
  - Consider documentation of a hold on an anticoagulant after discharge in one location and a listing of that anticoagulant as a discharge medication in another location as contradictory ONLY if the timeframe on the hold is not **defined** (e.g., “Hold Coumadin”). Examples of a hold with a defined timeframe include “Hold Coumadin x2 days” and “Hold warfarin until after stress test.”
  - If an anticoagulant is NOT listed as a discharge medication, and there is only documentation of a hold or plan to delay initiation/restarting of anticoagulation therapy after discharge (e.g., “Hold Coumadin x2 days,” “Start Coumadin as outpatient,” “Hold Coumadin”), select “No.”

- If two discharge summaries are included in the medical record, use the one with the latest date/time. If one or both are not dated or timed, and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms. Use the dictated date/time over transcribed date/time, file date/time, etc.
  Examples:
  - Two discharge summaries, one dictated 5/22 (day of discharge) and one dictated 5/27 - Use the 5/27 discharge summary.
  - Two discharge medication reconciliation forms, one not dated and one dated 4/24 (day of discharge) - Use both.

- Disregard an anticoagulant medication documented only as a recommended medication for discharge (e.g., "Recommend sending patient home on dabigatran"). Documentation must be clearer that an anticoagulant was actually prescribed at discharge.
- Disregard documentation of anticoagulant prescribed at discharge when noted only by medication class (e.g., "Anticoagulant Prescribed at Discharge: Yes" on a core measures form). The anticoagulant must be listed by name.

Suggested Data Sources:

- Consultation notes
- Progress notes
- Physician orders
- Discharge summary
- After Visit Summary (AVS)
- Medication reconciliation form

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Refer to Appendix C, Table 8.3 for a list of medications used for anticoagulation therapy.	• Heparin Flush • Heparin SQ • Hep-Lock

Name:	*Antithrombotic Therapy Administered by End of Hospital Day 2*
Collected For:	ASR-IP-2, STK-5
Definition:	Documentation that antithrombotic therapy was administered by the end of hospital day 2. Antithrombotics include both anticoagulant and antiplatelet drugs.
Question:	Was antithrombotic therapy administered by the end of hospital day 2?
Format:	**Length:** 1 **Type:** Alphanumeric **Occurs:** 1
Allowable Values:	Y (Yes) Antithrombotic therapy was administered by the end of hospital day 2. N (No) Antithrombotic therapy was not administered by the end of hospital day 2, OR unable to determine from medical record documentation.

Notes for Abstraction:

- To compute end of hospital day 2, count the arrival date as hospital day 1. If antithrombotic therapy was administered by 11:59 p.m. of hospital day two, select "Yes" for this data element. Documentation of antithrombotic administration must be found within the timeframe of arrival to the end of hospital day 2. **It is not necessary to review documentation outside of this timeframe to answer this data element.**
- For antithrombotic therapy administered in the Emergency Department/observation area prior to the end of hospital day 2, select "Yes."
- Antithrombotic therapy administration information must demonstrate actual administration of the medication.
  Example:
  Do not use physician orders as they do not demonstrate administration of the antithrombotic therapy (in the ED this may be used if signed/initialed by a nurse).
- When antithrombotic is noted as a "home" or "current" medication or documentation indicates that it was received prior to hospital arrival only, select "No."
- Lovenox SQ for VTE prophylaxis (i.e. enoxaparin SQ 40 mg once daily; enoxaparin SQ 30 mg Q12 hours) is not sufficient. If no other antithrombotic therapy is administered by the end of hospital day 2, select "No."

Suggested Data Sources:

- Emergency department record
- Nursing notes
- Nursing flow sheet
- Progress notes
- Physician orders
- Medication administration record (MAR)

Excluded Data Sources

- Emergency medical system (EMS) or ambulance documentation.
- Any documentation dated/timed prior to hospital arrival or after hospital day 2.

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Refer to Appendix C, Table 8.2 for a list of medications used for antithrombotic therapy.	• Heparin Flush • Heparin SQ • Hep-Lock

Name: *Antithrombotic Therapy Prescribed at Discharge*

Collected For: ASR-IP-3, STK-2

Definition: Documentation that antithrombotic therapy was prescribed or continued at hospital discharge. Antithrombotics include both anticoagulant and antiplatelet drugs.

Question: Was antithrombotic therapy prescribed at hospital discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

(Y) Antithrombotic therapy was prescribed at hospital discharge.

(N) Antithrombotic therapy was not prescribed at hospital discharge, OR unable to determine from medical record documentation.

Notes for Abstraction:

- If there is documentation in the medical record that an antithrombotic medication was prescribed at discharge, then select "Yes". Documentation that the patient should **continue to take an antithrombotic medication** that was administered during the hospital stay or taken prior to hospital admission (e.g., home medication) is also acceptable. At minimum, the name of the antithrombotic medication must be documented.
- In determining whether antithrombotic therapy was prescribed at discharge, it is not uncommon to see conflicting documentation amongst different medical record sources. For example, the discharge summary may list an antithrombotic that is not included in any of the other discharge medication sources (e.g., discharge orders). All discharge medication documentation available in the chart should be reviewed and taken into account by the abstractor.
  - In cases where there is an antithrombotic in one source that is not mentioned in other sources, it should be interpreted as a discharge medication (select "Yes") unless documentation elsewhere in the medical record suggests that it was NOT prescribed at discharge - **Consider it a discharge medication in the absence of contradictory documentation.**
  - If documentation is contradictory (e.g., physician noted “d/c Plavix” in the discharge orders, but Plavix is listed in the discharge summary’s discharge medication list), or after careful examination of circumstances, context, timing, etc., documentation raises enough questions, the case should be deemed "unable to determine" (select "No").
  - Consider documentation of a hold on an antithrombotic after discharge in one location and a listing of that antithrombotic as a discharge medication in another location as contradictory ONLY if the timeframe on the hold is not **defined** (e.g., “Hold Plavix”). Examples of a hold with a defined timeframe include “Hold Plavix x2 days” and “Hold ASA until after stress test.”
  - If an antithrombotic is NOT listed as a discharge medication, and there is only documentation of a hold or plan to delay initiation/restarting of

antithrombotic therapy after discharge (e.g., “Hold Plavix x2 days,” “Start Plavix as outpatient,” “Hold Plavix”), select “No.”

- If two discharge summaries are included in the medical record, use the one with the latest date/time. If one or both are not dated or timed, and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms. Use the dictated date/time over transcribed date/time, file date/time, etc.
  Examples:
  - Two discharge summaries, one dictated 5/22 (day of discharge) and one dictated 5/27 - Use the 5/27 discharge summary.
  - Two discharge medication reconciliation forms, one not dated and one dated 4/24 (day of discharge) - Use both.

- Disregard an antithrombotic medication documented only as a recommended medication for discharge (e.g., “Recommend sending patient home on aspirin”). Documentation must be clearer that an antithrombotic was actually prescribed at discharge.
- Disregard documentation of antithrombotic prescribed at discharge when noted only by medication class (e.g., “Antithrombotic Prescribed at Discharge: Yes” on a core measures form). The antithrombotic must be listed by name.

Suggested Data Sources:

- Consultation notes
- Progress notes
- Physician orders
- Discharge summary
- Medication reconciliation form
- After Visit Summary (AVS)

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Refer to Appendix C, Table 8.2 for a list of medications used for antithrombotic therapy.	• Heparin Flush • Heparin SQ • Hep-Lock

Name: *Appropriate Justification for Multiple Antipsychotic Medications*

Collected For: HBIPS-5

Definition: Documentation in the medical record of appropriate justification for discharging the patient on two or more routine antipsychotic medications.

Question: Is there documentation in the medical record of appropriate justification for the patient being discharged on two or more antipsychotic medications?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 The medical record contains documentation of a history of a minimum of three failed multiple trials of monotherapy.

2 The medical record contains documentation of a recommended plan to taper to monotherapy due to previous use of multiple antipsychotic medications OR documentation of a cross-taper in progress at the time of discharge.

3 The medical record contains documentation of augmentation of Clozapine.

4 The medical record contains documentation of a justification other than those listed in Allowable Values 1-3.

5 The medical record does not contain documentation supporting the reason for being discharged on two or more antipsychotic medications OR unable to determine from medical record documentation.

Notes for Abstraction: If the patient was in an acute-care hospital and had multiple admissions to the psychiatric unit during his or her hospitalization, this information should be abstracted only once at the time of discharge from the hospital or at the time of final discharge from the psychiatric unit.

"Failed multiple trials of monotherapy" comprises a history of three or more failed trials by history in which there was a lack of sufficient improvement in symptoms or functioning. The documentation must include at a minimum the names of the antipsychotic medications that previously failed.

A cross-taper plan is defined as a plan to decrease the dosage of one or more antipsychotic medications while increasing the dosage of another antipsychotic medication to a level which results in controlling the patient's symptoms with one antipsychotic medication.

Both the recommended plan to taper to monotherapy and the cross-taper plan must include the name(s) of the medication(s) to be tapered.

Only allowable values 1, 2 and 3 are supported by an evidence base which will allow the case to pass the measure. Allowable value 4 can be used as part of an internal performance improvement activity, but the case will not pass the measure.

Suggested Data Sources:

- Aftercare discharge plan
- Discharge plan
- Final discharge summary
- History and physical
- Interim discharge summary
- Medication reconciliation form
- Physician discharge orders
- Physician progress notes
- Referral form

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• None	• None

Name: *ARB Prescribed for LVSD in the Outpatient Setting*

Collected For: ACHFOP-02

Definition: Documentation that an angiotensin receptor blocker (ARB) was prescribed for LVSD in the outpatient setting. ARBs widen or dilate blood vessels, lowering blood pressure and making it easier for the heart to pump blood. They also inhibit the adverse effects of neurohormonal activation on the heart. These effects help reduce the risk of adverse outcomes such as death or hospitalization.

Question: Was an angiotensin receptor blocker (ARB) prescribed for LVSD in the outpatient setting?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) ARB was prescribed for LVSD in the outpatient setting, or the patient is currently on an ARB.

N (No) ARB was not prescribed for LVSD in the outpatient setting, or unable to determine from medical record documentation.

Notes for Abstraction:
- All medications prescribed in the outpatient setting should be reviewed and taken into account by the abstractor.
- If the patient is currently on an ARB, answer “Yes”.

Suggested Data Sources:
- Discharge summary
- Discharge instruction sheet
- Outpatient medical record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Refer to Appendix C Table 1.7 for a comphrensive list of ARB's.	None

Name: *Arrival Date*

Collected For: ASR-IP-1, ASR-IP-2, CSTK-01, CSTK-03, CSTK-05, CSTK-06, CSTK-07, CSTK-09, CSTK-11, STK-4, STK-5

Definition: The earliest documented month, day, and year the patient arrived at the hospital.

Question: What was the **earliest** documented date the patient arrived at the hospital?

Format:
Length: 10 — MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:

Enter the earliest documented date

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (20xx)
UTD = Unable to Determine

Notes for Abstraction:

- If the date of arrival is unable to be determined from medical record documentation, select "UTD"."
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid format/range or outside of the parameters of care [after the *Discharge Date*] **and** no other documentation is found that provides this information, the abstractor should select "UTD"." Examples:
  - Documentation indicates the *Arrival Date* was 03- **42** -20xx. No other documentation in the list of Only Acceptable Sources provides a valid date. Since the *Arrival Date* is outside of the range listed in the Allowable Values for "Day", it is not a valid date and the abstractor should select "UTD"."
  - Patient expires on 02-12-20xx and all documentation within the Only Acceptable Sources indicates the *Arrival Date* was 03-12-20xx. Other documentation in the medical record supports the date of death as being accurate. Since the *Arrival Date* is after the *Discharge Date* (death), it is outside of the parameter of care and the abstractor should select "UTD"."

Note: Transmission of a case with an invalid date as described above will be rejected from the CMS Clinical Warehouse and the Joint Commission's Data Warehouse. Use of "UTD" for *Arrival Date* allows the case to be accepted into the warehouse.

- Review the Only Acceptable Sources to determine the earliest date the patient arrived at the ED, nursing floor, or observation, or as a direct admit to the cath lab. The intent is to utilize any documentation which reflects processes that occurred after arrival at the ED or after arrival to the nursing floor/observation/cath lab for a direct admit.
- Documentation outside of the Only Acceptable Sources list should NOT be referenced (e.g., ambulance record, physician office record, H&P). Examples:

    - ED Triage Date/Time 03-22-20xx 2355. ED rhythm strip dated/timed 03-23-20xx 0030. EMS report indicates patient was receiving EMS care from 0005 through 0025 on 03-23-20xx. The EMS report is disregarded. Enter 03-22-20xx for *Arrival Date*.
    - ED noted arrival time of 0100 on 04-14-20xx. Lab report shows blood culture collected at 2345 on 04-13-20xx. It is not clear that the blood culture was collected in the ED because the lab report does not specify it was collected in the ED (unable to confirm lab report as an Only Acceptable Source). Enter 04-14-20xx for *Arrival Date*.
    - ED Triage Date/Time 06-18-20xx 0025. EMS report indicates patient arrived by ambulance on 06-17-20xx 2355. Patient routed directly to CT. The EMS report is disregarded. Enter 06-18-20xx for Arrival Date.
- Arrival date should NOT be abstracted simply as the earliest date in one of the Only Acceptable Sources, without regard to other substantiating documentation. When looking at the Only Acceptable Sources, if the earliest date documented appears to be an obvious error, this date should not be abstracted. Examples:
    - ED arrival time noted as 0030 on 10-29-20xx. ED MAR shows an antibiotic administration time of 0100 on 10-28-20xx. Surrounding documentation on the ED MAR makes clear that the 10-28-20xx date is an obvious error - Date was not changed to 10-29-20xx. The antibiotic administration date/time would be converted to 0100 on 10-29-20xx. Enter 10-29-20xx for *Arrival Date*.
    - ED MAR shows an antibiotic administration time of 1430 on 11-03-20xx. All other dates in the ED record note 12-03-20xx. The antibiotic administration date of 11-03-20xx would not be used for *Arrival Date* because it is an obvious error.
    - ED ECG dated/timed as 05-07-20xx 2142. ED Greet Date/Time 05-08-20xx 0125. ED Triage Date/Time 05-08-20xx 0130. There is no documentation in the Only Acceptable Sources which suggests the 05-07-20xx is an obvious error. Enter 05-07-20xx for *Arrival Date*.
    - ED RN documents on a nursing triage note dated 04-24-20xx, “Blood culture collected at 2230.” ED arrival time is documented as 0130 on 04-25-20xx. There is no documentation in the Only Acceptable Sources which suggests the 04-24-20xx is an obvious error. Enter 04-24-20xx for *Arrival Date*.
- The source “Emergency Department record”” includes any documentation from the time period that the patient was an ED patient — (e.g., ED face sheet, ED consent/Authorization for treatment forms, ED/Outpatient Registration/sign-in forms, ED vital sign record, ED triage record, ED physician orders, ED ECG reports, ED telemetry/rhythm strips, ED laboratory reports, ED x-ray reports, ED head CT scan, CTA, MRI, MRA reports).
- The source “Procedure notes” refers to procedures such as cardiac caths, endoscopies, and surgical procedures. Procedure notes do not include ECG and x-ray reports.
- The arrival date may differ from the admission date.
- If the patient is in either an outpatient setting of the hospital other than observation status (e.g., dialysis, chemotherapy, cardiac cath) or a SNF unit of

the hospital, and is subsequently admitted to acute inpatient, use the date the patient arrived at the ED or on the floor for acute inpatient care as the arrival date.

- **Observation status:**
  - If the patient was admitted to observation from an outpatient setting of the hospital, use the date the patient arrived at the ED or on the floor for observation care as the arrival date.
  - If the patient was admitted to observation from the ED of the hospital, use the date the patient arrived at the ED as the arrival date.
- **Direct Admits:**
  - If the patient is a "Direct Admit" to the cath lab, use the earliest date the patient arrived at the cath lab (or cath lab staging/holding area) as the arrival date.
  - For "Direct Admits" to acute inpatient or observation, use the earliest date the patient arrived at the nursing floor or in observation (as documented in the Only Acceptable Sources) as the arrival date.
- If the patient was transferred from your hospital's satellite/free-standing ED or from another hospital within your hospital's system (as an inpatient or ED patient), and there is one medical record for the care provided at both facilities, use the arrival date at the first facility.

  CSTK, STK, AND ASR MEASURES ONLY

  EXCEPTION: Use the arrival date at the comprehensive stroke center/primary stroke center/acute stroke ready hospital.

Suggested Data Sources:

ONLY ACCEPTABLE SOURCES:

- Emergency department record
- Nursing admission assessment/admitting note
- Observation record
- Procedure notes
- Vital signs graphic record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	Addressographs/Stamps

Name: *Arrival Time*

Collected For: ASR-IP-1, ASR-OP-1, ASR-OP-2, CSTK-01, CSTK-03, CSTK-05, CSTK-06, CSTK-07, CSTK-09, CSTK-11, STK-4, STK-OP-1

Definition: The earliest documented time (military time) the patient arrived at the hospital.

Question: What was the **earliest** documented time the patient arrived at the hospital?

Format:
Length: 5 - HH:MM (with or without colon) or UTD
Type: Time
Occurs: 1

Allowable Values:

Enter the earliest documented time of arrival
HH = Hour (00-23)
MM = Minutes (00-59)
UTD = Unable to Determine

Time must be recorded in military time format.
With the exception of Midnight and Noon:

- If the time is in the a.m., conversion is not required
- If the time is in the p.m., add 12 to the clock time hour

Examples:
Midnight - 00:00 Noon - 12:00
5:31 am - 05:31 5:31 pm - 17:31
11:59 am - 11:59 11:59 pm - 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20xx, review supporting documentation to determine if the *Arrival Date* should remain 11-24-20xx or if it should be converted to 11-25-20xx.

When converting 24:00 to 00:00 do not forget to change the *Arrival Date*.
Example: Midnight or 24:00 on 11-24-20xx = 00:00 on 11-25-20xx

Notes for Abstraction:

- For times that include "seconds," remove the seconds and record the time as is.
  Example:
  15:00:35 would be recorded as 15:00.
- If the time of arrival is unable to be determined from medical record documentation, select "UTD."
- The medical record must be abstracted as documented (taken at "face value"). When the time documented is obviously in error (not a valid format/range) **and** no other documentation is found that provides this information, the abstractor should select "UTD."
  Example:
  Documentation indicates the *Arrival Time* was 3300. No other documentation in the list of Only Acceptable Sources provides a valid time. Since the *Arrival Time*

is outside of the range in the Allowable Values for “Hour,” it is not a valid time and the abstractor should select “UTD.”
Note: Transmission of a case with an invalid time as described above will be rejected from the CMS Clinical Warehouse and the Joint Commission"s Data Warehouse. Use of “UTD” for *Arrival Time* allows the case to be accepted into the warehouse.

- Review the Only Acceptable Sources to determine the earliest time the patient arrived at the ED, nursing floor, or observation, or as a direct admit to the cath lab. The intent is to utilize any documentation which reflects processes that occurred after arrival at the ED or after arrival to the nursing floor/observation/cath lab for a direct admit.
- Documentation outside of the Only Acceptable Sources list should NOT be referenced (e.g., ambulance record, physician office record, H&P).
  Examples:
  - ED Triage Time 0800. ED rhythm strip 0830. EMS report indicates patient was receiving EMS care from 0805 through 0825. The EMS report is disregarded. Enter 0800 for *Arrival Time*.
  - ED noted arrival time of 0945. Lab report shows blood culture collected at 0830. It is not clear that the blood culture was collected in the ED because the lab report does not specify it was collected in the ED (unable to confirm lab report as an Only Acceptable Source). Enter 0945 for *Arrival Time*.
  - ED Triage Time 1525. EMS report indicates patient was receiving care 1435 through 1455. ED report documents time of head CT 1505. The EMS report is disregarded. Enter 1505 for *Arrival Time*.
- Arrival time should NOT be abstracted simply as the earliest time in one of the Only Acceptable Sources, without regard to other substantiating documentation. When looking at the Only Acceptable Sources, if the earliest time documented appears to be an obvious error, this time should not be abstracted.
  Examples:
  - ED arrival time noted as 2300 on 10-28-20xx. ED MAR shows an antibiotic administration time of 0100 on 10-28-20xx. Surrounding documentation on the ED MAR makes clear that the 10-28-20xx date is an obvious error - Date was not changed to 10-29-20xx. The antibiotic administration date/time would be converted to 0100 on 10-29-20xx. Enter 2300 for *Arrival Time*.
  - ED face sheet lists arrival time of 13:20. ED Registration Time 13:25. ED Triage Time 13:30. ED consent to treat form has 1:17 time but “AM” is circled. ED record documentation suggests the 1:17 AM is an obvious error. Enter 13:20 for *Arrival Time*.
  - ED ECG timed as 1742. ED Greet Time 2125. ED Triage Time 2130. There is no documentation in the Only Acceptable Sources which suggests the 1742 is an obvious error. Enter 1742 for *Arrival Time*.
  - ED RN documents on the nursing triage note, “Blood culture collected at 0730.” ED arrival time is documented as 1030. There is no documentation in the Only Acceptable Sources which suggests the 0730 is an obvious error. Enter 0730 for *Arrival Time*.

- The source “Emergency Department record”” includes any documentation from the time period that the patient was an ED patient (e.g., ED face sheet, ED consent/Authorization for treatment forms, ED/Outpatient Registration/sign-in forms, ED vital sign record, ED triage record, ED physician orders, ED ECG reports, ED telemetry/rhythm strips, ED laboratory reports, ED x-ray reports, ED head CT scan, CTA, MRI, MRA reports).
- The source “Procedure notes” refers to procedures such as cardiac caths, endoscopies, and surgical procedures. Procedure notes do not include ECG and x-ray reports.
- The arrival time may differ from the admission time.
- If the patient is in either an outpatient setting of the hospital other than observation status (e.g., dialysis, chemotherapy, cardiac cath) or a SNF unit of the hospital, and is subsequently admitted to acute inpatient, use the time the patient arrived at the ED or on the floor for acute inpatient care as the arrival time.
- **Observation status:**
  - If the patient was admitted to observation from an outpatient setting of the hospital, use the time the patient arrived at the ED or on the floor for observation care as the arrival time.
  - If the patient was admitted to observation from the ED of the hospital, use the time the patient arrived at the ED as the arrival time.
- **Direct Admits:**
  - If the patient is a “Direct Admit” to the cath lab, use the earliest time the patient arrived at the cath lab (or cath lab staging/holding area) as the arrival time.
  - For “Direct Admits” to acute inpatient or observation, use the earliest time the patient arrived at the nursing floor or in observation (as documented in the Only Acceptable Sources) as the arrival time.
- If the patient was transferred from your hospital”s satellite/free-standing ED or from another hospital within your hospital”s system (as an inpatient or ED patient), and there is one medical record for the care provided at both facilities, use the arrival time at the first facility.

  CSTK, STK, AND ASR MEASURES ONLY

  EXCEPTION: Use the arrival time at the comprehensive stroke center/primary stroke center/acute stroke ready hospital.

Suggested Data Sources:

ONLY ACCEPTABLE SOURCES

- Emergency department record
- Nursing admission assessment/admitting note
- Observation record
- Procedure notes
- Vital signs graphic record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion

None	• Addressographs/Stamps • Pre-printed times on a vital sign graphic record

Name: *Assessed for Rehabilitation Services*

Collected For: STK-10

Definition: Documentation that the patient was assessed for or received rehabilitation services during this hospitalization. Rehabilitation is a treatment or treatments designed to facilitate the process of recovery from injury, illness, or disease to as normal a condition as possible.

Question: Was the patient assessed for and/or did the patient receive rehabilitation services during this hospitalization?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) Patient was assessed for and/or received rehabilitation services during this hospitalization.

N (No) Patient was not assessed for nor did patient receive rehabilitation services during this hospitalization, OR unable to determine from medical record documentation.

Notes for Abstraction:

- The assessment for rehabilitation services must be completed by a qualified provider. See the inclusion list.
- If a documented reason exists for not completing a rehabilitation assessment, select "Yes."
  Examples:
  - "Patient returned to prior level of function, rehabilitation not indicated at this time."
  - "Patient unable to tolerate rehabilitation therapeutic regimen."
  - Patient/family refusal
- Do not infer that documentation of symptoms resolved means that a rehabilitation assessment was completed, unless mentioned in the context of rehabilitation services.
  Example:
  "Symptoms resolved – no rehab needed."
- When an assessment is not found in the medical record but documentation indicates that rehabilitation services were initiated (i.e., Physical Therapy (PT), Occupational Therapy (OT), Speech Language Therapy (SLT), Neuropsychology) during the hospital stay, select "Yes."
  Examples:
  - "PT x2 for range of motion (ROM) exercises at bedside."
  - "Patient aphasic – evaluated by speech pathology"
- When patient is transferred to a rehabilitation facility or referred to rehabilitation services following discharge, select "Yes."

Suggested Data Sources: **PHYSICIAN/APN/PA/KT/PT/OT/SLT OR NEUROPSYCHOLOGIST DOCUMENTATION ONLY FOR REHABILITATION ASSESSMENT:**

- After Visit Summary (AVS)
- Consultation notes
- History and physical
- Progress notes
- Discharge summary
- Referral forms
- Rehabilitation records
- Therapy notes (e.g., KT/PT/OT/SLT)

Excluded Data Sources:
Any documentation other than
Physician/APN/PA/KT/PT/OT/SLT/Neuropsychologist

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion

• Assessment/Consult done by a member of the rehabilitation team
• Patient received rehabilitation services from a member of the rehabilitation team.
• Members of the rehabilitation team:
  ○ Advanced Practice Nurse (APN)
  ○ Kinesiotherapist (KT)
  ○ Neuro-psychologist (PsychD)
  ○ Occupational therapist (OT)
  ○ Physical therapist (PT)
  ○ Physician
  ○ Physician Assistant (PA)
  ○ Speech and language pathologist (SLT)
	• Request for consultation for rehabilitation services that was not performed

Name: *Atrial Fibrillation/Flutter*

Collected For: STK-3

Definition: Documentation by a physician/APN/PA that the patient has a history of **ANY** atrial fibrillation (e.g., remote, persistent, or paroxysmal) or atrial flutter OR a diagnosis or signed ECG tracing of **ANY** atrial fibrillation or flutter.

Question: Was there physician/APN/PA documentation of a diagnosis, signed ECG tracing, or a history of **ANY** atrial fibrillation/flutter in the medical record?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is physician/APN/PA documentation of a diagnosis or a history of **ANY** atrial fibrillation/flutter.

N (No) There is no physician/APN/PA documentation of a diagnosis or a history of **ANY** atrial fibrillation/flutter, OR unable to determine from medical record documentation.

Notes for Abstraction:

- If there is a documented history or diagnosis of **ANY** condition (e.g., remote, persistent, or paroxysmal) described in the definition statement, select "Yes."
- If there is documentation of atrial fibrillation or flutter on a signed ECG, select "Yes."
- If there is a diagnosis of atrial fibrillation or flutter anywhere in the medical record, or documentation of a past history of atrial fibrillation or flutter anywhere in the medical record, select "Yes."
- If there is physician/APN/PA documentation of any of the following examples, disregard and continue to review the medical record for a confirmed diagnosis. If no other documentation exists, select "No."
  - "suspected/suspicion of atrial fibrillation or flutter"
  - "rule out atrial fibrillation/flutter"
  - "questionable atrial fibrillation/flutter"
  - "possible atrial fibrillation/flutter"
- If there is documentation to monitor the patient for atrial fibrillation/flutter after discharge and no other documentation of a confirmed diagnosis or history of atrial fibrillation/flutter in the medical record, select "No."
  Example:
  Possible cardioembolic origin. Telemetry monitoring for 30 days to exclude PAF.
- If there is documentation of a history of an ablation procedure for atrial fibrillation/flutter, select "Yes."
- If there is documentation of a history of left atrial appendage (LAA) closure with a device, select "Yes".
- If there is documentation of a history of atrial fibrillation or flutter that terminated within 8 weeks following CABG, select "No."
- If there is documentation of a history of transient and entirely reversible episode of atrial fibrillation or flutter due to thyrotoxicosis, select "No."

Suggested Data Sources:

PHYSICIAN/APN/PA DOCUMENTATION ONLY:

- History and physical
- Progress notes
- Discharge summary
- Transfer sheet
- ECG report
- Holter monitor report
- Problem List

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	• PAC • Paroxysmal atrial tachycardia • Paroxysmal supraventricular tachycardia • PAT • Premature atrial contraction • PST

Name: *Birth Weight*

Collected For: PC-04, PC-06, Risk Adjustment

Definition: The weight (in grams) of a newborn at the time of delivery.

Note:

453.5 grams = 1 pound

28.35 grams = 1 ounce

It is recommended that each ORYX Vendor provide the ability to enter birth weight in either grams or pounds. However, all birth weights must be converted to grams prior to indicator calculation.

Question: What was the weight of the newborn at delivery?

Format:
Length: 4 or UTD
Type: Alphanumeric
Occurs: 1

Allowable Values:

150 through 8165 grams
UTD = Unable to Determine

Note: When converting from pounds and ounces to grams, do not round to the nearest pound before converting the weight to grams. Round to the nearest whole number after the conversion to grams.

Notes for Abstraction:

- Newborns with birth weights less than 150 grams need to be verified that the baby was live born and for data quality purposes. Birth weights greater than 8165 grams need to be verified for data quality. Abstractors should review all of the suggested data sources to verify the accuracy of the data.
- If the birth weight is unable to be determined from medical record documentation, enter "UTD".
- The medical record must be abstracted as documented (taken at “face value”). When the value documented is not a valid number/value per the definition of this data element **and** no other documentation is found that provides this information, the abstractor should select “UTD.”
  Example:
  Documentation indicates the *Birth Weight* was 0 grams. No other documentation in the medical record provides a valid value. Since the *Birth Weight* is not a valid value, the abstractor should select “UTD.”
  Note:
  Transmission of a case with an invalid value as described above will be rejected from the Joint Commission's Data Warehouse. Use of “UTD” for *Birth Weight* allows the case to be accepted into the warehouse.
- The NICU admission assessment or notes should be reviewed first for the birth weight. In the absence of admission to the NICU, the delivery record or

operating room record should be reviewed next for the birth weight. In cases where there is conflicting data, use the document recording the birth weight closest to the time of delivery.

- It is acceptable to use data derived from vital records reports received from state or local departments of public health, delivery logs or clinical information systems if they are available and are directly derived from the medical record with a process in place to confirm their accuracy. If this is the case, these may be used in lieu of the suggested data sources listed below.
- For newborns received into the hospital as a transfer, the admission birth weight may be used if the original birth weight is not available.
- If the birth weight is recorded in pounds and ounces and also in grams, abstract the value for grams.

Suggested Data Sources: In Order of Priority:

- NICU admission assessment or notes
- Delivery record
- Operating room record
- History and physical
- Nursing notes
- Nursery record
- Physician progress notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• None	• None

Name: *Birthdate*

Collected For: All Records

Definition: The month, day, and year the patient was born.

Note:

- Patient's age (in years) is calculated by *Admission Date* minus *Birthdate*. The algorithm to calculate age must use the month and day portion of admission date and birthdate to yield the most accurate age.
- For HBIPS discharge measures, i.e., HBIPS-1, 5, patient's age (in years) is calculated by *Discharge Date* minus *Birthdate*. For event measures, i.e., HBIPS-2, 3, patient's age at time of event (in years) is calculated by *Event Date* minus *Birthdate*. The algorithm to calculate age must use the month and day portion of birthdate, and discharge date or event, as appropriate to yield the most accurate age.

Question: What is the patient's date of birth?

Format:
Length: 10 — MM-DD-YYYY (includes dashes)
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (1880-Current Year)

Notes for Abstraction: Because this data element is critical in determining the population for all measures, the abstractor should NOT assume that the claim information for the birthdate is correct. If the abstractor determines through chart review that the date is incorrect, she/he should correct and override the downloaded value. If the abstractor is unable to determine the correct birthdate through chart review, she/he should default to the date of birth on the claim information.

Suggested Data Sources:

- Emergency department record
- Face sheet
- Registration form
- UB-04

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• None	• None

Name: *Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD in the Outpatient Setting*

Collected For: ACHFOP-01

Definition: Documentation that bisoprolol, carvedilol, or sustained-release metoprolol was prescribed in the outpatient setting. Beta-blockers are agents which block beta-adrenergic receptors, thereby decreasing the rate and force of heart contractions, and reducing blood pressure. Over time beta-blockers improve the heart's pumping ability. The marked beneficial effects of beta blockade has been well demonstrated in large-scale clinical trials of symptomatic patients with New York Heart Association (NYHA) class II-IV heat failure and reduced LVEF using bisoprolol, carvedilol, and sustained-release metoprolol succinate.

Question: Was bisoprolol, carvedilol, or sustained-release metoprolol prescribed for LVSD in the outpatient setting?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) Bisoprolol, carvedilol, or sustained-release metoprolol was prescribed for LVSD in the outpatient setting, or the patient is currently on one of these beta-blockers.

N (No) Bisoprolol, carvedilol, or sustained-release metoprolol was not prescribed for LVSD in the outpatient setting or unable to determine from medical record documentation.

Notes for Abstraction:

- **Only select "Yes" for those beta-blockers identified in the list of inclusions. No other beta-blockers will be accepted for this data element**
- In determining whether bisoprolol, carvedilol, or sustained-release metoprolol succinate was prescribed at discharge, it is not uncommon to see conflicting documentation amongst different medical record sources. For example, the discharge summary may list one of these beta-blockers that is not included in any of the other discharge medication sources (e.g., discharge orders). All discharge medication documentation available in the chart should be reviewed and taken into account by the abstractor.
    - In cases where there is bisoprolol, carvedilol, or sustained-release metoprolol succinate in one source that is not mentioned in other sources, it should be interpreted as a discharge medication (select "Yes") unless documentation elsewhere in the medical record suggests that it was NOT prescribed at discharge - **Consider it a discharge medication in the absence of contradictory documentation.**
    - If documentation is contradictory (e.g., physician noted “d/c carvedilol” in the discharge orders, but carvedilol is listed in the discharge summary's discharge medication list), or after careful examination of circumstances, context, timing, etc, documentation raises enough questions, the case should be deemed unable to determine" (select "No").

- Consider documentation of a hold on bisoprolol, carvedilol, or sustained-release metoprolol succinate after discharge in one location and a listing of that beta-blocker as a discharge medication in another location as contradictory ONLY if the timeframe on the hold is not defined (e.g., "Hold bisoprolol"). Examples of a hold with a defined timeframe include "Hold Toprol-XL x 2 days" and "Hold Coreg until after stress test."
- If bisoprolol, carvedilol, or sustained-release metoprolol succinate is NOT listed as a discharge medication, and there is only documentation of a hold or plan to delay initiation/restarting of the beta-blocker after discharge (e.g., "Hold Toprol-XL x 2 days," "Start Zebeta as outpatient," "Hold Coreg"), select "No".
- If two discharge summaries are included in the medical record, use the one with the latest date/time. If one or both are not dated or timed, and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms. Use the dictated date/time over transcribed date/time, file date/time, etc.
  Examples:
- Two discharge summaries, one dictated 5/22 (day of discharge) and one dictated 5/27 - Use the 5/27 discharge summary.
- Two discharge medication reconciliation forms, one not dated and one dated 4/24 (day of discharge) - Use both.
- Disregard bisoprolol, carvedilol, or sustained-release metoprolol succinate documented only as a recommended medication for discharge (e.g., "Recommend sending patient home on Coreg"). Documentation must be more clear that the beta-blocker was actually prescribed at discharge.

- Disregard documentation of bisoprolol, carvedilol, or sustained-release metoprolol succinate prescribed at discharge when noted only by medication class (e.g., "Beta-Blocker Prescribed at Discharge: Yes" on a core measures form). The beta-blocker prescribed must be listed by name.

Suggested Data Sources:

- Discharge summary
- Discharge Instruction sheet
- Outpatient medical record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Bisoprolol • Bisoprolo/fumarate • Bisoprolol/hydrochlorothiazide • Carvedilol • Carvedilol phosphate • Coreg • Coreg CR • Metoprolol succinate	All other beta-blocker medications other than those listed as inclusions.

• Toprol-XL • Zebeta • Ziac	

Name: *Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate Prescribed for LVSD at Discharge*

Collected For: ACHF-01

Definition: Documentation that bisoprolol, carvedilol, or sustained-release metoprolol succinate was prescribed at discharge. Beta-blockers are agents which block beta-adrenergic receptors, thereby decreasing the rate and force of heart contractions, and reducing blood pressure. Over time beta-blockers improve the heart's pumping ability. The marked beneficial effects of beta blockade has been well demonstrated in large-scale clinical trials of symptomatic patients with New York Heart Association (NYHA) class II-IV heart failure and reduced LVEF using bisoprolol, carvedilol, and sustained-release metoprolol succinate.

Question: Was bisoprolol, carvedilol, or sustained-release metoprolol succinate prescribed for LVSD at discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) Bisoprolol, carvedilol, or sustained-release metoprolol succinate was prescribed for LVSD at discharge.

N (No) Bisoprolol, carvedilol, or sustained-release metoprolol succinate was not prescribed for LVSD at discharge or unable to determine from medical record documentation.

Notes for Abstraction:

- **Only select "Yes" for those beta-blockers identified in the list of inclusions. No other beta-blockers will be accepted for this data element**
- In determining whether bisoprolol, carvedilol, or sustained-release metoprolol succinate was prescribed at discharge, it is not uncommon to see conflicting documentation amongst different medical record sources. For example, the discharge summary may list one of these beta-blockers that is not included in any of the other discharge medication sources (e.g., discharge orders). All discharge medication documentation available in the chart should be reviewed and taken into account by the abstractor.
    - In cases where there is bisoprolol, carvedilol, or sustained-release metoprolol succinate in one source that is not mentioned in other sources, it should be interpreted as a discharge medication (select "Yes") unless documentation elsewhere in the medical record suggests that it was NOT prescribed at discharge - **Consider it a discharge medication in the absence of contradictory documentation.**
    - If documentation is contradictory (e.g., physician noted “d/c carvedilol” in the discharge orders, but carvedilol is listed in the discharge summary's discharge medication list), or after careful examination of circumstances, context, timing, etc, documentation raises enough questions, the case should be deemed unable to determine" (select "No").

- Consider documentation of a hold on bisoprolol, carvedilol, or sustained-release metoprolol succinate after discharge in one location and a listing of that beta-blocker as a discharge medication in another location as contradictory ONLY if the timeframe on the hold is not defined (e.g., “Hold bisoprolol”). Examples of a hold with a defined timeframe include “Hold Toprol-XL x 2 days” and “Hold Coreg until after stress test.”
- If bisoprolol, carvedilol, or sustained-release metoprolol succinate is NOT listed as a discharge medication, and there is only documentation of a hold or plan to delay initiation/restarting of the beta-blocker after discharge (e.g., “Hold Toprol-XL x 2 days,” “Start Zebeta as outpatient,” “Hold Coreg”), select “No”.
- If two discharge summaries are included in the medical record, use the one with the latest date/time. If one or both are not dated or timed, and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms. Use the dictated date/time over transcribed date/time, file date/time, etc.
  Examples:
- Two discharge summaries, one dictated 5/22 (day of discharge) and one dictated 5/27 - Use the 5/27 discharge summary.
- Two discharge medication reconciliation forms, one not dated and one dated 4/24 (day of discharge) - Use both.
- Disregard bisoprolol, carvedilol, or sustained-release metoprolol succinate documented only as a recommended medication for discharge (e.g., “Recommend sending patient home on Coreg”). Documentation must be more clear that the beta-blocker was actually prescribed at discharge.

- Disregard documentation of bisoprolol, carvedilol, or sustained-release metoprolol succinate prescribed at discharge when noted only by medication class (e.g., “Beta-Blocker Prescribed at Discharge: Yes” on a core measures form). The beta-blocker prescribed must be listed by name.

Suggested Data Sources:

- Nursing notes
- Progress notes
- Physician orders
- Physician's notes
- Discharge summary
- Medication administration record (MAR)
- Transfer sheet
- Discharge instruction sheet
- Medication reconciliation form

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Bisoprolol • Bisoprolol/fumarate • Bisoprolol/hydrochlorothiazide	All other beta-blocker medications other than those listed as inclusions.

• Carvedilol • Carvedilol phosphate • Coreg • Coreg CR • Metoprolol succinate • Toprol-XL • Zebeta • Ziac	

Name: *Bloodstream Infection Confirmed*

Collected For: PC-04

Definition: Documentation in the medical record that the bloodstream infection (BSI) is confirmed after the first 48 hours after admission. This includes patients with positive blood cultures or inconclusive blood cultures when the patient is suspected of having a bloodstream infection or septicemia and is being treated with a course of antibiotics for 7 days or longer for the condition. A blood culture can be defined as a culture of microorganisms from specimens of blood to determine the presence and nature of bacteremia.

Question: Is there documentation after the first 48 hours after admission that the patient has a bloodstream infection and was receiving a course of antibiotics for 7 days or longer for a suspected bloodstream infection or septicemia?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation that the bloodstream infection (BSI) is confirmed after the first 48 hours after admission and is being treated with a course of antibiotics for 7 days or longer for the condition.

N (No) There is no documentation that the bloodstream infection (BSI) is confirmed after the first 48 hours after admission and is being treated with a course of antibiotics for 7 days or longer for the condition or unable to determine from medical record documentation.

Notes for Abstraction: Confirmation of BSI is based on Bloodstream Infection Event criteria from the Centers for Disease Control and Prevention (CDC) available at: https://www.cdc.gov/nhsn/acute-care-hospital/clabsi/index.html

Hospital infection prevention and control professionals should be consulted to assist with confirmation of BSI.

For patients who die or transfer to another facility prior to the completion of a 7 day course of antibiotics, when there is a confirmed BSI and a 7 day course of antibiotics was planned, select Yes.

Suggested Data Sources:
- History and physical
- Laboratory report
- Nursing notes
- Progress notes
- Microbiology report
- NICU notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion

None	• Suspected, presumed or rule out bloodstream infection without a positive blood culture
	• Receiving a course of antibiotics primarily for the following conditions:
	  ○ Diagnosis of necrotizing enterocolitis (NEC)
	  ○ Diagnosis of urosepsis
	  ○ Skin infections confirmed as the primary source of the BSI
	  ○ Diagnosis of pneumonia

Name: *Bloodstream Infection Present on Admission*

Collected For: PC-04

Definition: Documentation in the medical record within the first 48 hours after admission that the patient had a bloodstream infection present on admission. This includes patients with positive blood cultures or inconclusive blood cultures when the patient is suspected of having a bloodstream infection or septicemia and is being treated for the condition. A blood culture can be defined as a culture of microorganisms from specimens of blood to determine the presence and nature of bacteremia.

Question: Is there documentation within the first 48 hours after admission that the patient had a bloodstream infection present on admission or is receiving treatment for a suspected bloodstream infection or septicemia on admission?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation within the first 48 hours after admission that the patient had a bloodstream infection present on admission or is receiving treatment for a suspected bloodstream infection or septicemia on admission.

N (No) There is no documentation within the first 48 hours after admission that the patient had a bloodstream infection present on admission or is receiving treatment for a suspected bloodstream infection or septicemia present on admission or unable to determine from medical record documentation.

Notes for Abstraction: The admission assessment and the NICU admission assessment or NICU notes should be reviewed first for documentation of a suspected or confirmed bloodstream infection present on admission or within the first 48 hours after admission.

Regardless of the blood culture results, if there is documentation by the clinician specifically stating that a suspected bloodstream infection was present on admission, this should be taken at face value, select "yes".

If the present on admission (POA) indicator is present with the diagnosis code for septicemia or bacteremia, answer “yes” to bloodstream infection present on admission.

Routine work up for sepsis for high risk newborns admitted to the NICU should not be considered a suspected bloodstream infection in the absence of positive blood culture results. There must be documentation from the clinician specifically stating that the newborn appeared septic or was showing signs and symptoms of sepsis in order to answer “yes”. Signs and symptoms of sepsis include but are not limited to: body temperature changes, respiratory difficulty, diarrhea, hypoglycemia, reduced

movements, reduced sucking, seizures, bradycardia, swollen/distended abdomen, vomiting and/or jaundice.

The results of the initial blood cultures drawn within the first 48 hours of admission which are reported after the first 48 hours may be used to determine if the bloodstream infection was present on admission.

Birth is considered the same as admission for patients who were born in the reporting hospital.

If there is documentation that a course of antibiotics was started within the first 48 hours after admission which lasted less than 7 days, select allowable value “no”.

Suggested Data Sources:

- History and physical
- Laboratory report
- Nursing notes
- Nursing admission assessment
- Progress notes
- Admission assessment
- Microbiology report
- NICU admission assessment or notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Suspected bloodstream infection • Positive blood culture • Inconclusive blood culture under treatment • Staphylococcal septicemia • Staphylococcal bacteremia • Gram negative septicemia • Gram negative bacteremia	• Rule out sepsis • R/O sepsis • Work up for sepsis • Negative blood culture under treatment • Evaluation for sepsis

Name: *Care Transition Record Transmitted*

Collected For: ACHF-03

Definition: A care transition record is a document or set of documents containing standardized components specific to the patient's diagnosis, treatment, and care. A care transition record is transmitted to the next level of care provider no later than the **seventh post-discharge day.**

Question: Was a care transition record transmitted to the next level of care provider no later than the **seventh post-discharge day?**

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 The medical record contains a care transition record that was transmitted to the next level of care provider no later than the **seventh post-discharge day.**

2 The medical record contains a care transition record but was not transmitted to the next level of care provider by the **seventh post-discharge day.**

3 The medical record does not contain a care transition record, or unable to determine from medical record documentation.

Notes for Abstraction:

- There must be documentation in the medical record to indicate that the care transition record was transmitted to the next level of care provider.
- A care transition record may consist of one document or several documents which could be considered a care transition “packet”. The hospital must be able to identify which document(s) make up the care transition record and the hospital must identify what specific documents are transmitted to the next level of care provider.
- The care transition record could be in the form of a continuing care plan, discharge instruction form, or another patient-specific document(s) contained in the medical record.
- The first post-discharge day is defined as the day after discharge.
- The next level of care provider is the clinician, hospital or clinic responsible for managing the patient's heart failure after hospital discharge.
    - The next level of care provider may be a primary care physician, cardiologist, advanced practice nurse (APN), or physician assistant (PA).
    - If the patient has referrals to more than one provider for follow-up after discharge, transmission of the care transition record must include the next level of care provider.
- Methods for transmitting the care transition record include, but are not limited to: U.S. mail, email, fax, EMR access, doctor's mailbox, medical transport personnel. Giving a copy of the care transition record to the patient DOES NOT comprise transmission.
- If the hospital has an electronic medical record (EMR), abstraction is a two-step process:

1. Make a list of those next level of care providers who have complete access to the hospital EMR.
2. Check the list of those providers who have EMR access against the providers named on the care transition record. If the next level of provider noted on the care transition record matches the list of providers who have EMR access, select allowable value '1'.

Suggested Data Sources:

- Aftercare discharge plan
- Care transition record
- Continuing care plan
- Discharge plan
- Discharge summary
- Medication reconciliation form
- Physician orders
- Progress notes
- Referral form

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Care Transition Record-Discharge Medications*

Collected For: ACHF-03

Definition: Documentation in the care transition record includes the discharge medications, dosage and indication for use or that no medications were prescribed at discharge.

Question: Is there documentation in the medical record of a care transition record which includes the discharge medications, dosage and indication for use or that no medications were prescribed at discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation that the care transition record included discharge medications, dosage, and indication for use.

N (No) There is no documentation that the care transition record included discharge medications, dosage, and indication for use, OR unable to determine from medical record documentation.

Notes for Abstraction:

- Medications are defined as any prescription medications, sample medications, herbal remedies, vitamins, nutriceuticals, over-the-counter drugs and any product designated by the Food and Drug Administration (FDA) as a drug (taken from the 2014 *Comprehensive Accreditation Manual for Hospitals: The Official Handbook (CAMH)*).
- Discharge medications are all medications prescribed for the patient at discharge, including PRN medications, and are NOT limited to only those medications prescribed for heart failure.
- All medications must have the names, dosage and indication for use listed in the care transition record in order to select Yes'. The indication for use can be as short as one to two words, but must be present for all medications, not just heart failure medications.
- If documentation reflects that no medications were prescribed for the patient at the time of discharge, select Yes.

Suggested Data Sources:

- Aftercare discharge plan
- Care transition record
- Continuing care plan
- Discharge plan
- Discharge summary
- Medication reconciliation form
- Physician orders
- Progress notes
- Referral form

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Routinely scheduled medications • PRN medications	None

Name: *Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed*

Collected For: ACHF-03

Definition: Documentation in the care transition record includes follow-up treatment(s) and service(s) needed. Follow-up treatments and services include treatments and services to be initiated or continued to manage the patient's heart failure after discharge from the hospital.

Question: Is there documentation in the medical record of the care transition record which includes follow-up treatment and services needed?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation that the care transition record included follow-up treatment and services.

N (No) There is no documentation that the care transition record included follow-up treatment or services, OR unable to determine from medical record documentation.

Notes for Abstraction:

- Follow-up treatments and services needed after hospital discharge should be documented in the care transition record. The list of treatments and services includes, but is not limited to: laboratory tests and results; imaging services (e.g., MRI, PET/CT, ultrasound, x-rays and other radiology services); rehabilitation services (e.g., PT, OT, SLT); respiratory treatments (e.g., oxygen therapy, CPAP BiPAP, nebulizer treatments); nutrition services; hospice or home care services; mental health, or other counseling services. Durable medical equipment needs and transportation needs (e.g., Medi-car) should be included.
- Documentation of one or more follow-up treatments and/or sevices in the care transition record, select YES'.
- If medical record documentation indicates that no follow-up treatment or services were ordered, select YES'.
- Unchecked checkbox or blank space for documentation of follow-up treatment or services, select NO'.

Suggested Data Sources:

- Aftercare discharge plan
- Care transition record
- Continuing care plan
- Discharge plan
- Discharge summary
- Medication reconciliation form
- Physician orders
- Progress notes
- Referral form

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Care Transition Record-Procedures Performed During Hospitalization*

Collected For: ACHF-03

Definition: Documentation in the care transition record includes procedures performed during hospitalization. Procedures may be diagnostic (e.g., echocardiogram), therapeutic (e.g., thoracentesis), or surgical (e.g., pacemaker insertion).

Question: Is there documentation in the medical record of a care transition record which includes procedures performed during hospitalization?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation that the care transition record included procedures performed during the hospitalization.

N (No) There is no documentation that the care transition record included procedures performed during the hospitalization, OR unable to determine from medical record documentation.

Notes for Abstraction:

- The procedures performed during hospitalization should be a list of any diagnostic procedure(s), therapeutic procedure(s), or surgery(s) performed during the hospital stay. Procedures described by name, ICD-10-PCS Principal Procedure Code, or ICD-10-PCS Other Procedure Codes are acceptable.
- If no procedures were performed during the hospitalization, select YES'.
- Unchecked checkbox or blank space for documentation of procedures performed during hospitalization, select NO'.

Suggested Data Sources:

- Aftercare discharge plan
- Care transition record
- Continuing care plan
- Discharge plan
- Discharge summary
- Medication reconciliation form
- Physician orders
- Progress notes
- Referral form

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Care Transition Record-Reason for Hospitalization*

Collected For: ACHF-03

Definition: Documentation in the care transition record includes the reason for hospitalization. The reason for hospitalization should be a short synopsis describing the events the patient experienced prior to this hospitalization. The reason for hospitalization may be listed as the triggering or precipitating event prior to the patient's admission to the hospital.

Question: Is there documentation in the medical record of a care transition record which includes the reason for hospitalization?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation that the care transition record included the reason for hospitalization.

N (No) There is no documentation that the care transition record included the reason for hospitalization, OR unable to determine from medical record documentation.

Notes for Abstraction:
- If the patient's primary diagnosis and/or other or secondary diagnoses are listed on the care transition record, select YES'.
- Documentation of the patient's “chief complaint” on the care transition, select YES'.
- Unchecked checkbox or blank space for documentation of reason for hospitalization, select NO'.

Suggested Data Sources:
- Aftercare discharge plan
- Care transition record
- Continuing care plan
- Discharge plan
- Discharge summary
- Medication reconciliation form
- Physician orders
- Progress notes
- Referral form

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Care Transition Record-Treatment(s)/Service(s) Provided*

Collected For: ACHF-03

Definition: Documentation in the care transition record includes treatment(s) and service(s) provided during hospitalization. Treatments and services include anything offered to or done for the patient during the hospital stay to manage his/her heart failure.

Question: Is there documentation in the medical record of a care transition record which includes treatments and services provided during hospitalization?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation that the care transition record included treatment(s) and service(s) provided during hospitalization.

N (No) There is no documentation that the care transition record included treatment(s) and service(s) provided during hospitalization, OR unable to determine from medical record documentation.

Notes for Abstraction:
- Treatments and services provided during the hospital stay should be documented in the care transition record. The list of treatments and services includes, but is not limited to: laboratory tests and results; imaging services (e.g., MRI, PET/CT, ultrasound, x-rays and other radiology services); rehabilitation services (e.g., PT, OT, SLT); respiratory treatments (e.g., oxygen therapy, CPAP, BiPAP, nebulizer treatments); nutrition services; hospice services; mental health, or other counseling services.
- If one or more treatments or sevices are documented in the care transition record, select Yes'.
- Documentation of tests with results pending that require follow-up, select YES'.
- Unchecked checkbox or blank space for documentation of treatment or services, select NO'.

Suggested Data Sources:
- Aftercare discharge plan
- Care transition record
- Continuing care plan
- Discharge plan
- Discharge summary
- Medication reconciliation form
- Physician orders
- Progress notes
- Referral form

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Certification Type*

Collected For: CSTK-01, CSTK-03, CSTK-04, CSTK-05, CSTK-06, CSTK-07, CSTK-08, CSTK-09, CSTK-11, CSTK-12, Joint Commission Only, Transmission, Hospital Clinical Data File

Definition: The certification program designation awarded to the site.

Question: What is the certification designation for the site?

Format:
Length: 10
Type: Alphanumeric
Occurs: 1

Allowable Values:

TSC = Thrombectomy-capable Stroke Center (TSC) program (follow up will be with CSTK-02 measure).
CSC = Comprehensive Stroke Center (CSC) program (follow up will be with CSTK-10 measure).
PSC = Primary Stroke Center (PSC)

Notes for Abstraction: NA

Suggested Data Sources:
- Not applicable

NA – consult The Joint Commission Certification program for more information.

Additional Notes: Hospitals should inform the ORYX vendor submitting the patient data of the type of certification program designation awarded to the site that treated the patient.

Guidelines for Abstraction:

Inclusion	Exclusion

Name: *Clinical Trial*

Collected For: ACHF-01, ACHF-02, ACHF-03, ACHF-06, ACHFOP-01, ACHFOP-02, ACHFOP-03, ACHFOP-04, ACHFOP-05, CSTK-04, CSTK-06, STK

Definition: Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied (i.e. STK, VTE).

Question: During this hospital stay, was the patient enrolled in a clinical trial in which patients with the same condition as the measure set were being studied (i.e. STK, VTE)?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied (i.e. STK, VTE).

N (No) There is no documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied (i.e. STK, VTE), or unable to determine from medical record documentation.

Notes for Abstraction:

- To select “Yes” to this data element, BOTH of the following must be true:
  1. **There must be a signed consent form for clinical trial.** For the purposes of abstraction, a clinical trial is defined as an **experimental study** in which research subjects are recruited and assigned a treatment/intervention and their outcomes are measured based on the intervention received. Treatments/interventions most often include use of drugs, surgical procedures, and devices. Often a control group is used to compare with the treatment/intervention. Allocation of different interventions to participants is usually randomized.
  2. **There must be documentation on the signed consent form that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied (i.e. STK, VTE).** Patients may either be newly enrolled in a clinical trial during the hospital stay or enrolled in a clinical trial prior to arrival and continued active participation in that clinical trial during this hospital stay.
- In the following situations, select "No:”
  1. **There is a signed patient consent form for an observational study only.** Observational studies are non-experimental and involve no intervention (e.g., registries). Individuals are observed (perhaps with lab draws, interviews, etc.), data is collected, and outcomes are tracked by investigators. Although observational studies may include the assessment of the effects of an intervention, the study participants are not allocated into intervention or control groups.

2. **It is not clear whether the study described in the signed patient consent form is experimental or observational.**
3. **It is not clear which study population the clinical trial is enrolling.** Assumptions should not be made if it is not specified.

STK: Only capture patients enrolled in clinical trials studying patients with stroke.

VTE: Only capture patients enrolled in clinical trials studying patients with VTE (prevention or treatment interventions).

ACHF and ACHFOP: Only capture patients enrolled in clinical trials studying patients with heart failure.

Suggested Data Sources:

ONLY ACCEPTABLE SOURCES:
Signed consent form for clinical trial

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *CMS Certification Number*

Collected For: HBIPS, Transmission, Hospital Clinical Data File, Optional for All Records

Definition: Hospital's six digit acute care CMS Certification Number (CCN).

Note: This data element is optional. If data is transmitted in Hospital Clinical Data (HCD) or Population and Sampling (PaS) all edits and rules associated to this data element will be applied to the data.

Question: What is the hospital's six digit acute care CMS Certification Number?

Format:
Length: 6
Type: Character
Occurs: 1

Allowable Values:

Any valid six digit CMS Certification Number.

The first two digits are the numeric state code. The third digit of zero represents an acute facility. The third digit of "1" and fourth digit of "3" represents a Critical Access Hospital (CAH).

Notes for Abstraction: None

Suggested Data Sources: None

Additional Notes: None

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Comfort Measures Only*

Collected For: ACHF, ASR-IP-2, ASR-IP-3, ASR-OP-2, CSTK-01, CSTK-03, CSTK-04, CSTK-06, STK-1, STK-10, STK-2, STK-3, STK-5, STK-6, STK-8, STK-OP-1

Definition: Comfort Measures Only refers to medical treatment of a dying person where the natural dying process is permitted to occur while assuring maximum comfort. It includes attention to the psychological and spiritual needs of the patient and support for both the dying patient and the patient's family. Comfort Measures Only is commonly referred to as “comfort care” by the general public. It is not equivalent to a physician order to withhold emergency resuscitative measures such as Do Not Resuscitate (DNR).

Question: When is the earliest physician/APN/PA documentation of comfort measures only?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 **Day 0 or 1:** The earliest day the physician/APN/PA documented comfort measures only was the day of arrival (Day 0) or day after arrival (Day 1).

2 **Day 2 or after:** The earliest day the physician/APN/PA documented comfort measures only was two or more days after arrival day (Day 2+).

3 **Timing unclear:** There is physician/APN/PA documentation of comfort measures only during this hospital stay, but whether the earliest documentation of comfort measures only was on day 0 or 1 OR after day 1 is unclear.

4 **Not Documented/UTD:** There is no physician/APN/PA documentation of comfort measures only, or unable to determine from medical record documentation.

Notes for Abstraction:

- **Only accept terms identified in the list of inclusions. No other terminology will be accepted.**
- Physician/APN/PA documentation of comfort measures only (hospice, comfort care, etc.) mentioned in the following contexts suffices:
  - Comfort measures only recommendation
  - Order for consultation or evaluation by a hospice care service
  - Patient or family request for comfort measures only
  - Plan for comfort measures only
  - Referral to hospice care service
  - Discussion of comfort measures
- Determine the earliest day comfort measures only (CMO) was DOCUMENTED by the physician/APN/PA. If any of the inclusion terms are documented by the physician/APN/PA, select value “1,” “2,” or “3” accordingly.
  Examples:
  "Discussed comfort care with family on arrival" noted in day 2 progress note -— Select “2.”"
- **State-Authorized Portable Orders (SAPOs).**

- SAPOs are specialized forms or identifiers authorized by state law that translate a patient"s preferences about specific end-of-life treatment decisions into portable medical orders
  Examples:
  - DNR-Comfort Care form
  - MOLST (Medical Orders for Life-Sustaining Treatment)
  - POLST (Physician Orders for Life-Sustaining Treatment)
  - Out-of-Hospital DNR (OOH DNR)
- If there is a SAPO in the record that is dated and signed prior to arrival with an option in which an inclusion term is found that is checked, select value "1."
- If a SAPO lists different options for CMO and any CMO option is checked, select value "1," "2,"" or "3"" as applicable.
- If one or more dated SAPOs are included in the record (and signed by the physician/APN/PA), use only the most recent one. Disregard undated SAPOs.
- For cases where there is a SAPO in the record with a CMO option selected: If the SAPO is dated prior to arrival and there is documentation on the day of arrival or the day after arrival that the patient does not want CMO, and there is no other documentation regarding CMO found in the record, disregard the SAPO.
  Example:
  Patient has a POLST dated prior to arrival in his chart and ED physician states in current record "Patient is refusing comfort measures, wants to receive full treatment and be a full code."

- Documentation of an inclusion term in the following situations should be **disregarded.** Continue to review the remaining physician/APN/PA documentation for acceptable inclusion terms. If the **ONLY** documentation found is an inclusion term in the following situations, select value "4.""
  - Documentation (other than SAPOs) that is dated prior to arrival or documentation which refers to the pre-arrival time period.
    Examples:
    - Comfort measures only order in previous hospitalization record.
    - "Pt. on hospice at home" in MD ED note.
  - Inclusion term clearly described as negative or conditional.
    Examples:
    - "No comfort care"
    - "Not appropriate for hospice care"
    - "Comfort care would also be reasonable - defer decision for now""
    - "DNRCCA"" (Do Not Resuscitate -— Comfort Care Arrest)
    - "Family requests comfort measures only should the patient arrest."
  - Documentation of "CMO"" should be disregarded if documentation makes clear it is not being used as an acronym for Comfort Measures Only (e.g., "hx dilated CMO" -— Cardiomyopathy context).
- If there is physician/APN/PA documentation of an inclusion term in one source that indicates the patient is Comfort Measures Only, AND there is physician/APN/PA documentation of an inclusion term in another source that

indicates the patient is NOT CMO, the source that indicates the patient is CMO would be used to select value "1," "2," or "3"" for this data element.
Examples:

- Physician documents in progress note on day 1 "The patient has refused Comfort Measures" AND then on day 2 the physician writes an order for a Hospice referral. Select value "2."
- ED physician documents in a note on day of arrival "Patient states they want to be enrolled in Hospice" AND then on day 2 there is a physician progress note with documentation of "Patient is not a Hospice candidate." Select value "1."

Suggested Data Sources:

PHYSICIAN/APN/PA DOCUMENTATION ONLY IN THE FOLLOWING ONLY ACCEPTBLE SOURCES:

- Consultation notes
- Discharge summary
- DNR/MOLST/POLST forms
- Emergency department record
- History and physical
- Physician orders
- Progress notes

Additional Notes:

Excluded Data Sources:

- Restraint order sheet

Guidelines for Abstraction:

Inclusion	Exclusion
• Brain dead • Brain death • Comfort care • Comfort measures • Comfort measures only (CMO) • Comfort only • DNR-CC • End of life care • Hospice • Hospice care • Organ harvest • Terminal care • Terminal extubation	None

Name: *Date Last Known Well*

Collected For: ASR-IP-1, ASR-OP-1, STK-4

Definition: The date prior to hospital arrival at which the patient was last known to be without the signs and symptoms of the current stroke or at his or her baseline state of health.

Question: What was the date associated with the time at which the patient was last known to be well or at his or her baseline state of health?

Format:
Length: 10 - MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (20xx)
UTD = Unable to Determine

Notes for Abstraction:

- **Enter the date associated with the *Time Last Known Well*.**
  If the date last known well is unable to be determined from medical record documentation, enter "UTD."
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid date/format) **and** no other documentation is found that provides this information, the abstractor should select "UTD."
  Example:
  Documentation indicates the *Date Last Known Well* was 03- **42** -20xx. No other documentation in the medical record provides a valid date. Since the *Date Last Known Well* is outside of the range listed in the Allowable Values for "Day," it is not a valid date and the abstractor should select "UTD."

Note: Transmission of a case with an invalid date as described above will be rejected from the CMS Clinical Warehouse and the Joint Commission's Data Warehouse. Use of "UTD" for *Date Last Known Well* allows the case to be accepted into the warehouse.

- If the date last known well is documented as a specific date and entered as *Date Last Known Well* on a "Code Stroke" form or stroke-specific electronic template, enter that date as the date last known well. Documentation of *Date Last Known Well* on a stroke-specific form or template should be selected regardless of other dates last known well documented elsewhere in the medical record.
- References in relation to *Arrival Date* are acceptable (e.g., today, tonight, this evening, and this morning). The *Date Last Known Well* and the *Arrival Date* may be the same date or a different date.
  Examples:
  - "Wife reports patient normal this evening until approximately 9 PM." Hospital arrival is 0030 on 12-10-20xx." *Date Last Known Well* is 12-09-20xx.
  - "Patient states he felt perfectly fine earlier today. At noon, he began to have trouble seeing." Hospital arrival is 3:59 PM on 12-10-20xx." *Date Last Known*

Well is 12-10-20xx.

- If a reference to date last known well is documented without a specific date, enter that date for the *Date Last Known Well*. If multiple dates are documented, select the earliest date.
  Examples:
  - "Patient last known well today (day of arrival)." Select *Arrival Date* for *Date Last Known Well*.
  - "Patient normal yesterday (day before arrival) documented in H&P and consult note documents that patient was last known to be well on Monday (two days prior to arrival)." Select Monday's date for *Date Last Known Well*.

Suggested Data Sources:

- Emergency department record
- History and physical
- Nursing flow sheet
- Progress notes
- Medication administration record (MAR)
- Transfer sheet
- Ambulance record
- Code Stroke form/template
- IV flow sheets

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Signs and Symptoms of Stroke • Sudden numbness or weakness of the face, arm or leg, especially on one side of the body • Sudden confusion, trouble speaking or understanding • Sudden trouble seeing in one or both eyes • Sudden trouble walking, dizziness, loss of balance or coordination • Sudden severe headache **Code Stroke Form** • Stroke Activation Form • Stroke Alert Form • Stroke Assessment Form • Stroke Intervention Form • Stroke Rapid Response Form • Thrombolysis Checklist • tPA Eligibility Form	**Code Stroke Form** • Stroke Education Form • Core Measure Form

Name: *Delayed Endovascular Rescue Procedure*

Collected For: CSTK-09, CSTK-11

Definition: Endovascular treatment (EVT) with a device and/or intra-arterial (IA) thrombolysis (t-PA) that was first performed at this hospital later than 8 hours after hospital arrival.

Question: Is there documentation in the medical record that the first endovascular treatment procedure was initiated greater than 8 hours after arrival at this hospital?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation that the first endovascular treatment procedure was initiated greater than 8 hours after arrival at this hospital.

N (No) There is no documentation that the first endovascular treatment procedure was initiated greater than 8 hours after arrival at this hospital, OR unable to determine from medical record documentation.

Notes for Abstraction:

- If EVT was initiated greater than 8 hours after hospital arrival AND there was no EVT procedure, i.e., mechanical embolectomy/ thrombectomy and/or IA thrombolysis (t-PA) performed during the first 8 hours after hospital arrival, then select "Yes".
  Example: Patient arrives at the hospital ED on 01-11-20XX at 0013. NIHSS 2. IV t-PA given. On 01-11-20XX, patient found with slurred speech, left-sided facial droop and paresthesia. Stroke alert call at 0900. Thrombectomy performed on 01-11-20XX at 1010.
- If EVT was initiated within 8 hours after hospital arrival and another EVT procedure performed later than 8 hours following hospital arrival, select "No".
  Example: Patient arrives at the hospital ED on 01-15-20XX at 1513. IA t-PA initiated at 1605. Thrombectomy performed 01-17-20XX at 0640.
- If unable to determine, select "No".

Suggested Data Sources:

- Consultation notes
- Diagnostic test reports
- Operative notes
- Operative report
- Procedure notes
- Procedure report

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Patients with ICD-10-PCS procedure codes on Table 8.1a Thrombolytic Agent Procedures or Table 8.1b Mechanical Endovascular Reperfusion Procedures,	Patients with ICD-10-PCS procedure codes on Table 8.1a Thrombolytic Agent Procedures or Table 8.1b Mechanical Endovascular Reperfusion Procedures,

if medical record documentation states that such a procedure was initiated later than 8 hours after hospital arrival	if medical record documentation states that such a procedure was initiated within 8 hours after hospital arrival

Name: *Direct Admission*

Collected For: CSTK-01, CSTK-03

Definition: Patient transferred from another acute care facility and taken to the operating room or interventional suite prior to hospital admission, or admitted directly to intensive care or other unit of the hospital.

Question: Was the patient a direct admission to the hospital?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation the patient was a direct admission to the hospital.

N (No) There is no documentation the patient was a direct admission to the hosptial, OR unable to determine from medical record documentation.

Notes for Abstraction:
- For patients taken directly to the operating room or interventional suite and admitted to a hospital bed post-procedure, select “YES”.
- For patients admitted directly to intensive care or another hospital unit, select “YES”.
- For patients who arrive at the hospital emergency department, select “NO”.

Suggested Data Sources:
- Face sheet
- Progress notes
- Physician orders
- Operating room record
- Procedure reports
- Transfer note

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Discharge Code*

Collected For: ACHFOP, ASR-OP-2, STK-OP-1

Definition: The final place or setting to which the patient was discharged from the outpatient setting.

Question: What was the patient's discharge code from the outpatient setting?

Format:
Length: 2
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 Home
2 Hospice - Home
3 Hospice — Health Care Facility
4a Acute Care Facility- General Inpatient Care
4b Acute Care Facility- Critical Access Hospital
4c Acute Care Facility- Cancer Hospital or Children's Hospital
4d Acute Care Facility — Department of Defense or Veteran's Administration
5 Other Health Care Facility
6 Expired
7 Left Against Medical Advice/AMA
8 Not Documented or Unable to Determine (UTD)

Notes for Abstraction:

- If documentation is contradictory, use the latest documentation. If there is documentation that further clarifies the level of care that documentation should be used to determine the correct value to abstract.
  Example:
  - Nursing discharge note documentation reflects that the patient is being discharged to “XYZ” Hospital. The Social Service notes from the day before discharge further clarify that the patient will be transferred to the rehab unit of “XYZ” Hospital, select value “5”.
- If the medical record states only that the patient is being discharged to another hospital and does not reflect the level of care that the patient will be receiving, select value “4a”.
- When determining whether to select value 7 (“Left Against Medical Advise”):
  - A signed AMA form is not required for this data element, but in the absence of a signed form, the medical record must contain physician or nurse documentation that the patient left against medical advice or AMA.
  - For this data element, a signed AMA form is not required.
  - Do not consider AMA documentation and other disposition documentation as “contradictory.” If any source states the patient left against medical advice, select value 7, regardless of whether the AMA documentation was written last (e.g., AMA form signed and discharge instruction sheet states “Discharged home with belongings”—Select value 7).
  - Physician order written to discharge to home. Nursing notes reflect that the patient left before discharge instructions could be given; select value 1.

Suggested Data Sources:

- Discharge instruction sheet
- Emergency Department Record
- Nursing discharge notes
- Physician orders
- Progress notes
- Transfer record

Additional Notes: Excluded Data Sources:

- UB-04

Guidelines for Abstraction:

Inclusion	Exclusion
For Value 1: • Assisted Living Facilities • Court/Law Enforcement — includes detention facilities, jails, and prison • Home — includes board and care, foster or residential care, group or personal care homes, and homeless shelters • Home with Home Health Services • Outpatient Services including outpatient procedures at another hospital, Outpatient Chemical Dependency Programs and Partial Hospitalization **For Value 3:** • Hospice Care - General Inpatient and Respite • Hospice Care - Residential and Skilled Facilities • Hospice Care - Other Health Care Facilities (excludes home) **For Value 5:** • Extended or Intermediate Care Facility (ECF/ICF) • Long Term Acute Care Hospital (LTACH) • Nursing Home or Facility including Veteran's Administration Nursing Facility • Psychiatric Hospital or Psychiatric Unit of a Hospital • Rehabilitation Facility including Inpatient Rehabilitation Facility/Hospital or Rehabilitation Unit of a Hospital • Skilled Nursing Facility (SNF), Sub-Acute Care or Swing Bed • Transitional Care Unit (TCU)	None

Name: *Discharge Date*

Collected For: All Records, Not collected for HBIPS-2 and HBIPS-3

Definition: The month, day, and year the patient was discharged from acute care, left against medical advice, or expired during this stay.

Question: What is the date the patient was discharged from acute care, left against medical advice (AMA), or expired?

Format:
Length: 10 — MM-DD-YYYY (includes dashes)
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (20xx)

Notes for Abstraction: Because this data element is critical in determining the population for many measures, the abstractor should NOT assume that the claim information for the discharge date is correct. If the abstractor determines through chart review that the date is incorrect, she/he should correct and override the downloaded value. If the abstractor is unable to determine the correct discharge date through chart review, she/he should default to the discharge date on the claim information.

For HBIPS only, if the patient was in an acute-care hospital and had multiple admissions to the psychiatric unit during his or her hospitalization, this information should be abstracted only once at the time of discharge from the hospital.

Suggested Data Sources:

- Face sheet
- Progress notes
- Physician orders
- Discharge summary
- Nursing discharge notes
- Transfer note
- UB-04

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• None	• None

Name: *Discharge Disposition*

Collected For: ACHF, ASR-IP-3, CSTK-02, CSTK-10, HBIPS-5, PAL-05, PC-04, PC-05, PC-06, STK-10, STK-2, STK-3, STK-6, STK-8

Definition: The final place or setting to which the patient was discharged on the day of discharge.

Question: What was the patient's discharge disposition on the day of discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 Home

2 Hospice - Home

3 Hospice —- Health Care Facility

4 Acute Care Facility

5 Other Health Care Facility

6 Expired

7 Left Against Medical Advice/AMA

8 Not Documented or Unable to Determine (UTD)

Notes for Abstraction:

- **Only use documentation written on the day prior to discharge through 30 days after discharge** when abstracting this data element.
  Example:
  Documentation in the Discharge Planning notes on 04-01-20xx state that the patient will be discharged back home. On 04-06-20xx the physician orders and nursing discharge notes on the day of discharge reflect that the patient was being transferred to skilled care. The documentation from 04-06-20xx would be used to select value “5” (Other Health Care Facility).
- The medical record must be abstracted as documented (taken at “face value”). Inferences should not be made based on internal knowledge.
- If there is documentation that further clarifies the level of care that documentation should be used to determine the correct value to abstract. If documentation is contradictory, use the latest documentation.
  Examples:
  - Discharge summary dictated 2 days after discharge states patient went “home”. Physician note on day of discharge further clarifies that the patient will be going home with hospice”. Select value “2” (“Hospice - Home”).

    - Discharge planner note from day before discharge states “XYZ Nursing Home”. Discharge order from day of discharge states “Discharge home”. Contradictory documentation, use latest. Select value “1”” (“Home”).
    - Physician order on discharge states “Discharge to ALF”. Discharge instruction sheet completed after the physician order states patient discharged to “SNF”. Contradictory documentation, use latest. Select value “5” (“Other Health Care Facility”).
- If documentation is contradictory, and you are unable to determine the latest documentation, select the disposition ranked highest (top to bottom) in the following list. See Inclusion lists for examples.
    - Acute Care Facility
    - Hospice —- Health Care Facility
    - Hospice —- Home
    - Other Health Care Facility
    - Home
- Hospice (values “2” and “3”) includes discharges with hospice referrals and evaluations.
- If the medical record states only that the patient is being discharged to another hospital and does not reflect the level of care that the patient will be receiving, select value “4” (“Acute Care Facility”).
- If the medical record states the patient is being discharged to assisted living care or an assisted living facility (ALF) and the documentation also includes nursing home, intermediate care or skilled nursing facility, select Value “1” (“Home”).
- If the medical record states the patient is being discharged to nursing home, intermediate care or skilled nursing facility without mention of assisted living care or assisted living facility (ALF), select Value “5” (“Other Health Care Facility”).
- If the medical record identifies the facility the patient is being discharged to by name only (e.g., “Park Meadows”), and does not reflect the type of facility or level of care, select value “5” (“Other Health Care Facility”).
- If the medical record states only that the patient is being “discharged” and does not address the place or setting to which the patient was discharged, select value “1” (“Home”).
- When determining whether to select value “7” (“Left Against Medical Advice/AMA”):
    - Explicit “left against medical advice” documentation is not required. E.g., “Patient is refusing to stay for continued care” —- Select value “7”.
    - Documentation suggesting that the patient left before discharge instructions could be given does not count.
    - A signed AMA form is not required, for the purposes of this data element.
    - Do not consider AMA documentation and other disposition documentation as “contradictory”. If any source states the patient left against medical advice, select value “7”, regardless of whether the AMA documentation was written last. E.g., AMA form signed and discharge instruction sheet states “Discharged home with belongings” -— Select “7”.

Suggested Data Sources:

- Progress notes
- Physician orders
- Discharge summary
- Discharge instruction sheet
- Discharge planning notes
- Nursing discharge notes
- Social service notes
- Transfer record

Excluded Data Sources

- Any documentation prior to the last two days of hospitalization
- Coding documents
- UB-04

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Home (Value 1): • Assisted Living Facilities (ALFs) -— Includes ALFs and assisted living care at nursing home, intermediate care, and skilled nursing facilities • Court/Law Enforcement -— includes detention facilities, jails, and prison • Home -— includes board and care, foster or residential care, group or personal care homes, retirement communities, and homeless shelters • Home with Home Health Services • Outpatient Services including outpatient procedures at another hospital, Outpatient Chemical Dependency Programs and Partial Hospitalization **Hospice -— Home (Value 2)**: • Hospice in the home (or other “Home” setting as above in Value 1) **Hospice — Health Care Facility (Value 3)**: • Hospice - General Inpatient and Respite • Hospice - Residential and Skilled Facilities • Hospice - Other Health Care Facilities **Acute Care Facility (Value 4)**: • Acute Short Term General and Critical Access Hospitals • Cancer and Children's Hospitals	None

• Department of Defense and Veteran's Administration Hospitals **Other Health Care Facility (Value 5)**: • Extended or Intermediate Care Facility (ECF/ICF) • Long Term Acute Care Hospital (LTACH) • Nursing Home or Facility including Veteran's Administration Nursing Facility • Psychiatric Hospital or Psychiatric Unit of a Hospital • Rehabilitation Facility including Inpatient Rehabilitation Facility/Hospital or Rehabilitation Unit of a Hospital • Skilled Nursing Facility (SNF), Sub-Acute Care or Swing Bed • Transitional Care Unit (TCU) • Veterans Home	

Name: *Discharge Time*

Collected For: CSTK-01, CSTK-03, CSTK-06

Definition: The time the patient was discharged from acute care, left against medical advice (AMA), or expired during the hospital stay.

Question: What time was the patient discharged?

Format:
Length: 5 — HH:MM (with or without colon) or UTD
Type: Time
Occurs: 1

Allowable Values:

HH = Hour (00-23)
MM = Minutes (00-59)
UTD = Unable to Determine

Time must be recorded in military time format. With the exception of Midnight and Noon:

- If the time is in the a.m., conversion is not required
- If the time is in the p.m., add 12 to the clock time hour

Examples:

Midnight = 00:00
Noon = 12:00
5:31 am = 05:31
5:31 pm = 17:31
11:59 am = 11:59
11:59 pm = 23:59

Notes for Abstraction:

- Abstract the earliest documented time of the following:
  - Discharge from acute inpatient care
  - Left against medical advice (AMA)
  - Expired
- If the time the patient was discharged from acute inpatient care, left AMA, or expired is unable to be determined from medical record documentation, enter "UTD."
- The medical record must be abstracted as documented (taken at "face value"). When the time documented is obviously in error (not a valid format/range) and no other documentation is found that provides this information, the abstractor should select "UTD".
  Example:
  Documentation indicates the patient expired at 3300. No other documentation in the medical record provides a valid time. Since the Time Expired is outside of

the range listed in the Allowable Values for "Hour," it is not a valid time and the abstractor should select "UTD."

- If the patient expired and there are multiple times, such as a time the patient was pronounced in physician notes and an administrative time the patient was discharged, use the time the patient was pronounced.
- If the patient expired and there is not a pronounced time but there is a discharge time, use the discharge time.
- If the patient was discharged from acute inpatient care, left AMA, transferred out to another facility, or discharged to home, use the time the patient actually left, not the time the order was written.
- If there are multiple times documented when the patient was discharged from acute inpatient care or left AMA, use the earliest time.

Suggested Data Sources:

- Nursing notes
- Progress notes
- Discharge summary
- Death certificate
- Resuscitation records

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Discussion of Advance Directives/Advance Care Planning*

Collected For: ACHF-04, ACHFOP-06

Definition: Documentation in the medical record of a one-time discussion of advance directives/advance care planning with a healthcare provider. Advance directives are instructions given to individuals specifying what actions should be taken for their health in the event that they are no longer able to make decisions due to illness or incapacity, and therefore appoints a person to make such decisions on their behalf.

Question: Was documentation present in the medical record of a one-time discussion of advance directives/advance care planning with a healthcare provider?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There was documentation present in the medical record of a one-time discussion of advance directives/advance care planning with a healthcare provider.

N (No) There was no documentation present in the medical record of a one-time discussion of advance directives/advance care planning with a healthcare provider, or unable to determine from medical record documentation.

Notes for Abstraction:

- If documentation of a discussion of advance directives or advance care planning with the patient and/or caregiver is present in the medical record, select “Yes”.
- The caregiver is defined as the patient's family or other person (e.g. home health, VNA provider, prison official or law enforcement personnel) who will be responsible for care of the patient after discharge.
- Advance directive discussion may be with a physician/APN/PA, social worker, pastoral care, or nurse.
- A one-time discussion documented anywhere in the medical record is sufficient to select “Yes” for this data element.
- If the only documentation in the medical record is that the patient was asked if they have an advance directive and the patient response is no, select No.
- If there is documentation that the patient has an advance directive but a copy is not present in the medical record, select Yes.
- Documentation that the patient did not wish or was not able to name a surrogate decision maker or provide an advance care plan, select “Yes”.
- Documentation that the patient’s cultural beliefs may be in conflict with the discussion of advance directives, e.g., Navajo Indian, select “Yes”.
- Documentation of patient/family refusal of a discussion, select “Yes”.
- If an advance directive is present in the medical record, select “Yes”.

Suggested Data Sources:

- History and physical
- Progress notes
- Discharge summary
- Care Transition Record

- Consultation form
- Discharge planning form
- MOLST/POLST Forms
- Hospice referral
- Outpatient medical record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Advance care plan • Advance decision • Advance directive • Advance healthcare directive • DNR orders • Do Not Resuscitate Orders • Health care proxy • Living will • MOLST (Medical Orders for Life-Sustaining Treatment) • Personal directive • POLST (Physician Orders for Life-Sustaining Treatment) • Power of attorney for healthcare	None

Name: *Dyspnea Severity*

Collected For: PAL-03

Definition: Evaluation of the patient for the presence or absence of dyspnea (shortness of breath) and its severity at the time of the palliative care initial encounter.

Question: What was the severity of dyspnea when the patient was first screened for dyspnea during the palliative care initial encounter?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

0 None

1 Mild

2 Moderate

3 Severe

4 Dyspnea severity not able to be rated

5 There is no documentation that the patient was screened for dyspnea, or unable to determine from medical record documentation.

Notes for Abstraction:

- Select "0" if documented in the medical record the patient's dyspnea severity score was none. This would include a score of 0 on a 10-point numeric scale or equivalent on verbal, visual, other numeric, or staff observation scale. Example: "patient reports no discomfort and is breathing shallowly but without signs of distress; no concerns about breathing from patient or family."
- Select "1" if documented in the medical record the patient's dyspnea severity score was mild. This would include a score of 1–3 on a 10-point numeric scale or equivalent on verbal, visual, other numeric, or staff observation scale. Example: "patient unable to speak; observed during 20-minute evaluation; respiratory rate 28 with intermittent use of abdominal breathing; some wheezing on exam but good air movement."
- Select "2" if documented in the medical record the patient's dyspnea severity score was moderate. This would include a score of 4–6 on a 10-point numeric scale or equivalent on verbal, visual, other numeric, or staff observation scale. Example: "patient reports he is currently not experiencing any shortness of breath. Patient reports that he does become short of breath when walking from the bed to the bathroom. Patient reports that when he is short of breath, shortness of breath is mild to moderate, depending on activity level."
- Select "3" if documented in the medical record the patient's dyspnea severity score was severe. This would include a score of 7–10 on a 10-point numeric scale or equivalent on verbal, visual, other numeric, or staff observation scale. Example: "patient reports great difficulty with breathing when walking to the

bathroom; breathing is eased after resting and better if using oxygen when active."

- Select "4" if documented in the medical record the patient had dyspnea, but the patient's dyspnea severity was not able to be evaluated by any manner. This would include documentation that staff was unable to rate severity by observation or patient was unable or declined to use a rating scale. Example: "patient intubated."
- Select "5" if there is no documentation that the patient was screened for dyspnea, or unable to determine from medical record documentation. Example: "patient very drowsy; appears to be comfortable during visit."
- If documentation indicates the patient had shortness of breath, but severity was not evaluated in any manner, select "5".
- A screening for dyspnea must include evaluating the patient for presence or absence of dyspnea (shortness of breath), and if dyspnea is present, rating of its severity. Structured clinical evaluation for dyspnea is not well defined, therefore documentation found in the medical record for screening of dyspnea may vary and may not include use of a standardized tool for rating severity.
- Examples of scales that may be used include, but are not limited to:
  - Modified Borg Scale (MBS) – Rating of Perceived Dyspnea (RPD)
  - Edmonton Symptom Assessment System (ESAS)
  - Memorial Symptom Assessment Scale
  - Visual Analogue Scale (VAS)
  - The Numeric Rating Scale (NRS)
  - Medical Research Council Dyspnea Scale
  - Baseline Dyspnea Index (BDI)
  - Respiratory Distress Observation Scale (RDOS)
- It is possible that at the time of the palliative care initial encounter there will have been multiple screenings for dyspnea that were documented in the clinical record. For purposes of this measure use the dyspnea screening based on the first dyspnea screening that appears during the palliative care initial encounter.
- If a range is provided, such as mild to moderate, select the highest level of severity recorded.
- The clinical record could include patient's self-report of distress or "trouble breathing" from shortness of breath or dyspnea; documentation of shortness of breath or dyspnea at rest, upon exertion, etc.; patient/family report of shortness of breath; observed clinical signs of distress from shortness of breath; and/or documentation that the symptom is distressing or limits patient function or quality of life.
- Evidence of a "positive" screen for shortness of breath should consider whether shortness of breath was an active problem for the patient at the time of the screening clinical encounter. In determining whether shortness of breath was an active problem for the patient, providers may need to consider historical report of patient's shortness of breath, documentation of patient's self-report of distress, and observed clinical signs of shortness of breath at the time of the encounter in which the screening was conducted. On the basis of reports of recent symptoms and current treatment, the assessing clinician may determine

that dyspnea is an active problem, even if shortness of breath does not occur during the initial encounter.
- The initial screening documentation may be completed by any member of the palliative care core interdisciplinary team. The core interdisciplinary team is comprised of the following: Physician(s); Registered nurse(s) or advanced practice nurse(s); Chaplain(s) or, spiritual care professional(s); Social worker(s).

Suggested Data Sources:
- Palliative care consultation notes
- Palliative care team progress notes
- Palliative care initial encounter notes
- Palliative care admission assessment

Additional Notes: Notes adapted from: Guidance Manual for Completion of the Hospice Item Set (HIS), Centers for Medicare and Medicaid Services, Hospice Quality Reporting Program, V 1.02 Effective June 28, 2015

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *E/M Code*

Collected For: ACHFOP, ASR-OP-1, ASR-OP-2, STK-OP-1

Definition: The code used to report evaluation and management services provided in the outpatient department clinic or emergency department.

Question: What was the E/M code documented for this outpatient encounter?

Format:
Length: 5
Type: Alphanumeric
Occurs: 1

Allowable Values:

- For **ASR-OP measures**, select the E/M code from Appendix A, Table 1.0.
- For **STK-OP measures**, select the E/M code from Appendix A, Table 1.0.
- For **ACHFOP measures**, select the E/M code from Appendix A, Table 2.0.

Notes for Abstraction: None

Suggested Data Sources:

- Outpatient medical record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• For ASR-OP measures, refer to Appendix A, Table 1.0, E/M Codes for Emergency Department Encounters • For STK-OP measures, refer to Appendix A, Table 1.0, E/M Codes for Emergency Department Encounters • For ACHFOP measures, refer to Appendix A, Table 2.0, E/M Codes for Hospital Outpatient Encounters	None

Name: *ED Departure Date*

Collected For: ASR-OP-2, STK-OP-1

Definition: The month, day, and year at which the patient departed from the emergency department.

Question: What is the date the patient departed from the emergency department?

Format:
Length: 10 — MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:

Enter the documented date of the ED Departure
MM = Month (01-12)
DD = Day (01-31
YYYY = Year (20xx)
UTD = Unable to Determine

Notes for Abstraction:

- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid format/range or outside of the parameters of care [after the *Discharge Date*]) **and** no other documentation is found that provides this information, the abstractor should select "UTD"."
  Examples:
  - Documentation indicates the *ED Departure Date* was 03-**42**-20xx. No other documentation in the list of ONLY ACCEPTABLE SOURCES provides a valid date. Since the *ED Departure Date* is outside of the range listed in the Allowable Values for "Day", it is not a valid date and the abstractor should select "UTD"."
  - Patient expires on 02-12-20xx and all documentation within the ONLY ACCEPTABLE SOURCES indicates the *ED Departure Date* was 03-12-20xx. Other documentation in the medical record supports the date of death as being accurate. Since the *ED Depature Date* is after the *Discharge Date* (death), it is outside of the parameter of care and the abstractor should select "UTD"." **Note:** Transmission of a case with an invalid date as described above will be rejected from the QIO Clinical Warehouse and the Joint Commission's Data Warehouse. Use of "UTD" for *ED Departure Date* allows the case to be accepted into the warehouse.
- If the date the patient departed is unable to be determined from medical record documentation, select "UTD"."
- If the date of departure is not documented, but you are able to determine the date from other documentation this is acceptable (e.g., you are able to identify from documentation the patient arrived and was transferred on the same day).
- If there is documentation the patient left against medical advice and it cannot be determined what time the patient left against medical advice, select "UTD"."
- For patients who are placed into observation services, use the date of the physician/APN/PA order for observation services as the *ED Departure Date* .

- The intent of this guidance is to abstract the date that the patient is no longer under the care of the ED. When a patient is placed into observation, their clinical workflow may vary from patients who are not placed into observation prior to departure from the ED, so the observation order may be used instead of the actual *ED Departure Date* .
- If there is a discharge date listed on a disposition sheet this may be abstracted as *ED Departure Date* .
- The inclusion and exclusion lists are not to be considered comprehensive lists of inclusions and exclusions.

Suggested Data Sources:

ONLY ACCEPTABLE SOURCES:

- Emergency department record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• ED departure date • ED discharge date • ED leave date • ED checkout date • ED order for observation status • Release date • Out date • Gone date • Transport documented date • The event log, registration sheet, transfer record, etc. (if a discharge date is noted and the document is part of the permanent medical record) • Transfer date	• Report called date • Disposition date • Discharge instructions date • Coding summary • Physicians discharge summary • ED record released from holding date • Chart closed date • Off the tracking board date

Name: *ED Departure Time*

Collected For: ASR-OP-2, STK-OP-1

Definition: The time (military time) represented in hours and minutes at which the patient departed from the emergency department.

Question: What is the time the patient departed from the emergency department?

Format:
Length: 5 — HH:MM (with or without colon) or UTD
Type: Time
Occurs: 1

Allowable Values:

HH = Hour (00-23)
MM = Minutes (00-59)
UTD = Unable to Determine

Time must be recorded in military time format.
With the exception of Midnight and Noon:

- If the time is in the a.m., conversion is not required.
- If the time is in the p.m., add 12 to the clock time hour.

Examples:
Midnight - 00:00 Noon - 12:00
5:31 am - 05:31 5:31 pm - 17:31
11:59 am - 11:59 11:59 pm - 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20xx, review supporting documentation to determine if the *ED Departure Date* should remain 11-24-20xx or if it should be converted to 11-25-20xx.
When converting Midnight or 24:00 to 00:00, do not forget to change the *ED Departure Date*.
Example:
Midnight or 24:00 on 11-24-20xx = 00:00 on 11-25-20xx

Notes for Abstraction:

- For times that include “seconds”, remove the seconds and record the military time. Example: 15:00:35 would be recorded as 15:00.
- The intention is to capture the latest time at which the patient was receiving care in the emergency department, under the care of emergency department services, or awaiting transport to services/care.
- The medical record must be abstracted as documented (taken at “face value”). When the time documented is obviously in error (not a valid format/range) **and** no other documentation is found that provides this information, the abstractor should select “UTD”."
  Example:
  Documentation indicates the *ED Departure Time* was 3300. No other

documentation in the list of ONLY ACCEPTABLE SOURCES provides a valid time. Since the *ED Departure Time* is outside of the range in the Allowable Values for "Hour," it is not a valid time and the abstractor should select "UTD"."
Note: Transmission of a case with an invalid time as described above will be rejected from the QIO Clinical Warehouse and the Joint Commission's Data Warehouse. Use of "UTD" for ED Departure Time allows the case to be accepted into the warehouse.

- *ED Departure Time* is the documented time the patient physically left the emergency department.
  Examples:
  - ED nursing notes documented the "ED Departure Time" as 1030, however, vital signs are documented at 1040. There is no documentation to support that the patient was in the ED at 1040. Enter 1030 for ED Departure Time.
  - ED nursing notes document patient departed from the ED at 0730. ED nursing notes document medication administration at 0735. Enter 0730 for ED Departure Time.
- If the time the patient departed is unable to be determined from medical record documentation, select, "UTD."
  Example:
  - ED nursing notes document patient departed from the ED at 1225. Nursing notes document medication administration at 1245. Physician progress notes document assessment at 1310. There is substantial documentation to support that the patient was in the ED after documented departure and no additional documented time of ED departure. Enter UTD for *ED Departure Time* .
- When more than one emergency department departure/discharge time is documented abstract the latest time.
  Examples:
  - ED nursing notes contain documentation that the patient was transferred to floor at 1800 and transport documentation states that patient left the ED via stretcher at 1815. There are multiple times documented for departure. Use the later time of 1815 as ED Departure Time.
  - ED nursing notes contain documentation that the patient departed the ED at 0500. ED record contains documentation of medication administration at 0510 and that the patient departed the ED at 0620. Physician notes contain documentation of an assessment at 0540. As there are multiple departure times documented, enter 0620 for ED Departure Time as it is the latest time documented.
- If patient expired in the ED, use the time of death as the departure time.
- Do not use the time the discharge order was written because it may not represent the actual time of departure.
- If *ED Departure Time* is documented prior to arrival abstract UTD.
- For patients who are placed into observation services, use the time of the physician/APN/PA order for observation for *ED Departure Time* .
- The intent of this guidance is to abstract the time that the patient is no longer under the care of the ED. When a patient is placed into observation, their clinical

workflow may vary from patients who are not placed into observation prior to departure from the ED, so the observation order may be used instead of the actual *ED Departure Time* .
- *If there is a discharge time listed on a disposition sheet, this may be used for ED Departure Time* .
- *The inclusion and exclusion lists are not to be considered comprehensive lists of inclusions and exclusions.*

Suggested Data Sources:

ONLY ACCEPTABLE SOURCES:
- Emergency Department record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• ED leave time • ED discharge time • ED departure time • ED checkout time • ED order for observation status • Release time • Out time • Gone time • Transport documented time • The event log, registration sheet, transfer record, etc. (if a discharge time is noted and the document is part of the permanent medical record) • Transfer time	• Report called time • Disposition time • Discharge instructions time • Coding summary • Physicians discharge summary • ED record released from holding time • Chart closed time • Off the tracking board time

Name: *ED Patient*

Collected For: ASR-IP-1, CSTK-01, CSTK-03, STK-4

Definition: Patient received care in a dedicated emergency department of the facility.

Question: Was the patient an ED patient at the facility?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation the patient was an ED patient.

N (No) There is no documentation the patient was an ED patient, OR unable to determine from medical record documentation.

Notes for Abstraction:

- For the purposes of this data element an ED patient is defined as any patient receiving care or services in the Emergency Department.
- Patients seen in an Urgent Care, ER Fast Track, etc. are not considered an ED patient unless they received services in the emergency department at the facility (e.g., patient treated at an urgent care and transferred to the main campus ED is considered an ED patient, but a patient seen at the urgent care and transferred to the hospital as a direct admit would not be considered an ED patient).
- Patients presenting to the ED who do not receive care or services in the ED abstract as a “No” (e.g., patient is sent to hospital from physician office and presents to ED triage and is instructed to proceed straight to floor).
- Patients presenting to the ED for outpatient services such as lab work etc. will abstract as a “Yes”."

ED: (Abstraction Guidelines for ED Measures Only)

- If a patient is transferred in from any emergency department (ED) or observation unit OUTSIDE of your hospital, select “No”." This applies even if the emergency department or observation unit is part of your hospital's system (e.g., your hospital's free-standing or satellite emergency department), has a shared medical record or provider number, or is in close proximity. Select “No”, even if the transferred patient is seen in this facility"s ED.
- If the patient is transferred to your hospital from an outside hospital where he was an inpatient or outpatient, select “No”." This applies even if the two hospitals are close in proximity, part of the same hospital system, have the same provider number, and/or there is one medical record. Select “No”, even if the transferred patient is seen in this facility"s ED.

Suggested Data Sources:

- Emergency department record
- Face sheet
- Registration form

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	• Urgent Care • Fast Track ED • Terms synonymous with Urgent Care

Name: *Education Addresses Activation of Emergency Medical System*

Collected For: STK-8

Definition: Documentation that the patient/caregiver received educational materials that address the need for activation of the emergency medical system (EMS) if signs or symptoms of stroke occur. Immediate activation of the emergency medical system by calling 911 or another EMS number improves hospital arrival time and the likelihood of thrombolytic administration.

Question: Did the WRITTEN instructions or other documentation of educational material given to the patient/caregiver address activation of the emergency medical system (EMS) if signs or symptoms of stroke occur?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) WRITTEN instructions/educational material given to patient/caregiver address activation of the emergency medical system (EMS) if signs or symptoms of stroke occur.

N (No) WRITTEN instructions/educational material given to patient/caregiver do not address activation of the emergency medical system (EMS) if signs or symptoms of stroke occur, OR unable to determine from medical record documentation.

Notes for Abstraction:

- Educational material must address activation of the emergency medical system (EMS) if signs or symptoms of stroke or transient ischemic attack (TIA) occur.
  Example:
  "Call 911 immediately if you experience signs or symptoms of stroke, such as sudden numbness or weakness of an extremity."
- If the medical record does not contain documentation of education regarding stroke and EMS activation, select "No."
  Examples:
  - "Stroke binder given to patient's family."
  - "Aneurysm education completed."
- If documentation reflects educational material regarding EMS activation was given to the patient/caregiver, select "Yes", even if a copy of the material is not present in the medical record.
- Documentation must clearly convey that the patient/caregiver was given a copy of the material to take home. When the material is present in the medical record and there is no documentation which clearly suggests that a copy was given, the inference should be made that it was given IF the patient's name or the medical record number appears on the material AND hospital staff or the patient/caregiver has signed the material. An electronic staff signature is acceptable. This applies to educational materials in the form of printed,

electronic, or digital patient-oriented materials. Providing a link to electronic materials is not sufficient.

- **Use only documentation provided in the medical record itself.** Do not review and use outside materials in abstraction. Do not make assumptions about what content may be covered in material documented as given to the patient/caregiver.
- Written instructions given anytime during the hospital stay are acceptable.
- If there is documentation that instructions were given or sent to the patient/caregiver after discharge, select "No."
- If the patient refused written instructions/material which addressed activation of the emergency medical system (EMS) if signs or symptoms of stroke occur, select "Yes."
- If documentation indicates that written instructions/material on activation of the emergency medical system (EMS) were not given because the patient is cognitively impaired (e.g., comatose, obtunded, confused, short-term memory loss) and has no caregiver available, select "Yes."
- The caregiver is defined as the patient's family or any other person (e.g.,home health, VNA provider, prison official or other law enforcement personnel) who will be responsible for care of the patient after discharge.

Suggested Data Sources:

- Nursing notes
- Progress notes
- Discharge summary
- After Visit Summary (AVS)
- Discharge instruction sheet
- Education Record
- Home health referral form
- Nursing discharge notes
- Teaching sheet

Excluded Data Sources:

- Any documentation dated/timed after discharge, except discharge summary
- Core measure forms

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Emergency Medical System • EMS • 911 **Warning Signs and Symptoms of Stroke** • F.A.S.T. (Face, Arms, Speech, Time) • Sudden numbness or weakness of the face, arm or leg, especially on one side of the body	Unchecked checkbox next to instruction (e.g., blank checkbox on discharge instruction sheet next to "Activation of the Emergency Medical System").

• Sudden confusion, trouble speaking or understanding • Sudden trouble seeing in one or both eyes • Sudden trouble walking, dizziness, loss of balance or coordination • Sudden severe headache with no known cause	

Name: *Education Addresses Follow-up After Discharge*

Collected For: STK-8

Definition: Documentation that the patient/caregiver received educational materials that address the need for continuing medical care after discharge. Patient education programs for specific chronic conditions have increased healthful behaviors, improved health status, and/or decreased health care costs of their participants.

Question: Did the WRITTEN instructions or other documentation of educational material given to the patient/caregiver address follow-up with a physician/APN/PA after discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) WRITTEN instructions/educational material given to patient/caregiver address follow-up with a physician/APN/PA after discharge.

N (No) WRITTEN instructions/educational material do not address follow-up with a physician/APN/PA or unable to determine from medical record documentation.

Notes for Abstraction:

- Educational material must address follow-up after discharge.
  Example:
  "It is important for you to keep all follow-up appointments with your physician and reschedule appointments that you cannot make as soon as possible."
- Educational material which addresses follow-up after discharge for transient ischemic attack (TIA) is acceptable.
- If the medical record contains documentation of education that does not include stroke and follow-up after discharge, select "No."
  Examples:
  - "Stroke binder given to patient's family."
  - "Aneurysm education completed."
- Documentation must reflect that follow-up after discharge will be with a physician/APN/PA in order to select "Yes" for this data element. The date, time, and name of the provider may be mentioned in the written material but all three are not required to select "Yes".
- In the absence of explicit documentation that follow-up involves contact with a physician/APN/PA, the abstractor may infer contact with a physician/APN/PA, unless documentation suggests otherwise (e.g., BP check, laboratory work only).
- If documentation reflects that educational material regarding follow-up after discharge was given to the patient/caregiver, select "Yes", even if a copy of the material is not present in the medical record.
- Documentation must clearly convey that the patient/caregiver was given a copy of the material to take home. When the material is present in the medical record and there is no documentation which clearly suggests that a copy was given, the inference should be made that it was given IF the patient's name or the

medical record number appears on the material AND hospital staff or the patient/caregiver has signed the material. An electronic staff signature is acceptable. This applies to educational materials in the form of printed, electronic, or digital patient-oriented materials. Providing a link to electronic materials is not sufficient.

- **Use only documentation provided in the medical record itself.** Do not review and use outside materials in abstraction. Do not make assumptions about what content may be covered in material documented as given to the patient/caregiver.
- Written instructions given anytime during the hospital stay are acceptable.
- If the medical record contains documentation that instructions were given or sent to the patient/caregiver after discharge, select "No."
- If the patient refused written instructions/material which addressed follow-up, select "Yes."
- If documentation indicates that written instructions/material on follow-up after discharge were not given because the patient is cognitively impaired (e.g., comatose, obtunded, confused, short-term memory loss) and has no caregiver available, select "Yes."
- The caregiver is defined as the patient's family or any other person (e.g.,home health, VNA provider, prison official or other law enforcement personnel) who will be responsible for care of the patient after discharge.

Suggested Data Sources:

- Nursing notes
- Progress notes
- Discharge summary
- After Visit Summary (AVS)
- Discharge instruction sheet
- Education Record
- Home health referral form
- Nursing discharge notes
- Teaching sheet

Excluded Data Sources:

- Any documentation dated/timed after discharge, except discharge summary
- Core measure forms

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• None	• Follow-up prescribed on PRN or as needed basis • Follow-up noted only "as directed" or "as instructed" • Follow-up noted only as Not Applicable (N/A), None, or left blank • Follow-up only in the form of a direction to the patient to bring a copy of a form to their next

	appointment • Pre-printed follow-up appointment instruction with all fields left blank (e.g., “Please return for follow up appointment with Dr. [blank line] on [blank line],” "Make an appointment with your physician in [blank line] for follow up"), unless next to checked checkbox • Unchecked checkbox next to instruction (e.g., blank checkbox on discharge instruction sheet next to “Call Dr.’s office for appointment within two weeks”)

Name: *Education Addresses Medication Prescribed at Discharge*

Collected For: STK-8

Definition: Documentation that the patient/caregiver received educational materials that address all medications prescribed at discharge. Instructions must address at least the names of all discharge medications but may also include other usage instructions such as dosages, frequencies, side effects, etc. The importance of medications prescribed to prevent a second stroke (e.g., Plavix) should be emphasized.

Question: Did the WRITTEN instructions or other documentation of educational material given to the patient/caregiver address all discharge medications?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) WRITTEN instructions/educational material given to patient/caregiver address discharge medications.

N (No) WRITTEN instructions/educational material do not address all discharge medications, OR unable to determine from medical record documentation.

Notes for Abstraction: Abstraction is a two-step process:
1. Compile a list of all of the medications being prescribed at discharge, based on available medical record documentation.
   - **ALL** discharge medication documentation in the chart should be reviewed and taken into account by the abstractor.
   - Discharge medication information included in a discharge summary dated after discharge should be used as long as it was added within 30 days after discharge.
   - If two discharge summaries are included in the medical record, use the one with the latest date/time. If one or both are not dated or timed, and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms. Use the dictated date/time over transcribed date/time, file date/time, etc.
     Examples:
     - Two discharge summaries, one dictated 5/22 (day of discharge) and one dictated 5/27 - Use the 5/27 discharge summary.
     - Two discharge medication reconciliation forms, one not dated and one dated 4/24 (day of discharge) - Use both.
   - If discharge medications are noted using only references such as “continue home meds,” “resume other meds,” or “same medications,” rather than lists of the names of the discharge medications, the abstractor should use all sources to compile a list of medications the patient was on prior to arrival (or in the case of acute care transfers, use the medications the patient was on prior to arrival at the first hospital).

- Discharge medications can be listed in any of the acceptable data sources to be considered a discharge medication. If there is a medication in one source that is not mentioned in other sources, consider it a discharge medication.
  Example:
  - Discharge orders list Lasix but the discharge medication reconciliation form does not mention Lasix. Consider Lasix a discharge medication.
- If there is documentation in the medical record that specifically states a medication was NOT prescribed at discharge, do not consider it a discharge medication.
- If documentation is contradictory (e.g., physician noted “d/c ASA” in the discharge orders, but it is listed in the discharge summary’s discharge medication list), or, after careful examination of circumstances, context, timing, etc., documentation is still unclear, the case should be deemed "unable to determine” (select "No”).
- If there is documentation of a plan to start/restart a medication after discharge or a hold has been placed on a medication for a **defined** timeframe after discharge (e.g., “Start Plavix as outpatient,” “Hold Lasix x 2 days,” “Hold ASA until after endoscopy”), consider this a discharge medication requiring education.
- Disregard a medication documented **only** as a recommended medication for discharge. e.g., “Recommend sending patient home on Vasotec.” Documentation must reflect that the medication was actually prescribed at discharge.
- If a medication name is missing from a discharge medication source, disregard the medication.
- Disregard a discharge medication list labeled as “preliminary” or “interim”.
- As needed (PRN) medications are required on the discharge instructions, with ONE exception: When discharge medications outside of the written discharge instructions are noted using ONLY references such as “continue current medications” or “continue present meds,” rather than lists of the names of the discharge medications, and the abstractor is referencing what medications the patient was taking on the day of discharge (for comparison against the written discharge instructions, to confirm completeness of that list), medications which are clearly listed as PRN (given on an as needed basis only) do NOT need to be included in the instructions.
- Medications which the patient will not be taking at home (and/or the caregiver will not be giving at home) are NOT required in the medication list included in the written discharge instructions (e.g., monthly B12 injections, dialysis meds, chemotherapy).

2. Check this list of discharge medications against the written discharge instructions given to the patient to ensure that the discharge instructions addressed at least the names of all of the discharge medications prescribed. If medications are included in the discharge instructions that are not on the a list of discharge medications, or discharge medications are missing from the list in the instructions and it cannot be determined that the list of medications in the

instructions is complete, then the case should be deemed "unable to determine" (select "No").
Example:
Lasix is a medication listed on the discharge instruction sheet but Lasix is not in the discharge summary or documented as a discharge medication elsewhere in the medical record, select "No."

- **EXCEPTION**: Medications listed on the discharge instructions but not mentioned as discharge medications elsewhere in the medical record are acceptable if the physician/APN/PA has signed or initialed the discharge instructions. Signatures that are dated/ timed after discharge are not acceptable.
  Example:
  - Discharge instruction sheet lists Plavix and aspirin. No other mention of Plavix or aspirin as a discharge medication in the medical record. Discharge instruction sheet is signed by Dr. X – Select "Yes."
- In making medication name comparisons, consider two medications that are **brand/trade name vs. generic name** in nature or that have the **same generic equivalent** as matches.
  Examples of matches:
  - Coumadin vs. Warfarin
  - ASA vs. EC ASA
  - Plavix vs. Clopidogrel
  - Mevacor vs. Lovastatin
  - Lopressor vs. Metoprolol
  - Metoprolol vs. Metoprolol Succinate
    Example of a mismatch:
  - Lopressor vs. Toprol
- If there is documentation that the patient was discharged on insulin(s) of ANY kind, ANY reference to insulin as a discharge medication in the written discharge instructions can be considered a match, for the purposes of the Stroke Education measure (STK-8). E.g., D/C summary notes patient discharged on "Humulin Insulin" and "Insulin 70/30" is listed on the discharge instruction sheet – Consider this a match. However, contradictory documentation abstraction guidelines still apply to insulin cases (e.g., D/C summary notes patient discharged on "Novolog 50 unit's t.i.d." and "Novolog 50 unit's t.i.d." is discontinued on discharge medication reconciliation form – Select "No").
- Medications must be listed on the discharge instruction by name. Documentation to continue home medications without documentation of home medications listed by name, select "No."
- Do not give credit in cases where there is a reference to a medication by class only on the written discharge instructions, (e.g., "Continue ACEI Inhibitor"), select "No."
- Do not give credit in cases where the patient was given written discharge medication instructions **only** in the form of written prescriptions.
- Documentation must clearly convey that the patient/caregiver was given a copy of the discharge instructions to take home which listed all discharge medications prescribed for the patient by name. When the discharge

instructions are present in the medical record and there is no documentation which clearly suggests that a copy was given, the inference should be made that it was given IF the patient's name or the medical record number appears on the material AND hospital staff or the patient/caregiver has signed the material. An electronic staff signature documenting in the medical record that the after visit summary (AVS) was printed for the patient/caregiver to take home is acceptable.

- **Use only documentation provided in the medical record itself.** Do not review and use outside materials in abstraction. Do not make assumptions about what content may be covered in material documented as given to the patient/caregiver.
- Written instructions given or sent to the patient/caregiver after discharge, select "No."
- If the patient refused written discharge instructions/material which addressed discharge medications, select "Yes."
- If documentation indicates that written instructions/material on discharge medications were not given because the patient is cognitively impaired (e.g., comatose, obtunded, confused, short-term memory loss) and has no caregiver available, select "Yes."
- The caregiver is defined as the patient's family or any other person (e.g.,home health, VNA provider, prison official or other law enforcement personnel) who will be responsible for care of the patient after discharge.

Suggested Data Sources:

- Nursing notes
- Progress notes
- Discharge summary
- After Visit Summary (AVS)
- Discharge instruction sheet
- Education Record
- Home health referral form
- Nursing discharge notes
- Teaching sheet

Excluded Data Sources:

- Any documentation dated/timed after discharge, except discharge summary
- Core measure forms

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• None	• Laxatives • Antacids • Proton pump inhibitors • Vitamins • Minerals (EXCEPT potassium) • Food supplements

	• Herbs • Medications listed by class only (e.g., “heparinoids”) • Oxygen

Name: *Education Addresses Risk Factors for Stroke*

Collected For: STK-8

Definition: Documentation that the patient/caregiver received educational materials that address risk factors for stroke. Patient education programs for specific chronic conditions have increased healthful behaviors, improved health status, and/or decreased health care costs of their participants.

Question: Did the WRITTEN instructions or other documentation of educational material given to the patient/caregiver address risk factors for stroke?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) WRITTEN instructions/educational material given to patient/caregiver address risk factors for stroke.

N (No) WRITTEN instructions/educational material given to patient/caregiver do not address risk factors for stroke, OR unable to determine from medical record documentation.

Notes for Abstraction:

- Educational material must specifically address risk factors for stroke:
  Example:
  Stroke Risk Factors:
  - Overweight
  - Smoking
  - Sedentary lifestyle
- See the inclusion list for acceptable risk factors for stroke. The list is not all-inclusive.
- **Individual risk factors that are not mentioned in the context of education provided on the risk factors for stroke, do not count** (e.g., discharge instruction to limit alcohol without explicit documentation that excessive alcohol consumption is a risk factor for stroke).
  - If individual risk factors are mentioned in the context of education provided on the risk factors for stroke, then it may be inferred that the education was personalized and patient-specific.
- Educational material which addresses risk factors for transient ischemic attack (TIA) is acceptable.
- Documentation of education which does not include stroke and risk factors, select "No."
  Examples:
  - "Stroke binder given to patient's family."
  - "Aneurysm education completed."
- If documentation reflects that educational material regarding risk factors for stroke was given to the patient/caregiver, select "Yes", even if a copy of the material is not present in the medical record.

- Documentation must clearly convey that the patient/caregiver was given a copy of the material to take home. When the material is present in the medical record and there is no documentation which clearly suggests that a copy was given, the inference should be made that it was given IF the patient's name or the medical record number appears on the material AND hospital staff or the patient/caregiver has signed the material. An electronic staff signature is acceptable. This applies to educational materials in the form of printed, electronic, or digital patient-oriented materials. Providing a link to electronic materials is not sufficient.
- **Use only documentation provided in the medical record itself.** Do not review and use outside materials in abstraction. Do not make assumptions about what content may be covered in material documented as given to the patient/caregiver.
- Written instructions given anytime during the hospital stay are acceptable.
- If the medical record contains documentation that instructions were given or sent to the patient/caregiver after discharge, select "No."
- If the patient refused written instructions/material which addressed risk factors for stroke, select "Yes."
- If documentation indicates that written instructions/material on risk factors for stroke were not given because the patient is cognitively impaired (e.g., comatose, obtunded, confused, short-term memory loss) and has no caregiver available, select "Yes."
- The caregiver is defined as the patient's family or any other person (e.g.,home health, VNA provider, prison official or other law enforcement personnel) who will be responsible for care of the patient after discharge.

Suggested Data Sources:

- Nursing notes
- Progress notes
- Discharge summary
- After Visit Summary (AVS)
- Discharge instruction sheet
- Education record
- Home health referral form
- Nursing discharge notes
- Teaching sheet

Excluded Data Sources:

- Any documentation dated/timed after discharge, except discharge summary
- Core measure forms

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Risk Factors for Stroke: • Age • Atrial fibrillation	Unchecked checkbox next to instruction (e.g., blank checkbox on discharge instruction sheet next to

• Carotid artery stenosis • Carotid/peripheral or other artery disease • Cigarette smoking • Diabetes mellitus • Excessive alcohol consumption • Heredity (family history) • High blood pressure • Other heart disease (e.g., coronary heart disease, heart failure, dilated cardiomyopathy) • Overweight (BMI greater than or equal to 25) • Physical inactivity • Poor diet (e.g., high in saturated fat, trans fat, cholesterol or sodium) • Prior stroke, TIA or heart attack • Race • Sex (gender) • Sickle cell disease (also called sickle cell anemia)	"Stroke Risk Factors teaching sheet given to patient").

Name: *Education Addresses Warning Signs and Symptoms of Stroke*

Collected For: STK-8

Definition: Documentation that the patient/caregiver received educational materials that address the warning signs and symptoms of stroke. Patient education programs for specific chronic conditions have increased healthful behaviors, improved health status, and/or decreased health care costs of their participants.

Question: Did the WRITTEN instructions or other documentation of educational material given to the patient/caregiver address warning signs and symptoms of stroke?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) WRITTEN instructions/educational material given to patient/caregiver address warning signs and symptoms of stroke.

N (No) WRITTEN instructions/educational material given to patient/caregiver do not address warning signs and symptoms of stroke, OR unable to determine from medical record documentation.

Notes for Abstraction:

- Educational material must address what to do if warning signs or symptoms of stroke or transient ischemic attack (TIA) are noted.
  Example:
  "Call 911 immediately if you experience signs or symptoms of stroke, such as sudden numbness or weakness of an extremity."
- If the medical record contains documentation of education that does not include stroke and warning signs and symptoms, select "No."
  Examples:
  - "Stroke binder given to patient's family."
  - "Aneurysm education completed."
- If documentation reflects that educational material regarding warning signs or symptoms of stroke was given to the patient/caregiver, select "Yes", even if a copy of the material is not present in the medical record.
- Documentation must clearly convey that the patient/caregiver was given a copy of the material to take home. When the material is present in the medical record and there is no documentation which clearly suggests that a copy was given, the inference should be made that it was given IF the patient's name or the medical record number appears on the material AND hospital staff or the patient/caregiver has signed the material. An electronic staff signature is acceptable. This applies to educational materials in the form of printed, electronic, or digital patient-oriented materials. Providing a link to electronic materials is not sufficient.
- **Use only documentation provided in the medical record itself.** Do not review and use outside materials in abstraction. Do not make assumptions about what

content may be covered in material documented as given to the patient/caregiver.
- Written instructions given anytime during the hospital stay are acceptable.
- If the medical record contains documentation that instructions were given or sent to the patient/caregiver after discharge, select "No."
- If the patient refused written instructions/material which addressed warning signs and symptoms of stroke, select "Yes."
- If documentation indicates that written instructions/material on warning signs and symptoms of stroke were not given because the patient is cognitively impaired (e.g., comatose, obtunded, confused, short-term memory loss) and has no caregiver available, select "Yes."
- The caregiver is defined as the patient's family or any other person (e.g.,home health, VNA provider, prison official or other law enforcement personnel) who will be responsible for care of the patient after discharge.

Suggested Data Sources:

- Nursing notes
- Progress notes
- Discharge summary
- After Visit Summary (AVS)
- Discharge instruction sheet
- Education record
- Home health referral form
- Nursing discharge notes
- Teaching sheet

Excluded Data Sources:

- Any documentation dated/timed after discharge, except discharge summary
- Core measure forms

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Warning Signs and Symptoms of Stroke • F.A.S.T. (Face, Arms, Speech, Time) • Sudden numbness or weakness of the face, arm or leg, especially on one side of the body • Sudden confusion, trouble speaking or understanding • Sudden trouble seeing in one or both eyes • Sudden trouble walking, dizziness, loss of balance or coordination • Sudden severe headache with no known cause	Unchecked checkbox next to instruction (e.g., blank checkbox on discharge instruction sheet next to "Warning Signs and Symptoms of Stroke").

Name: *Elective Carotid Intervention*

Collected For: CSTK-01, CSTK-02, CSTK-05, CSTK-07, CSTK-08, CSTK-09, CSTK-10, CSTK-11, CSTK-12, STK

Definition: Documentation demonstrates that the current admission is solely for the performance of an elective carotid intervention (e.g., elective carotid endarterectomy, angioplasty, carotid stenting).

Question: Was this admission for the sole purpose of performance of an elective carotid intervention?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation that this admission was solely for the performance of elective carotid intervention.

N (No) There is no documentation that this admission was solely for the performance of elective carotid intervention, OR unable to determine from medical record documentation.

Notes for Abstraction:

- When documentation clearly indicates that the carotid intervention is elective (e.g., admitting orders to obtain informed consent for a carotid procedure; pre-operative testing completed prior to admission; surgical orders for carotid endarterectomy dated prior to arrival; physician office visit documentation prior to arrival stating, "CEA with Dr. X planned in the near future"), select "Yes."
- Patients who are sent to the hospital by their physician and admitted for performance of a carotid intervention, select "Yes."
- Patients admitted to the hospital for purposes of performance of a carotid intervention and the intervention cancelled/postponed during the hospital stay, select "Yes."
- Patients who request admission to the hospital for performance of a carotid intervention, select "Yes."
- Patients transferred to the hospital for purposes of surgical evaluation for performance of a carotid intervention, select "Yes."
- When the patient is directly admitted to the hospital post-procedure following an elective carotid intervention performed as an outpatient, select "Yes."
  Example:
  Patient scheduled for elective carotid endarterectomy right side on 05/17/20xx at 08:30. Patient checks into outpatient surgery at 06:13 and proceeds to the O.R., then to PACU. Patient status is changed to inpatient at 11:35 on 05/17/20xx. Patient discharged home on 05/18/20xx.
  EXCEPTION:
  Patients with documentation of an elective carotid intervention performed and discharged from the outpatient setting prior to hospital admission for stroke.
  Example:
  Pt. scheduled for outpatient placement of an elective right carotid stent on

05/17/20xx. Patient discharged home on 05/17/20xx following the procedure. Patient arrives in the ED two days later with complaints of syncope and left-sided numbness, and is admitted to the hospital on 05/19/20xx.

- Patients who are symptomatic and come to the ED for treatment of stroke signs and symptoms and then admitted to the hospital are not considered elective admissions, even if a carotid intervention was performed after admission, select "No."
- When documentation of the procedure is not linked with "elective," select "No."

Suggested Data Sources:

- History and physical
- Progress notes
- Physician orders
- OR report

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion

Patients with ICD-10-PCS procedure codes on Table 8.3 Carotid Intervention Procedures, if medical record documentation states that the patient was admitted for the elective performance of the procedure. Refer to Appendix A, Table 8.3 Carotid Intervention Procedures for examples of acceptable ICD-10-PCS procedure codes.
• Elective
  ○ Anticipated
  ○ Asymptomatic
  ○ Evaluation
  ○ Non-emergent
  ○ Planned
  ○ Pre-admission
  ○ Pre-arranged
  ○ Pre-planned
  ○ Pre-scheduled
  ○ Preventive
  ○ Previously arranged
  ○ Prophylactic
  ○ Scheduled
  ○ Work-up
	Patients with ICD-10-PCS procedure codes on Table 8.3 Carotid Intervention Procedures, if medical record documentation indicates that the patient is also being treated for an acute stroke during this hospitalization. Refer to Appendix A, Table 8.3 Carotid Intervention Procedures.

Name: *Event Date*

Collected For: HBIPS-2, HBIPS-3, Not collected for HBIPS-1 and 5

Definition: The date the associated event type occurred.

Question: What is the date recorded in the medical record that the associated event type occurred?

Format:
Length: 10 — MM-DD-YYYY (includes dashes)
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY =Year (20xx)

Notes for Abstraction: Medical record documentation only should be used to collect this data element.

This information is abstracted once for each day on which an event (*Event Type*) occurs during the patient's hospitalization. A patient may have multiple events during the hospitalization.

When an event (*Event Type*) begins and ends on different dates (crosses midnight) this is considered 2 separate events; therefore, both dates must be documented in order to determine the total amount of time associated with each *Event Date*. If one of the event dates is missing, the event will be rejected.

Suggested Data Sources:
- Licensed independent practitioner orders
- Nursing notes
- Nursing flow sheet
- Observation sheets
- Physician orders
- Progress notes
- Psychiatrist notes
- Restraint monitoring form
- Therapist notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• None	• None

Name: *Event Type*

Collected For: HBIPS-2, HBIPS-3, Not collected for HBIPS-1 and 5

Definition: The measure-related event being identified.

Question: What is the identified measure-related event?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1. Physical Restraint
2. Seclusion

Notes for Abstraction: This information is abstracted once for each type of event that occurs on a specific day (*Event Date*) during the patient's hospitalization. A patient may have multiple events during the hospitalization.

A physical restraint is any manual method or physical or mechanical device, material, or equipment that immobilizes or reduces the ability of a patient to move his or her arms, legs, body or head freely when it is used as a restriction to manage a patient's behavior or restrict the patient's freedom of movement and is not a standard treatment for the patient's medical or psychiatric condition.[1] Refer to the data element *Minutes of Physical Restraint* for a list of inclusions and exclusions.

Seclusion is the involuntary confinement of a patient alone in a room or an area where the patient is physically prevented from leaving.[1] Refer to the data element *Minutes of Seclusion* for a list of inclusions and exclusions.

[1] 42 CFR Part 482, Medicare and Medicaid Programs; Hospital Conditions of Participation: Patient's Rights

Suggested Data Sources: None

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• None	• None

Name: *Exclusive Breast Milk Feeding*

Collected For: PC-05

Definition: Documentation that the newborn was exclusively fed breast milk during the entire hospitalization.

Exclusive breast milk feeding is defined as a newborn receiving only breast milk and no other liquids or solids except for drops or syrups consisting of vitamins, minerals, or medicines.

Question: Is there documentation that the newborn was exclusively fed breast milk during the entire hospitalization?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation that the newborn was exclusively fed breast milk during the entire hospitalization.

N (No) There is no documentation that the newborn was exclusively fed breast milk during the entire hospitalization OR unable to determine from medical record documentation.

Notes for Abstraction: If the newborn receives any other liquids including water during the entire hospitalization, select allowable value "No".

Exclusive breast milk feeding includes the newborn receiving breast milk via a bottle or other means beside the breast.

Sweet-Ease® or a similar 24% sucrose and water solution given to the newborn for the purpose of reducing discomfort during a painful procedure is classified as a medication and is not considered a supplemental feeding.

If the newborn receives donor breast milk, select allowable value "Yes".

If breast milk fortifier is added to the breast milk, select allowable value "Yes".

In cases where there is conflicting documentation and both exclusive breast milk feeding and formula supplementation is documented, select allowable value "No".

If the newborn received “drops” of water or formula dribbled onto the mother"s breast to stimulate latching and not an actual feeding, select “yes”.

If the newborn received IV fluids this is the same as a medication and not a feeding.

Actual feedings must be abstracted from the only acceptable data sources regardless of any documentation about feeding plans and changes to feeding plans which mention inclusion of formula.

Suggested Data Sources:

ONLY ACCEPTABLE SOURCES:

- Diet flow sheets
- Feeding flow sheets
- Intake and output sheets

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Failed Attempt at Thrombectomy*

Collected For: CSTK-08, CSTK-11, CSTK-12

Definition: Documentation demonstrates that a mechanical thrombectomy procedure was attempted to remove a large vessel cerebral occlusion (LVO) but was unsuccessful and/or aborted.

Question: Was a mechanical thrombectomy procedure attempted but unsuccessful or aborted before removal of the LVO?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (YES) There is documentation that a mechanical thrombectomy procedure was attempted but unsuccessful or aborted before removal of the LVO.

N (No) There is no documentation that a mechanical thrombectomy procedure was attempted but unsuccessful or aborted before removal of the LVO, OR unable to determine from medical record documentation.

Notes for Abstraction:

- If medical record documentation does not include an ICD-10-PCS Principal or Other Procedure Code on Table 8.1b Mechanical Endovascular Reperfusion Procedures, continue to review the record for documentation that an extirpation procedure failed. When documentation clearly indicates that a mechanical thrombectomy procedure was attempted but unsuccessful or aborted before removal of the LVO, select “Yes.”
  Examples:
  - 67 Y/O male presents with acute right MCA stroke and occlusion. Neuroendovascular interventionalist documents in a procedure note, e.g., "Despite multiple passes with the wire, distal access with the microcatheter could not be obtained. Given the tortuosity, distal nature of clot, and chronicity/organization of the clot, the procedure was concluded."
  - Operative note states, e.g., "Attempted mechanical thrombectomy of M1 occlusion, S/P unsuccessful mechanical thrombectomy. Procedure terminated after multiple attempts at clot. The M1 segment remained occluded with no recanalization."
- If a mechanical thrombectomy procedure was attempted and down coded to the root ICD-10-PCS Principal or Other Procedure Code due to extirpation procedure failure, select “Yes.” **A procedure code on Table 8.1c is not necessary to select "Yes" for this data element**, but may assist abstraction.
  Examples:
  - Operative note includes documentation that left groin was punctured but thrombectomy intervention could not be completed due to inability to access the target parent vessel. Pre-procedure TICI 0; post-procedure TICI 0. No root procedure code assigned. ICD-10-PCS B3121ZZ fluoroscopy is the only procedure code. Select "Yes".

- ICD-10-PCS procedure code 037J3ZZ Dilation of Left Common Carotid Artery, Percutaneous Approach assigned. ICD-10-PCS 037J3ZZ is on Table 8.1c. Medical record documentation indicates that mechanical thrombectomy attempted but unsuccessful. Select "Yes".
- ICD-10-PCS procedure code 037J3ZZ Dilation of Left Common Carotid Artery, Percutaneous Approach assigned. Medical record documentation indicates that carotid artery stenting was performed. Select "No".
- ICD-10-PCS procedure codes 037J3ZZ Dilation of Left Common Carotid Artery, Percutaneous Approach and 03CL3ZZ Extirpation of Matter from Left Internal Carotid Artery, Percutaneous Approach assigned. TICI score 2A post-procedure, select "No".

- If medical record documentation includes an ICD-10-PCS Principal or Other Procedure Code on Table 8.1b Mechanical Endovascular Reperfusion Procedures, select "No."
- If unable to be determined from medical record documentation that the procedure attempted was a mechanical thrombectomy for removal of a LVO, select “No”/UTD.

Suggested Data Sources:

- Consultation notes
- Diagnostic test reports
- Operative notes
- Procedure notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Patients with ICD-10-PCS procedure codes on Table 8.1c Thrombectomy Root Procedures, if medical record documentation states that the mechanical thrombectomy procedure was attempted but unsuccessful or aborted before removal of the LVO. Refer to Appendix A, Table 8.1c Thrombectomy Root Procedures for examples of acceptable ICD-10-PCS procedure codes.	Patients with ICD-10-PCS procedure codes on Table 8.1c Thrombectomy Root Procedures, if medical record documentation does not indicate that the procedure attempted was a mechanical thrombectomy for removal of a LVO. Refer to Appendix A, Table 8.1c Thrombectomy Root Procedures for examples of acceptable ICD-10-PCS procedure codes.

Name: *First Pass Date*

Collected For: CSTK-07

Definition: The date associated with the time of the first pass (i.e., mechanical deployment) of a clot retrieval device at this hospital.

Question: What is the date associated with the time of the first pass of a clot retrieval device at this hospital?

Format:
Length: 10-MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2012-Current Year)
UTD = Unable to Determine

Notes for Abstraction:

- If the date of the first pass is unable to be determined from medical record documentation, select "UTD".
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid date/format) and no other documentation is found that provides this information, the abstractor should select UTD
  Examples:
  - Documentation indicates the first pass date was 03-**42**-20xx. No other documentation in the medical record provides a valid date. Since the first pass date is outside of the range listed in the Allowable Values for "Day," it is not a valid date and the abstractor should select "UTD".
    - Patient expires on 02-12-20xx and documentation indicates the *First Pass Date* was 03-12-20xx. Other documentation in the medical record supports the date of death as being accurate. Since the *First Pass Date* is after the *Discharge Date* (death), it is outside of the parameters of care and the abstractor should select "UTD."

Note: Transmission of a case with an invalid date as described above will be rejected from the Joint Commission's Data Warehouse. Use of "UTD" for *First Pass Date* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Consultation notes
- Diagnostic test reports
- Operative notes
- Procedure reports

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *First Pass of a Mechanical Reperfusion Device*

Collected For: CSTK-07

Definition: First pass (i.e., deployment) of a mechanical reperfusion device to remove a clot occluding a cerebral artery at this hospital. A mechanical reperfusion device is also known as a clot retrieval device. Clot retrieval devices are designed to treat ischemic stroke by removal of the clot from the cerebral artery. Several brand names are used to identify clot retrieval devices which include, Merci, Penumbra, Trevo, and Solataire. For purposes of this data element, "pass" means mechanical deployment of a clot retrieval device.

Question: Is there documentation in the medical record of the first pass of a mechanical reperfusion device to remove a clot occluding a cerebral artery at this hospital?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of the first pass of a mechanical reperfusion device to remove a clot occluding a cerebral artery at this hospital.

N (No) There is no documentation of the first pass of a mechanical reperfusion device to remove a clot occluding a cerebral artery at this hospital, OR unable to determine from medical record documentation.

Notes for Abstraction:
- If the first pass of the mechanical reperfusion device at this hospital is unable to be determined from medical record documentation, select "No".
- If a diagnostic test report conflicts with other sources documenting the first pass of a mechanical reperfusion device to remove a clot occluding a cerebral artery, use the documentation found in the diagnostic test report.

Suggested Data Sources:
- Consultation notes
- Diagnostic test reports
- Operative notes
- Procedure reports

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Access • Advance • Aspiration • Attempt • Deployment • Pass • Run	None

Name: *First Pass Time*

Collected For: CSTK-07

Definition: The time (military time) of the first pass (i.e., mechanical deployment) of a clot retrieval device at this hospital.

Question: What is the time of the first pass (i.e., mechaical deployment) of a clot retrieval device at this hospital?

Format:
Length: 5-HH-MM (with or without colon) or UTD
Type: Time
Occurs: 1

Allowable Values:

HH = Hour (00-23)
MM = Minutes (00-59)
UTD = Unable to Determine

Time must be recorded in military time format. With the exception of Midnight and Noon:

- If the time is in the a.m., conversion is not required
- If the time is in the p.m., add 12 to the clock time hour

Examples:

Midnight = 00:00
Noon = 12:00
5:31 am = 05:31
5:31 pm = 17:31
11:59 am = 11:59
11:59 pm = 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20xx, review supporting documentation to determine if the *First Radiographic Image Date* should remain 11-24-20xx or if it should be converted to 11-25-20xx.

When converting Midnight or 24:00 to 00:00, do not forget to change the *First Radiographic Image Date*.
Example:
Midnight or 24:00 on 11-24-20xx = 00:00 on 11-25-20xx

Notes for Abstraction:

- For times that include “seconds”", remove the seconds and record the time as is. Example: 15:00:35 would be recorded as 15:00.
- If the *First Pass Time* is unable to be determined from medical record documentation, select “UTD”.

- The medical record must be abstracted as documented (taken at "face value"). When the time documented is obviously in error (not a valid time) **and** no other documentation is found that provides this information, the abstractor should select "UTD".
  Example:
  Documentation indicates the first pass time was 3300. No other documentation in the medical record provides a valid time. Since the first pass time is outside of the range listed in the Allowable Values for "Hour," it is not a valid time and the abstractor should select "UTD".
  Note: Transmission of a case with an invalid time as described above will be rejected from the Joint Commission's Data Warehouse. Use of "UTD" for *First Pass Time* allows the case to be accepted into the warehouse.
- The earliest time should be used regardless of how many vessels were treated or which ones were successful vs. unsuccessful.

Suggested Data Sources:

- Consultation notes
- Diagnostic test reports
- Procedure notes * Operative notes
- Procedure report

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	• Anesthesia start time • Groin puncture time • Procedure start time

Name: *Gestational Age*

Collected For: PC-01, PC-02, PC-03

Definition: The weeks of gestation completed at the time of delivery.

Gestational age is defined as the best obstetrical estimate (OE) of the newborn's gestation in completed weeks based on the birth attendant's final estimate of gestation , irrespective of whether the gestation results in a live birth or a fetal death. This estimate of gestation should be determined by all perinatal factors and assessments such as ultrasound, but not the newborn exam. Ultrasound taken early in pregnancy is preferred (source: American College of Obstetricians and Gynecologists reVITALize Initiative).

Question: How many weeks of gestation were completed at the time of delivery?

Format:
Length: 3 or UTD
Type: Alphanumeric
Occurs: 1

Allowable Values:

1-50

UTD=Unable to Determine

Notes for Abstraction: Gestational age should be rounded off to the nearest completed week, not the following week.

> For example, an infant born on the 5th day of the 36th week (35 weeks and 5/7 days) is at a gestational age of 35 weeks, not 36 weeks.

Gestational age should be documented by the clinician as a numeric value between 1-50. Gestational age (written with both weeks and days, eg. 39 weeks and 0 days) is calculated using the best obstetrical Estimated Due Date (EDD) based on the following formula:

> Gestational Age = (280 - (EDD - Reference Date)) / 7 (source: American College of Obstetricians and Gynecologists reVITALize Initiative).

The clinician, not the abstractor, should perform the calculation to determine gestational age.

The delivery or operating room record should be reviewed first for gestational age; documentation of a valid number should be abstracted.

If the gestational age in the delivery or operating room record is missing, obviously incorrect (in error, e.g. 3.6), or there is conflicting data, then continue to review the following data sources, starting with the document completed closest to the delivery until a positive finding for gestational age is found:

- History and physical
- Clinician admission progress note
- Prenatal forms

- Discharge summary

Gestational age documented closest to the time of delivery (not including the newborn exam) should be abstracted.

The phrase "estimated gestational age" is an acceptable descriptor for gestational age.

If no gestational age was documented (e.g. the patient has not received prenatal care), select allowable value UTD.

Documentation in the acceptable data sources may be written by the following clinicians:
- Physician
- Certified nurse midwife (CNM)
- Advanced practice nurse/physician assistant (APN/PA)
- Registered nurse (RN)

It is acceptable to use data derived from vital records reports received from state or local departments of public health, delivery logs or clinical information systems if they are available and are directly derived from the medical record with a process in place to confirm their accuracy. If this is the case, these may be used in lieu of the acceptable data sources listed below.

The EHR takes precedence over a hand written entry if different gestational ages are documented in equivalent data sources, e.g., delivery record and delivery summary.

Suggested Data Sources:

ONLY ACCEPTABLE SOURCES:
- Delivery or Operating room record, note or summary
- History and physical
- Admission clinician progress notes
- Prenatal forms
- Discharge summary

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Goals of Care*

Collected For: PAL-04

Definition: There is documentation in medical record that the palliative care team discussed or attempted to discuss the patient's goals for care.

Question: Is there documentation in medical record that the palliative care team discussed or attempted to discuss the patient's goals for care?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation in medical record that the palliative care team discussed or attempted to discuss the patient's goals for care.

N (No) There is no documentation in medical record that the palliative care team discussed or attempted to discuss the patient's goals for care or unable to determine from the medical record documentation.

Notes for Abstraction:

- Goals of care may be curative, rehabilitative, life-prolonging, or comfort focused.
- For the purpose of this patient-centered measure, the documentation should indicate that the patient, family or surrogate was involved in the discussion of goals of care and care planning (i.e. that it was not ordered solely by the clinician without input by the patient). Examples include (but not limited to) "discussed goals of care with patient, who chooses to…" "patient indicated desire to," or "patient verbalized agreement with plan to" may be illustrative of collaborative goals of care discussion.
- Goals of care should be derived based upon the patient's expressed preferences, values, needs, concerns and/or desires, through clinician-led discussion, professional guidance and support for patient and family decision making.
- Family is determined by the patient. Family may be defined as a person or persons who play a significant role in an individual's life. A family is a group of two or more persons united by blood or adoptive, marital, domestic partnership, or other legal ties. The family may also be a person or persons not legally related to the individual (such as a significant other, friend, or caregiver) whom the individual personally considers to be family. A family member may be the surrogate decision-maker if authorized to make care decisions for the individual should he or she lose decision-making capacity or choose to delegate decision making to another.
- A surrogate decision-maker is someone legally appointed to make decisions on behalf of another. This individual can be a family member or someone not related to the individual. A surrogate decision-maker makes decisions when the individual is without decision-making capacity or when the individual has given permission to the surrogate to make decisions. Such an individual is sometimes referred to as a legally responsible representative.
- If the patient or family declines to discuss the goals of care, and the documentation reflects this, select "Yes." This would include statements such

as, “I don’t want to talk about this” or “I’m only going to talk to my priest about this”.

- A discussion about goals of care can be initiated by any member of the palliative care core interdisciplinary team. The core interdisciplinary team is comprised of the following: Physician(s); Registered nurse(s) or advanced practice nurse(s); Chaplain(s) or, spiritual care professional(s); Social worker(s).

Suggested Data Sources:

- Palliative care consultation notes
- Palliative care team progress notes
- Palliative care initial encounter notes
- Palliative care admission assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Health Care Organization Identifier*

Collected For: All Records, Patient Population Data File, Hospital Clinical Data File

Definition: A unique number, assigned by The Joint Commission, to identify the health care organization that is accredited by The Joint Commission. This number is used to identify and group a health care organization's HCO-Level performance measure data.

Question: What is the Joint Commission's unique identification number for the provider?

Format:
Length: 6
Type: Numeric
Occurs: 1

Allowable Values:

1 through— 999,999

Notes for Abstraction: None

Suggested Data Sources: Does not apply, assigned by The Joint Commission.

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Highest NIHSS Score Documented Within 36 Hours Following IA Alteplase or MER Initiation*

Collected For: CSTK-05

Definition: The highest NIHSS score documented within 36 hours following initiation of IA alteplase or mechanical endovascular reperfusion therapy (MER). The NIHSS measures several aspects of brain function, including consciousness, vision, sensation, movement, speech, and language.

Question: What is the highest NIHSS score documented within 36 hours following IA alteplase or MER initiation?

Format:
Length: 3
Type: Alphanumeric
Occurs: 1

Allowable Values:

Score = 0-42
UTD = Unable to Determine

Notes for Abstraction:

- The NIHSS score may be documented by the physician/APN/PA or nurse (RN).
- Look for the highest NIHSS score documented in less than or equal to 36 hours following initiation of IA alteplase or MER therapy.
- For purposes of this data element, score documentation between 0 and 42 is acceptable.
- If only one NIHSS score is documented within the first 36 hours following initiation of IA alteplase or MER therapy and no other NIHSS score(s) are available for comparison, enter the value for that score.
- If multiple scores are documented within the first 36 hours following initiation of IA alteplase or MER therapy, select the highest score.
  EXAMPLES:
  - IA alteplase initiated at 1247 with first deployment of a mechanical reperfusion device at 1303. NIHSS Score is 10 at 1500 and 20 at 2300. Select NIHSS score of 20.
  - IA alteplase infusion initiated on 9/5/20XX at 0900. NIHSS score is 8 on 9/5/20XX at 2300, 10 on 9/6/20XX at 0100, and 8 on 9/6/20XX at 0300. Select NIHSS score 10.
  - MER initiated on 9/5/20XX at 0900. NIHSS score 3 on 9/6/20XX at 0900, 2 on 9/8/20XX at 0900, and 6 on 9/10/2012 at 0900. Select 3.
- If no NIHSS score is documented within 36 hours following IA alteplase or MER therapy initiation, select “UTD”.
- If unable to determine the highest score documented within 36 hours following IA alteplase or MER therapy initiation, select “UTD”.

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical

- Nursing flow sheet
- Progress notes
- Admitting note
- Nursing assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	• Modified NIHSS scores • Estimated NIHSS scores • Scoring methodologies other than NIHSS

Name: *Highest NIHSS Score Documented Within 36 Hours Following IV Alteplase Initiation*

Collected For: CSTK-05

Definition: The highest NIHSS score documented within 36 hours following initiation of IV alteplase. The NIHSS measures several aspects of brain function, including consciousness, vision, sensation, movement, speech, and language.

Question: What is the highest NIHSS score documented within 36 hours following initiation of IV alteplase?

Format:
Length: 3
Type: Alphanumeric
Occurs: 1

Allowable Values:

Score = 0-42
UTD = Unable to Determine

Notes for Abstraction:

- The NIHSS score may be documented by the physician/APN/PA or nurse (RN).
- Look for the highest NIHSS score documented in less than or equal to 36 hours following initiation of IV alteplase.
- For purposes of this data element, score documentation between 0 and 42 is acceptable.
- If only one NIHSS score is documented within the first 36 hours following initiation of IV alteplase and no other NIHSS score(s) are available for comparison, enter the value for that score.
- If multiple scores are documented within the first 36 hours following initiation of IV alteplase, select the highest score.
  EXAMPLES:
  - NIHSS Score is 10 at 1500 and 20 at 2300. Both scores are documented following the initiation of IV alteplase. Select NIHSS score of 20.
  - IV alteplase initiated on 9/5/20XX at 0900. NIHSS score is 8 on 9/5/20XX at 2300, 10 on 9/6/20XX at 0100, and 8 on 9/6/20XX at 0300. Select NIHSS score 10.
  - IV alteplase initiated on 9/5/20XX at 0900. NIHSS score 3 on 9/6/20XX at 0900, 2 on 9/8/20XX at 0900, and 6 on 9/10/2012 at 0900. Select 3.
- If no NIHSS score is documented within 36 hours following IV alteplase, select “UTD”.
- If unable to determine the highest score documented within 36 hours following IV alteplase, select “UTD”.

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Nursing flow sheet
- Progress notes
- Admitting note
- Nursing assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	• Modified NIHSS scores • Estimated NIHSS scores • Scoring methodologies other than NIHSS

Name: *Hispanic Ethnicity*

Collected For: All Records

Definition: Documentation that the patient is of Hispanic ethnicity or Latino.

Question: Is the patient of Hispanic ethnicity or Latino?

Format:
Length: 1
Type: Character
Occurs: 1

Allowable Values:

Y (Yes) Patient is of Hispanic ethnicity or Latino.

N (No) Patient is not of Hispanic ethnicity or Latino or unable to determine from medical record documentation.

Notes for Abstraction: The data element, *Race* , is required in addition to this data element.

Suggested Data Sources:
- Emergency department record
- History and physical
- Face sheet
- Nursing admission assessment
- Progress notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race. The term “Spanish origin” can be used in addition to “Hispanic or Latino.” Examples: • Black-Hispanic • Chicano • H • Hispanic • Latin American • Latino/Latina • Mexican-American • Spanish • White-Hispanic	• None

Name: *History of Stillbirth*

Collected For: PC-01

Definition: Documentation that the patient had prior history of stillbirth.

Question: Is there documentation that the patient had prior history of stillbirth?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) The medical record contains documentation that the patient had prior history of stillbirth.

N (No) The medical record does not contain documentation that the patient had prior history of stillbirth OR unable to determine from medical record documentation.

Notes for Abstraction: If there is documentation in the medical record of a prior pregnancy resulting in stillbirth, fetal death or intrauterine fetal demise occurring at 20 weeks gestation or greater, select "Yes."

Suggested Data Sources:
- History and physical
- Nursing admission assessment
- Progress notes
- Physician's notes
- Prenatal forms

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *IA Alteplase or MER Initiation Date*

Collected For: CSTK-05

Definition: The date associated with the time that IA alteplase or mechanical endovascular reperfusion (MER) therpy was initiated to a patient with ischemic stroke at this hospital. IA alteplase converts plasminogen to plasmin, which in turn breaks down fibrin and fibrinogen, thereby dissolving thrombus. Reperfusion therapies also include procedures utilizing mechanical thrombectomy devices with or without pharmacological thrombolysis.

Question: What is the date associated with the time that IA alteplase or MER was initiated at this hospital?

Format:
Length: 10 - MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2001-Current Year)
UTD = Unable to Determine

Notes for Abstraction:

- If the date IA alteplase or MER was initiated is unable to be determined from medical record documentation, select "UTD".
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid date/format) **and** no other documentation is found that provides this information, the abstractor should select "UTD".
  Example:
  Documentation indicates the MER initiation date was 03-**42**-20xx. No other documentation in the medical record provides a valid date. Since the MER initiation date is outside of the range listed in the Allowable Values for "Day," it is not a valid date and the abstractor should select "UTD".
  Note: Transmission of a case with an invalid date as described above will be rejected from the Joint Commission"s Data Warehouse. Use of "UTD" for *IA Alteplase or MER Initiation Date* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Consultation notes
- Progress notes
- Operative notes
- Diagnostic test reports

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *IA Alteplase or MER Initiation Time*

Collected For: CSTK-05

Definition: The time (military time) for which IA alteplase or mechanical endovascular reperfusion (MER) therapy was initiated at this hospital. IA alteplase converts plasminogen to plasmin, which in turn breaks down fibrin and fibrinogen, thereby dissolving thrombus. Reperfusion therapies also include procedures utilizing mechanical thrombectomy devices with or without pharmacological thrombolysis.

Question: What was the time of IA alteplase or MER initiation?

Format:
Length: 5 - HH-MM (with or without colon) or UTD
Type: Time
Occurs: 1

Allowable Values:

HH = Hour (00-23)
MM = Minutes (00-59)
UTD = Unable to Determine

Time must be recorded in military time format. With the exception of Midnight and Noon:

- If the time is in the a.m., conversion is not required
- If the time is in the p.m., add 12 to the clock time hour

Examples:

Midnight = 00:00
Noon = 12:00
5:31 am = 05:31
5:31 pm = 17:31
11:59 am = 11:59
11:59 pm = 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20xx, review supporting documentation to determine if the *Therapy Initiation Date* should remain 11-24-20xx or if it should be converted to 11-25-20xx.

When converting Midnight or 24:00 to 00:00, do not forget to change the *Therapy Initiation Date*.
Example:
Midnight or 24:00 on 11-24-20xx = 0000 on 11-25-20xx

Notes for Abstraction:

- For times that include "seconds", remove the seconds and record the time as is. Example: 15:00:35 would be recorded as 15:00
- The medical record must be abstracted as documented (taken at "face value"). When the time documented is obviously in error (not a valid time) **and** no other

documentation is found that provides this information, the abstractor should select “UTD”.
Example:
Documentation indicates the MER initiation time was 3300. No other documentation in the medical record provides a valid time. Since the MER initiation time is outside of the range listed in the Allowable Values for “Hour,” it is not a valid time and the abstractor should select “UTD”.
Note: Transmission of a case with an invalid time as described above will be rejected from the Joint Commission"s Data Warehouse. Use of “UTD” for *IA Alteplase or MER Initiation Time* allows the case to be accepted into the warehouse.

- The earliest time should be used. If both IA alteplase and MER were initiated in the same procedure or different procedures, select the start time for the intervention that was done first.
  Example:
  - “Patient entered the interventional suite at 1130. Anesthesia start time 1145. Groin puncture documented at 1151. IA infusion at 1205. Solataire deployed at 1229; second deployment 1243; Trevo deployed at 1310.” Select 1205 for *IA Alteplase or MER Initiation Time.*
- If the time of therapy initiation is unable to be determined from medical record documentation, select “UTD”.

Suggested Data Sources:

- Consultation notes
- Diagnostic test reports
- Operative notes
- Procedure notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *IA Route of Alteplase Administration*

Collected For: CSTK-05, CSTK-07, CSTK-08, CSTK-09

Definition: The route of alteplase administration was intra-arterial (IA). Alteplase may be administered intra-venously (IV) by infusion directly into a vein through a peripheral or central venous catheter, or it may be given through an endovascular mircrocatheter delivery system positioned in an artery to directly infuse alteplase into the clot.

Question: Is there documentation that the route of alteplase administration was intra-arterial (IA)?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) The route of alteplase administration was intra-arterial (IA).

N (No) The route of alteplase administration was not intra-arterial (IA), OR unable to determine from medical record documentation.

Notes for Abstraction:
- If the route of alteplase administration is documented as intra-arterial (IA), select "Yes".
- If both intravenous (IV) and intra-arterial (IA) alteplase are given either in different procedures or the same procedure, select "Yes".
  Examples:
  - "IV alteplase given at hospital 'A' prior to transfer to hospital 'B' (i.e. drip and ship). Mechanical thrombectomy with IA alteplase was performed at hospital 'B'".
  - "NIHSS score 3 on arrival to this hospital. IV alteplase initiated in ED with initial improvement noted and NIHSS score zero post-infusion. NIHSS score 5 one hour later. Patient taken to interventional suite and IA alteplase administered."
- If the only route of alteplase administration was intra-venous (IV) at this hospital or a transferring hospital, select "No".
- If IA alteplase was administered at another hospital and the patient subsequently transferred to this hospital, select "No".

Suggested Data Sources:
- Consultation notes
- Diagnostic test reports
- Operative notes
- Procedure notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Only Acceptable Thrombolytic Therapy for Stroke:	• Intravenous (IV) alteplase (t-PA)

• Activase • Alteplase • IA t-PA • Recombinant Tissue Plasminogen Activator(rt-PA) • Tissue Plasminogen Activator(t-PA)	• IA administration of thrombolytic agents not listed as inclusions

Name: *IA Thrombolytic Initiation Date*

Collected For: CSTK-07

Definition: The date associated with the time that Intra-arterial (IA) thrombolytic therapy was initiated to a patient with ischemic stroke at this hospital. IA thrombolytics convert plasminogen to plasmin, which in turn breaks down fibrin and fibrinogen, thereby dissolving thrombus.

Question: What is the date associated with the time that IA thrombolytic therapy was initiated for this patient at this hospital?

Format:
Length: 10 - MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2001-Current Year)
UTD = Unable to Determine

Notes for Abstraction:

- If the date IA thrombolytic therapy was initiated is unable to be determined from medical record documentation, select "UTD".
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid date/format) **and** no other documentation is found that provides this information, the abstractor should select "UTD".
  Example:
  Documentation indicates the IA thrombolytic initiation date was 03-*42*-20xx. No other documentation in the medical record provides a valid date. Since the IA thrombolytic initiation date is outside of the range listed in the Allowable Values for "Day," it is not a valid date and the abstractor should select "UTD".
  Note:
  Transmission of a case with an invalid date as described above will be rejected from the Joint Commission's Data Warehouse. Use of "UTD" for *IA Thrombolytic Initiation Date* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Consultation notes
- Diagnostic test reports
- Operative notes
- Procedure notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *IA Thrombolytic Initiation Time*

Collected For: CSTK-07

Definition: The time (military time) for which intra-arterial (IA) thrombolytic therapy was initiated at this hospital. IA thrombolytics convert plasminogen to plasmin, which in turn breaks down fibrin and fibrinogen, thereby dissolving thrombus

Question: What was the time of initiation for IA thrombolytic therapy?

Format:
Length: 5 - HH-MM (with or without colon) or UTD
Type: Time
Occurs: 1

Allowable Values:

HH = Hour (00-23)
MM = Minutes (00-59)
UTD = Unable to Determine

Time must be recorded in military time format. With the exception of Midnight and Noon:

- If the time is in the a.m., conversion is not required
- If the time is in the p.m., add 12 to the clock time hour

Examples:

Midnight = 00:00
Noon = 12:00
5:31 am = 05:31
5:31 pm = 17:31
11:59 am = 11:59
11:59 pm = 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20xx, review supporting documentation to determine if the *IA Thrombolytic Initiation Date* should remain 11-24-20xx or if it should be converted to 11-25-20xx.

When converting Midnight or 24:00 to 00:00, do not forget to change the *IA Thrombolytic Initiation Date*.
Example:
Midnight or 24:00 on 11-24-20xx = 0000 on 11-25-20xx

Notes for Abstraction:

- Use the time at which initiation of the IA thrombolytic was first documented. If a discrepancy exists in time documentation from different sources, choose the earliest time. If there are two or more different IA thrombolytic initiation times (either different IA thrombolytic episodes or corresponding with the same episode), enter the earliest time.

- For times that include “seconds”, remove the seconds and record the time as is. Example: 15:00:35 would be recorded as 15:00
- IA thrombolytic initiation time refers to the start time of the thrombolytic bolus/infusion.
- If the time of IA thrombolytic initiation is unable to be determined from medical record documentation, select “UTD”.
- The medical record must be abstracted as documented (taken at “face value”). When the time documented is obviously in error (not a valid time) **and** no other documentation is found that provides this information, the abstractor should select “UTD”.
  Example:
  Documentation indicates the IA thrombolytic initiation time was 3300. No other documentation in the medical record provides a valid time. Since the IA thrombolytic initiation time is outside of the range listed in the Allowable Values for “Hour,” it is not a valid time and the abstractor should select “UTD.
  Note:
  Transmission of a case with an invalid time as described above will be rejected from the Joint Commission’s Data Warehouse. Use of “UTD” for IA Thrombolytic Initiation Time allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Consultation notes
- Diagnostic test reports
- Operative notes
- Procedure notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *IA Thrombolytic Initiation*

Collected For: CSTK-07

Definition: Intra-arterial (IA) thrombolytic therapy was initiated at this hospital. IA thrombolytics convert plasminogen to plasmin, which in turn breaks down fibrin and fibrinogen, thereby dissolving thrombus.

Question: Is there documentation that IA thrombolytic therapy was initiated at this hospital?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) IA thrombolytic was initiated at this hospital.

N (No) IA thrombolytic was not initiated at this hospital, OR unable to determine from medical record documentation.

Notes for Abstraction:
- When a “start time” or “infusion time” for IA thrombolytic is documented in the medical record, select “Yes”.
- If the data element "IA Route of t-PA Administration" is "Yes", select "Yes" for this data element.
- If IA thrombolytic initiation is unable to be determined from medical record documentation, select “No”.
- If IA thrombolytic was administered at another hospital and the patient subsequently transferred to this hospital, select “No”.

Suggested Data Sources:
- Consultation notes
- Diagnostic test reports
- Operative notes
- Procedure notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Only Acceptable Thrombolytic Therapy for Stroke: • Activase • Alteplase • IA t-PA • Recombinant Tissue Plasminogen Activator (rt-PA)	• Intravenous (IV) t-PA • IA administration of thrombolytic agents not listed as inclusions

Name: *ICD-10-CM Other Diagnosis Codes*

Collected For: All Records, Optional for HBIPS-2, HBIPS-3

Definition: The other or secondary (ICD-10-CM) codes associated with the diagnosis for this hospitalization.

Question: What were the ICD-10-CM other diagnosis codes selected for this medical record?

Format:
Length: 3-7 (without decimal point or dot; upper or lower case)
Type: Character
Occurs: 24

Allowable Values:

Any valid diagnosis code as per the CMS ICD-10-CM master code table (Code Descriptions in Tabular Order):
https://www.cms.gov/Medicare/Coding/ICD10/index.html

Notes for Abstraction: None

Suggested Data Sources:
- Discharge summary
- Face sheet
- UB-04

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *ICD-10-CM Principal Diagnosis Code*

Collected For: All Records, Optional for HBIPS-2, HBIPS-3

Definition: The ICD-10-CM diagnosis code that is primarily responsible for the admission of the patient to the hospital for care during this hospitalization.

Question: What was the ICD-10-CM code selected as the principal diagnosis for this record?

Format:
Length: 3-7 (without decimal point or dot; upper or lower case)
Type: Character
Occurs: 1

Allowable Values:

Any valid diagnosis code as per the CMS ICD-10-CM master code table (Code Descriptions in Tabular Order):
https://www.cms.gov/Medicare/Coding/ICD10/index.html

Notes for Abstraction: None

Suggested Data Sources:
- Discharge summary
- Face sheet
- UB-04

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *ICD-10-PCS Other Procedure Codes*

Collected For: All Records, Optional for All HBIPS Records

Definition: The other or secondary (ICD-10-PCS) codes identifying all significant procedures other than the principal procedure.

Note: If transmitted for the HBIPS measure set, all applicable edits (e.g., valid value, *ICD-10-PCS Other Procedure Date* exists, etc.) will apply.

Question: What were the ICD-10-PCS code(s) selected as other procedure(s) for this record?

Format:
Length: 3-7 (without decimal point or dot; upper or lower case)
Type: Character
Occurs: 24

Allowable Values:

Any valid procedure code as per the CMS ICD-10-PCS master code table (PCS Long and Abbreviated Titles): https://www.cms.gov/Medicare/Coding/ICD10/index.html

Notes for Abstraction: None

Suggested Data Sources:
- Discharge summary
- Face sheet
- UB-04

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *ICD-10-PCS Other Procedure Dates*

Collected For: All Records, Optional for All HBIPS Records

Definition: The month, day, and year when the associated procedure(s) was (were) performed.

Note: If transmitted for the HBIPS measure set, all applicable edits (e.g., valid value, *ICD-10-PCS Other Procedure Codes* exists, etc.) will apply.

Question: What were the date(s) the other procedure(s) were performed?

Format:
Length: 10 – MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 24

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (20xx)
UTD = Unable to Determine

Notes for Abstraction:

- If the procedure date for the associated procedure is unable to be determined from medical record documentation, select "UTD."
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid format/range or outside of the parameters of care [after *Discharge Date*]) **and** no other documentation is found that provides this information, the abstractor should select "UTD."
  Examples:
  - Documentation indicates the *ICD-10-PCS Other Procedure Dates* was 02-**42**-20xx. No other documentation in the medical record provides a valid date. Since the *ICD-10-PCS Other Procedure Dates* is outside of the range listed in the Allowable Values for "Day," it is not a valid date and the abstractor should select "UTD."
  - Patient expires on 02-12-20xx and documentation indicates the *ICD-10-PCS Other Procedure Dates* was 03-12-20xx. Other documentation in the medical record supports the date of death as being accurate. Since the *ICD-10-PCS Other Procedure Dates* is after the *Discharge Date* (death), it is outside of the parameters of care and the abstractor should select "UTD."

Note: Transmission of a case with an invalid date as described above will be rejected from the QIO Clinical Warehouse and the Joint Commission's Data Warehouse. Use of "UTD" for *ICD-10-PCS Other Procedure Dates* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Consultation notes
- Diagnostic test reports
- Discharge summary
- Face sheet

- Operative notes
- Procedure notes
- Progress notes
- UB-04

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *ICD-10-PCS Other Procedure Times*

Collected For: CSTK-01, CSTK-03

Definition: The time (military time) when the associated procedure(s) was (were) performed.

Question: What were the time(s) the other procedure(s) were performed?

Format:
Length: 5 - HH-MM (with or without colon) or UTD
Type: Time
Occurs: 24

Allowable Values:

HH = Hour (00-23)
MM = Minutes (00-59)
UTD = Unable to Determine

Time must be recorded in military time format. With the exception of Midnight and Noon:

- If the time is in the a.m., conversion is not required
- If the time is in the p.m., add 12 to the clock time hour

Examples:

Midnight = 00:00
Noon = 12:00
5:31 am = 05:31
5:31 pm = 17:31
11:59 am = 11:59
11:59 pm = 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20xx, review supporting documentation to determine if the *ICD-10-PCS Other Procedure Date(s)* should remain 11-24-20xx or if it should be converted to 11-25-20xx.

When converting Midnight or 24:00 to 00:00, do not forget to change the *ICD-10-PCS Other Procedure Date(s)*.
Example:
Midnight or 24:00 on 11-24-20xx = 00:00 on 11-25-20xx

Notes for Abstraction:

- For times that include “seconds”, remove the seconds and record the time as is. Example: 15:00:35 would be recorded as 15:00.
- The *ICD-10-PCS Other Procedure Times* are the time(s) associated with the start of procedures performed after the principal procedure. If a patient enters the operating room or interventional suite, but the procedure is canceled before it is initiated and the procedure performed at a later time, the *ICD-10-PCS Other Procedure Times* are the start time(s) when the procedure(s) were actually performed.

- For bedside procedures, e.g. external ventricular drain (EVD) placement, the time documented on the bedside flow sheet/nursing note should be used if earlier than other times documented on a procedure record or in other sources.
- If the procedure start time is unable to be determined from medical record documentation, select “UTD”.
- The medical record must be abstracted as documented (taken at “face value”). When the procedure start time documented is obviously in error (not a valid time) **and** no other documentation is found that provides this information, the abstractor should select “UTD”.
  Example:
  Documentation indicates the procedure start time was 3300. No other documentation in the medical record provides a valid time. Since the procedure start time is outside of the range listed in the Allowable Values for “Hour,” it is not a valid time and the abstractor should select "UTD".
  Note: Transmission of a case with an invalid time as described above will be rejected from the Joint Commission’s Data Warehouse. Use of “UTD” for ICD-10-PCS Other Procedure Times allows the case to be accepted into the warehouse.
- If the procedure start time is obviously incorrect (in error) but it is a valid time and the correct time can be supported with other documentation in the medical record, the correct time may be entered. If supporting documentation of the correct time cannot be found, the medical record must be taken at face value.
  Examples:
  - The procedure start time is documented as 10:00 but other documentation in the medical record supports the correct time as 22:00. Enter the correct time of 22:00 as the *ICD-10-PCS Other Procedure Time(s*).
  - The procedure end time of 11:58 is documented but the procedure start time is documented as 11:57. If no other documentation can be found to support another procedure start time, then it must be abstracted as 11:57 because the time is not considered invalid or outside the parameter of care.

Suggested Data Sources:

- Consultation notes
- Face sheet
- Nursing notes
- Nursing flow sheet
- Progress notes
- Diagnostic test reports
- Operative notes
- Operating room notes
- Procedure notes
- ICU notes
- Administrative record
- Anesthesia record
- Bedside flow sheet
- Circulator record
- Intraoperative record
- Procedure record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
1. Locate an inclusion term in a suggested data source in no particular order. Use the earliest time associated with an inclusion term that represents the *ICD-10-PCS Other Procedure Time(s)*. 2. If no inclusion terms are found on any suggested data source, look for alternative terms associated with the procedure start time. If none are found, other sources can be used in no particular order. Use the earliest time that represents the *ICD-10-PCS Other Procedure Time(s)*. • Procedure start • Procedure begin • Procedure initiated	None

Name: *ICD-10-PCS Principal Procedure Code*

Collected For: All Records, Optional for All HBIPS Records

Definition: The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication.

Note: If transmitted for the HBIPS measure set, all applicable edits (e.g., valid value, *ICD-10-PCS Principal Procedure Date* exists, etc.) will apply.

Question: What was the ICD-10-PCS code selected as the **principal** procedure for this record?

Format:
Length: 3-7 (without decimal point or dot; upper or lower case)
Type: Character
Occurs: 1

Allowable Values:

Any valid procedure code as per the CMS ICD-10-PCS master code table (PCS Long and Abbreviated Titles): https://www.cms.gov/Medicare/Coding/ICD10/index.html

Notes for Abstraction: None

Suggested Data Sources:
- Discharge summary
- Face sheet
- UB-04

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *ICD-10-PCS Principal Procedure Date*

Collected For: All Records, Optional for All HBIPS Records

Definition: The month, day, and year when the principal procedure was performed.

Note: If transmitted for the HBIPS measure set, all applicable edits (e.g., valid value, *ICD-10-PCS Principal Procedure Code* exists, etc.) will apply.

Question: What was the date the principal procedure was performed?

Format:
Length: 10 – MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (20xx)
UTD = Unable to Determine

Notes for Abstraction:

- If the principal procedure date is unable to be determined from medical record documentation, select "UTD."
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid date/format or is outside of the parameters of care [after *Discharge Date*]) **and** no other documentation is found that provides this information, the abstractor should select "UTD."
  Examples:
  - Documentation indicates the *ICD-10-PCS Principal Procedure Date* was 02-**42**-20xx. No other documentation in the medical record provides a valid date. Since the *ICD-10-PCS Principal Procedure Date* is outside of the range listed in the Allowable Values for "Day," it is not a valid date and the abstractor should select "UTD."
  - Patient expires on 02-12-20xx and documentation indicates the *ICD-10-PCS Principal Procedure Date* was 03-12-20xx. Other documentation in the medical record supports the date of death as being accurate. Since the *ICD-10-PCS Principal Procedure Date* is after the *Discharge Date* (death), it is outside of the parameter of care and the abstractor should select "UTD."

Note: Transmission of a case with an invalid date as described above will be rejected from the QIO Clinical Warehouse and the Joint Commission's Data Warehouse. Use of "UTD" for *ICD-10-PCS Principal Procedure Date* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Consultation notes
- Diagnostic test reports
- Discharge summary

- Face sheet
- Operative notes
- Procedure notes
- Progress notes
- UB-04

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *ICD-10-PCS Principal Procedure Time*

Collected For: CSTK-01, CSTK-03

Definition: The time (military time) when the principal procedure was performed.

Question: What was the time that the principal procedure was performed?

Format:
Length: 5 - HH-MM (with or without colon) or UTD
Type: Time
Occurs: 1

Allowable Values:

HH = Hour (00-23)
MM = Minutes (00-59)
UTD = Unable to Determine

Time must be recorded in military time format. With the exception of Midnight and Noon:

- If the time is in the a.m., conversion is not required
- If the time is in the p.m., add 12 to the clock time hour

Examples:

Midnight = 00:00
Noon = 12:00
5:31 am = 05:31
5:31 pm = 17:31
11:59 am = 11:59
11:59 pm = 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20xx, review supporting documentation to determine if the *ICD-10-PCS Principal Procedure Date* should remain 11-24-20xx or if it should be converted to 11-25-20xx.

When converting Midnight or 24:00 to 00:00, do not forget to change the *ICD-10-PCS Principal Procedure Date*.
Example:
Midnight or 24:00 on 11-24-20xx = 00:00 on 11-25-20xx

Notes for Abstraction:

- For times that include “seconds”, remove the seconds and record the time as is. Example: 15:00:35 would be recorded as 15:00.
- The *ICD-10-PCS Principal Procedure Time* is the time associated with the start of the principle procedure performed during the hospitalization. If a patient enters the operating room or interventional suite, but the principal procedure is canceled before it is initiated and the principal procedure performed at a later time, the *ICD-10-PCS Principal Procedure Time* is the start time when the procedure was actually performed.

- For bedside procedures, e.g. external ventricular drain (EVD) placement, the time documented on the bedside flowsheet/nurses note should be used if earlier than other times documented on a procedure record or in other sources.
- If the start time when the principal procedure was performed is unable to be determined from medical record documentation, select "UTD".
- The medical record must be abstracted as documented (taken at "face value"). When the principal procedure start time documented is obviously in error (not a valid time) and no other documentation is found that provides this information, the abstractor should select "UTD".
  Example:
  Documentation indicates the start time of the ICD-10-PCS Principal Procedure was 3300. No other documentation in the medical record provides a valid time. Since the start time of the ICD-10-PCS Principal Procedure is outside of the range listed in the Allowable Values for "Hour," it is not a valid time and the abstractor should select "UTD".
  Note: Transmission of a case with an invalid time as described above will be rejected from the Joint Commission's Data Warehouse. Use of "UTD" for *ICD-10-PCS Principal Procedure Time* allows the case to be accepted into the warehouse.
- If the principal procedure start time is obviously incorrect (in error) but it is a valid time and the correct time can be supported with other documentation in the medical record, the correct time may be entered. If supporting documentation of the correct time cannot be found, the medical record must be taken at face value.
  Examples:
  - The principal procedure start time is documented as 10:00 but other documentation in the medical record supports the correct time as 22:00. Enter the correct time of 22:00 as the *ICD-10-PCS Principal Procedure Time*.
  - The principal procedure end time of 11:58 is documented but the principal procedure start time is documented as 11:57. If no other documentation can be found to support another principal procedure start time, then it must be abstracted as 11:57 because the time is not considered invalid or outside the parameter of care.

Suggested Data Sources:

- Anesthesia record
- Consultation notes
- Face sheet
- Nursing notes
- Nursing flow sheet
- Progress notes
- Diagnostic test reports
- Operating room notes
- Operative report
- Procedure notes
- ICU notes
- Administrative record
- Bedside flowsheet
- Circulator record

- Intraoperative record
- Procedure record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
1. Locate an inclusion term in a suggested data source in no particular order. Use the earliest time associated with an inclusion term that represents the *ICD-10-PCS Other Procedure Time(s)*. 2. If no inclusion terms are found on any suggested data source, look for alternative terms associated with the procedure start time. If none are found, other sources can be used in no particular order. Use the earliest time that represents the *ICD-10-PCS Other Procedure Time(s)*. • Procedure start • Procedure begin • Procedure initiated	None

Name: *Initial Blood Glucose Value at Hospital Arrival*

Collected For: CSTK-05, CSTK-08, CSTK-10

Definition: Documentation of the first blood glucose value obtained prior to or after hospital arrival. A blood glucose test measures the amount of a type of sugar, called glucose, in the blood.

Question: What is the first blood glucose value obtained prior to or after hospital arrival?

Format:
Length: 3
Type: Alphanumeric
Occurs: 1

Allowable Values:

BG= blood glucose value (no decimals)
UTD = Unable to Determine

Notes for Abstraction:
- To determine the value for this data element, review the blood glucose values obtained prior to and after hospital arrival.
- Select the earliest documented blood glucose value regardless of location of testing. Values obtained and documented by EMS, a transferring hospital, or your hospital are acceptable. The first documented value should be used.
- Values obtained with point-of-care (POC) devices, finger-stick, or laboratory values are acceptable.

Suggested Data Sources:
- Emergency department record
- History and physical
- Nursing flow sheet
- Progress notes
- Transfer sheet
- Admitting note
- Ambulance record
- Consultation form/note
- Nursing assessment
- EMS records

Additional Notes:

Excluded Data Sources:
- Discharge summary

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Initial Blood Pressure at Hospital Arrival*

Collected For: CSTK-05, CSTK-08, CSTK-10

Definition: Documentation of the first blood pressure (systolic and diastolic values) obtained prior to or after hospital arrival. Systolic blood pressure is the amount of pressure that blood exerts on vessels while the heart is beating. In a blood pressure reading (e.g., 120/80), it is the number on the top. The diastolic blood pressure number or the bottom number indicates the pressure in the arteries when the heart rests between beats. A normal diastolic blood pressure number is less than 80.

Question: What is the first blood pressure obtained prior to or after hospital arrival?

Format:
Length: 7
Type: Alphanumeric
Occurs: 1

Allowable Values:

BP = systolic and diastolic blood pressure values
UTD = Unable to Determine

Notes for Abstraction:
- To determine the value for this data element, review blood pressure readings obtained prior to and after hospital arrival.
- Select the earliest documented blood pressure regardless of where it was done. Blood pressure readings obtained and documented by EMS, a transferring hospital, or your hospital are acceptable. The first documented blood pressure should be used.

Suggested Data Sources:
- History and physical
- Nursing flow sheet
- Progress notes
- Transfer sheet
- Admitting note
- Ambulance record
- Consultation form/note
- Emergency room records
- EMS records
- Nursing assessment

Additional Notes:
Excluded Data Sources:
- Discharge summary

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Initial Encounter Date*

Collected For: PAL

Definition: The date that the patient was first seen in consultation by any member of the palliative care service.

Question: What was the date the patient was first seen in consultation by any member of the palliative care service?

Format:
Length: 10 – MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY =Year (20xx)
UTD =Unable to Determine

Notes for Abstraction:

- "Consultation" indicates that the patient received a face to face encounter visit with any member of the palliative care core interdisciplinary team. The core interdisciplinary team is comprised of the following: Physician(s); Registered nurse(s) or advanced practice nurse(s); Chaplain(s) or, spiritual care professional(s); Social worker(s).
- A formal order for a consultation does not need to be present in the medical record.
- If multiple palliative care consultations took place, use the first face to face meeting date with any palliative care team member.
- Do not include attempted visits, use the first face to face visit.
- If the month and/or day contain only a single digit, enter a "0" in the first box of the month and/or day. For example, November 1, 20xx, would be entered as 11-01-20xx.
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid format/range or outside of the parameters of care [after the Discharge Date]) and no other documentation is found that provides this information, the abstractor should select "UTD."

Example:
Documentation indicates the palliative care initial encounter date was 03-42-20xx. No other documentation in the medical record provides a valid date. Since the palliative care initial encounter date is outside of the range listed in the Allowable Values for "Day," it is not a valid date and the abstractor should select "UTD."

Suggested Data Sources:

- Palliative care consultation notes
- Palliative care team progress notes
- Palliative care initial encounter notes
- Palliative care admission assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Initial Encounter*

Collected For: PAL

Definition: A patient who has received a consultation with any member of the palliative care service team.

Question: Did the patient receive a palliative care service initial encounter at the organization?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation in the medical record that the patient received an initial encounter consultation with a member of the palliative care team.

N (No) There is no documentation in medical record that the patient received an initial encounter consultation with a member of the palliative care team or unable to determine from the medical record documentation.

Notes for Abstraction:

- "Consultation" indicates that the patient received a face to face encounter visit with any member of the palliative care core interdisciplinary team. The core interdisciplinary team is comprised of the following: Physician(s); Registered nurse(s) or advanced practice nurse(s); Chaplain(s) or, spiritual care professional(s); Social worker(s).
- A formal order for a consultation does not need to be present in the medical record.
- Do not include attempted visits, use the first face to face visit.

Suggested Data Sources:

- Palliative care consultation notes
- Palliative care team progress notes
- Palliative care initial encounter notes
- Palliative care admission assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Initial Hunt and Hess Scale Date*

Collected For: CSTK-03

Definition: The month, date, and year that the Hunt and Hess scale was first performed at this hospital. The Hunt and Hess scale is a grading system used to classify the severity of a subarachnoid hemorrhage based on the patient's clinical condition. It is used as a predictor of prognosis/outcome with a higher grade correlating to a lower survival rate.

Question: What is the date that the Hunt and Hess scale was first performed at this hospital?

Format:
Length: 10-MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2012-Current Year)
UTD = Unable to Determine

Notes for Abstraction:

- Use the date that the Hunt and Hess scale was first performed. If a discrepancy exists in date documentation from different sources, choose the earliest date. If there are two or more initial Hunt and Hess scale dates (either different Hunt and Hess assessments or corresponding with the same assessment), enter the earliest date.
- If the initial Hunt and Hess scale date is unable to be determined from medical record documentation, select "UTD".
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid date/format) **and** no other documentation is found that provides this information, the abstractor should select "UTD".
  Example:
  Documentation indicates the initial Hunt and Hess scale date was 03-**42**-20xx. No other documentation in the medical record provides a valid date. Since the initial Hunt and Hess scale date is outside of the range listed in the Allowable Values for "Day," it is not a valid date and the abstractor should select "UTD".
  Note: Transmission of a case with an invalid date as described above will be rejected from the Joint Commission's Data Warehouse. Use of "UTD" for *Initial Hunt and Hess Scale Date* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Admitting note

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Initial Hunt and Hess Scale Performed*

Collected For: CSTK-03

Definition: Documentation of the first Hunt and Hess scale that was done at this hospital. The Hunt and Hess scale is a grading system used to classify the severity of a subarachnoid hemorrhage based on the patient's clinical condition. The scale ranges from a score of 1 to 5. It is used as a predictor of prognosis/outcome with a higher grade correlating to a lower survival rate.

Grade - **Description**

1 (I) - Asymptomatic, mild headache, slight nuchal rigidity

2 (II) - Moderate to severe headache, nuchal rigidity, no neurologic deficit other than cranial nerve palsy

3 (III) - Drowsiness / confusion, mild focal neurologic deficit

4 (IV) - Stupor, moderate-severe hemiparesis

5 (V) - Coma, decerebrate posturing

Question: Was an initial Hunt and Hess scale done at this hospital?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (YES) Initial Hunt and Hess scale was done at this hospital.

N (No) Initial Hunt and Hess scale was not done at this hospital, OR Unable to determine (UTD) from the medical record documentation.

Notes for Abstraction:
- The Hunt and Hess scale may be documented by the physician/APN/PA or nurse (RN).
- Hunt and Hess obtained by teleneurology and documented in the medical record, select 'YES'.

Suggested Data Sources:
- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Admitting note

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Hunt and Hess “1-5” • Hunt and Hess Grade • Hunt and Hess Scale • Hunt & Hess “1-5” • H/H “1-5” • Hunt & Hess “1-5”/Fischer “X” • SAH Grade “1-5” • Grade “1-5” SAH	None

Name: *Initial Hunt and Hess Scale Time*

Collected For: CSTK-03

Definition: The time (military time) for which the Hunt and Hess scale was first performed at this hospital. The Hunt and Hess scale is a grading system used to classify the severity of a subarachnoid hemorrhage based on the patient's clinical condition. It is used as a predictor of prognosis/outcome with a higher grade correlating to a lower survival rate.

Question: What is the time for which the Hunt and Hess scale was first performed at this hospital?

Format:
Length: 5 - HH-MM (with or without colon) or UTD
Type: Time
Occurs: 1

Allowable Values:

HH = Hour (00-23)
MM = Minutes (00-59)
UTD = Unable to Determine

Time must be recorded in military time format. With the exception of Midnight and Noon:

- If the time is in the a.m., conversion is not required
- If the time is in the p.m., add 12 to the clock time hour

Examples:

Midnight = 00:00
Noon = 12:00
5:31 am = 05:31
5:31 pm = 17:31
11:59 am = 11:59
11:59 pm = 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20xx, review supporting documentation to determine if the *Initial Hunt and Hess Scale Date* should remain 11-24-20xx or if it should be converted to 11-25-20xx.

When converting Midnight or 24:00 to 00:00, do not forget to change the *Initial Hunt and Hess Scale Date*.
Example:
Midnight or 24:00 on 11-24-20xx = 00:00 on 11-25-20xx

Notes for Abstraction:

- Use the time for which the Hunt and Hess scale was first performed. If a discrepancy exists in time documentation from different sources, choose the earliest time. If there are two or more different initial Hunt and Hess scale times

(either different Hunt and Hess assessments or corresponding with the same assessment), enter the earliest time.

- If the time of the first Hunt and Hess is a time prior to hospital arrival because the score was obtained by teleneurology or MD/APN/PA directly receiving the patient via life flight, use the Arrival Time for the score time.
- For times that include "seconds", remove the seconds and record the time as is. Example: 15:00:35 would be recorded as 15:00
- *Initial Hunt and Hess Scale Time* refers to the time that the first Hunt and Hess Scale was performed. If the time performed is mentioned in the body of a note, select the time performed rather than the time stamp on the note". If the only time documented with the scale is the time stamp on the note, then select the time stamped.
  Examples:
  - Documentation indicates that the initial Hunt and Hess scale was done at 0920. Time stamp on the note is 1159. The abstractor should select "0920 for *Initial Hunt and Hess Scale Time*.
  - Documentation indicates that the Hunt and Hess done on arrival was III. Patient arrived at your hospital 2100. Time stamp on the note is 2136. The abstractor should select "2100 for *Initial Hunt and Hess Scale Time*.
  - Hunt & Hess 3 [no time] documented. Time stamp on the note is 1513. The abstractor should select "1513 for *Initial Hunt and Hess Scale Time*.
- Do not use physician orders as they do not demonstrate the Hunt and Hess scale was done (in the ED this may be used if signed/initialed by a nurse).
- If the time of the first Hunt and Hess scale is unable to be determined from medical record documentation, select "UTD".
- The medical record must be abstracted as documented (taken at "face value"). When the time documented is obviously in error (not a valid time) **and** no other documentation is found that provides this information, the abstractor should select "UTD".
  Example:
  Documentation indicates the initial Hunt and Hess scale time was 3300. No other documentation in the medical record provides a valid time. Since the initial Hunt and Hess scale time is outside of the range listed in the Allowable Values for "Hour," it is not a valid time and the abstractor should select "UTD".
  Note: Transmission of a case with an invalid time as described above will be rejected from the Joint Commission's Data Warehouse. Use of "UTD" for *Initial Hunt and Hess Scale Time* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Admitting note

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Initial ICH Score Date*

Collected For: CSTK-03

Definition: The month, date, and year that the ICH score was first performed at this hospital. The ICH Score is a clinical grading scale composed of factors related to a basic neurological examination (GCS), a baseline patient characteristic (age), and initial neuroimaging (ICH volume, IVH, infratentorial/supratentorial origin). The purpose of this grading scale is to provide a standard assessment tool that can be easily and rapidly determined at the time of ICH presentation by physicians without special training in stroke neurology and that will allow consistency in communication and treatment selection in clinical care and clinical research.

Question: What is the date that the ICH score was first performed at this hospital?

Format:
Length: 10-MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2012-Current Year)
UTD = Unable to Determine

Notes for Abstraction:

- Use the date that the ICH score was first performed. If a discrepancy exists in date documentation from different sources, choose the earliest date. If there are two or more initial ICH score dates (either different ICH assessments or corresponding with the sameassessment), enter the earliest date.
- If the initial ICH score date is unable to be determined from medical record documentation, select "UTD".
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid date/format) **and** no other documentation is found that provides this information, the abstractor should select "UTD".
  Example:
  Documentation indicates the initial ICH score date was 03-**42**-20xx. No other documentation in the medical record provides a valid date. Since the initial ICH score date is outside of the range listed in the Allowable Values for "Day," it is not a valid date and the abstractor should select "UTD".
  Note: Transmission of a case with an invalid date as described above will be rejected from the Joint Commission's Data Warehouse. Use of "UTD" for *Initial ICH Score Date* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Admitting note

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Initial ICH Score Performed*

Collected For: CSTK-03

Definition: Documentation of the first ICH score that was done at this hospital. The ICH Score is a clinical grading scale composed of factors related to a basic neurological examination (GCS), a baseline patient characteristic (age), and initial neuroimaging (ICH volume, IVH, infratentorial/supratentorial origin). Score documentation may range from 0 to 6. The purpose of this grading scale is to provide a standard assessment tool that can be easily and rapidly determined at the time of ICH presentation by physicians without special training in stroke neurology and that will allow consistency in communication and treatment selection in clinical care and clinical research.

Component	Criteria	Points
GCS	3-4	2
	5-12	1
	13-15	0
ICH Volume (cc)	>/=30cc	1
	<30cc	0
Intraventricular Hemorrhage	Yes	1
	No	0
Infratentorial Origin	Yes	1
	No	0
Age	>/=80 years old	1
	<80 years old	0
Total ICH Score		0-6

Question: Was an initial ICH score done at this hospital?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (YES) Initial ICH score was done at this hospital.

N (No) Initial ICH score was not done at this hospital, OR Unable to determine (UTD) from the medical record documentation.

Notes for Abstraction:
- The ICH score may be documented by the physician/APN/PA or nurse (RN).

- ICH score obtained by teleneurology and documented in the medical record, select 'YES'.
- If a total ICH score (i.e., sum of the component points) is documented, select 'YES'.
- If components are scored but the total ICH score is not documented or left blank, select 'NO'. Do not infer a total ICH score from documented component scores.

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Admitting note

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	Scoring methodologies other than the ICH Score

Name: *Initial ICH Score Time*

Collected For: CSTK-03

Definition: The time (military time) for which the ICH score was first performed at this hospital. The ICH Score is a clinical grading scale composed of factors related to a basic neurological examination (GCS), a baseline patient characteristic (age), and initial neuroimaging (ICH volume, IVH, infratentorial/supratentorial origin). The purpose of this grading scale is to provide a standard assessment tool that can be easily and rapidly determined at the time of ICH presentation by physicians without special training in stroke neurology and that will allow consistency in communication and treatment selection in clinical care and clinical research.

Question: What is the time for which the ICH score was first performed at this hospital?

Format:
Length: 5 - HH-MM (with or without colon) or UTD
Type: Time
Occurs: 1

Allowable Values:

HH = Hour (00-23)
MM = Minutes (00-59)
UTD = Unable to Determine

Time must be recorded in military time format. With the exception of Midnight and Noon:

- If the time is in the a.m., conversion is not required
- If the time is in the p.m., add 12 to the clock time hour

Examples:

Midnight = 00:00
Noon = 12:00
5:31 am = 05:31
5:31 pm = 17:31
11:59 am = 11:59
11:59 pm = 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20xx, review supporting documentation to determine if the *Initial ICH Score Date* should remain 11-24-20xx or if it should be converted to 11-25-20xx.

When converting Midnight or 24:00 to 00:00, do not forget to change the *Initial ICH Score Date*.
Example:
Midnight or 24:00 on 11-24-20xx = 00:00 on 11-25-20xx

Notes for Abstraction:

- Use the time for which the ICH score was first performed. If a discrepancy exists

in time documentation from different sources, choose the earliest time. If there are two or more different initial ICH score times (either different ICH assessments or corresponding with the same assessment), enter the earliest time.

- If the time of the first ICH score is a time prior to hospital arrival because the score was obtained by teleneurology or MD/APN/PA directly receiving the patient via life flight, use the Arrival Time for the score time.
- For times that include "seconds", remove the seconds and record the time as is. Example: 15:00:35 would be recorded as 15:00
- *Initial ICH Score Time* refers to the time that the first ICH score was performed. If the time performed is mentioned in the body of a note, select the time performed rather than the time stamp on the note". If the only time documented with the score is the time stamp on the note, then select the time stamped.
  Examples:
  - Documentation indicates that the initial ICH score was done at 0920. Time stamp on the note is 1159. The abstractor should select "0920 for *Initial ICH Score Time*.
  - Documentation indicates that the ICH score done on arrival was 5. Patient arrived at your hospital 2100. Time stamp on the note is 2136. The abstractor should select "2100 for *Initial ICH Score Time*.
  - ICH score 5 [no time] documented. Time stamp on the note is 1513. The abstractor should select "1513 for *Initial ICH Score Time*.
- Do not use physician orders as they do not demonstrate the ICH score was done (in the ED this may be used if signed/initialed by a nurse).
- If the time of the first ICH score is unable to be determined from medical record documentation, select "UTD".
- The medical record must be abstracted as documented (taken at "face value"). When the time documented is obviously in error (not a valid time) **and** no other documentation is found that provides this information, the abstractor should select "UTD".
  Example:
  Documentation indicates the initial ICH score time was 3300. No other documentation in the medical record provides a valid time. Since the initial ICH score time is outside of the range listed in the Allowable Values for "Hour," it is not a valid time and the abstractor should select "UTD".
  Note: Transmission of a case with an invalid time as described above will be rejected from the Joint Commission's Data Warehouse. Use of "UTD" for *Initial ICH Score Time* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Admitting note

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Initial NIHSS Score at Hospital Arrival*

Collected For: CSTK-05, CSTK-08, CSTK-10

Definition: Documentation of the first NIHSS score obtained prior to or after hospital arrival. The NIHSS measures several aspects of brain function, including consciousness, vision, sensation, movement, speech, and language.

Question: What is the first NIHSS score obtained prior to or after hospital arrival?

Format:
Length: 3 (0 to 42)
Type: Alphanumeric
Occurs: 1

Allowable Values:

Score = XX (0-42)
UTD = Unable to Determine

Notes for Abstraction:

- To determine the value for this data element, review the NIHSS scores obtained prior to and after hospital arrival.
- Select the earliest documented NIHSS score regardless of where it was done. Values obtained and documented by EMS, teleneurology, a transferring hospital, or your hospital are acceptable. The first documented NIHSS score should be used.

Suggested Data Sources:

- Emergency department record
- History and physical
- Nursing flow sheet
- Progress notes
- Transfer sheet
- Admitting note
- Ambulance record
- Consultation form/note
- Nursing assessment
- EMS records

Additional Notes:

Excluded Data Sources:

- Discharge summary

Guidelines for Abstraction:

Inclusion	Exclusion
None	• Modified NIHSS scores • Estimated NIHSS scores • Scoring methodologies other than NIHSS

Name: *Initial NIHSS Score Date*

Collected For: CSTK-01

Definition: The month, date, and year that the NIHSS score was first performed at this hospital. The NIH stroke scale measures several aspects of brain function, including consciousness, vision, sensation, movement, speech, and language. The NIH stroke scale serves several purposes, but its main use in clinical medicine is during the assessment of whether or not the degree of disability caused by a given stroke merits treatment with t-PA.

Question: What is the date that the NIHSS score was first performed at this hospital?

Format:
Length: 10-MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2012-Current Year)
UTD = Unable to Determine

Notes for Abstraction:

- Use the date that the NIHSS score was first performed. If a discrepancy exists in date documentation from different sources, choose the earliest date. If there are two or more initial NIHSS score dates (either different NIHSS assessments or corresponding with the sameassessment), enter the earliest date.
- If the initial NIHSS score date is unable to be determined from medical record documentation, select "UTD".
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid date/format) **and** no other documentation is found that provides this information, the abstractor should select "UTD".
  Example:
  Documentation indicates the initial NIHSS date was 03-**42**-20xx. No other documentation in the medical record provides a valid date. Since the initial NIHSS date is outside of the range listed in the Allowable Values for "Day," it is not a valid date and the abstractor should select "UTD".
  Note: Transmission of a case with an invalid date as described above will be rejected from the Joint Commission's Data Warehouse. Use of "UTD" for *Initial NIHSS Score Date* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Nursing flow sheet
- Progress notes
- Admitting note
- Nursing assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Initial NIHSS Score Performed*

Collected For: CSTK-01

Definition: Documentation of the first National Instititutes of Health Stroke Scale (NIHSS) score that was done at this hospital. The NIHSS measures several aspects of brain function, including consciousness, vision, sensation, movement, speech, and language. The NIHSS serves several purposes, but its main use in clinical medicine is during the assessment of whether or not the degree of disability caused by a given stroke merits treatment with t-PA. Score documentation may range from 0 to 42.

Question: Is there documentation that an initial NIHSS score was done at this hospital?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (YES) Initial NIHSS score was done at this hospital.

N (No) Initial NIHSS score was not done at this hospital, OR Unable to determine (UTD) from the medical record documentation.

Notes for Abstraction:
- The NIHSS score may be documented by the physician/APN/PA or nurse (RN).
- If a total NIHSS score (i.e., sum of the category scores) is documented, select 'YES'.
- Total scores obtained by teleneurology and documented in the medical record, select 'YES'.
- If components are scored but the total NIHSS score is not documented or left blank, select 'NO'. Do not infer a total NIHSS score from documented category scores.

Suggested Data Sources:
- Consultation notes
- Emergency department record
- History and physical
- Nursing flow sheet
- Progress notes
- Admitting note
- Nursing assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	• Modified NIHSS scores • Estimated NIHSS scores • Scoring methodologies other than NIHSS

Name: *Initial NIHSS Score Time*

Collected For: CSTK-01

Definition: The time (military time) for which the NIHSS score was first performed at this hospital. The NIHSS measures several aspects of brain function, including consciousness, vision, sensation, movement, speech, and language. The NIHSS serves several purposes, but its main use in clinical medicine is during the assessment of whether or not the degree of disability caused by a given stroke merits treatment with t-PA.

Question: What is the time for which the NIHSS score was first performed at this hospital?

Format:
Length: 5 - HH-MM (with or without colon) or UTD
Type: Time
Occurs: 1

Allowable Values:

HH = Hour (00-23)
MM = Minutes (00-59)
UTD = Unable to Determine

Time must be recorded in military time format. With the exception of Midnight and Noon:

- If the time is in the a.m., conversion is not required
- If the time is in the p.m., add 12 to the clock time hour

Examples:

Midnight = 00:00
Noon = 12:00
5:31 am = 05:31
5:31 pm = 17:31
11:59 am = 11:59
11:59 pm = 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20xx, review supporting documentation to determine if the *Initial NIHSS Score Date* should remain 11-24-20xx or if it should be converted to 11-25-20xx.

When converting Midnight or 24:00 to 00:00, do not forget to change the *Initial NIHSS Score Date*.
Example:
Midnight or 24:00 on 11-24-20xx = 00:00 on 11-25-20xx

Notes for Abstraction:

- Use the time for which the NIHSS score was first performed. If a discrepancy exists in time documentation from different sources, choose the earliest time. If

there are two or more different initial NIHSS score times (either different NIHSS assessments or corresponding with the sameassessment), enter the earliest time.

- If the time of the first NIHSS score is a time prior to hospital arrival because the score was obtained by teleneurology or MD/APN/PA directly receiving the patient via life flight, use the Arrival Time for the score time.
- For times that include "seconds", remove the seconds and record the time as is. Example: 15:00:35 would be recorded as 15:00
- *Initial NIHSS Score Time* refers to the time that the first NIHSS score was performed. If the time performed is mentioned in the body of a note, select the time performed rather than the time stamp on the note". If the only time documented with the score is the time stamp on the note, then select the time stamped.
  Examples:
  - Documentation indicates that the initial NIHSS score was done at 0920. Time stamp on the note is 1159. The abstractor should select "0920 for *Initial NIHSS Score Time*.
  - Documentation indicates that the NIHSS score done on arrival was 12. Patient arrived at your hospital 2100. Time stamp on the note is 2136. The abstractor should select "2100 for *Initial NIHSS Score Time*.
  - NIHSS score 12 [no time] documented. Time stamp on the note is 1513. The abstractor should select "1513 for *Initial NIHSS Score Time*.
- Do not use physician orders as they do not demonstrate the NIHSS score was done (in the ED this may be used if signed/initialed by a nurse).
- Times for scores done prior to arrival by a teleneurologist are acceptable if signed/initialed by a nurse.
- If the time of the first NIHSS score is unable to be determined from medical record documentation, select "UTD".
- The medical record must be abstracted as documented (taken at "face value"). When the time documented is obviously in error (not a valid time) **and** no other documentation is found that provides this information, the abstractor should select "UTD".
  Example:
  Documentation indicates the initial NIHSS score time was 3300. No other documentation in the medical record provides a valid time. Since the initial NIHSS score time is outside of the range listed in the Allowable Values for "Hour," it is not a valid time and the abstractor should select "UTD".
  Note: Transmission of a case with an invalid time as described above will be rejected from the Joint Commission's Data Warehouse. Use of "UTD" for *Initial NIHSS Score Time* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Nursing flow sheet
- Progress notes
- Admitting note

- Nursing assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Initial Patient Population Size — Medicare Only*

Collected For: All Records, Transmission, Patient Population Data File

Definition: Indicates the number of episode of care (EOC) records identified for a hospital with Medicare listed as a payment source prior to the application of data integrity filters, measure exclusions, and/or sampling methodology for the specified time period.

The data element is based on the hospital's initial identification of Medicare EOC records for a measure set, stratum, or sub-population. Initial Patient Population Size — Medicare Only includes all patients that are billed under Medicare or Title 18. Medicare can be listed as a primary, secondary, teritary or lower on the list of payment sources for the patient. In addition, patients who are participating as a member of a Medicare HMO/Medicare Advantage are included in the Medicare counts, e.g., Medicare Blue, Humana Gold, Secure Horizons, AARP, Coventry Advantra, etc. This initial data pull utilizes administrative data such as ICD-10-CM diagnosis and ICD-10-PCS procedure codes, admission date, and birthdate.

For the discharge measures (eg. HBIPS-1, STK-1, PC-01), refer to the Initial Patient Population discussion in the Measure Information section of this manual for more information.

For the HBIPS event measures (HBIPS-2 and 3), the Initial Patient Population Size — Medicare Only is equal to those EOC records in the census data identified as being Medicare EOC records. The HBIPS census data are calculated by (Psychiatric Inpatient Days-Medicare Only - Total Leave Days-Medicare Only). Initial Patient Population Size — Medicare Only is not derived from those cases that pass through the Initial Patient Population algorithm.

Note:
If the hospital's data has been sampled, this field contains the population from which the sample was originally drawn, NOT the sample size.

Question: Not Applicable

Format:
Length: 6
Type: Numeric
Occurs:

Non-stratified Measure Sets:

One Initial Patient Population Size — Medicare Only per hospital's measure set (e.g. GLB).

Stratified Measure Sets:

One Initial Patient Population Size — Medicare Only per measure set stratum or sub-population the hospital is participating in:
* The PC measure set has three occurrences, one for the mother sub-population and two for the newborn sub-populations.

* The HBIPS measure set has four occurrences, one for each age stratum.
* The STK measure set has two occurrences, one for each sub-population.

Note:
Refer to the appropriate version of the Specifications Manual for National Quality Inpatient Measures for the number of occurrences for the VTE measure set.

Allowable Values:

0 through 999,999

Notes for Abstraction: *Initial Patient Population Size-Medicare Only* must contain the actual number of patients in the population even if the hospital has five or fewer discharges (both Medicare and non-Medicare combined) in a quarter and has decided to not submit patient level data.

Suggested Data Sources: Not Applicable

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Initial Patient Population Size — Non-Medicare Only*

Collected For: All Records, Transmission, Patient Population Data File

Definition: Indicates the number of episode of care (EOC) records identified for a hospital with Medicare NOT listed as a payment source prior to the application of data integrity filters, measure exclusions, and/or sampling methodology for the specified time period.

The data element is based on the hospital's initial identification of non-Medicare EOC records for a measure set, stratum, or sub-population. This initial data pull utilizes administrative data such as ICD-10-CM diagnosis and ICD-10-PCS procedure codes, admission date, and birthdate.

For the discharge measures (eg. HBIPS-1, STK-1, PC-01), refer to the Initial Patient Population discussion in the Measure Information section of this manual for more information.

For the HBIPS event measures (HBIPS-2 and 3), the Initial Patient Population Size — Non-Medicare Only is equal to those EOC records in the census data identified as not having Medicare listed as a payment source. The HBIPS census data are calculated by (Psychiatric Inpatient Day-Non-Medicare Only - Total Leave Days-Non-Medicare Only). Initial Patient Population Size — Non-Medicare Only is not derived from those cases that pass through the Initial Patient Population algorithm.

Note:
If the hospital's data has been sampled, this field contains the population from which the sample was originally drawn, NOT the sample size.

Question: Not Applicable

Format:

Length: 6
Type: Numeric
Occurs:

Non-stratified Measure Sets:

One Initial Patient Population Size — Non-Medicare Only per hospital's measure set (e.g. GLB).

Stratified Measure Sets:

One Initial Patient Population Size — Non-Medicare Only per measure set stratum or sub-population the hospital is participating in:
* The PC measure set has three occurrences, one for the mother sub-population and two for the newborn sub-populations.
* The HBIPS measure set has four occurrences, one for each age stratum.
* The STK measure set has two occurrences, one for each sub-population.

***Note:**
Refer to the appropriate version of the Specifications Manual for National Quality Inpatient Measures for the number of occurrences for the VTE measure set.

Allowable Values:

0 through 999,999

Notes for Abstraction: *Initial Patient Population Size-Non-Medicare* Only must contain the actual number of patients in the population even if the hospital has five or fewer discharges (both Medicare and non-Medicare combined) in a quarter and has decided to not submit patient level data.

Suggested Data Sources: Not Applicable

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Initial Platelet Count at Hospital Arrival*

Collected For: CSTK-05, CSTK-08, CSTK-10

Definition: Documentation of the first platelet count obtained prior to or after hospital arrival. Platelets are one of three components of human blood. Platelets play a very important role in the healing process and the formation of blood clots at the time of injury.

Question: What is the first platelet count obtained prior to or after hospital arrival?

Format:
Length: 6 (no comma, no decimal)
Type: Alphanumeric
Occurs: 1

Allowable Values:

PLT = platelet count value (no commas, no decimal)
UTD = Unable to Determine

Notes for Abstraction:
- To determine the value for this data element, review the platelet counts obtained prior to and after hospital arrival.
- Select the earliest documented platelet count regardless of location of testing. Values obtained and documented by EMS, a transferring hospital, or your hospital are acceptable. The first documented platelet count should be used.
- Platelet counts obtained with point-of-care (POC) devices or laboratory values are acceptable.

Suggested Data Sources:
- History and physical
- Nursing flow sheet
- Progress notes
- Transfer sheet
- Admitting note
- Ambulance record
- Consultation form/note
- Emergency room records
- EMS records
- Nursing assessment

Additional Notes:

Excluded Data Sources:
- Discharge summary

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *INR Value > 1.4*

Collected For: CSTK-04

Definition: Documentation that the international normalized ratio (INR) value performed closest to hospital arrival was greater than 1.4. This value correlates to the ability of the blood to clot. Higher values greater than 1.4 are associated with an increased risk of hemorrhage.

Question: Is there documentation in the medical record that the INR value performed closest to hospital arrival was greater than 1.4?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation that the INR value performed closest to hospital arrival was greater than 1.4.

N (No) There is no documentation that the INR value performed closest to hospital arrival was greater than 1.4, OR unable to determine from medical record documentation.

Notes for Abstraction:
- To determine the value for this data element, review the INR values obtained closest to hospital arrival (i.e., before and after hospital arrival). If any result is greater than 1.4, select “Yes”.
- INR values obtained at a transferring hospital may be used to select ‘YES’ if a more recent INR value was not done after arrival at this hospital.

Suggested Data Sources:
- Emergency department record
- Laboratory report
- Nursing notes
- Progress notes
- Transfer sheet

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *IV Alteplase Initiation Date*

Collected For: ASR-IP-1, ASR-OP-1, CSTK-05, STK-4

Definition: The month, date, and year that IV alteplase was initiated to a patient with ischemic stroke at this hospital. IV alteplase converts plasminogen to plasmin, which in turn breaks down fibrin and fibrinogen, thereby dissolving thrombus.

Question: What is the date that IV alteplase was initiated for this patient at this hospital?

Format:
Length: 10 - MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (20xx)
UTD = Unable to Determine

Notes for Abstraction:

- Use the date at which initiation of IV alteplase was first documented. If a discrepancy exists in date documentation from different sources, choose nursing documentation first before other sources. If multiple dates are documented by the same individual, use the earliest date recorded by that person.
- If the date IV alteplase was initiated is unable to be determined from medical record documentation, select "UTD".
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid date/format) **and** no other documentation is found that provides this information, the abstractor should select "UTD".
  Example:
  Documentation indicates the IV alteplase initiation date was 03-**42**-20xx. No other documentation in the medical record provides a valid date. Since the IV alteplase initiation date is outside of the range listed in the Allowable Values for "Day"," it is not a valid date and the abstractor should select "UTD".
  Note: Transmission of a case with an invalid date as described above will be rejected from the CMS Clinical Warehouse and the Joint Commission"s Data Warehouse. Use of "UTD" for *IV Alteplase Initiation Date* allows the case to be accepted into the warehouse

Suggested Data Sources:

- Emergency department record
- Nursing flow sheet
- Progress notes
- IV flow sheets
- Medication administration record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *IV Alteplase Initiation Time*

Collected For: ASR-IP-1, ASR-OP-1, CSTK-05, STK-4

Definition: The time for which IV alteplase was initiated at this hospital.

Question: What was the time of initiation for IV alteplase?

Format:
Length: 5 - HH-MM (with or without colon) or UTD
Type: Time
Occurs: 1

Allowable Values:

HH = Hour (00-23)
MM = Minutes (00-59)
UTD = Unable to Determine

Time must be recorded in military time format. With the exception of Midnight and Noon:

- If the time is in the a.m., conversion is not required
- If the time is in the p.m., add 12 to the clock time hour

Examples:

Midnight = 00:00
Noon = 12:00
5:31 am = 05:31
5:31 pm = 17:31
11:59 am = 11:59
11:59 pm = 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20xx, review supporting documentation to determine if the *IV Alteplase Initiation Date* should remain 11-24-20xx or if it should be converted to 11-25-20xx.

When converting Midnight or 24:00 to 00:00, do not forget to change the *IV Alteplase Initiation Date*.
Example:
Midnight or 24:00 on 11-24-20xx = 00:00 on 11-25-20xx

Notes for Abstraction:

- Use the time at which initiation of IV alteplase was first documented. If a discrepancy exists in time documentation from different sources, choose nursing documentation first before other sources. If multiple times are documented by the same individual, use the earliest time recorded by that person.
- For times that include “seconds”, remove the seconds and record the time as is. Example: 15:00:35 would be recorded as 15:00

- The use of “hang time” or “infusion time” is acceptable as IV alteplase initiation time when other documentation cannot be found.
- IV alteplase initiation time refers to the time the thrombolytic bolus/infusion was started.
- Do not use physician orders unless there is documentation with the order that it was administered.
- If the time of IV alteplase initiation is unable to be determined from medical record documentation, select “UTD”."
- The medical record must be abstracted as documented (taken at “face value”). When the time documented is obviously in error (not a valid time) **and** no other documentation is found that provides this information, the abstractor should select “UTD”."
  Example:
  Documentation indicates the IV alteplase initiation time was 3300. No other documentation in the medical record provides a valid time. Since the IV alteplase initiation time is outside of the range listed in the Allowable Values for “Hour,” it is not a valid time and the abstractor should select “UTD”."
  Note: Transmission of a case with an invalid time as described above will be rejected from the CMS Clinical Warehouse and the Joint Commission”s Data Warehouse. Use of “UTD” for *IV Alteplase Initiation Time* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Emergency department record
- Nursing flow sheet
- Progress notes
- IV flow sheets
- Medication administration record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *IV Alteplase Initiation*

Collected For: ASR-IP-1, ASR-OP-1, ASR-OP-2, CSTK-05, STK-4, STK-OP-1

Definition: Intravenous (IV) alteplase was initiated at this hospital. IV alteplase converts plasminogen to plasmin, which in turn breaks down fibrin and fibrinogen, thereby dissolving thrombus.

Question: Is there documentation that IV alteplase was initiated at this hospital?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) IV alteplase was initiated at this hospital.

N (No) IV alteplase was not initiated at this hospital, OR unable to determine from medical record documentation.

Notes for Abstraction:
- When a "hang time" or "infusion time" for IV alteplase is documented in the medical record, select "Yes."
- If IV alteplase was administered at another hospital and patient was subsequently transferred to this hospital, select "No."
- If the patient was transferred to this hospital with IV alteplase infusing, select "No."

Suggested Data Sources:
- Emergency department record
- Progress notes
- IV flow sheets
- Medication records

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Only Acceptable Thrombolytic Therapy for Stroke: • Activase • Alteplase • IV t-PA • Recombinant t-PA Tissue plasminogen activator • t-PA Tissue plasminogen activator	• Intra-arterial (IA) t-PA • Thrombolytic administration to flush, open, or maintain patency of a central line, e.g., PICC line

Name: *IV Alteplase Prior to IA or Mechanical Reperfusion Therapy*

Collected For: CSTK-05, CSTK-08, CSTK-10

Definition: There is documentation in the record that the patient received intravenous (IV) alteplase at this hospital or a transferring hospital prior to receiving intra-arterial (IA) alteplase or mechanical reperfusion therapy at this hospital.

Question: Did the patient receive intravenous (IV) alteplase at this hospital or a transferring hospital prior to receiving intra-arterial (IA) alteplase or mechanical reperfusion therapy at this hospital?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) Patient received IV alteplase prior to IA alteplase or mechanical reperfusion therapy.

N (No) Patient did not receive IV alteplase prior to IA alteplase or mechanical reperfusion therapy, OR unable to determine from medical record documentation.

Notes for Abstraction: Documentation in the medical record must reflect that the patient received IV alteplase at this hospital or a transferring hospital (i.e., drip and ship) prior to receiving IA alteplase or mechanical reperfusion therapy at this hospital.

Suggested Data Sources:
- Emergency department record
- Progress notes
- Medication records
- Transfer forms
- Medical transport records

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Only Acceptable Thrombolytic Therapy for Stroke: • Activase • Altepase • IV t-PA • Recombinant Tissue plasminogen activator (rt-PA) • Tissue plasminogen activator (t-PA)	None

Name: *IV OR IA Alteplase Administered at This Hospital or Within 24 Hours Prior to Arrival*

Collected For: ASR-IP-2, STK-5

Definition: There is documentation in the record that the patient received intravenous (IV) or intra-arterial (IA) alteplase at this hospital or within 24 hours prior to arrival. Antithrombotic administration within 24 hours of IV alteplase may be contraindicated.

Question: Did the patient receive IV or IA alteplase at this hospital or within 24 hours prior to arrival?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) Patient received IV or IA alteplase at this hospital or within 24 hours prior to arrival.

N (No) Patient did not receive IV or IA alteplase at this hospital or within 24 hours prior to arrival, OR unable to determine from medical record documentation.

Notes for Abstraction:
- Documentation in the medical record must reflect that the patient received IV or IA alteplase at this hospital or within 24 hours prior to arrival (i.e., drip and ship).
- If there is documentation that the patient received IV or IA alteplase and mechanical thrombectomy at this hospital or within 24 hours prior to arrival, select “Yes”.
- If there is documentation that the patient received mechanical thrombectomy only with no IV or IA alteplase given, select “No”.

Suggested Data Sources:
- Emergency department record
- Progress notes
- Transfer sheet
- Medication records
- Medical transport records

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Only Acceptable Thrombolytic Therapy for Stroke: • Activase • Alteplase • Intra-arterial (IA) t-PA • IV t-PA • Recombinant t-PA Tissue plasminogen activator • t-PA Tissue plasminogen activator	• Heparin Flush • Heparin Lock • Thrombolytic administration to flush, open, or maintain patency of a central line, e.g., PICC line.

Name: *Labor*

Collected For: PC-01

Definition: Documentation by the clinician that the patient was in labor prior to induction and/or cesarean birth.

Question: Is there documentation by the clinician that the patient was in labor prior to induction and/or cesarean birth?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation by the clinician that the patient was in labor prior to induction and/or cesarean birth.

N (No) There is no documentation by the clinician that the patient was in labor prior to induction and/or cesarean birth OR unable to determine from medical record documentation.

Notes for Abstraction:

- A clinician is defined as a physician, certified nurse midwife (CNM), advanced practice nurse/physician assistant (APN/PA) or registered nurse (RN).
- Documentation of labor by the clinician should be abstracted at face value, e.g., admit for management of labor, orders for labor, etc. There is no requirement for acceptable descriptors to be present in order to answer "yes" to labor.
- Documentation of regular contractions with or without cervical change, without mention of labor may be used to answer "yes" to labor. For example:
  - contractions every 4 to 5 minutes
  - regular contractions and dilation
  - effacement 50% with contractions every 3 minutes
  - steady contractions
- Induction of labor is defined as the use of medications or other methods to bring on (induce) labor. Methods of induction of labor include, but are not limited to:
  - Administration of Oxytocin (Pitocin)
  - Artificial rupture of membranes (AROM) or amniotomy
  - Insertion of a catheter with an inflatable balloon to dilate the cervix
  - Ripening of the cervix with prostaglandins, i.e. Cervidil, Prepidil, Cytotec, etc.
  - Stripping of the membranes when the clinician sweeps a gloved finger over the thin membranes that connect the amniotic sac to the wall of the uterus.

Suggested Data Sources:

- History and physical
- Nursing notes
- Physician orders
- Medication administration record (MAR)
- Labor flow sheet
- Physician progress notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
The following are acceptable descriptors for labor: • Active • Early • Latent • Spontaneous	The following is not an acceptable descriptor for labor: • Prodromal

Name: *Large Vessel Occlusion (LVO)*

Collected For: CSTK, STK-OP-1

Definition: Documentation in the medical record of a large vessel cerebral artery occlusion.

Large vessel occlusions include documentation of a cerebral occlusion in the Internal Carotid Artery (ICA), ICA terminus(T-lesion; T occlusion), Middle Cerebral Artery (MCA), M1 MCA, Vertebral Artery, or Basilar Artery.

Question: Is there documentation of a LVO in the medical record?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of a LVO.

N (No) There is no documentation of an LVO, OR unable to determine from the medical record documentation.

Notes for Abstraction:
- Collect the documented clinical location of a cerebral artery occlusion in the Internal Carotid Artery (ICA), ICA terminus (T-lesion; T occlusion), Middle Cerebral Artery (MCA), M1 MCA, Vertebral Artery, or Basilar Artery.

Suggested Data Sources:
- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Discharge summary
- Diagnostic test reports

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Last Known Well*

Collected For: ASR-IP-1, ASR-OP-1, STK-4

Definition: The date and time prior to hospital arrival at which it was witnessed or reported that the patient was last known to be without the signs and symptoms of the current stroke or at his or her baseline state of health.

Question: Is there documentation that the date and time of last known well was witnessed or reported?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation that the date and time of last known well was witnessed or reported.

N (No) There is no documentation that the date and time of last known well was witnessed or reported, OR unable to determine from medical record documentation.

Notes for Abstraction:

- Select "Yes" if BOTH a date and time *Last Known Well* are documented.
- Select "No" if there is ANY physician/APN/PA documentation that *Last Known Well* is "UNKNOWN." Documentation must explicitly state that the *Last Known Well* is unknown/uncertain/unclear. Documentation that time of symptom onset is unknown/uncertain/unclear is also acceptable when *Time Last Known Well* is not documented. If *Last Known Well* is not explicitly documented as unknown, **do not make inferences** (e.g. do not assume that patient woke with stroke so *Last Known Well* unknown unless explicitly documented).
  - If one physician documents a *Time Last Known Well* and another documents time of symptom onset unknown, select "Yes."
  - If physician documents a *Time Last Known Well* and nurse/EMS documents Last Known Well unknown, select "Yes."
  - If one physician documents *Last Known Well* unknown and another documents a *Time Last Known Well*, select "No."
    EXCEPTION:
  - If the physician documents *Last Known Well* as unknown and the same physician crosses out unknown or mentions in a later note that *Last Known Well* is now known with a time documented, select "Yes."
  - If the physician documents *Last Known Well* or stroke/symptom onset unknown as a *Reason for Not Initiating IV Thrombolytic* and the *Time Last Known Well* is also documented on a Code Stroke Form or elsewhere in the medical record, "unknown" should be disregarded and "Yes" selected.
- If the *Time Last Known Well* is clearly greater than 2 hours prior to hospital arrival AND **no time** is documented, select "No."
  Example:
  "Patient OK last night." Select "No" because no other documentation of a

specific time/time range/time reference was present in the medical record and the time is required for the *Time Last Known Well*.

- If the only *Time Last Known Well* is documented as a time immediately before hospital arrival without a specific time range in minutes, e.g., "symptoms started just prior to ED arrival," select "Yes."
- If there is no documentation that *Last Known Well* or stroke signs/symptoms occurred prior to hospital arrival but there is documentation that *Last Known Well* first occurred after *Arrival Time* (e.g., in-house stroke), select "No."

Suggested Data Sources:

- Emergency department record
- History and physical
- Nursing notes
- Nursing flow sheet
- Progress notes
- Medication administration record (MAR)
- Transfer sheet
- Ambulance record
- Code Stroke form/template
- IV flow sheets

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Signs and Symptoms of Stroke • Sudden numbness or weakness of the face, arm or leg, especially on one side of the body • Sudden confusion, trouble speaking or understanding • Sudden trouble seeing in one or both eyes • Sudden trouble walking, dizziness, loss of balance or coordination • Sudden severe headache	Delay in stroke diagnosis

Name: *LVSD < 40%*

Collected For: ACHF-01, ACHFOP-01, ACHFOP-02, ACHFOP-03

Definition: Left ventricular systolic dysfunction (LVSD) documented in medical record. LVSD is defined as a left ventricular ejection fraction less than 40% or a narrative description consistent with moderate or severe systolic dysfunction.

LVSD is an impairment of left ventricular performance. An ejection fraction (EF) is an index of left ventricular systolic function (LVSF) and reflects the proportion of blood ejected during each ventricular contraction compared with the total ventricular filling volume.

Question: Is the left ventricular systolic function (LVSF) documented as an ejection fraction (EF) less than 40% or a narrative description consistent with moderate or severe systolic dysfunction?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) LVSF is documented as an ejection fraction (EF) less than 40% or a narrative description consistent with moderate or severe systolic dysfunction.

N (No) LVSF is not documented as an ejection fraction (EF) less than 40% or a narrative description consistent with moderate or severe systolic dysfunction, or unable to determine from medical record documentation.

Notes for Abstraction:

- Results from in-hospital LVSF assessments filed into the chart after discharge should still be used.

A. Methodology:

- **Final findings take priority over preliminary findings**. Applies to test reports and findings noted outside of reports. If not labeled "preliminary," assume it is final.
- **Conclusion section of report takes priority over other sections**. Consider the "Impression," "Interpretation," and "Final Diagnosis"" sections as equivalent with the "Conclusion" section.
- **Apply Section B Conflicting Documentation priority order** in ANY step in Methodology section when there are two or more different descriptions of Ejection Fraction/LVSF.
- Disregard the following terminology when reviewing the record for documentation of LVSF/LVSD. If documented, continue reviewing for LVSF/LVSD inclusions outlined in the Inclusion lists, as directed in the abstraction guidelines below.
  - Diastolic dysfunction, failure, function, or impairment
  - Ventricular dysfunction not described as left ventricular or systolic
  - Ventricular failure not described as left ventricular or systolic
  - Ventricular function not described as left ventricular or systolic
    E.g., Impression section of echo report states only "diastolic dysfunction."

Findings section states “EF 35%.” Disregard “diastolic dysfunction”” in the Impression section and answer “Yes” due to EF 35%.

1. **If one or more in-hospital tests performed:**
   a. Use report from **most recent test*** (test done closest to discharge).
   b. If no report or no Ejection Fraction/LVSF findings noted in report, use other sources (e.g., progress notes) that **clearly reference** the **most recent** test*.
   c. If no Ejection Fraction/LVSF results from the **most recent test** are documented anywhere, use the **report** from the **second most recent test***.
   d. If no Ejection Fraction/LVSF findings from second **most recent test** are documented anywhere, use **other sources** (e.g., progress notes) that **clearly reference** the **second most recent test***. Continue working backwards (if greater than 2 tests) and use Ejection Fraction/LVSF from the **most recent test*** that has Ejection Fraction/LVSF findings, using the report over non-report sources as above.
   e. If no Ejection Fraction/LVSF results from any in-hospital test are documented anywhere, skip to step 2a below.

***If you cannot determine between two in-hospital tests which was performed closest to the time of discharge, use BOTH tests:**

1. Use reports. Reports take priority over non-report sources.
2. If no reports or no Ejection Fraction/LVSF findings on reports from any test, use other sources (e.g., progress notes) that **clearly reference** the tests.
3. If no Ejection Fraction/LVSF results from either in-hospital test documented anywhere, go to step 2a below.

2. **If in-hospital test not done, no Ejection Fraction/LVSF results from any in-hospital test documented, OR documentation is not clear that one was done** (e.g., echo ordered but no documentation that it was done):
   a. Assume notations of Ejection Fraction/LVSF with no timeframe (“floating” Ejection Fractions/LVSFs) are from assessments done prior to arrival.
   b. If timeframe known for ALL pre-arrival Ejection Fractions/LVSFs (no “floaters”):
      - Use results from the pre-arrival test known to be most recent (closest to hospital arrival). Use report over other sources, and Conclusion (Impression, etc.) over other sections of report, as above.
   c. If one or more “floaters”:
      - Compile all Ejection Fractions/LVSFs and eliminate those that you can determine are not the most recent, resulting in a list of Ejection Fraction/LVSF “Possibles.””
      - If Ejection Fraction/LVSF from one test in the “Possibles” list is referenced both in a report and in another source, use the report, and use the Conclusion (Impression, etc.) over other sections of the report, as above, to determine which Ejection Fraction/LVSF from this test to add to the list of “Possibles.”

- Select final Ejection Fraction/LVSF from list of "Possibles" based on the Conflicting Documentation rules below.

B. Conflicting Documentation:
Apply the following priority order in cases of conflicting documentation within ANY ONE STEP in Methodology above, where there are two or more different descriptions of Ejection Fraction/LVSF:

1. Use **lowest calculated ejection fraction**. Presume calculated unless described as estimated (e.g., "Ejection fraction 30%"").
   - If calculated ejection fraction less than 40% select "Yes"." If calculated ejection fraction greater than or equal to 40%, select "No"."
2. Use **lowest estimated ejection fraction**. E.g., "Ejection fraction about 40%," "Ejection fraction approximately 30%," "Ejection fraction appears to be 35%," "Visually ejection fraction is 45%," "Ejection fraction 35-40%" (use mid-point)" "Ejection fraction less than 40%."
   - If estimated ejection fraction less than 40%, select "Yes"." If estimated ejection fraction greater than or equal to 40%, select "No"."
3. Use **worst** narrative description with severity specified.
   - Select "Yes" if description is synonymous with term from Inclusion list A.
   - Select "No" if description with severity specified is NOT synonymous with term from Inclusion List A (e.g., normal, mild, preserved).
4. Use narrative description without severity specified. Select "Yes" if description is synonymous with term from Inclusion list B. Otherwise, select "No"."

Suggested Data Sources:

- Consultation notes
- History and physical
- Progress notes
- Discharge summary
- Procedure notes
- Outpatient medical record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Inclusion list A: Moderate/severe LVSD • Biventricular dysfunction described as marked, moderate, moderate-severe, severe, significant, substantial, or very severe • Biventricular heart failure described as moderate or severe • Ejection fraction or left ventricular ejection fraction (LVEF) described as low, poor, or very low • Endstage cardiomyopathy	**Moderate or severe systolic dysfunction** • Any term in Inclusion list A or B described using one of the negative modifiers or qualifiers listed in Appendix H, Table 2.6, Qualifiers and Modifiers Table • Any term in Inclusion list A or B described as mild-moderate

- Hypokinesis described as diffuse, generalized, or global AND marked, moderate, moderate-severe, severe, significant, substantial, or very severe
- Left ventricular (LV) akinesis described as marked, moderate, moderate-severe, severe, significant, substantial, or very severe
- Left ventricular (LV) hypokinesis described as marked, moderate, moderate-severe, severe, significant, substantial, or very severe in one or more segments of left ventricle
- Left ventricular dysfunction (LVD), left ventricular systolic dysfunction (LVSD), or systolic dysfunction described as marked, moderate, moderate-severe, severe, significant, substantial, or very severe
- Left ventricular function (LVF), left ventricular systolic function (LVSF), or systolic function described as low, poor, or very low
- Systolic failure described as marked, moderate, moderate-severe, severe, significant, substantial, or very severe AND not described as right ventricular

Inclusion list B: LVSD — Severity not specified

- Biventricular dysfunction where severity is not specified
- Ejection fraction or left ventricular ejection fraction (LVEF) described as abnormal, compromised, decreased, depressed, diminished, impaired, or reduced
- Hypokinesis described as diffuse, generalized, or global where severity is not specified
- Left ventricular (LV) hypokinesis described as involving the entire left ventricle
- Left ventricular dysfunction (LVD), left ventricular systolic dysfunction (LVSD), or systolic dysfunction where severity is not specified
- Left ventricular function (LVF), left ventricular systolic function (LVSF), or systolic function described as abnormal, compromised, decreased, depressed, diminished, impaired, or reduced
- Systolic failure where severity is not specified AND not described as right ventricular

Name: *Measure Category Assignment*

Collected For: All Records, Calculation, Transmission, Hospital Clinical Data File, Used in calculation of the Joint Commission's aggregate data and in the transmission of the Hospital Clinical Data file.

Definition: Calculated measures results for each episode of care (EOC) that is processed through a measure algorithm.

Used to summarize the outcome for an EOC that is processed through a specific measure algorithm.

Question: Not Applicable

Format:
Length: 1
Type: Character
Occurs: One *Measure Category Assignment* per EOC is expected for every measure that a hospital is participating in.

Allowable Values:

B **Category B - Not in Measure Population**
For rate-based and continuous variable measures:
EOC record is not a member of a measure's population.

For rate-based-ratio measures:
Does not apply.

D **Category D - In Measure Population**
For rate-based measures:
EOC record is a member of the measure's population and there has not been an occurrence of the measure.

For rate-based-ratio measures:
Does not apply.

For continuous variable measures:
EOC record is a member of the measure's population and has sufficient accurate and valid data to compute the measurement.

Note: For measures for which better quality is associated with a lower score or numerator, i.e.,PC-01, PC-02, PC-04, a Measure Category Assignment of "D" means that the appropriate care was provided and the intent of the measure was met. For aggregate data, the EOC record will be included in the measure denominator only.

Note:
For continuous variable measures, EOC records that have a *Measure Category Assignment* of "D" **will** have an associated *Measurement Value*.

E **Category E - In Numerator Population**
For rate-based measures:
EOC record is a member of the measure's population and there has been an occurrence of the measure.

For rate-based-ratio measures:
Event record is a member of the measure's population and there has been an occurrence of the measure.

For continuous variable measures:
Does not apply.

Note: For measures for which better quality is associated with a lower score or numerator, i.e., PC-01, PC-02, PC-04, a Measure Category Assignment of “E” means that the appropriate care was not provided and the intent of the measure was not met. For aggregate data, the EOC record will be included in both the measure numerator and denominator.

U **Category U — Not In Numerator Population**

For rate-based-proportion measures:
Does not apply

For rate-based-ratio measures:
Event record is a member of the measure's population; however, it contains a data element whose allowable value excludes it from the numerator.

For continuous variable measures:
Does not apply.

X **Category X — Data Are Missing**
For rate-based and continuous variable measures:
Data are missing that is required to calculate the measure. The record will be rejected by the QIO Clinical Warehouse and the Joint Commission's Data Warehouse.

Y **Category Y — UTD Allowable Value Does Not Allow Calculation of The Measure**
For rate-based measures:
Does not apply.

For rate-based-ratio measures: Event record contains a Date, Time, or Numeric data element with a value of UTD'.

For continuous variable measures:
EOC record contains a Date, Time, or Numeric data element with a value of UTD'.

Note:
For continuous variable measures, EOC records that have a *Measure Category Assignment* of "Y" **will not** have an associated *Measurement Value*.

Notes for Abstraction: None

Suggested Data Sources: Not Applicable

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• None	• None

Name: *Measure Set*

Collected For: All Records, Transmission, Patient Population Data File, Hospital Clinical Data File

Definition: Indicates which measure set (topic) is being transmitted for a hospital.

Question: Not Applicable

Format:
Length: 10
Type: Character
Occurs: Hospital Clinical Data file: 1
Hospital Initial Patient Population Data file: 1 - 6

Allowable Values:

Refer to the Hospital Clinical Data XML File Layout and the Hospital Initial Patient Population Data XML File Layout in the Transmission section of this manual.

Notes for Abstraction: None

Suggested Data Sources: Not Applicable

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Measurement Value*

Collected For: CSTK, HBIPS, PC, Calculation, Transmission, Hospital Clinical Data File, Used in the calculation of the Joint Commission's aggregate data, Continuous Variable Measures and in the transmission of the Hospital Clinical Data file

Note:

- The ORYX Vendor's calculated *Measurement Value* will be transmitted to The Joint Commission on a quarterly basis with the associated hospital clinical data. These measure results will be used in the Joint Commission's data quality analysis and continuous measure verification process. ORYX Vendors can refer to the Joint Commission's *ORYX Data Quality Manual* for more information.
- *Measurement Value* must be transmitted to The Joint Commission but cannot be transmitted to CMS. Files transmitted to the CMS Clinical Warehouse that contain *Measurement Value* will be rejected.

Definition: This data element is used to store the calculated results of the measurements that are outputs from continuous variable measure algorithms.

Note:
Used in conjunction with *Measure Category Assignment* when its allowable value = "D" (In Measure Population).

Question: Not Applicable

Format:
Length: 6
Type: Numeric
Occurs: One *Measurement Value* is expected per EOC for every continuous variable measure that a hospital is participating in.

Allowable Values:

Any valid number

Notes for Abstraction: None

Suggested Data Sources: Not Applicable

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• None	• None

Name: *MER Eligibility*

Collected For: CSTK, STK-OP-1

Definition: Documentation in the medical record that the ischemic stroke patient is eligible for mechanical endovascular reperfusion (MER) therapy.

MER therapy or mechanical thrombectomy is an advanced neurological procedure for removal of a cerebral occlusion using a mechanical device, also known as a clot retrieval device or stent retriever, and/or aspiration technique.

Question: Is there documentation in the medical record that the patient is eligible for MER therapy or a mechanical thrombectomy procedure?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation that the patient is eligible for MER therapy or a mechanical thrombectomy procedure.

N (No) There is no documentation that the patient is eligible for MER therapy or a mechanical thrombectomy procedure, OR unable to determine from the medical record documentation.

Notes for Abstraction:
- Documentation by a physician/APN/PA that the patient is a candidate or eligible for MER therapy.
- Documentation by a physician/APN/PA that the patient is being transferred to a higher level stroke center for the purpose of having a mechanical thrombectomy procedure or further evaluation for possible MER therapy.

Suggested Data Sources:
- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Discharge summary
- Diagnostic test reports

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Endovascular Therapy (EVT) • Mechanical Endovascular Reperfusion (MER) Therapy • Mechanical Thrombectomy	None

Name: *Minutes of Physical Restraint*

Collected For: HBIPS-2

Definition: The total minutes recorded in the medical record that a patient was maintained in *Event Type* 1 (physical restraint(s)) for the associated *Event Date*.

Question: What was the total number of minutes recorded in the medical record that the patient was maintained in *Event Type* 1 (physical restraint) for the *Event Date*?

Format:
Length: 4 or UTD
Type: Alphanumeric
Occurs: 1

Allowable Values:

1-1440
UTD= Unable to Determine

Notes for Abstraction: *Event Type* 1 (physical restraint(s)) should be reported in whole minutes. Events less than or equal to 60 seconds should be reported as 1 minute (i.e., event duration of 2 minutes 5 seconds is reported as 3 minutes).

For each patient enter the *Minutes of Physical Restraint* that corresponds with the *Event Date* and *Event Type*.

If a patient is in *Event Type* 1 (physical restraint(s)) and then changed to *Event Type* 2 (seclusion), the time for *Event Type* 1 (physical restraint(s)) STOPS. The initiation of *Event Type* 2 (seclusion) stops the time for *Event Type* 1 (physical restraint(s)).

If a patient is in *Event Type* 1 (physical restraint(s)) and *Event Type* 2 (seclusion) at the same time, the time should be counted as *Minutes of Physical Restraint*. Time in physical restraints supersedes time in seclusion.

Select unable to determine when either the start or stop time **OR** the total number of minutes of *Event Type* 1 (physical restraint) event is missing from the medical record and the total *Minutes of Physical Restraint* can not be calculated for the associated *Event Date*.

See the guidelines for abstraction for definition of an *Event Type* 1 (physical restraint).

When an *Event Type* 1 (physical restraint) starts at school or during an off-campus outing; this event should be reported.

Suggested Data Sources:
- Licensed independent practitioner orders
- Nursing flow sheet
- Nursing notes
- Observation sheets

- Physician orders
- Progress notes
- Psychiatrist notes
- Restraint monitoring form
- Therapist notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
A physical restraint is any manual method or physical or mechanical device, material, or equipment that immobilizes or reduces the ability of a patient to move his or her arms, legs, body or head freely when it is used as a restriction to manage a patient's behavior or restrict the patient's freedom of movement and is not a standard treatment for the patient's medical or psychiatric condition.[1] Examples of physical restraint includes but is not limited to:: • 2 point restraint • 4 point restraint • 5 point restraint • Body nets • Mittens to prevent intentional self-harm • Wrist-to-waist restraints • Soft wrist restraints • Manual holds • Stapling • Jarvis • Leather restraints • Devices that serve multiple purposes such as a Geri chair or side rails, when they have the effect of restricting a patient's movement and cannot be easily removed by the patient, constitute a restraint. [2] [1],[2],[3] 42 CFR Part 482, Medicare and Medicaid Programs; Hospital Conditions of Participation: Patient's Rights	• Devices such as orthopedically prescribed devices, surgical dressings or bandages, protective helmets • Methods that involve the physical holding of a patient to conduct routine physical examinations, tests, or medication administration • Methods that protect a patient from falling out of bed • Methods that permit the patient to participate in activities without the risk of physical harm (does not include a physical escort)[3] • Restraint uses that are forensic or correctional restrictions applied and used by outside law enforcement • Restraint uses that are forensic or correctional restrictions applied and used by designated hospital security personnel to transport the patient to court off the locked unit

Name: *Minutes of Seclusion*

Collected For: HBIPS-3

Definition: The total minutes recorded in the medical record that a patient was held in *Event Type* 2 (seclusion) during the associated *Event Date*.

Question: What was the total number of minutes recorded in the medical record that the patient was held in *Event Type* 2 (seclusion) during the *Event Date*?

Format:
Length: 4 or UTD
Type: Alphanumeric
Occurs: 1

Allowable Values:

1-1440
UTD= Unable to Determine

Notes for Abstraction: *Event Type* 2 (seclusion(s)) should be reported in whole minutes. Events less than or equal to 60 seconds should be reported as 1 minute (i.e., event duration of 2 minutes 5 seconds is reported as 3 minutes).

For each patient enter the *Minutes of Seclusion* that corresponds with the *Event Date* and *Event Type*.

If a patient is in *Event Type* 2 (seclusion) and then changed to *Event Type* 1 (physical restraint(s)), the time for *Event Type* 2 (seclusion) STOPS. The initiation of Event Type 1 (physical restraint(s)) stops the time for *Event Type 2* (seclusion).

If a patient is in *Event Type* 1 (physical restraint(s)) and *Event Type* 2 (seclusion) at the same time, the time should be counted as *Minutes of Physical Restraint*. Time in physical restraints supersedes time in seclusion.

Select unable to determine when either the start or stop time **OR** the total number of minutes of *Event Type* 2 (seclusion) event is missing from the medical record and the total *Minutes of Seclusion* can not be calculated for the associated *Event Date*.

See guidelines for abstraction for definition of an *Event Type* 2 (seclusion).

When an *Event Type* 2 (seclusion) starts at school or during an off-campus outing; this event should be reported.

Suggested Data Sources:
- Licensed independent practitioner orders
- Nursing flow sheet
- Nursing notes
- Observation sheets
- Physician orders
- Progress notes

- Psychiatrist notes
- Seclusion monitoring form
- Therapist notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Seclusion is the involuntary confinement of a patient alone in a room or an area where the patient is physically prevented from leaving. This includes but is not limited to [1]: • Manually or electronically locked doors • One-way doors • The presence of staff proximal to the room preventing exit or the threat of consequences if the patient leaves the room [1] 42 CFR Part 482, Medicare and Medicaid Programs; Hospital Conditions of Participation: Patient's Rights	• Time-out • Quarantine due to infectious disease

Name: *Modified Rankin Score (mRS) Date*

Collected For: CSTK-02, CSTK-10

Definition: The month, date, and year that the Modified Rankin Score (mRS) was obtained post-discharge. The Modified Rankin Score (mRS) is a 6 point disability scale with possible scores ranging from 0 to 5. A separate category of 6 is usually added for patients who expire. The Modified Rankin Score (mRS) is the most widely used outcome measure in stroke clinical trials. Standardized interviews to obtain a mRS score are recommended at 3 months (90 days) following hospital discharge.

Question: What is the date that the Modified Rankin Score (mRS) was obtained post-discharge?

Format:
Length: 10-MM-DD-YYYY (includes dashes)
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2012-Current Year)

Notes for Abstraction:

- The Modified Rankin Score (mRS) should be done at 90 days (i.e., plus or minus 15 days; ≥ 75 days and ≤ 105 days) following the patient's discharge from the hospital. When multiple dates are recorded during this timeframe, use the earliest date in the 90-day period for the *Modified Rankin Score (mRS) Date*.
  Example: Discharge Date 02-22-20XX. First mRS dated 05-25-20XX. Second mRS dated 06-01-20XX. Select 05-25-20XX for the *Modified Rankin Score (mRS) Date*.
- If a Modified Rankin Score (mRS) was obtained sooner than 75 days post-discharge and no mRS is dated within the 90-day timeframe, select the date for the score closest to 75 days for the *Modified Rankin Score (mRS) Date*.
  Example: Discharge Date 02-22-20XX. First mRS dated 05-18-20XX. Second mRS dated 07-01-20XX. Select 05-18-20XX for the *Modified Rankin Score (mRS) Date*.
- If a Modified Rankin Score (mRS) was obtained later than 105 days post-discharge and no mRS is dated within the 90-day timeframe, select the date for the score closest to 105 days for the *Modified Rankin Score (mRS) Date*.
  Example: Discharge Date 02-22-20XX. First mRS dated 07-01-20XX. Second mRS dated 08-10-20XX. Select 07-01-20XX for the *Modified Rankin Score (mRS) Date*.
- If a discrepancy exists in date documentation from different sources, choose the earliest date. If there are two or more mRS dates (either different mRS episodes or corresponding with the same episode), enter the earliest date.
- For patients who expire **during the hospital stay**, use the *Discharge Date* for the *Modified Rankin Score Date*.

- For patients who expire **after** hospital discharge, select the date of the interview call or visit which notified the hospital of the patient's death and not the actual date of death. If a Modified Rankin Score was not done because the hospital was notified of the patient's death prior to the interview call or visit, select the date of the notification for the *Modified Rankin Score Date*.
  Examples:
  - Patient discharged home on 12-16-20XX. Telephone mRS done on 03-22-20XX. Family informs interviewer that patient expired at home on 03-01-20XX. Select 03-22-20XX, the date of the interview call, for the *Modified Rankin Score Date*.
  - Patient discharged home on 12-16-20XX. Outpatient visit scheduled for 01-16-20XX. Appointment cancelled in the EHR on 12-30-20Xx with a note that patient expired at home. Select 12-30-20XX for the *Modified Rankin Score Date*.
- If Modified Rankin Score allowable value '7' was chosen, select the date of the last attempt to contact the patient. If more than three unsuccessful attempts, then use the date of the third attempt.
- If the Modified Rankin Score was not performed, OR unable to determine (UTD) from the medical record documentation (allowable value '8'), then use the discharge date for the *Modified Rankin Score Date*.

Suggested Data Sources:

- History and physical
- Progress notes
- Care Transition Record
- Consultation Form
- Home health forms
- Logs from follow-up phone calls or other logs that record follow-up information
- Outpatient record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Modified Rankin Score (mRS)*

Collected For: CSTK-02, CSTK-10

Definition: Documentation in the medical record of a Modified Rankin Score (mRS). The Modified Rankin Score (mRS) is a 6 point disability scale with possible scores ranging from 0 to 5. A separate category of 6 is usually added for patients who expire. The Modified Rankin Score (mRS) is the most widely used outcome measure in stroke clinical trials. Standardized interviews to obtain a mRS score are recommended at 3 months (90 days) following hospital discharge.

Question: What is the patient's Modified Rankin Score (mRS) at 90 days post-discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

0 The patient has no residual symptoms.

1 The patient has no significant disability; able to carry out all pre-stroke activities.

2 The patient has slight disability; unable to carry out all pre-stroke activities but able to look after self without daily help.

3 The patient has moderate disability; requiring some external help but able to walk without the assistance of another individual.

4 The patient has moderately severe disability; unable to walk or attend to bodily functions without assistance of another individual.

5 The patient has severe disability; bedridden, incontinent, requires continuous care.

6 The patient has expired (during the hospital stay or after discharge from the hospital).

7 Unable to contact patient/caregiver.

8 Modified Rankin Score not performed, OR unable to determine (UTD) from the medical record documentation.

Notes for Abstraction:

- Modified Rankin Score (mRS) may be documented by the physician/APN/PA, nurse (RN), medical assistant, or any individual trained to perform the mRS.
- No value should be recorded more than once.
- If value 8 (UTD) is selected, no other values should be selected.
- Select the value (values 0-6) corresponding to the mRS documented at 90 days post-discharge.
- If more than one value is documented at 90 days, select the highest value.
- If a score range is documented, e.g. 2-3, select the higher value.

- If no mRS is documented, select “UTD”.
- Documentation of a mRS obtained within the 90 day timeframe (i.e., 75 to 105 days after hospital discharge) via telephone or in-person is acceptable.
- If the patient cannot be interviewed because of communication deficits or other limitations, an interview with the patient's caregiver is acceptable.
- If documentation reflects that after 3 attempts to contact the patient and/or caregiver, the mRS could not be obtained because attempts to contact the patient and/or caregiver were unsuccessful, select allowable value “7”.
  EXAMPLES:
  - Home phone number provided at discharge is a wrong number, AND no e-mail address or other contact information was provided by the patient and/or caregiver at discharge.
  - Calls placed go to a voicemail system. Message left for patient and/or caregiver requesting a return phone call, but no return call received.
  - Calls placed within the 90 day timeframe. Message left for patient and/or caregiver. Call returned after 105 days.
- If documentation reflects that the mRS could not be obtained due to a language barrier with the patient and/or caregiver, and no hospital or patient translator was available to interpret, select allowable value “7”.
- If the patient and/or caregiver refuse to be interviewed, select allowable value “7”.
- If documentation reflects that the mRS could not be obtained because the patient is a resident of a nursing home or extended/immediate care facility, and the facility refuses to provide patient information due to HIPPA regulations or other reasons, select allowable value "7".
- The caregiver is defined as the patient's family or other person (e.g. home health, VNA provider, prison official or law enforcement personnel) who will be responsible for care of the patient after discharge.

Suggested Data Sources:

- History and physical
- Progress notes
- Care Transition Record
- Consultation form
- Home health forms
- Logs from follow-up phone calls or other logs that record follow-up information
- Outpatient record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	• Unchecked checkbox next to a mRS (e.g., blank checkbox on a pre-printed form next to mRS). • Pre-printed Modified Rankin Score Form (mRS) left blank.

Name: *National Provider Identifier*

Collected For: HBIPS, Transmission, Optional for All Records

Definition: All Health Insurance Portability and Accountability Act of 1996 (HIPAA) covered healthcare providers must obtain a National Provider Identifier (NPI). The NPI may be provided in addition to the Medicare provider number.

Question: What is the NPI for this provider?

Format:
Length: 10
Type: Character
Occurs: 1

Allowable Values:

Any valid 10 digit NPI number.

The 10th digit is a numeric check digit based off the first 9 digits.

Notes for Abstraction: None

Suggested Data Sources: UB-04, Field Location: 56

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *New York Heart Association (NYHA) Classification*

Collected For: ACHFOP-04

Definition: The New York Heart Association (NYHA) Classification provides a simple way of classifying the extent of heart failure. It classifies patients in one of four categories based on their limitations during physical activity; the limitations/symptoms are in regards to normal breathing and varying degrees in shortness of breath and or angina pain.

Question: Is there documentation of the use of the NYHA Classification as an assessment tool to measure the functional status for this patient?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of the use of the NYHA Classification as an assessment tool to measure the functional status for this patient.

N (No) There is no documentation of the use of the NYHA Classification as an assessment tool to measure the functional status for this patient or unable to determine from medical record documentation.

Notes for Abstraction: NYHA Classification - The Stages of Heart Failure:

1. Class I - No symptoms and no limitation in ordinary physical activity, e.g. shortness of breath when walking, climbing stairs etc.
2. Class II - Mild symptoms (mild shortness of breath and/or angina) and slight limitation during ordinary activity.
3. Class III - Marked limitation in activity due to symptoms, even during less-than-ordinary activity, e.g. walking short distances (20—100 m).Comfortable only at rest.
4. Class IV - Severe limitations. Experiences symptoms even while at rest. Mostly bedbound patients.
5. No NYHA class listed or unable to determine.

Suggested Data Sources:
- Discharge summary
- Outpatient medical record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *NIHSS Score Documented Closest to IA Alteplase or MER Initiation*

Collected For: CSTK-05

Definition: The NIHSS score documented closest to IA alteplase or mechanical endovascular reperfusion (MER) therapy initiation is the last NIHSS score documented prior to IA alteplase or MER initiation (i.e., the initiation time of the intervention performed first) at this hospital. The NIHSS measures several aspects of brain function, including consciousness, vision, sensation, movement, speech, and language.

Question: What is the last NIHSS score documented prior to initiation of IA alteplase or MER at this hospital?

Format:
Length: 3
Type: Alphanumeric
Occurs: 1

Allowable Values:

Score = 0-42
UTD = Unable to Determine

Notes for Abstraction:

- The NIHSS score may be documented by the physician/APN/PA or nurse (RN).
- Look for the last NIHSS score documented prior to IA alteplase or MER initiation at this hospital.
  Examples:
  - "Initial NIHSS score 4 documented by the ED nurse at this hospital. No other NIHSS scores were documented prior to IA alteplase or MER initiation." Select '4'.
  - "NIHSS score 6 prior to transfer to this hospital. IV alteplase 'drip and ship'. *Arrival Time* at this hospital 2319. NIHSS score 8 at 2325 and NIHSS score 10 at 2340. *IA Alteplase Initiation Time* 0015." Select '10'.
  - "NIHSS score 10 on arrival. IV alteplase given at 0800. NIHSS score 8 at 0900. IA infusion start time 0950." Select '8'.
  - "IV alteplase given at a transferring hospital. Nurse documented NIHSS score 18 via telemedicine prior to arrival at this hospital. Patient went directly to OR for mechanical thrombectomy procedure. No NIHSS score documented at this hospital prior to intervention." Select '18'.
- For purposes of this data element, score documentation between 0 and 42 is acceptable. Only one score may be selected. Select the last NIHSS score documented prior to the start time of IA alteplase **OR** first pass of a mechanical reperfusion device whichever intervention is performed first, i.e. "IA Alteplase first then MER" or "MER first then IA Alteplase", at this hospital.
- If only one NIHSS score is documented prior to IA alteplase or MER initiation and no other score(s) are available for comparison, enter the value for that score.
- If no NIHSS score is documented prior to IA alteplase or MER initiation, select "UTD".
- If unable to determine the last NIHSS score documented prior to IA alteplase or MER initiation, select "UTD".

Suggested Data Sources:

- Consultation notes
- History and physical
- Nursing flow sheet
- Progress notes
- Transfer sheet
- Admitting note
- Ambulance record
- Emergency room records
- Nursing assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	• Modified NIHSS scores • Estimated NIHSS scores • Scoring methodologies other than NIHSS

Name: *NIHSS Score Documented Closest to IV Alteplase Initiation*

Collected For: CSTK-05

Definition: The NIHSS score documented closest to IV alteplase initiation is the last NIHSS score documented prior to IV alteplase initiation at this hospital. The NIHSS measures several aspects of brain function, including consciousness, vision, sensation, movement, speech, and language.

Question: What is the last NIHSS score documented prior to initiation of IV alteplase at this hospital?

Format:
Length: 3
Type: Alphanumeric
Occurs: 1

Allowable Values:

Score = 0-42
UTD = Unable to Determine

Notes for Abstraction:

- The NIHSS score may be documented by the physician/APN/PA or nurse (RN).
- Look for the last NIHSS score documented prior to IV alteplase initiation at this hospital.
  Examples:
  - "Initial NIHSS score 4 documented by the ED nurse at this hospital. "No other NIHSS scores were documented prior to IV alteplase initiation." Select '4'.
  - "Symptoms resolved by time of hospital arrival at 1200. Initial NIHSS score zero documented in ED. Symptoms returned at 1330, NIHSS score 2, and IV alteplase given at 1338." Select '2'.
  - "Patient transferred to this hospital. NIHSS score 10 done at transferring hospital. No NIHSS score documented at this hospital prior to IV alteplase." Select '10'.
  - "Nurse documented NIHSS score 8 via telemedicine prior to arrival at this hospital. IV alteplase initiated at 1712. NIHSS score 2 at 1800." Select '8'.
- For purposes of this data element, score documentation between 0 and 42 is acceptable. Only one score may be selected. Select the last NIHSS score documented prior to *IV Alteplase Initiation Time* at this hospital
- If only one NIHSS score is documented prior to IV alteplase initiation and no other score(s) are available for comparison, enter the value for that score.
- If no NIHSS score is documented prior to IV alteplase initiation, select "UTD".
- If unable to determine the last NIHSS score documented prior to IV alteplase initiation, select "UTD".

Suggested Data Sources:

- Consultation notes
- History and physical
- Nursing flow sheet
- Progress notes
- Transfer sheet

- Admitting note
- Ambulance record
- Emerency room records
- Nursing assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	• Modified NIHSS scores • Estimated NIHSS scores • Scoring methodologies other than NIHSS

Name: *Nimodipine Administration*

Collected For: CSTK-06

Definition: Documentation that nimodipine was administered at this hospital. Nimodipine is a cerebroselective calcium channel blocker that inhibits calcium transport into vascular smooth muscle cells, thereby suppressing contractions. Nimodipine is used in the treatment of subarachnoid hemorrhage patients to prevent or limit the severity of cerebral vasospasm.

Question: Is there documentation that nimodipine was administered at this hospital?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) Nimodipine was administered at this hospital.

N (No) Nimodipine was not administered at this hospital,OR unable to determine from medical record documentation.

Notes for Abstraction:
- Nimodipine treatment must be administered at this hospital within the first 24 hours of arrival to select "'YES'. It is not necessary to review documentation outside of this timeframe.
- If nimodipine was administered at another hospital and the patient was subsequently transferred to this hospital and nimodipine treatment continued on admission to this hospital, select "'YES"'.
- If nimodipine was administered at this hospital later than the first 24 hours after arrival, select 'NO'.
- If nimodipine was administered at another hospital and the patient was subsequently transferred to this hospital and nimodipine treatment was not resumed or discontinued, select "'NO'.
- A physician order for nimodipine that is not executed, select "'NO"'.

Suggested Data Sources:
- Emergency department record
- Nursing flow sheet
- Progress notes
- Medication administration record (MAR)
- Medical transport records
- Medication reconciliation form

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Nimodipine • Nimotop • Nymalize	All other calcium channel blocker medications other than those listed as inclusions.

Name: *Nimodipine Administration Date*

Collected For: CSTK-06

Definition: The month, date, and year that the first dose of nimodipine was administered to a patient with subarachnoid hemorrhage at this hospital. Nimodipine inhibits calcium transport into vascular smooth muscle cells, thereby preventing or limiting cerebral vasospasm.

Question: What is the date that nimodipine was first administered to this patient at this hospital?

Format:
Length: 10-MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2012-Current Year)
UTD = Unable to Determine

Notes for Abstraction:

- Use the date at which administration of nimodipine was first documented. If a discrepancy exists in date documentation from different sources, choose the earliest date. If there are two or more different nimodipine administration dates (either different nimodipine episodes or corresponding with the same episode), enter the earliest date.
- If the date nimodipine treatment was administered is unable to be determined from medical record documentation, select "UTD".
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid date/format) **and** no other documentation is found that provides this information, the abstractor should select "UTD".
  Example:
  Documentation indicates the nimodipine administration date was 03-**42**-20xx. No other documentation in the medical record provides a valid date. Since the nimodipine administration date is outside of the range listed in the Allowable Values for "Day," it is not a valid date and the abstractor should select "UTD".
  Note: Transmission of a case with an invalid date as described above will be rejected from the Joint Commission's Data Warehouse. Use of "UTD" for *Nimodipine Administration Date* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Emergency department record
- Nursing flow sheet
- Progress notes
- Medication administration record (MAR)
- Medical transport records

- Medical reconciliation form

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Nimodipine Administration Time*

Collected For: CSTK-06

Definition: The time (military time) for which the first dose of nimodipine was administered to a patient with subarachnoid hemorrhage at this hospital. Nimodipine inhibits calcium transport into vascular smooth muscle cells, thereby preventing or limiting cerebral vasospasm.

Question: What is the time of nimodipine administration for this patient at this hospital?

Format:
Length: 5 - HH-MM (with or without colon) or UTD
Type: Time
Occurs: 1

Allowable Values:

HH = Hour (00-23)
MM = Minutes (00-59)
UTD = Unable to Determine

Time must be recorded in military time format. With the exception of Midnight and Noon:

- If the time is in the a.m., conversion is not required
- If the time is in the p.m., add 12 to the clock time hour

Examples:

Midnight = 00:00
Noon = 12:00
5:31 am = 05:31
5:31 pm = 17:31
11:59 am = 11:59
11:59 pm = 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20xx, review supporting documentation to determine if the *Nimodipine Administration Date* should remain 11-24-20xx or if it should be converted to 11-25-20xx.

When converting Midnight or 24:00 to 00:00, do not forget to change the *Nimodipine Administration Date*.
Example:
Midnight or 24:00 on 11-24-20xx = 00:00 on 11-25-20xx

Notes for Abstraction:

- Use the time at which initiation of nimodipine administration was first documented. If a discrepancy exists in time documentation from different sources, choose the earliest time. If there are two or more different nimodipine administration times (either different nimodipine episodes or corresponding with the same episode), enter the earliest time.

- For times that include “seconds”, remove the seconds and record the time as is. Example: 15:00:35 would be recorded as 15:00
- Nimodipine administration time refers to the time that the first dose of nimodipine was administered.
- Do not use physician orders as they do not demonstrate administration of nimodipine treatment (in the ED this may be used if signed/initialed by a nurse).
- If the time of nimodipine administration is unable to be determined from medical record documentation, select “UTD”.
- The medical record must be abstracted as documented (taken at “face value”). When the time documented is obviously in error (not a valid time) **and** no other documentation is found that provides this information, the abstractor should select “UTD”.
  Example:
  Documentation indicates the nimodipine administration time was 3300. No other documentation in the medical record provides a valid time. Since the nimodipine administration time is outside of the range listed in the Allowable Values for “Hour,” it is not a valid time and the abstractor should select “UTD”.
  Note: Transmission of a case with an invalid time as described above will be rejected from the Joint Commission's Data Warehouse. Use of “UTD” for *Nimodipine Administration Time* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Emergency department record
- Nursing flow sheet
- Progress notes
- Medication administration record (MAR)
- Medical transport records
- Medication reconciliation form

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Non-aneurysmal*

Collected For: CSTK-03

Definition: Patients with documentation of non-aneurysmal SAH or SAH related to head trauma any time during the hospital stay. Non-aneurysmal SAH refers to hemorrhage in the subarachnoid space that is not attributed to the ruptured of a cerebral aneurysm.

Question: Is there documentation any time during the hospital stay that the hemorrhage was non-aneurysmal or due to head trauma?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation any time during the hospital stay that the hemorrhage was non-aneurysmal or due to head trauma.

N (No) There is no documentation any time during the hospital stay that the hemorrhage was non-aneurysmal or due to head trauma, OR unable to determine from the medical record documentation.

Notes for Abstraction:
- The timeframe for documentation of this data element is any time during the hospital stay from hospital arrival to discharge.
- **Only accept terms identified in the list of inclusions. No other terminology will be accepted.**
- Terms must be documented by a physician/APN/PA only.

Suggested Data Sources:
- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Discharge summary

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Head trauma • Non-aneurysmal • Not aneurysmal • Trauma	• Trauma other than head • Trauma or traumatic injuries involving body parts other than the head

Name: *Number of Antipsychotic Medications Prescribed at Discharge*

Collected For: HBIPS-5

Definition: The number of routinely scheduled antipsychotic medications prescribed to the patient at discharge as documented in the medical record.

Question: What is the documented number of antipsychotic medications prescribed for the patient at discharge?

Format:
Length: 2 or UTD
Type: Alphanumeric
Occurs: 1

Allowable Values:

0-99
UTD= Unable to Determine

Notes for Abstraction: An antipsychotic medication is defined as any of a group of drugs, such as the phenothiazines, butyrophenones or serotonin-dopamine antagonists, which are used to treat psychosis. An antipsychotic medication is also called neuroleptic (refer to Appendix C, Table 10.0- Antipsychotic Medications).

All antipsychotic medications should be counted regardless of the indication for use or the reason documented for prescribing the antipsychotic medication.

If the patient was in an acute-care hospital and had multiple admissions to the psychiatric unit during his or her hospitalization, this information should be abstracted only once at the time of discharge from the hospital.

If the patient is on two forms of the same medication i.e., po and IM, this would be counted as one antipsychotic medication.

Only use Antipsychotic NOS in the following situation:
- For new antipsychotics that are not yet listed in Table 10.0 in Appendix C.

It is acceptable to use data derived from pharmacy reports or clinical information systems if they are available and are directly derived from the medical record with a process in place to confirm their accuracy. If this is the case, these may be used in lieu of the suggested data sources listed below.

Suggested Data Sources:
- Aftercare discharge plan
- Discharge plan
- Final discharge summary
- Interim discharge summary
- Medication reconciliation form
- Physician discharge orders
- Physician progress notes

- Referral form

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Refer to Appendix C, Table 10.0- Antipsychotic Medications	• PRN antipsychotic medications • Short-acting intramuscular antipsychotic medications (refer to Appendix C, Table 10.1- Short-Acting Intramuscular Antipsychotic Medications)

Name: *Outpatient Encounter Date*

Collected For: ACHFOP, ASR-OP-1, ASR-OP-2, STK-OP-1

Definition: The documented month, day, and year the patient arrived in the outpatient setting.

Question: What was the date the patient arrived in the outpatient setting?

Format:
Length: 10-MM-DD-YYYY
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)

DD = Day (01-31)

YYYY = Year (2008-Current Year)

Notes for Abstraction:
- The intent of this data element is to determine the date the patient arrived in the outpatient setting.
- UTD is NOT an allowable value.
- Consider the outpatient encounter date as the earliest documented date the patient arrived in the applicable hospital outpatient setting. If the patient had preoperative laboratory or other screening tests performed prior to the date of surgery, use the date the patient arrived for surgery.

Suggested Data Sources:
- Emergency department record
- Outpatient medical record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	• Preoperative tests or screening

Name: *Pain Character*

Collected For: PAL-02

Definition: Documentation of a comprehensive pain assessment that included pain character completed within one day of the pain screening.

Question: Is there documentation of a comprehensive pain assessment including pain character completed within one day of pain screening?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation in the medical record that a comprehensive pain assessment including pain character was completed within one day of the pain screening.

N (No) There is no documentation that a comprehensive pain assessment including pain character was completed within one day of the pain screening or unable to determine from the medical record.

Notes for Abstraction:

- A comprehensive pain assessment includes documentation of pain character. Examples for this component include but are not limited to:
  - Character – type of pain, quality or description, such as throbbing, aching, sharp, dull etc.
    - What does the pain feel like?
- Components of the comprehensive assessment must be documented in the medical record within one day of the pain screening to select "yes". The time frame for documentation is the day of and the day after the pain screening.
- The comprehensive assessment documentation may be completed by any member of the palliative care core interdisciplinary team. The core interdisciplinary team is comprised of the following: Physician(s); Registered nurse(s) or advanced practice nurse(s); Chaplain(s) or, spiritual care professional(s); Social worker(s).
- It is possible to include elements of the pain assessment for nonverbal patients. A family report may be used to complete one or more of the components of the comprehensive assessment. Clinical notes about assessment of nonverbal indicators of pain are also acceptable to select “1”. Examples included but are not limited to:
  - Nonverbal indicators of pain include nonverbal sounds such as crying, whining, and groaning; facial expressions, such as grimaces and clenched jaw; and protective body movements or postures such as bracing, guarding, rubbing, or clutching a body part.
- Documentation based on whether the clinician made an attempt to gather the information from the patient/family may be used. For example, if, for a nonverbal patient, the clinician asked the family about pain character and the family responded “I’m not sure” or “I don’t know.”

Suggested Data Sources:

- Palliative care consultation notes
- Palliative care team progress notes
- Palliative care initial encounter notes
- Palliative care admission assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Pain Duration*

Collected For: PAL-02

Definition: Documentation of a comprehensive pain assessment that included pain duration completed within one day of the pain screening.

Question: Is there documentation of a comprehensive pain assessment including pain duration completed within one day of pain screening?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation in the medical record that a comprehensive pain assessment including pain duration was completed within one day of the pain screening.

N (No) There is no documentation that a comprehensive pain assessment including pain duration was completed within one day of the pain screening or unable to determine from the medical record.

Notes for Abstraction:

- A comprehensive pain assessment includes documentation of pain duration. Examples for this component include but are not limited to:
  - Duration – pain onset, length of time
    - When did pain start, how long does it last?
- Components of the comprehensive assessment must be documented in the medical record within one day of the pain screening to select "yes". The time frame for documentation is the day of and the day after the pain screening.
- The comprehensive assessment documentation may be completed by any member of the palliative care core interdisciplinary team. The core interdisciplinary team is comprised of the following: Physician(s); Registered nurse(s) or advanced practice nurse(s); Chaplain(s) or, spiritual care professional(s); Social worker(s).
- It is possible to include elements of the pain assessment for nonverbal patients. A family report may be used to complete one or more of the components of the comprehensive assessment. Clinical notes about assessment of nonverbal indicators of pain are also acceptable to select “1”. Examples included but are not limited to:
  - Nonverbal indicators of pain include nonverbal sounds such as crying, whining, and groaning; facial expressions, such as grimaces and clenched jaw; and protective body movements or postures such as bracing, guarding, rubbing, or clutching a body part.
  - An assessment that included pain duration for a nonverbal patient may include documentation about how long a patient exhibits any nonverbal cues of pain, such as “patient cradled right arm throughout entire visit.”
- Documentation based on whether the clinician made an attempt to gather the information from the patient/family may be used. For example, if, for a

nonverbal patient, the clinician asked the family about pain duration and the family responded “I’m not sure” or “I don’t know.”

Suggested Data Sources:

- Palliative care consultation notes
- Palliative care team progress notes
- Palliative care initial encounter notes
- Palliative care admission assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Pain Effect*

Collected For: PAL-02

Definition: Documentation of a comprehensive pain assessment that included pain effect completed within one day of the pain screening.

Question: Is there documentation of a comprehensive pain assessment including pain effect completed within one day of pain screening?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation in the medical record that a comprehensive pain assessment including pain effect was completed within one day of the pain screening.

N (No) There is no documentation that a comprehensive pain assessment including pain effect was completed within one day of the pain screening or unable to determine from the medical record.

Notes for Abstraction:

- A comprehensive pain assessment includes documentation of pain effect on function or quality of life. Examples for this component include but are not limited to:
  - Effect on function or quality of life – interference with activities, sleep, appetite, mood, relationships.
    - What impact does the pain have on your daily activities?
- Components of the comprehensive assessment must be documented in the medical record within one day of the pain screening to select "yes". The time frame for documentation is the day of and the day after the pain screening.
- The comprehensive assessment documentation may be completed by any member of the palliative care core interdisciplinary team. The core interdisciplinary team is comprised of the following: Physician(s); Registered nurse(s) or advanced practice nurse(s); Chaplain(s) or, spiritual care professional(s); Social worker(s).
- It is possible to include elements of the pain assessment for nonverbal patients. A family report may be used to complete one or more of the components of the comprehensive assessment. Clinical notes about assessment of nonverbal indicators of pain are also acceptable to select “1”. Examples included but are not limited to:
  - Nonverbal indicators of pain include nonverbal sounds such as crying, whining, and groaning; facial expressions, such as grimaces and clenched jaw; and protective body movements or postures such as bracing, guarding, rubbing, or clutching a body part.
  - An assessment that included pain’s effect on function or quality of life for a nonverbal patient may include documentation about change in patient activity, such as “family caregiver reports that patient is no longer able to sit up in bed without moaning.”

- Documentation based on whether the clinician made an attempt to gather the information from the patient/family may be used. For example, if, for a nonverbal patient, the clinician asked the family about pain effect and the family responded “I’m not sure” or “I don’t know.”

Suggested Data Sources:

- Palliative care consultation notes
- Palliative care team progress notes
- Palliative care initial encounter notes
- Palliative care admission assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Pain Factors*

Collected For: PAL-02

Definition: Documentation of a comprehensive pain assessment that included pain factors completed within one day of the pain screening.

Question: Is there documentation of a comprehensive pain assessment including pain factors completed within one day of pain screening?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation in the medical record that a comprehensive pain assessment including pain factors was completed within one day of the pain screening.

N (No) There is no documentation that a comprehensive pain assessment including pain factors was completed within one day of the pain screening or unable to determine from the medical record.

Notes for Abstraction:

- A comprehensive pain assessment includes documentation of factors that relieves or worsens pain. Examples for this component include but are not limited to:
  - Factors that relieve or worsen pain – aggravating or alleviating actions, activities, or positions
    - What increases or decreases your pain?
- Components of the comprehensive assessment must be documented in the medical record within one day of the pain screening to select "yes". The time frame for documentation is the day of and the day after the pain screening.
- The comprehensive assessment documentation may be completed by any member of the palliative care core interdisciplinary team. The core interdisciplinary team is comprised of the following: Physician(s); Registered nurse(s) or advanced practice nurse(s); Chaplain(s) or, spiritual care professional(s); Social worker(s).
- It is possible to include elements of the pain assessment for nonverbal patients. A family report may be used to complete one or more of the components of the comprehensive assessment. Clinical notes about assessment of nonverbal indicators of pain are also acceptable to select “1”. Examples included but are not limited to:
  - Nonverbal indicators of pain include nonverbal sounds such as crying, whining, and groaning; facial expressions, such as grimaces and clenched jaw; and protective body movements or postures such as bracing, guarding, rubbing, or clutching a body part.
  - An assessment that included what relieves/worsens pain for a nonverbal patient may include documentation about actions, activities, or positions that relieve/worsen pain, such as “patient exhibits fewer nonverbal signs of pain when sitting up versus lying down.”

- Documentation based on whether the clinician made an attempt to gather the information from the patient/family may be used. For example, if, for a nonverbal patient, the clinician asked the family about factors that relieves or worsens pain and the family responded “I’m not sure” or “I don’t know.”

Suggested Data Sources:

- Palliative care consultation notes
- Palliative care team progress notes
- Palliative care initial encounter notes
- Palliative care admission assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Pain Frequency*

Collected For: PAL-02

Definition: Documentation of a comprehensive pain assessment that included pain frequency completed within one day of the pain screening.

Question: Is there documentation of a comprehensive pain assessment including pain frequency completed within one day of pain screening?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation in the medical record that a comprehensive pain assessment including pain frequency was completed within one day of the pain screening.

N (No) There is no documentation that a comprehensive pain assessment including pain frequency was completed within one day of the pain screening or unable to determine from the medical record.

Notes for Abstraction:

- A comprehensive pain assessment includes documentation of pain frequency. Examples for this component include but are not limited to:
  - Frequency – pain constant or intermittent, time of day
    - How often do you have pain? When is the pain present, daytime, nighttime?
- Components of the comprehensive assessment must be documented in the medical record within one day of the pain screening to select "yes". The time frame for documentation is the day of and the day after the pain screening.
- The comprehensive assessment documentation may be completed by any member of the palliative care core interdisciplinary team. The core interdisciplinary team is comprised of the following: Physician(s); Registered nurse(s) or advanced practice nurse(s); Chaplain(s) or, spiritual care professional(s); Social worker(s).
- It is possible to include elements of the pain assessment for nonverbal patients. A family report may be used to complete one or more of the components of the comprehensive assessment. Clinical notes about assessment of nonverbal indicators of pain are also acceptable to select “1”. Examples included but are not limited to:
  - Nonverbal indicators of pain include nonverbal sounds such as crying, whining, and groaning; facial expressions, such as grimaces and clenched jaw; and protective body movements or postures such as bracing, guarding, rubbing, or clutching a body part.
  - An assessment that included pain frequency for a nonverbal patient may include documentation about how often a patient exhibits any nonverbal cues of pain, such as most of the time, only at night, intermittently.
- Documentation based on whether the clinician made an attempt to gather the information from the patient/family may be used. For example, if, for a

nonverbal patient, the clinician asked the family about pain frequency and the family responded “I’m not sure” or “I don’t know.”

Suggested Data Sources:

- Palliative care consultation notes
- Palliative care team progress notes
- Palliative care initial encounter notes
- Palliative care admission assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Pain Location*

Collected For: PAL-02

Definition: Documentation of a comprehensive pain assessment that included pain location completed within one day of the pain screening.

Question: Is there documentation of a comprehensive pain assessment including pain location completed within one day of pain screening?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation in the medical record that a comprehensive pain assessment including pain location was completed within one day of the pain screening.

N (No) There is no documentation that a comprehensive pain assessment including pain location was completed within one day of the pain screening or unable to determine from the medical record.

Notes for Abstraction:

- A comprehensive pain assessment includes documentation of pain location. Examples for this component include but are not limited to:
  - Location – pain site(s), referral pattern, radiation
    - Where does it hurt? Does the pain radiate?
- Components of the comprehensive assessment must be documented in the medical record within one day of the pain screening to select "yes". The time frame for documentation is the day of and the day after the pain screening.
- The comprehensive assessment documentation may be completed by any member of the palliative care core interdisciplinary team. The core interdisciplinary team is comprised of the following: Physician(s); Registered nurse(s) or advanced practice nurse(s); Chaplain(s) or, spiritual care professional(s); Social worker(s).
- It is possible to include elements of the pain assessment for nonverbal patients. A family report may be used to complete one or more of the components of the comprehensive assessment. Clinical notes about assessment of nonverbal indicators of pain are also acceptable to select “1”. Examples included but are not limited to:
  - Nonverbal indicators of pain include nonverbal sounds such as crying, whining, and groaning; facial expressions, such as grimaces and clenched jaw; and protective body movements or postures such as bracing, guarding, rubbing, or clutching a body part.
  - An assessment that included pain location for a nonverbal patient may include documentation, such as “patient grimaced/shouted when clinician touched the right leg” or other documentation denoting patient exhibiting nonverbal cues of pain for a specific location on the body.
- Documentation based on whether the clinician made an attempt to gather the information from the patient/family may be used. For example, if, for a

nonverbal patient, the clinician asked the family about pain location and the family responded “I’m not sure” or “I don’t know.”

Suggested Data Sources:

- Palliative care consultation notes
- Palliative care team progress notes
- Palliative care initial encounter notes
- Palliative care admission assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Pain Severity*

Collected For: PAL-01, PAL-02

Definition: Evaluation of the patient for the presence or absence of pain, and its severity using a standardized tool at the time of the palliative care initial encounter.

Question: What was severity of pain when the patient was first screened for pain during the palliative care initial encounter?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

0 None

1 Mild

2 Moderate

3 Severe

4 Pain severity not able to be rated

5 There is no documentation that the patient was screened for pain, or unable to determine from medical record documentation.

Notes for Abstraction:

- A comprehensive pain assessment includes documentation of pain character. Examples for this component include but are not limited to:
  - Severity – pain level or intensity rating
    - How severe is your pain now?
- The comprehensive assessment documentation may be completed by any member of the palliative care core interdisciplinary team. The core interdisciplinary team is comprised of the following: Physician(s); Registered nurse(s) or advanced practice nurse(s); Chaplain(s) or, spiritual care professional(s); Social worker(s).
- It is possible to include elements of the pain assessment for nonverbal patients. A family report may be used to complete one or more of the components of the comprehensive assessment. Clinical notes about assessment of nonverbal indicators of pain are also acceptable to select “1”. Examples included but are not limited to:
  - Nonverbal indicators of pain include nonverbal sounds such as crying, whining, and groaning; facial expressions, such as grimaces and clenched jaw; and protective body movements or postures such as bracing, guarding, rubbing, or clutching a body part.
  - An assessment that included pain severity for a nonverbal patient may include documentation about intensity of nonverbal expressions of pain (grimaces, winces, and clenched teeth/jaw) or protective body movements (bracing, guarding, rubbing, clutching, or holding of a certain body part/area).

It could also include documentation of severity using a nonverbal standardized rating scale.

- Documentation based on whether the clinician made an attempt to gather the information from the patient/family may be used. For example, if, for a nonverbal patient, the clinician asked the family about pain character and the family responded "I'm not sure" or "I don't know."
- Select "0" if documented in the medical record the patient's pain severity score was none. This would include a score of 0 on a 10-point numeric scale or equivalent on verbal, visual, other numeric, or staff observation scale. Example: "patient very drowsy; appears to be comfortable during visit. No nonverbal signs of pain observed during the visit."
- Select "1" if documented in the medical record the patient's pain severity score was mild. This would include a score of 1–3 on a 10-point numeric scale or equivalent on verbal, visual, other numeric, or staff observation scale. Example: "patient reports 3/10 abdominal pain now; was 6/10 during past 24 hours." Select "1 Mild" based on the patient's pain severity rating at the time of the initial encounter.
- Select "2" if documented in the medical record the patient's pain severity score was moderate. This would include a score of 4–6 on a 10-point numeric scale or equivalent on verbal, visual, other numeric, or staff observation scale. Example: "patient reports he has recently taken a dose of his pain medication, and throughout the visit his pain is reported as 4/10. Patient states he has a history of pain, at its worst pain is 9/10." Select "2 Moderate" based on the patient's pain status at the time of the screening.
- Select "3" if documented in the medical record the patient's pain severity score was severe. This would include a score of 7–10 on a 10-point numeric scale or equivalent on verbal, visual, other numeric, or staff observation scale. Example: "patient unable to speak; observed during 20 minute evaluation; pain severity on nonverbal scale moderate to severe." It is evident that the patient was in pain, and that the clinician evaluated the patient's pain and noted pain severity. Although the clinical tool is not named, it is still evident that the clinician used a standardized approach or clinical protocol to screen the patient. Select "3 Severe" based on the highest severity of pain at the time of the screening.
- Select "4" if documented in the medical record the patient had pain, but the patient's pain severity was not able to be evaluated by any manner. This would include documentation that staff was unable to rate severity by observation or patient was unable or declined to use a rating scale. Example: "patient intubated and sedated."
- Select "5" if there is no documentation that the patient was screened for pain, or unable to determine from medical record documentation.
- Pain screening includes evaluating the patient for presence of pain, and if pain is present, rating of its severity using a standardized tool. A standardized tool is one that (1) has been scientifically tested on a population with characteristics similar to that of the patient being assessed (for example, community-dwelling elderly, non-institutionalized adults with disabilities, etc.), and (2) includes a standard response scale (for example, a scale where patients rate pain from 0-

10). The standardized tool must be appropriately administered as indicated in the instructions and must be relevant for the patient's ability.

- Examples of standardized numeric scales include, but are not limited to:
  - 10-point scale
  - Symptom Distress Scale (McCorkle)
  - Memorial Symptom Assessment Scale (MSAS)
  - Edmonton Symptom Assessment System (ESAS)
- Examples of standardized verbal descriptor scales include, but are not limited to:
  - Brief Pain Inventory
  - McGill pain questionnaire
  - 6-point Verbal Pain Scale
- Examples of standardized patient visual scales include, but are not limited to:
  - Wong-Baker FACES Pain Scale
  - Visual analog scale
  - Distress thermometer
- Examples of standardized staff observation scales include, but are not limited to:
  - Critical Care Pain Observation Tool (CPOT)
  - Checklist of Nonverbal Pain Indicators (CNPI)
  - Pain Assessment Checklist for Seniors with Limited Ability to Communicate (PACSLAC)
  - Pain Assessment in Advanced Dementia (PAIN-AD)
- It is possible that at the time of the palliative care initial encounter there will have been multiple pain screenings documented in the clinical record. For purposes of this measure use the first pain screening that appears during the palliative care initial encounter.
- If a range is provided, such as mild to moderate, select the highest level of severity recorded during the initial encounter.
- If a non-numeric scale was used to screen the patient for pain, select the pain severity based on the standard established for that scale. If no standard has been established for that scale, the organization must establish the standard to categorize severity.
- If documentation in the patient’s medical record indicates the patient was assessed clinically and was found to have no pain, but no standardized pain tool was used to screen the patient, select “0, None”.

Suggested Data Sources:

- Palliative care consultation notes
- Palliative care team progress notes
- Palliative care initial encounter notes
- Palliative care admission assessment

Additional Notes: Notes adapted from: Guidance Manual for Completion of the Hospice Item Set (HIS), Centers for Medicare and Medicaid Services, Hospice Quality Reporting Program, V 1.02 Effective June 28, 2015

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Patient Status at Discharge*

Collected For: HBIPS-5

Definition: Documentation in the medical record of the patient's status at the time the patient left the hospital-based inpatient psychiatric care setting

Question: What was the patient's status at the time the patient left the hospital-based inpatient psychiatric care setting?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 The medical record contains documentation that the patient was discharged from the inpatient psychiatric care setting under these circumstances:
- Patient is leaving the psychiatric unit within the acute care hospital AND the hospital facility completely.
- Patient is leaving the freestanding inpatient psychiatric facility completely.

2 The medical record contains documentation of one of the following:
- the patient eloped and was discharged
- the patient failed to return from leave and was discharged
- the patient has not yet been discharged from the hospital
- the patient was transferred/discharged from the inpatient psychiatric unit in an acute care setting to another level of care, (i.e. medical unit), and subsequently discharged from that level of care

3 Unable to determine from medical record documentation.

Notes for Abstraction: The intent of this data element is to identify and exclude patients with an unplanned departure resulting in discharge.
- Patients who discharge or transfer to another level of care in the same hospital are excluded from the measure population since they have not yet been discharged from the hospital.
- Patients who are discharged from the psychiatric setting are included in the measure population.

If the patient was in an acute-care hospital and had multiple admissions to the psychiatric unit during his or her hospitalization, this information should be abstracted only once at the time of discharge from the hospital.

For patients discharged from free-standing psychiatric facilities, select allowable value 1.

When a patient checks himself out of a hospital against the advice of his doctor (AMA), select allowable value 2.

When a patient is released from a psychiatric inpatient stay directly after a court hearing, select allowable value 2.

Suggested Data Sources:

- Progress notes
- Physician's notes
- Discharge summary

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• None	• None

Name: *Patient Strengths*

Collected For: HBIPS-1

Definition: Documentation in the medical record that an admission screening for a minimum of **two** patient strengths was performed within the first three days of admission.

Question: Is there documentation in the medical record that the patient was screened for a minimum of **two** patient strengths within the first three days of admission?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) Documentation in the medical record includes a screening for a minimum of **two** patient strengths performed within the first three days of admission.

N (No) Documentation in the medical record does not include a screening for a minimum of **two** patient strengths OR the screening was not performed within the first three days of admission OR unable to determine from medical record documentation.

X (Unable to complete admission screening) Documentation in the medical record that a screening for a minimum of **two** patient strengths cannot be completed due to the patient's inability or unwillingness to answer screening questions within the first three days of admission OR patient has a previous admission to the psychiatric unit during a single hospitalization.

Notes for Abstraction: A screening for patient strengths must be completed by a qualified psychiatric practitioner, e.g., psychiatrist, psychologist, registered nurse (RN), physician's assistant (PA) or Master of Social Work (MSW) within the first three days of admission. The titles of qualified psychiatric practitioners may vary from state to state.

If the patient was in an acute-care hospital and had multiple admissions to the psychiatric unit during his or her hospitalization, select the first admission to the psychiatric unit.

The admission screening timeframe must have occurred within the first three days of admission for psychiatric care. The day after admission is defined as the first day. An admission screen performed in an ambulatory setting, i.e. emergency department, crisis center which results in an admission to an inpatient psychiatric care setting can be used if the screen becomes a permanent part of the medical record.

If there is documentation that the patient is not a reliable historian, a relative or guardian if available, may answer the screening questions on behalf of the patient.

Suggested Data Sources:

- Biopsychosocial assessment
- Emergency department record
- Functional skills assessment
- History and physical
- Individual plan of service
- Initial assessment form
- Nursing notes
- Physician progress notes
- Psychiatrist assessment/admission form
- Referral packet
- School report
- Social worker assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Examples of adult and older adult patient strengths may include but are not limited to: • Assessment of patient optimism that change can occur • Motivation and readiness for change • Setting and pursuing goals • Attempting to realize one's potential • Managing surrounding demands and opportunities • Exercising self-direction • Vocational interests, i.e., hobbies • Interpersonal relationships and supports,i.e., family, friends, peers • Cultural/spiritual/religious and community involvement • Access to housing/residential stability • Steady employment • Financial stability • Awareness of substance use issues • Knowledge of medications Examples of children and adolescent patient strengths may include but are not limited to: • Stable and supportive family • Presence of friends • School engagement • Parent involvement in school • Favorable relationships with teachers	• None

• Assessment of self-esteem, motivation and achievement • Refrain from alcohol, drugs, sexual activity • Engagement in hobbies, sports, arts and clubs	

Name: *Payment Source*

Collected For: All Records, Optional for HBIPS-2 and HBIPS-3

Definition: The source of payment for this episode of care.

Question: What is the patient's source of payment for this episode of care?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 Source of payment is Medicare.

2 Source of payment is NonMedicare.

Notes for Abstraction:
- If Medicare is listed as the primary, secondary, tertiary, or even lower down on the list or payers, select "1".
- If the patient has Medicaid only or Medicaid and another insurance type, other than Medicare, select "2". If the patient has Medicaid and Medicare, select "1".
- If the patient is an Undocumented Alien or Illegal immigrant select "1". Undocumented Alien: Section 1011 of the Medicare Modernization Act of 2003 allows for reimbursement for services rendered to patients who are: Undocumented or illegal aliens (immigrants), Aliens who have been paroled into a United States port of entry and Mexican citizens permitted to enter the United States on a laser visa.

Suggested Data Sources:
- Face sheet
- UB-04

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Medicare includes, but is not limited to: • Medicare Fee for Service (includes DRG or PPS) • Black Lung • End Stage Renal Disease (ESRD) • Railroad Retirement Board (RRB) • Medicare Secondary Payer • Medicare HMO/Medicare Advantage	• None

Name: *Positive Brain Image Date*

Collected For: CSTK-05

Definition: The month, date, and year for which a positive finding on brain imaging of parenchymal hematoma, subarachnoid hemorrhage, and/or intraventricular hemorrhage was documented. Early hemorrhagic transformation occurs in about one in ten patients with acute ischemic stroke, but only parenchymal hematoma predicts poor outcomes, according to the research.

Question: What was the date of the positive brain image finding?

Format:
Length: 10 - MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2001-Current Year)
UTD = Unable to Determine

Notes for Abstraction:

- Use the date when a positive finding on brain imaging of parenchymal hematoma, subarachnoid hemorrhage, and/or intraventricular hemorrhage was first documented following IV or IA alteplase therapy, or mechanical endovascular reperfusion therapy initiation. If a discrepancy exists in date documentation from different sources, choose the earliest date. If there are two or more different positive brain image dates (either different brain images or corresponding with the same brain image), enter the earliest date.
- If the date of positive brain image is unable to be determined from medical record documentation, select “UTD”.
- The medical record must be abstracted as documented (taken at “face value”). When the date documented is obviously in error (not a valid date/format) **and** no other documentation is found that provides this information, the abstractor should select “UTD”.
  Example:
  Documentation indicates the positive brain image date was 03-**42**-20xx. No other documentation in the medical record provides a valid date. Since the positive brain image date is outside of the range listed in the Allowable Values for “Day,” it is not a valid date and the abstractor should select “UTD”.
  Note: Transmission of a case with an invalid date as described above will be rejected from the Joint Commission's Data Warehouse. Use of “UTD” for *Positive Brain Image Date* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Diagnostic test reports
- Brain imaging reports
- Radiology reports

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Positive Brain Image Time*

Collected For: CSTK-05

Definition: The time (military time) for which a positive finding on brain imaging of parenchymal hematoma, subarachnoid hemorrhage, and/or intraventricular hemorrhage was documented. Early hemorrhagic transformation occurs in about one in ten patients with acute ischemic stroke, but only parenchymal hematoma predicts poor outcomes, according to the research.

Question: What was the time of the positive brain image?

Format:
Length: 5 - HH-MM (with or without colon) or UTD
Type: Time
Occurs: 1

Allowable Values:

HH = Hour (00-23)
MM = Minutes (00-59)
UTD = Unable to Determine

Time must be recorded in military time format. With the exception of Midnight and Noon:

- If the time is in the a.m., conversion is not required
- If the time is in the p.m., add 12 to the clock time hour

Examples:

Midnight = 00:00
Noon = 12:00
5:31 am = 05:31
5:31 pm = 17:31
11:59 am = 11:59
11:59 pm = 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20xx, review supporting documentation to determine if the *Positive Bain Image Date* should remain 11-24-20xx or if it should be converted to 11-25-20xx.

When converting Midnight or 24:00 to 00:00, do not forget to change the *Positive Brain Image Date*.
Example:
Midnight or 24:00 on 11-24-20xx = 00:00 on 11-25-20xx

Notes for Abstraction:

- Use the time at which symptomatic intracranial hemorrhage was first documented following IV or IA alteplase therapy, or mechanical endovascular reperfusion therapy initiation. If a discrepancy exists in time documentation from different sources, choose the earliest time. If there are two or more

different symptomatic intracranial hemorrhage times (either different brain images or corresponding with the same brain image), enter the earliest time.

- For times that include “seconds”, remove the seconds and record the time as is. Example: 15:00:35 would be recorded as 15:00
- If the time of symptomatic intracranial hemorrhage is unable to be determined from medical record documentation, select “UTD”.
- The medical record must be abstracted as documented (taken at “face value”). When the time documented is obviously in error (not a valid time) **and** no other documentation is found that provides this information, the abstractor should select “UTD”.
  Example:
  Documentation indicates primary brain image time was 3300. No other documentation in the medical record provides a valid time. Since primary brain image time is outside of the range listed in the Allowable Values for “Hour,” it is not a valid time and the abstractor should select “UTD”.
  Note: Transmission of a case with an invalid time as described above will be rejected from the Joint Commission’s Data Warehouse. Use of “UTD” for *Primary Brain Image Time* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Diagnostic test reports
- Brain imaging reports
- Radiology reports

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Positive Brain Image*

Collected For: CSTK-05

Definition: Documentation of a positive finding on brain imaging of parenchymal hematoma, subarachnoid hemorrhage, and/or intraventricular hemorrhage following IV or IA alteplase therapy, OR mechanical endovascular reperfusion therapy initiation. The major risk of reperfusion therapy is hemorrhage

Question: Was there a positive finding on brain imaging of parenchymal hematoma, subarachnoid hemorrhage, and/or intraventricular hemorrhage following IV or IA alteplase therapy, or mechanical endovascular reperfusion therapy initiation?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (YES) Parenchymal hematoma, subarachnoid hemorrhage, and/or intraventricular hemorrhage was detected on brain imaging following IV or IA alteplase therapy, or mechanical endovascular reperfusion therapy initiation.

N (No) Parenchymal hematoma, subarachnoid hemorrhage, and/or intraventricular hemorrhage was not detected on brain imaging following IV or IA alteplase therapy, or mechanical endovascular reperfusion therapy initiation, OR Unable to determine (UTD) from the medical record documentation.

Notes for Abstraction:

- For purposes of this data element, **do not use brain imaging reports for CT/MRI performed prior to IV or IA alteplase initiation, or mechanical endovascular reperfusion (MER) therapy.** Abstract only brain imaging reports for tests done after these interventions to select 'YES'.
- Patients with a positive finding on brain imaging of parenchymal hematoma, subarachnoid hemorrhage, and/or intraventricular hemorrhage on brain imaging following IV or IA alteplase therapy, or mechanical endovascular reperfusion therapy initiation, are acceptable to select "Yes".
  - A confirmed report is not necessary. Reports of preliminary findings within this timeframe may be used in abstraction.
  - If the report documents that "hemorrhage cannot be excluded", "cannot R/O hemorrhage", or "findings suggestive of hemorrhage", select "Yes".
- When conflicting information is documented in the medical record, select 'YES'.
- Documentation that the hemorrhage is "old", select 'NO'. **Do not infer that a hemorrhage is old unless explicitly documented.**
- See the inclusion list for acceptable examples of documentation of a positive finding. The list is not all inclusive.

Suggested Data Sources:

ONLY acceptable data source:

- Brain imaging reports
- Diagnostic test reports

- Radiology reports

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Bleed • Brain hemorrhage • Cerebral hemorrhage • ECASS criteria PH1 or PH2 • Hemorrhage • Hemorrhagic conversion • Hemorrhagic expansion • Hemorrhagic transformation • Intracerebral hemorrhage (ICH) • Intracranial hemorrhage • Intraparenchymal hemorrhage • Intraventricular hemorrhage • Parenchymal hematoma • Parenchymal hemorrhage • Parenchymal intracerebral hemorrhage • Subarachnoid hemorrhage (SAH)	• ECASS criteria H1 or H2 • Incidental • Micro • Petechial • Punctate • Trace

Name: *Post-Discharge Appointment Scheduled Within 7 Days*

Collected For: ACHF-02

Definition: Documentation that a follow-up appointment for an office or home health visit for management of heart failure was scheduled within 7 days post-discharge and documented including location, date, and time.

Question: Was a follow-up appointment for an office or home health visit for management of heart failure scheduled within 7 days post-discharge and documented including location, date, and time?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) A follow-up appointment for an office or home health visit for management of heart failure was scheduled within 7 days post-discharge and documented including location, date, and time.

N (No) A follow-up appointment for an office or home health visit for management of heart failure was not scheduled within 7 days post-discharge and documented including location, date, and time, OR unable to determine from medical record documentation.

Notes for Abstraction:

- A follow-up appointment is an appointment with a physician/APN/PA in a physician office or ambulatory care clinic OR a home health visit with a RN/APN for professional nursing services that occurs within 7 days of discharge from the inpatient setting.
- Follow-up scheduled within 7 days via telemedicine/teleconference to assess the patient in the home setting should be treated as a home health visit, select “Yes”.
- Documentation of the scheduled office appointment must include location, date and time in order to select “Yes”. If all three pieces of information are not documented, select “No.
- Documentation of a home health visit must include the date in order to select Yes. Documentation of the time is optional only for a home health visit, as the time of the visit may vary.
- If the follow-up appointment is scheduled beyond 7 days post-discharge, select “No”.

Suggested Data Sources:

- Nursing notes
- Progress notes
- Physician orders
- Discharge summary
- Discharge instruction sheet
- Home health referral form

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Post-Discharge Evaluation Conducted Within 72 Hours*

Collected For: ACHF-06

Definition: Documentation that the post-discharge evaluation was conducted with the patient and/or caregiver(s) within 72 hours following hospital discharge.

Question: Was there documentation that the post-discharge evaluation was conducted with the patient and/or caregiver(s) within 72 hours of hospital discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

- Y (Yes) There is documentation that the post-discharge evaluation was conducted with the patient and/or caregiver(s) within 72 hours of hospital discharge.
- N (No) There is no documentation that the post-discharge evaluation was conducted with the patient and/or caregiver(s) within 72 hours of hospital discharge OR unable to determine from medical record documentation.

Notes for Abstraction:

- The caregiver is defined as the patient's family or any other person (e.g., home health, VNA provider, prison official or other law enforcement personnel) who will be responsible for care of the patient after discharge.
- The post-discharge evaluation must be conducted within 72 hours by a heart failure program team member following the patient's discharge from the hospital in order to select "Yes." To compute 72 hours, count the day after hospital discharge as day 1.
- Documentation of a post-discharge evaluation conducted any time up to 23:59 of day 3, select "YES" for this data element.
- If the post-discharge evaluation was conducted beyond the 72 hour timeframe, select "No".
- A post-discharge evaluation conducted within 72 hours via telephone or electronically, i.e., e-mail is sufficient to select "Yes" for this data element.
- Documentation that there was phone contact made with the patient/caregiver but the post-discharge evaluation could not be conducted, select "Yes."
  EXAMPLES
  - Patient/caregiver refuse to cooperate with evaluation.
  - Patient unable to participate in evaluation.
- Documentation of a home health evaluation or office appointment scheduled within 72 hours is also acceptable to select "Yes"."

- Documentation that the patient presents to the ED or is readmitted within 72 hours, select "Yes."

- If documentation reflects that after 3 attempts to contact the patient and/or caregiver, the post-discharge evaluation could not be conducted because attempts to contact the patient and/or caregiver were unsuccessful, select "Yes".
  EXAMPLES:
  - Home phone number provided at discharge is a wrong number, AND no e-mail address or other contact information was provided by the patient and/or caregiver at discharge.
  - Calls placed go to a voicemail system. Message left for patient and/or caregiver requesting a return phone call, but no return call received.
  - E-mail address generates an "undeliverable" message and no phone number is available for the patient and/or caregiver.
  - E-mail message delivered with no return response from the patient and/or caregiver.

Suggested Data Sources:
- Home Health Forms,
- Logs from follow-up phone calls or other logs that record follow-up information

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	• Automated generic phone calls/messages • Computerized self-management services/remote patient monitoring products

Name: *Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade Date*

Collected For: CSTK-11, CSTK-12

Definition: The month, date, and year that a Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade of 2B/3 was first documented during the mechanical thrombectomy procedure.

Question: What was the date that a TICI 2B/3 was first documented during the mechanical thrombectomy procedure?

Format:
Length: 10 - MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2001-Current Year)
UTD = Unable to Determine

Notes for Abstraction:

- Use the date a TICI 2B/3 was first documented. If a discrepancy exists in date documentation from different sources, choose the earliest date. If multiple dates are documented during the procedure, use the earliest date.
- The procedure end date may be used if an earlier date is not documented during the procedure.
- If the date a TICI 2B/3 was first documented is unable to be determined from medical record documentation, select "UTD".
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid date/format) **and** no other documentation is found that provides this information, the abstractor should select "UTD".
  Example:
  Documentation indicates the *Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade Date* was 03-*42*-20xx. No other documentation in the medical record provides a valid date. Since the *Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade Date* is outside of the range listed in the Allowable Values for "Day," it is not a valid date and the abstractor should select "UTD".
  Note:
  Transmission of a case with an invalid date as described above will be rejected from the Joint Commission's Data Warehouse. Use of "UTD" for *Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade Date* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Consultation notes
- Progress notes
- Operative report
- Procedure notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade Time*

Collected For: CSTK-11, CSTK-12

Definition: The time (military time) that a Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade of 2B/3 was first documented during the mechanical thrombectomy procedure.

Question: What was the time that a TICI 2B/3 was first documented during the mechanical thrombectomy procedure?

Format:
Length: 5 - HH-MM (with or without colon) or UTD
Type: Time
Occurs: 1

Allowable Values:

HH = Hour (00-23)
MM = Minutes (00-59)
UTD = Unable to Determine

Time must be recorded in military time format. With the exception of Midnight and Noon:

- If the time is in the a.m., conversion is not required
- If the time is in the p.m., add 12 to the clock time hour

Examples:

Midnight = 00:00
Noon = 12:00
5:31 am = 05:31
5:31 pm = 17:31
11:59 am = 11:59
11:59 pm = 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20xx, review supporting documentation to determine if the *Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade Date* should remain 11-24-20xx or if it should be converted to 11-25-20xx.

When converting Midnight or 24:00 to 00:00, do not forget to change the *Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade Date*.
Example:
Midnight or 24:00 on 11-24-20xx = 0000 on 11-25-20xx

Notes for Abstraction:

- Use the time a TICI 2B/3 was first documented. If a discrepancy exists in time documentation from different sources, choose the earliest time. If multiple times are documented during the procedure, use the earliest time.

- The procedure end time may be used if an earlier time is not documented during the procedure.
- For times that include “seconds”, remove the seconds and record the time as is. Example: 15:00:35 would be recorded as 15:00.
- If the time a TICI 2B/3 was first documented is unable to be determined from medical record documentation, select “UTD”.
- A grade value (e.g., 2B/3) must be documented to meet this data element. **Do not infer** a TICI grade based on other documentation in the medical record, e.g., TICI estimated from the dictated angiography report.
- The medical record must be abstracted as documented (taken at “face value”). When the time documented is obviously in error (not a valid time) **and** no other documentation is found that provides this information, the abstractor should select “UTD”.
  Example:
  Documentation indicates the *Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade Time* was 3300. No other documentation in the medical record provides a valid time. Since the *Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade Time* is outside of the range listed in the Allowable Values for “Hour,” it is not a valid time and the abstractor should select “UTD.
  Note:
  Transmission of a case with an invalid time as described above will be rejected from the Joint Commission’s Data Warehouse. Use of “UTD” for *Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade Time* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Consultation notes
- Progress notes
- Operative notes
- Procedure notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Reperfusion time • Revascularization time • Stroke reperfusion time • TICI time	None

Name: *Post-Treatment Thrombolysis in Cerebral Infarction (TICI) Reperfusion Grade*

Collected For: CSTK-08, CSTK-11, CSTK-12

Definition: Documentation that the Thrombolysis in Cerebral Infarction (TICI) reperfusion grade was 2B (i.e., partial perfusion greater than or equal to 50% of vascular distribution of occulded artery) or higher post-treatment. The TICI scale is a tool used to grade the degree of perfusion obtained following recanalization of an arterial occlusion. Recanalization of an arterial occlusion increases reperfusion into distal segments of the artery and restores blood flow to brain tissue. Scores may range from 0 (no perfusion) to 3 (full perfusion with filling of all distal branches).

Question: Is there a documented TICI reperfusion gradepost-treatment?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 A TICI reperfusion grade greater than or equal to (≥) 2B was documented post-treatment.

2 A TICI reperfusion grade less than (<) 2B was documented post-treatment.

3 A TICI reperfusion grade was not done post-treatment, OR Unable to determine (UTD) from the medical record documentation.

Notes for Abstraction:
- The TICI grade may be documented by the physician/APN/PA, or a nurse (RN),circulating nurse, operating room technician, radiology technician or other individual designated to scribe during the procedure.
- When multiple TICIs are documented because more than one vessel or branches of an artery are occluded, select the TICI grade associated with the site of primary vessel occlusion.
- When multiple TICIs are documented for the primary vessel occlusion, select the highest grade documented.
- If unable to determine whether the TICI refelcts reperfusion of the primary vessel, then select "UTD".

Suggested Data Sources:
- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Discharge summary
- Diagnostic test reports
- Operative notes
- Procedure notes
- Admitting notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	• TIBI • TIMI • Scoring methodologies other than TICI/mTICI

Name: *Pre-Stroke Modified Rankin Score (mRS)*

Collected For: CSTK-10

Definition: The pre-stroke Modified Rankin Score (mRS) is an estimated score used to assess the patient's pre-stroke level of function. An estimated mRS should be abstracted from current medical record documentation about the patient's ability to perform activities of daily living prior to the hospitalization for the acute ischemic stroke event.

Question: What is the patient's pre-stroke Modified Rankin Score (mRS)?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

0 The patient had no residual symptoms.

1 The patient had no significant disability; able to carry out all activities.

2 The patient had slight disability; unable to carry out all activities but able to look after self without daily help.

3 The patient had moderate disability; requiring some external help but able to walk without the assistance of another individual.

4 The patient had moderately severe disability; unable to walk or attend to bodily functions without assistance of another individual.

5 The patient had severe disability; bedridden, incontinent, requires continuous care.

6 Unable to determine (UTD) from the medical record documentation.

Notes for Abstraction:

- Use all available documentation in the current medical record to estimate a score and select a pre-stroke mRS value. mRS values documented during previous episodes of care may not be valid. Use only current data/information.
- Documentation about the patient's family and living situation may reflect the patient's level of function prior to the hospital admission.
- If documentation reflects that the patient was able to ambulate independently (no help form another person) with or without an assistive device, select value '0', '1', '2', or '3' based on the patient's level of disability.
- If the patient was able to walk with the assistance of another person, select value '4'.
- If the patient was unable to ambulate prior to the hospitalization, select value '5'.
- Select the value (values 0-5) that best represents the patient's pre-stroke level of function.
- No value should be selected more than once.

- If more than one value is estimated, select the highest value.
- If a score range is estimated, e.g. 2-3, select the higher value.
- If a pre-stroke mRS cannot be determined (UTD) from current medical record documentation, select “6”.
- If value 6 (UTD) is selected, no other values should be selected.

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Discharge summary
- Admission note

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Predicted Value*

Collected For: PC, Transmission, Risk Adjustment, Hospital Clinical Data File, Used in the calculation of the Joint Commission's aggregate data for Risk Adjusted Measures **(PC-04)** and in the Transmission section of the Hospital Clinical Data file.

Note:

- The ORYX Vendor's calculated *Predicted Value* will be transmitted to The Joint Commission on a quarterly basis with the associated hospital clinical data. These measure results will be used in the Joint Commission's data quality analysis and continuous measure verification process. ORYX Vendors can refer to the Joint Commission's *ORYX Data Quality Manual* and *ORYX Risk Adjustment Guide* for more information.

Definition: This data element is used to store the calculated predicted value that results from applying the appropriate Joint Commission risk model to the data.

Note:
Used in conjunction with Measure Category Assignment when its allowable value = "D" (In Measure Population) or "E" (In Numerator Population).

Question: Not Applicable

Format:
Length: 2-9 (including decimal)
Type: Numeric
Occurs: One Predicted Value is expected per EOC for every risk-adjusted measure that a hospital is participating in.

Allowable Values:

0.00000001 — 0.99999999

JOINT COMMISSION NOTE TO PROGRAMMERS:

- Round to 8 decimal places.
- Use only the twenty four ICD-10-CM Diagnosis Codes that are transmitted as part of the patient record when evaluating the patient against the risk model. Do not use additional ICD-10-CM Diagnosis Codes that may be available in the medical record or from the UB download.

Notes for Abstraction: None

Suggested Data Sources: Not Applicable

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Previous Live Births*

Collected For: PC-02

Definition: Documentation that the patient experienced a live birth prior to the current hospitalization.

Question: Did the patient experience a live birth prior to the current hospitalization?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation that the patient experienced one or more live births prior to the current hospitalization.

N (No) There is no documentation that the patient experienced one or more live births prior to the current hospitalization OR unable to determine from medical record documentation.

Notes for Abstraction: The delivery or operating room record should be reviewed first for documentation of previous live births. If documentation of previous live births is not present or is conflicting in the delivery or operating room record, then continue to review the acceptable data sources in the following order: history and physical, clinician admission progress note, prenatal forms, and discharge summary until a positive finding for previous live births is found.

If there is conflicting documentation throughout the acceptable sources and it cannot be determined from the medical record if there were previous live births, select No.

Documentation in the acceptable data sources may be written by the following clinicians:

- Physician
- Certified nurse midwife (CNM)
- Advanced practice nurse/physician assistant (APN/PA)
- Registered nurse (RN)

It is acceptable to use data derived from vital records reports received from state or local departments of public health, delivery logs or clinical information systems if they are available and are directly derived from the medical record with a process in place to confirm their accuracy. If this is the case, these may be used in lieu of the Only Acceptable Sources listed below.

Parity may be used in the absence of documentation of the number of previous live births. If the number for parity documented is "one" and includes the delivery for the current hospitalization, do not include the current delivery to determine previous live births.

A string of three or more numbers without the alpha designation of "p" preceding the second number cannot be used to determine parity. Example: 321 When GTPAL terminology is documented, G= Gravida, T= Term, P= Preterm, A= Abortions, L= Living, P does not equal parity.

Suggested Data Sources:

ONLY ACCEPTABLE SOURCES IN ORDER OF PREFERENCE:

- Delivery or Operating room record, note or summary
- History and physical
- Admission clinician progress note
- Prenatal forms
- Discharge summary

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Select Yes: • Number of previous live births is greater than 0 • Parity is greater than 0 • Term is greater than 0 • Preterm is greater than 0 • Living is greater than 0 • Documentation of multiparous	Select No: • Number of previous live births equals 0 • Parity equals 0 • Gravidity equals 1 • Documentation of primigravida or nulliparous

Name: *Prior Uterine Surgery*

Collected For: PC-01

Definition: Documentation that the patient had undergone prior uterine surgery.

Question: Is there documentation that the patient had undergone prior uterine surgery?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) The medical record contains documentation that the patient had undergone prior uterine surgery.

N (No) The medical record does not contain documentation that the patient had undergone a prior uterine surgery OR unable to determine from medical record documentation.

Notes for Abstraction: In order to select "yes", the current episode of care must contain documentation of one of the included surgeries below. An inverted T or J incision would be acceptable only if there is also documentation that the incision extended into the upper uterine segment.

Suggested Data Sources:
- History and physical
- Nursing admission assessment
- Progress notes
- Physician's notes
- Prenatal forms

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
The **only** prior uterine surgeries considered for the purposes of the measure are: • Prior classical cesarean birth which is defined as a vertical incision into the upper uterine segment • Prior myomectomy • Prior uterine surgery resulting in a perforation of the uterus due to an accidental injury • History of a uterine window or thinning or defect of the uterine wall noted during prior uterine surgery or during a past or current ultrasound • History of uterine rupture requiring surgical repair • History of a cornual ectopic pregnancy • History of transabdominal cerclage	• Prior low transverse cesarean birth • Prior cesarean birth without specifying prior classical cesarean birth • History of an ectopic pregnancy without specifying cornual ectopic pregnancy • History of a cerclage without specifying transabdominal cerclage

• History of metroplasty and/or prior removal of vestigial horn with entry into the uterine cavity	

Name: *Procoagulant Reversal Agent Initiation*

Collected For: CSTK-04

Definition: A procoagulant reversal agent was initiated at this hospital. Procoagulant reversal agents are medications that increase coagulation factors to promote clotting.

Question: Is there documentation that a procoagulant reversal agent was initiated at this hospital?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) A procoagulant reversal agent was initiated at this hospital.

N (No) A procoagulant reversal agent was not initiated at this hospital, OR unable to determine from medical record documentation.

Notes for Abstraction:
- If a procoagulant reversal agent was initiated at this hospital, select “Yes”.
- **Only accept reversal agents identified in the list of inclusions. No other terms for reversal agents will be accepted.**
- If Vitamin K only was administered as the sole form of reversal and no other procoagulant agent was administered, select “No”.

Suggested Data Sources:
- Emergency department record
- Nursing flow sheet
- Progress notes
- Medication administration record (MAR)
- Medication reconciliation form

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Activated prothrombin complex concentrates • Anti-inhibitor coagulant complex • Autoplex T • Bebulin VH • Eptacog alfa • Factor IX Complex • Factor VIIa (Recombinant) • Feiba VH Immuno • Fresh frozen plasma (FFP) • NovoSeven • NovoSeven RT • Profilnine SD • Proplex T • Prothrombin complex concentrates (PCCs • rFVIIa	• Vitamin K Only • Factor IX (without complex)

• (Kcentra) PCC-Human • *Pradaxa (dabigatran) reversal agent:* Praxbind (idarucizumab)	

Name: *Proximal or Distal Occlusion*

Collected For: CSTK-08

Definition: Documentation in the medical record of the location of the clot in either the large arteries in the neck or base of the brain (proximal), or small arteries higher up in the brain (distal). Arterial occlusions arising more proximally are associated with poorer outcomes.

Question: What is the location of the clot in the cerebral circulation?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 Proximal cerebral occlusion

2 Distal cerebral occlusion

3 Neither proximal or distal, OR unable to determine (UTD) from the medical record documentation

Notes for Abstraction:
- If the occlusion is documented in an artery listed as an inclusion term for "proximal", select '1'.
- If the occlusion is documented in an artery listed as an inclusion term for "distal", select '2'.
- If multiple occlusions, select "proximal" or "distal" for the primary vessel occlusion.
- If unable to determine, select '3'.

Suggested Data Sources:
- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Discharge summary
- Diagnostic test reports
- Operative notes
- Procedure notes
- Admitting notes
- Procedure reports

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
PROXIMAL: • Internal Carotid Artery (ICA) • ICA terminus • Middle Cerebral Artery (MCA) • Middle Cerebral Artery (MCA) M1 segment	None

• M1 • T-occlusion (T-lesion) • Vertebral Artery • Basilar Artery DISTAL: • Anterior Cerebral Artery (ACA) • Anterior Cerebral Artery (ACA) A1 segment • A1 • Anterior Cerebral Artery (ACA) A2 segment • A2 • Anterior Cerebral Artery (ACA) A3 segment • A3 • Middle Cerebral Artery (MCA) M2 segment • M2 • Middle Cerebral Artery (MCA) M3 segment • M3 • Middle Cerebral Artery (MCA) M4 segment • M4 • Posterior Cerebral Artery (PCA) • Posterior Cerebral Artery (PCA) P1 segment • P1 • Posterior Cerebral Artery (PCA) P2 segment • P2 • Posterior Cerebral Artery (PCA) P3 segment • P3	

Name: *Psychiatric Care Setting*

Collected For: All Records, HBIPS

Definition: Documentation in the medical record that the patient was receiving care primarily for a psychiatric diagnosis in an inpatient psychiatric setting, i.e., a psychiatric unit of an acute care hospital or a free-standing psychiatric hospital.

Question: Did the patient receive care in an inpatient psychiatric setting?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) The patient received care in an inpatient psychiatric setting.

N (No) The patient did not receive care in an inpatient psychiatric setting.

Programming Note: The allowable value for *Psychiatric Care Setting* may be determined electronically using a source such as an Electronic Record (EHR/EMR) or hospital billing system. Hospitals must document the specific data source (field and application) that is used and make this information available to their vendor. This information must be made available to The Joint Commission upon request.

Notes for Abstraction: Example 1 - Chemical Dependency Units that treat patients primarily for substance use disorders and occasionally psychiatric diagnoses are excluded from the HBIPS measures.

Example 2 - Psychiatric Units that treat dual diagnosis patients (patients with **both** substance use disorders and psychiatric diagnoses) are included in the HBIPS measures.

Suggested Data Sources:
- Emergency department record
- Face sheet
- Physician orders
- Discharge summary
- Registration form

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• None	• Patients with a psychiatric diagnosis who received care in an inpatient unit other than a psychiatric unit within an acute-care hospital or a free-standing psychiatric hospital.

Name: *Psychiatric Inpatient Days - Medicare Only*

Collected For: HBIPS-2, HBIPS-3

Definition: The sum of the number of days each Medicare patient was included in the psychiatric inpatient census during the month (includes clients on leave status).

This data element is used to calculate the *Initial Patient Population Size —Medicare Only* data element and the denominator for HBIPS-2 and 3. ORYX vendors can refer to the Joint Commission's *ORYX Technical Implementation Guide* for more information.

Question: What is the sum of the number of days each Medicare patient was included in the psychiatric inpatient census during the month?

Format:
Length: 6
Type: Numeric
Occurs: 5 (Overall rate and once per sub-strata)

Allowable Values:

0-999999

Programming Note: The value of the *Initial Patient Population Size —Medicare Only* may be determined electronically using a source such as an Electronic Record (EHR/EMR) or hospital billing system. Hospitals must document the specific data source (field and application) that is used and make this information available to their vendor. This information must be made available to The Joint Commission upon request.

Notes for Abstraction:

- For the purposes of calculating inpatient days, the admission day (*Admission Date*) but not the discharge day (*Discharge Date*) should be counted. The only exception will be for patients who are admitted and discharged on the same day. Such patients will contribute one inpatient day to the calculation.
- If Medicare is listed as the primary, secondary, tertiary, or even lower down on the list of payers, the patient should be counted in the Medicare inpatient days.
- If the patient is an Undocumented Alien or Illegal immigrant, the patient should be counted in the Medicare inpatient days: Section 1011 of the Medicare Modernization Act of 2003 allows for reimbursement for services rendered to patients who are: Undocumented or illegal aliens (immigrants), Aliens who have been paroled a United States port of entry and Mexican citizens to enter the United States on a laser visa.

Suggested Data Sources:

- Admissions/ discharges/ transfers (ADT) system
- Daily census log that is completed on the same time each day

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	• Discharge date

Name: *Psychiatric Inpatient Days-Non-Medicare Only*

Collected For: HBIPS-2, HBIPS-3

Definition: The sum of the number of days each Non-Medicare patient was included in the psychiatric inpatient census during the month (includes clients on leave status).

This data element is used to calculate the *Initial Patient Population Size — Non-Medicare Only* data element and the denominator for HBIPS-2 and 3. ORYX vendors can refer to the Joint Commission's *ORYX Technical Implementation Guide for more information*.

Question: What is the sum of the number of days each Non-Medicare patient was included in the psychiatric inpatient census during the month?

Format:
Length: 6
Type: Numeric
Occurs: 5 (Overall rate and once per sub-strata)

Allowable Values:

0-999999

Programming Note: The value of the *Initial Patient Population Size —Non-Medicare Only* may be determined electronically using a source such as an Electronic Record (EHR/EMR) or hospital billing system. Hospitals must document the specific data source (field and application) that is used and make this information available to their vendor. This information must be made available to The Joint Commission upon request.

Notes for Abstraction:

- For the purposes of calculating inpatient days, the admission day (*Admission Date*) but not the discharge day (*Discharge Date*) should be counted. The only exception will be for patients who are admitted and discharged on the same day. Such patients will contribute one inpatient day to the calculation.
- If Medicare is **not** listed as the primary, secondary, tertiary, or even lower down on the list of payers, the patient should be counted in the Non-Medicare inpatient days.

Suggested Data Sources:

- Admissions/ discharges/transfers (ADT) system
- Daily census log that is completed on the same time each day

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	• Discharge date

Name: *Psychological Trauma History*

Collected For: HBIPS-1

Definition: Documentation in the medical record that an admission screening for a psychological trauma history was performed within the first three days of admission.

Question: Is there documentation in the medical record that the patient was screened for a psychological trauma history performed within the first three days of admission?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) Documentation in the medical record includes a screening for a psychological trauma history performed within the first three days of admission.

N (No) Documentation in the medical record does not include a screening for a psychological trauma history OR the screening was not performed within the first three days of admission OR unable to determine from medical record documentation.

X (Unable to complete admission screening) Documentation in the medical record that a screening for a psychological trauma history can not be completed due to the patient's inability or unwillingness to answer screening questions within the first three days of admission OR patient has a previous admission to the psychiatric unit during a single hospitalization.

Notes for Abstraction: A screening for a psychological trauma history must be completed by a qualified psychiatric practitioner e.g., psychiatrist, registered nurse (RN), physician's assistant (PA) or Master of Social Work (MSW) within the first three days of admission. The titles of qualified psychiatric practitioners may vary from state to state.

If the patient was in an acute-care hospital and had multiple admissions to the psychiatric unit during his or her hospitalization, select the first admission to the psychiatric unit.

Traumatic life experiences are defined as those that result in responses to life stressors characterized by significant fear, anxiety, panic, terror, dissociation, feelings of complete powerless or strong emotions that have long term effects on behaviors and coping skills[1].

[1]American Psychiatric Association. (1994). *Diagnostic and statistical manual or mental disorders, Fourth Ed*. Washington, DC: APA.

The admission screening timeframe must have occurred within the first three days of admission for psychiatric care. The day after admission is defined as the first day. An admission screen performed in an ambulatory setting, i.e. emergency department, crisis center which results in an admission to an inpatient psychiatric care setting can be used if the screen becomes a permanent part of the medical record.

If there is documentation that the patient is not a reliable historian, a relative or guardian if available, may answer the screening questions on behalf of the patient.

Suggested Data Sources:

- Biopsychosocial assessment
- Emergency department record
- Functional skills assessment
- History and physical
- Individual plan of service
- Initial assessment form
- Nursing notes
- Physician progress notes
- Psychiatrist assessment/admission form
- Referral packet
- School report
- Social worker assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Examples of psychological trauma may include but are not limited to: • physical abuse • sexual abuse • emotional abuse • Severe childhood neglect • victimization, e.g., disasters, criminal activities, crime stigma, identity theft • combat experiences • witnessing others being harmed or victimized • any significant injury or life-threatening disease • significant psycho/social loss, e.g., bankruptcy, traumatic family loss	• None

Name: *Race*

Collected For: All Records

Definition: Documentation of the patient's race.

Question: What is the patient's race?

Format:
Length: 1
Type: Character
Occurs: 1

Allowable Values:

Select one:

1 **White:** Patient's race is White or the patient has origins in Europe, the Middle East, or North Africa.

2 **Black or African American:** Patient's race is Black or African American.

3 **American Indian or Alaska Native:** Patient's race is American Indian/Alaska Native.

4 **Asian:** Patient's race is Asian.

5 **Native Hawaiian or Pacific Islander:** Patient's race is Native Hawaiian/Pacific Islander.

6 **RETIRED VALUE** (effective 07-01-05 discharges)

7 **UTD:** Unable to determine the patient's race or not stated (e.g., not documented, conflicting documentation or patient unwilling to provide).

Notes for Abstraction:

- The data element *Hispanic Ethnicity* is required in addition to this data element.
- If documentation indicates the patient has more than one race (e.g., Black-White, Indian-White), select the first listed race.
- Although the terms “Hispanic” and “Latino” are actually descriptions of the patient's ethnicity, it is not uncommon to find them referenced as race. If the patient's race is documented only as Hispanic/Latino, select “White.” If the race is documented as mixed Hispanic/Latino with another race, use whatever race is given (e.g., Black-Hispanic — select “Black”). Other terms for Hispanic/Latino include Chicano, Cuban, H (for Hispanic), Latin American, Latina, Mexican, Mexican-American, Puerto Rican, South or Central American, and Spanish.

Suggested Data Sources:

- Emergency department record
- History and physical
- Face sheet
- Nursing admission assessment
- Progress notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Black or African American A person having origins in any of the black racial groups of Africa. Terms such as “Haitian” or “Negro” can be used in addition to “Black or African American.” **American Indian or Alaska Native** A person having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment (e.g., any recognized tribal entity in North and South America [including Central America], Native American.) **Asian** A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam. **White** A person having origins in any of the original peoples of Europe, the Middle East, or North Africa (e.g., Caucasian, Iranian, White). **Native Hawaiian or Pacific Islander** A person having origins in any of the other original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.	• None

Name: *Reason for Extending the Initiation of IV Alteplase*

Collected For: ASR-IP-1, ASR-OP-1, STK-4

Definition: Reasons for extending the initiation of IV alteplase to 3 to 4.5 hours.

- Documentation of treatment to lower blood pressure prior to IV alteplase initiation
- Documentation of patient/family refusal of IV alteplase which was recanted/reversed prior to IV alteplase initiation
- Documentation of cardiac arrest, respiratory arrest, cardiopulmonary resuscitation, defibrillation, or intubation in the emergency department prior to IV alteplase initiation
- Other reasons for extending the initiation of IV alteplase to 3 to 4.5 hours documented by physician/APN/PA or pharmacist

Question: Is there documentation on the day of or day after hospital arrival of a reason for extending the initiation of IV alteplase to 3 to 4.5 hours of *Time Last Known Well*?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation on the day of or the day after hospital arrival of a reason for extending the initiation of IV alteplase to 3 to 4.5 hours of *Time Last Known Well*.

N (No) There is no documentation on the day of or day after hospital arrival of a reason for extending the initiation of IV alteplase to 3 to 4.5 hours of *Time Last Known Well*, OR unable to determine from the medical record documentation.

Notes for Abstraction:

- **Documentation of a reason for extending the initiation of IV alteplase to 3 to 4.5 hours must be done on the day of or the day after hospital arrival and must refer to the time period prior to IV alteplase initiation. It is not necessary to review documentation outside of this timeframe to answer this data element.**
- "Other" reasons for extending the initiation of IV alteplase therapy to 3 to 4.5 hours must be documented by a physician/APN/PA or pharmacist.
  EXCEPTION:
  Nursing documentation of a telemedicine/teleneurology reason for extending the initiation of IV alteplase therapy to 3 to 4.5 hours is acceptable.
- The following are acceptable as **stand-alone reasons** for extending the initiation of IV alteplase – IV alteplase therapy linkage is not needed:
  - Documentation of treatment to lower blood pressure, (e.g. nicardipine, hydralazine), prior to IV alteplase initiation
  - Documentation of patient/family refusal of IV alteplase which was recanted/reversed prior to IV alteplase initiation
  - Documentation of cardiac arrest, respiratory arrest, cardiopulmonary resuscitation, defibrillation, or intubation in the emergency department prior to IV alteplase initiation

- **If "other" reasons are not mentioned in the context of IV alteplase, do not make inferences** (e.g., do not assume that IV alteplase was initiated in 3 to 4.5 hours because patient consent could not be obtained from family in 3 hours unless explicitly documented).
  Examples:
  - Documentation to initiate IV alteplase for worsening symptoms following documentation to not give tPA because symptoms resolved after hospital arrival, select "Yes."
  - NIHSS score of 1 on arrival. IV alteplase ordered 4 hours after hospital arrival, select "No."
- **System reasons are not acceptable as "other" reasons, regardless of any linkage to IV alteplase:**
  - Equipment-related (e.g., CT not available, IV pump malfunction)
  - Pharmacy-related (e.g., alteplase not available from pharmacy)
  - Staff-related (e.g., unable to contact consulting MD)

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Nursing notes
- Progress notes
- Physician orders
- Medical transport records
- Medication reconciliation form
- Transfer Form

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Thrombolytic therapy • t-PA	• Delay in hospital arrival greater than 2 hours • Delay in stroke diagnosis • Hold IV alteplase without a documented reason • No IV access

Name: *Reason for No ACEI and No ARB Prescribed for LVSD in Outpatient Setting*

Collected For: ACHFOP-02

Definition: Reasons for not prescribing either an angiotensin converting enzyme inhibitor (ACEI) or angiotensin receptor blocker (ARB) for LVSD in the outpatient setting:

- ACEI allergy AND ARB allergy
- Moderate or severe aortic stenosis
- Other reasons documented by physician/advanced practice nurse/physician assistant (physician/APN/PA) or pharmacist for not prescribing an ACEI AND not prescribing an ARB for this patient.
  Note: Documentation of a reason for not prescribing one class (either ACEI or ARB) should be considered implicit documentation of a reason for not prescribing the other class for the following five conditions only:
  - Angioedema
  - Hyperkalemia
  - Hypotension
  - Renal artery stenosis
  - Worsening renal function/renal disease/dysfunction

- Reason documented by physician/APN/PA or pharmacist for not prescribing an ARB AND an ACEI allergy
- Reason documented by physician/APN/PA or pharmacist for not prescribing an ACEI AND an ARB allergy

ACEIs and ARBs widen or dilate blood vessels, lowering blood pressure and making it easier for the heart to pump blood. They also inhibit the adverse effects of neurohormonal activation on the heart. These effects help reduce the risk of adverse outcomes such as death or hospitalization.

Question: Is there documentation of BOTH a reason for not prescribing an ACEI AND a reason for not prescribing an ARB for LVSD in the outpatient setting?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of BOTH a reason for not prescribing an ACEI AND a reason for not prescribing an ARB for LVSD in the outpatient setting.

N (No) There is no documentation of BOTH a reason for not prescribing an ACEI AND a reason for not prescribing an ARB for LVSD in the outpatient setting, or unable to determine from medical record documentation.

Notes for Abstraction:

- An “allergy” or “sensitivity” documented counts as an allergy regardless of what type of reaction might be noted (e.g., “Allergies: ACEIs — Cough” — consider as ACEI allergy).
- Documentation of an allergy/sensitivity to one particular ACEI is acceptable to take as an allergy to the entire class of ACEIs. Same for ARBs (e.g., “Allergic to

Valsartan"- consider as ARB allergy).

- When conflicting information is documented in a medical record, select "Yes".
- In the absence of explicit documentation that the patient has current moderate/severe aortic stenosis, this should be inferred when there is documentation of a history of moderate/severe aortic stenosis without mention of repair or replacement, valvuloplasty, or commissurotomy.
- When determining whether there is a reason documented by a physician/APN/PA or pharmacist for not prescribing an ACEI or an ARB:
  - Documentation of a reason for not prescribing one class (either ACEI or ARB) should be considered implicit documentation of a reason for not prescribing the other class for the following five conditions ONLY:
    - Angioedema
    - Hyperkalemia
    - Hypotension
    - Renal artery stenosis
    - Worsening renal function/renal disease/dysfunction
  - Examples of statements that count as a reason for not prescribing ACEI and a reason for not prescribing ARB:
    - "Creatinine high. Hold losartan."
    - "Hx angioedema with ACEIs."
    - "No ACEI. Bilateral renal artery stenosis."
    - "BPs running low. Discontinue losartan."
    - "Potassium 5.5 — No ACEI."
    - "Severe hypotension with ACEIs in past."
    - "Add ARB if hyperkalemia resolves."
- Reasons for no ACEIs and reasons for no ARBs must be explicitly documented (e.g., "POTASSIUM 5.5 — No ACEI") or clearly implied (e.g., "Severe hypotension with ACEIs in past," "Hx ACEI-induced cough," "ARBs contraindicated," "Pt. refusing all medications," "Supportive care only — no medications," "ACEI therapy not indicated," ACEI on pre-printed order form is crossed out, "No ACEI/ARB" [reason not given]). If reasons are not mentioned in the context of ACEIs/ARBs, do not make inferences (e.g., Do not assume that an ACEI/ARB is not prescribed because of the patient's chronic renal disease alone).
  - Deferral of an ACEI from one physician/APN/PA or pharmacist to another does NOT count as a reason for not prescribing an ACEI unless the problem underlying the deferral is also noted. Same for ARBs. Examples:
    - "Consulting cardiologist to evaluate pt. for ACEI therapy" - select **"No"** (Do NOT consider as reason for not prescribing ACEI).
    - "Pt. hypotensive. Start ARB if OK with cardiology." - select **"Yes"** (Consider as reason for not prescribing ACEI and reason for not prescribing ARB).
  - If there is documentation of a plan to initiate/restart an ACEI, and the reason/problem underlying the delay in starting/restarting the ACEI is also noted, this constitutes a "clearly implied" reason for not prescribing ACEI. Same for ARBs. Acceptable examples (select "Yes"):
    - "Pt. hemodynamically unstable. May start ACEI/ARB as outpatient."
    - "Add ARB if hyperkalemia resolves"

- ACEIs/ARBs are sometimes described as RAS (renin-angiotensin system) or RAAS (renin-angiotensin-aldosterone system) blockers/inhibitors. Documentation of a reason for not prescribing "RAS" or "RAAS" blockers or inhibitors should be considered implicit documentation of a reason for no ACEI and no ARB (e.g., "Hold all RAS blockers").

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Physician orders
- Discharge summary
- Diagnostic test reports
- Transfer sheet
- Discharge instruction sheet
- Outpatient medical record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Angioedema • Angioneurotic edema • Edema of the eyelid, glottis, larynx, nasopharynx, or pharynx • Periorbital edema described as acute **Hyperkalemia** • Patient's potassium (K+) level noted (e.g., "Last Potassium 6.5. Will hold off on ACEI therapy") • Potassium level described as elevated • References to potassium not specified or described as hyperkalemia (e.g., "Hold off on ACEI therapy. Check potassium.", "Start candesartan once potassium improved") **Hypotension** • Blood pressure (BP) described as low • Patient's blood pressure measurement noted (e.g., "BP systolic running in 80s. Will not prescribe ARBs at this time") • References to blood pressure not specified or described as hypotension (e.g., "Hold off on	• ACEI allergy • ACEI allergy described using one of the negative modifiers or qualifiers listed in Appendix H, Table 2.6, Qualifiers and Modifiers Table **Moderate/severe aortic stenosis (AS)** • Aortic insufficiency only • Aortic regurgitation only • Aortic stenosis described as 1+ or 2+ • Moderate/severe aortic stenosis, or any of the other moderate/severe aortic stenosis inclusion terms, described using one of the negative modifiers or qualifiers listed in Appendix H, Table 2.6, Qualifiers and Modifiers Table

ACEI therapy. Check BP in a.m.", "Start candesartan after BP normalizes") • Shock **oderate/severe aortic stenosis (AS)** • Aortic stenosis described as 3+, 4+, critical, or significant • Aortic stenosis, degree of severity not specified • Aortic valve area of less than 1.0 square cms • Subaortic stenosis, moderate/severe or degree of severity not specified **Worsening renal function/renal disease/dysfunction** • Acute kidney injury (AKI) • Azotemia • Chronic kidney disease (CKD) • Dialysis • End stage renal disease (ESRD) • Nephritis • References to creatinine not specified or described as elevated (e.g., "Hold off on ACEI therapy. Check creatinine.", "Start candesartan once creatinine improved"). References to renal/renal function not specified or described as renal dysfunction (e.g., "Hold on ACEI pending kidney function panel in a.m.", "Start candesartan after nephrology sees") • Renal failure, acute or chronic (ARF, RF, CRF) • Renal insufficiency (RI, CRI) • Renal/kidney transplant (RT, RTx, s/p renal transplant, KT) • Serum creatinine (Cr, Cre) level described as abnormal or elevated • Serum creatinine (Cr, Cre) noted (e.g., "No ACEIs. Creatinine 2.0") Refer to Appendix C, Table 1.2 for a comprehensive list of ACEIs and Table 1.7 for a comprehensive list of ARBs.	

Name: *Reason for No Activity Recommendations in the Outpatient Setting*

Collected For: ACHFOP-05

Definition: Documentation of the reason that written instructions or other documentation that individualized activity recommendations tailored to the patient's needs were NOT given to the patient/caregiver.

Question: Is there documentation in the medical record of a reason for no activity recommendations including duration of activity, intensity of activity and type of activity in the outpatient settting?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of a reason for not giving written instructions including duration of activity, intensity of activity and type of activity in the medical record.

N (No) There is no documentation of a reason for not giving written instructions including duration of activity, intensity of activity and type of activity or unable to determine from medical record documentation.

Notes for Abstraction:
- If the patient/caregiver refused written instructions which address recommendations for level of activity, select “Yes”.
- A caregiver is defined as the patient's family or any other person (e.g., home health VNA provider, prison official or other law enforcement personeel) who will be responsible for the care of the patient.
- If the activity recommendations do not include all the following, duration of activity, intensity of activity and type of activity, select "No".

Suggested Data Sources:
- Discharge summary
- Outpatient medical record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Reason for No Aldosterone Receptor Antagonist Prescribed for LVSD in the Outpatient Setting*

Collected For: ACHFOP-03

Definition: Reasons for not prescribing aldosterone receptor antagonist for LVSD in the outpatient setting. The main action of aldosterone is to increase sodium re-absorption by the kidneys. At the same time it increases the excretion of hydrogen and potassium ions. Aldosterone receptor antagonists block the effects of aldosterone, therefore decrease sodium re-absorption and water retention by the kidneys and consequently lead to a decrease in blood pressure. Other reasons include hyperkalemia or renal dysfunction or dialysis.

Question: Is there documentation of a reason for not prescribing aldosterone receptor antagonist for LVSD in the outpatient setting or a history of hyperkalemia or renal dysfunction or dialysis?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of a reason for not prescribing aldosterone receptor antagonist for LVSD in the outpatient setting.

N (No) There is no documentation of a reason for not prescribing aldosterone receptor antagonist for LVSD in the outpatient setting or unable to determine from medical record documentation.

Notes for Abstraction:
- All medication documentation available in the chart should be reviewed and taken into account by the abstractor.
- If the patient is currently on an aldosterone receptor antagonist, answer “Yes”.

Suggested Data Sources:
- Discharge summary
- Outpatient medical record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Spironolactone • Eplerenone	None

Name: *Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD in the Outpatient Setting*

Collected For: ACHFOP-01

Definition: Reasons for not prescribing bisoprolol, carvedilol, or sustained-release metoprolol succinate for LVSD in the outpatient setting:

- Beta-blocker allergy
- Second or third-degree heart block on ECG and does not have a pacemaker
- Other reasons documented by physician/advanced practice nurse/physician assistant (physician/APN/PA) or pharmacist

Bisoprolol, carvedilol, and sustained-release metoprolol succinate are agents which block beta-adrenergic receptors, thereby decreasing the rate and force of heart contractions, and reducing blood pressure. Over time beta-blockers improve the heart's pumping ability.

Question: Is there documentation of a reason for not prescribing bisoprolol, carvedilol, or sustained-release metoprolol succinate for LVSD in the outpatient setting?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of a reason for not prescribing bisoprolol, carvedilol, or sustained-release metoprolol succinate for LVSD in the outpatient setting.

N (No) There is no documentation of a reason for not prescribing bisoprolol, carvedilol, or sustained-release metoprolol succinate for LVSD in the outpatient setting, or unable to determine from medical record documentation.

Notes for Abstraction:

- A beta-blocker "allergy" or "sensitivity" documented counts as an allergy regardless of what type of reaction might be noted (e.g., "Allergies: Beta-blockers — Impotence" — select "Yes").
- Documentation of an allergy/sensitivity to one particular beta-blocker is acceptable to take as an allergy to the entire class of beta-blockers (e.g., "Allergic to Toprol-XL").
- When conflicting information is documented in a medical record, select "Yes".
- When determining whether there is second or third-degree heart block on ECG in the outpatient setting AND does not have pacemaker:
  - Consider this true if (1) there are findings of second or third-degree heart block on the ECG AND this same ECG does NOT show pacemaker findings, OR (2) There is documentation of a finding of second or third-degree heart block (not specifically referenced as an ECG finding) without mention of the presence of pacemaker findings (e.g., "Second-degree heart block" per ER report).

    - Disregard pacemaker findings if documentation suggests the patient has a non-functioning pacemaker.
    - Second or third-degree heart block and pacemaker ECG findings can be taken from unsigned ECG reports. Physician/APN/PA documentation is not required.
    - Second or third-degree heart block findings and pacemaker findings from telemetry and rhythm strips are acceptable.
    - In cases where ECG findings of second- or third-degree heart block are referenced and documentation does not address the presence or absence of pacemaker findings, infer no pacemaker findings. E.g., "ECG on arrival showed second-degree heart block" per H&P.
- When determining whether there is a reason documented by a physician/APN/PA or pharmacist for not prescribing bisoprolol, carvedilol, or sustained-release metoprolol succinate in the outpatient setting:
    - Reasons must be explicitly documented (e.g., "COPD - No BBs", "HR running in 50s. Hold off on beta-blocker therapy") or clearly implied (e.g., "Severe hypotension with beta-blockers in past," "BBs contraindicated," "Pt. refusing all medications," "Supportive care only — no medications," "BBs not indicated," beta-blocker on pre-printed order form is crossed out, "No beta-blockers" [no reason given]). If reasons are not mentioned in the context of beta-blockers, do not make inferences (e.g., Do not assume that bisoprolol, carvedilol, or sustained-release metoprolol succinate is not being prescribed because of the patient's history of Peripheral Vascular Disease alone).
        - Discontinuation of bisoprolol, carvedilol, or sustained-release metoprolol succinate documented in combination with the start of a another one of these beta-blockers (i.e., switch from bisoprolol to carvedilol) does not count as a reason for not prescribing bisoprolol, carvedilol, or sustained-release metoprolol succinate in the outpatient setting. Examples:
            - "Stop carvedilol" and "Start Coreg 12.5 mg po bid" in same physician order
            - "Change metoprolol to Coreg" in progress note
        - Discontinuation of bisoprolol, carvedilol, or sustained-release metoprolol succinate at a particular dose documented in combination with the start of a different dose of that beta-blocker (i.e., change in dosage) does not count as a reason for not prescribing bisoprolol, carvedilol, or sustained-release metoprolol succinate in the outpatient setting. Examples:
            - "Stop metoprolol succinate 25 mg po" and "Start metoprolol succinate 50 mg po" in same physician order
            - "Increase bisoprolol 5 mg to 10 mg" in progress note
    - "Reason documentation which refers to a more general medication class is not acceptable (e.g., "Hold all BP meds").
    - Deferral from one physician/APN/PA or pharmacist to another does NOT count as a reason for not prescribing bisoprolol, carvedilol, or sustained-release metoprolol succinate in the outpatient setting unless the problem underlying the deferral is also noted. Examples:

- "Consulting cardiologist to evaluate pt. for beta-blocker treatment" - select **"No".**
- "Pt. hypotensive. Start Coreg if OK with cardiology." - select **"Yes".**

- If there is documentation of a plan to initiate/restart bisoprolol, carvedilol, or sustained-release metoprolol succinate, and the reason/problem underlying the delay in starting/restarting the beta-blocker is also noted, this constitutes a "clearly implied" reason for not prescribing a beta-blocker in the outpatient setting.
  - Acceptable examples (select "Yes"):
    - "BPs running low. May start Zebeta as outpatient."
    - "Add Toprol-XL if HR stabilizes"
  - Unacceptable examples (select "No"):
    - "Consider starting Coreg next appointment ."
    - "May add beta-blockers when pt. can tolerate"

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Physician orders
- Discharge summary
- Transfer sheet
- Outpatient medical record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
2nd/3rd degree heart block (HB) Note: The following inclusive terms may stand alone or be modified by "variable" or "intermittent." • Atrioventricular (AV) block described as 2 to 1, 3 to 1, second-degree, or third-degree • Atrioventicular (AV) dissociation • Heart block (HB) described as 2 to 1, 3 to 1, complete (CHB), high degree, high grade, second-degree, or third-degree • Mobitz Type 1 or 2 • Wenckebach **Pacemaker findings** • Paced rhythm • Paced spikes • Pacing described as atrial, AV, dual chamber, or ventricular	**Beta-blocker allergy** • Allergy to beta-blocker eye drops (e.g., Cosopt) • Beta-blocker allergy described using one of the negative modifiers or qualifiers listed in Appendix H, Table 2.6, Qualifiers and Modifiers Table **2nd/3rd degree heart block (HB)** • 2nd/3rd degree heart block (HB), or any of the other 2nd/3rd degree heart block inclusion terms, described using one of the negative modifiers or qualifiers listed in Appendix H, Table 2.6, Qualifiers and Modifiers Table • Atrial flutter • Atrioventricular (AV) block or conduction block, type/degree not specified • First-degree atrioventricular (AV) block

	• First-degree heart block (HB) • Heart block, type/degree not specified • Intraventricular conduction delay (IVCD)

Name: *Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate Prescribed for LVSD at Discharge*

Collected For: ACHF-01

Definition: Reasons for not prescribing bisoprolol, carvedilol, or sustained-release metoprolol succinate at discharge:

- Beta-blocker allergy
- Second or third-degree heart block on ECG on arrival or during hospital stay and does not have a pacemaker
- Other reasons documented by physician/advanced practice nurse/physician assistant (physician/APN/PA) or pharmacist

Bisoprolol, carvedilol, and sustained-release metoprolol succinate are agents which block beta-adrenergic receptors, thereby decreasing the rate and force of heart contractions, and reducing blood pressure. Over time beta-blockers improve the heart's pumping ability.

Question: Is there documentation of a reason for not prescribing bisoprolol, carvedilol, or sustained-release metoprolol succinate at discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of a reason for not prescribing bisoprolol, carvedilol, or sustained-release metoprolol succinate at discharge.

N (No) There is no documentation of a reason for not prescribing bisoprolol, carvedilol, or sustained-release metoprolol succinate at discharge, OR unable to determine from medical record documentation.

Notes for Abstraction:

- If there is documentation in the medical record of LVSD greater than or equal to 40%, this data element is not required.
- A beta-blocker "allergy" or "sensitivity" documented at anytime during the hospital stay counts as an allergy regardless of what type of reaction might be noted (e.g., "Allergies: Beta-blockers — Impotence" — select "Yes").
- Documentation of an allergy/sensitivity to one particular beta-blocker is acceptable to take as an allergy to the entire class of beta-blockers (e.g., "Allergic to Toprol-XL").
- When conflicting information is documented in a medical record, select "Yes".
- When determining whether there is second or third-degree heart block on ECG on arrival or during hospital stay AND does not have pacemaker:
  - Consider this true if (1) there are findings of second or third-degree heart block on the ECG AND this same ECG does NOT show pacemaker findings, OR (2) There is documentation of a finding of second or third-degree heart block (not specifically referenced as an ECG finding) without mention of the presence of pacemaker findings (e.g., "Second-degree heart block" per ER report).

- Disregard pacemaker findings if documentation suggests the patient has a non-functioning pacemaker.
- Second or third-degree heart block and pacemaker ECG findings can be taken from unsigned ECG reports. Physician/APN/PA documentation is not required.
- Second or third-degree heart block findings and pacemaker findings from telemetry and rhythm strips are acceptable.
- In cases where ECG findings of second- or third-degree heart block are referenced and documentation does not address the presence or absence of pacemaker findings, infer no pacemaker findings. E.g., "ECG on arrival showed second-degree heart block" per H&P.

- When determining whether there is a reason documented by a physician/APN/PA or pharmacist for not prescribing bisoprolol, carvedilol, or sustained-release metoprolol succinate at discharge:
  - Reasons must be explicitly documented (e.g., "COPD - No BBs", "HR running in 50s. Hold off on beta-blocker therapy") or clearly implied (e.g., "Severe hypotension with beta-blockers in past," "BBs contraindicated," "Pt. refusing all medications," "Supportive care only — no medications," "BBs not indicated," beta-blocker on pre-printed order form is crossed out, "No beta-blockers" [no reason given]). If reasons are not mentioned in the context of beta-blockers, do not make inferences (e.g., Do not assume that bisoprolol, carvedilol, or sustained-release metoprolol succinate is not being prescribed because of the patient's history of Peripheral Vascular Disease alone).
  - Physician/APN/PA or pharmacist documentation of a hold on bisoprolol, carvedilol, or sustained-release metoprolol succinate or discontinuation of one of these beta-blockers that occurs during the hospital stay constitutes a "clearly implied" reason for not prescribing bisoprolol, carvedilol, or sustained-release metoprolol succinate at discharge. A hold/discontinuation of all p.o. medications counts if bisoprolol, carvedilol, or sustained-release metoprolol succinate p.o. was on order at the time of the notation.
    EXCEPTION:
    - Documentation of a conditional hold/discontinuation of bisoprolol, carvedilol, or sustained-release metoprolol succinate does not count as a reason for not prescribing one of these beta-blockers at discharge UNLESS (1) it exists as an order to hold/discontinue the beta-blocker if the blood pressure (BP) or heart rate (HR) falls outside certain parameters, AND (2) the beta-blocker was held due to a BP/HR outside the parameters. Nursing documentation is acceptable. E.g., "Hold bisoprolol for SBP less than 100" ordered and the nurse documents that the bisoprolol was held for a BP of 90/50 — select "Yes".
- Discontinuation of bisoprolol, carvedilol, or sustained-release metoprolol succinate documented in combination with the start of a another one of these beta-blockers (i.e., switch from bisoprolol to carvedilol) does not count as a reason for not prescribing bisoprolol, carvedilol, or sustained-release metoprolol succinate at discharge.
  Examples:

- "Stop carvedilol" and "Start Coreg 12.5 mg po bid" in same physician order
- "Change metoprolol succinate to Coreg" in progress note
- "Do not continue after discharge" checked for metoprolol succinate and "Continue after discharge" checked for Toprol-XL on a physician-signed discharge medication reconciliation form
- Discontinuation of bisoprolol, carvedilol, or sustained-release metoprolol succinate at a particular dose documented in combination with the start of a different dose of that beta-blocker (i.e., change in dosage) does not count as a reason for not prescribing bisoprolol, carvedilol, or sustained-release metoprolol succinate at discharge.
  Examples:
- "Stop sustained-release metoprolol succinate 25 mg po" and "Start sustained-release metoprolol succinate 50 mg po" in same physician order
- "Increase bisoprolol 5 mg to 10 mg" in progress note
- "Do not continue after discharge" checked for Coreg 3.125 mg bid and "Continue after discharge" checked for Coreg 6.25 mg bid on a physician-signed discharge medication reconciliation form
  - Reason documentation which refers to a more general medication class is not acceptable (e.g., "Hold all BP meds").
  - Deferral from one physician/APN/PA or pharmacist to another does NOT count as a reason for not prescribing bisoprolol, carvedilol, or sustained-release metoprolol succinate at discharge unless the problem underlying the deferral is also noted.
    Examples:
    - "Consulting cardiologist to evaluate pt. for beta-blocker treatment" - select "No".
    - "Pt. hypotensive. Start Coreg if OK with cardiology." - select "Yes".
- If there is documentation of a plan to initiate/restart bisoprolol, carvedilol, or sustained-release metoprolol succinate, and the reason/problem underlying the delay in starting/restarting the beta-blocker is also noted, this constitutes a "clearly implied" reason for not prescribing a beta-blocker discharge.
  - Acceptable examples (select "Yes"):
    - "BPs running low. May start Zebeta as outpatient."
    - "Add Toprol-XL if HR stabilizes"
  - Unacceptable examples (select "No"):
    - "Consider starting Coreg in a.m."
    - "May add beta-blockers when pt. can tolerate"
- Reasons do NOT need to be documented at discharge or otherwise linked to the discharge timeframe: Documentation of reasons anytime during the hospital stay are acceptable (e.g., mid-hospitalization note stating "no bisoprolol due to hypotension" - select "Yes," even if documentation indicates that the hypotension had resolved by the time of discharge and the beta-blocker was restarted).
- Crossing out of bisoprolol, carvedilol, or sustained-release metoprolol succinate counts as a "clearly implied reason" for not prescribing one of

these beta-blockers at discharge only if on a pre-printed form.

- When the current record includes documentation of a pre-arrival reason for no bisoprolol, carvedilol, or sustained-release metoprolol succinate, the following counts regardless of whether this documentation is included in a pre-arrival record made part of the current record or whether it is noted by hospital staff during the current hospital stay:
  - Pre-arrival beta-blocker allergy
  - Pre-arrival hold/discontinuation or notation such as "No carvedilol" IF the underlying reason/problem is also noted (e.g., “Coreg discontinued in transferring hospital secondary to hypotension”).

Suggested Data Sources:

- Emergency department record
- History and physical
- Nursing notes
- Physician orders
- Physician's notes
- Discharge summary
- Medication administration record (MAR)
- Transfer sheet
- Consultation notes
- ECG reports
- Vital signs graphic record

Additional Notes: Excluded Data Sources: Any documentation dated/timed after discharge, except discharge summary and operative/procedure/diagnostic test reports (from procedure done during hospital stay).

Guidelines for Abstraction:

Inclusion	Exclusion
2nd/3rd degree heart block (HB) Note: The following inclusive terms may stand alone or be modified by “variable” or “intermittent.” • Atrioventricular (AV) block described as 2 to 1, 3 to 1, second-degree, or third-degree • Atrioventicular (AV) dissociation • Heart block (HB) described as 2 to 1, 3 to 1, complete (CHB), high degree, high grade, second-degree, or third-degree • Mobitz Type 1 or 2 • Wenckebach Pacemaker findings • Paced rhythm • Paced spikes • Pacing described as atrial, AV, dual chamber, or ventricular	Beta-blocker allergy • Allergy to beta-blocker eye drops (e.g., Cosopt) • Beta-blocker allergy described using one of the negative modifiers or qualifiers listed in Appendix H, Table 2.6, Qualifiers and Modifiers Table 2nd/3rd degree heart block (HB) • 2nd/3rd degree heart block (HB), or any of the other 2nd/3rd degree heart block inclusion terms, described using one of the negative modifiers or qualifiers listed in Appendix H, Table 2.6, Qualifiers and Modifiers Table • Atrial flutter • Atrioventricular (AV) block or conduction block, type/degree not specified • First-degree atrioventricular (AV) block • First-degree heart block (HB)

	• Heart block, type/degree not specified • Intraventricular conduction delay (IVCD)

Name: *Reason for No Post-Discharge Appointment Within 7 Days*

Collected For: ACHF-02

Definition: Documentation by a physician/APN/PA in the medical record of a reason for not scheduling a post-discharge appointment within 7 days.

Question: Is there documentation by a physician/APN/PA in the medical record of a reason for not scheduling a post-discharge appointment within 7 days?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of a reason for not scheduling a post-discharge appointment within 7 days.

N (No) There is no documentation of a reason for not scheduling a post-discharge appointment within 7 days, OR unable to determine from medical record documentation.

Notes for Abstraction:

- Reasons for not scheduling a post-discharge appointment within 7 days must be documented by the physician/APN/PA.
- If reasons are not mentioned in the context of 7 days after discharge, do not make inferences (e.g., do not assume that an appointment was scheduled for 14 days post-discharge because one was not available within 7 days unless documentation explicitly states so.)
  - Reasons must be explicitly documented (e.g., “4 week wait at county clinic. Follow-up scheduled with Dr. X at 10:30 on X/XX/XXXX.”)
- When conflicting information is documented in the medical record, select “Yes”.
- If documentation indicates that the follow-up appointment was not scheduled because the patient is cognitively impaired, (e.g., comatose, obtunded, confused, short-term memory loss) and has no caregiver available to receive the details of the scheduled appointment, select “Yes”.
- The caregiver is defined as the patient's family or other person (e.g. home health, VNA provider, prison official or law enforcement personnel) who will be responsible for care of the patient after discharge.
- The following **do not** require physician/APN/PA documentation:
  - Patient is a visitor from another country or a state or region outside of the provider's scope of referral
  - Patient refusal of follow-up appointment
  - Patient is discharged to a court/law enforcement setting

Suggested Data Sources:

- Nursing notes
- Progress notes
- Physician orders
- Discharge summary
- Discharge instruction sheet,
- Home health referral form

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Reason for No VTE Prophylaxis – Hospital Admission*

Collected For: STK-1

Definition: Physician/APN/PA or pharmacist documentation why mechanical AND pharmacological VTE prophylaxis was not administered at hospital admission.

- Explicit documentation of a contraindication to **BOTH** mechanical prophylaxis AND pharmacological prophylaxis is needed.

Question: Is there physician/APN/PA or pharmacist documentation why VTE prophylaxis was not administered at hospital admission?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is physician/APN/PA or pharmacist documentation why VTE prophylaxis was not administered at hospital admission.

N (No) There is no physician/APN/PA or pharmacist documentation why VTE prophylaxis was not administered at hospital admission or unable to determine from medical record documentation.

Notes for Abstraction:

- If a patient received prophylaxis as per the data element VTE Prophylaxis, select "No."
- To select "Yes" for this data element, documentation must be dated from arrival to the day after hospital admission. Documentation written after arrival but prior to admission is acceptable.
- Reasons for not prescribing mechanical and pharmacological VTE prophylaxis must be documented by a physician/APN/PA or pharmacist.
  EXCEPTIONS:
  - Patient/family refusal may be documented by a nurse, but should be documented within the same time frame as the reason for no VTE prophylaxis. Patient/family refusal of any form of prophylaxis is acceptable.
    Example:
    Patient refused heparin, select "Yes."
- **For patients on anticoagulants:**
  - For patients on continuous IV heparin therapy the day of or day after hospital admission, select "Yes."
  - If warfarin is listed as a home or current medication, select "Yes" regardless of other documentation.
  - For patients receiving anticoagulant therapy for atrial fibrillation or for other conditions (e.g. angioplasty), with anticoagulation administered on the day of or the day after hospital admission, select "Yes."
- **If reasons are not mentioned in the context of VTE prophylaxis, do not make inferences** (e.g., do not assume that VTE Prophylaxis was not administered because of a bleeding disorder unless documentation explicitly states so).
  Example:

Physician/APN/PA or pharmacist documentation of bleeding risk, review the chart for documentation about reasons for no mechanical AND reasons for no pharmacological VTE prophylaxis.

EXCEPTION:

- Documentation within the timeframe specified that the patient is a bilateral lower extremity amputee is an acceptable reason for no mechanical prophylaxis.

- Physician/APN/PA or pharmacist documentation that the patient is ambulating without mention of VTE prophylaxis is insufficient. Do not infer that VTE prophylaxis is not needed unless explicitly documented.

  Examples:

  - There is documentation of "No VTE Prophylaxis, patient ambulating," select "Yes."
  - There is documentation of "Patient low risk for VTE, ambulating," select "Yes."
- For patients with a reason for no pharmacologic or no mechanical prophylaxis and an order for ANY prophylaxis that was NOT administered without a reason, select "No."

  Example:

  - Patient has documentation of an order for IPCs and no documentation that IPCs were applied, select "No."
- If two physicians/APN/PA or pharmacists document conflicting or questionable risk/ needs for prophylaxis, select "No."
- If a risk assessment is used, and notes anything other than low risk (e.g. intermediate risk, moderate risk, or high risk), additional documentation must be present to answer "Yes." **Explicit documentation** of a contraindication to mechanical AND contraindication to pharmacological prophylaxis must be addressed.

  - If there is physician documentation of "bleeding, no pharmacologic prophylaxis" the chart must be reviewed for documentation about a reason for no mechanical prophylaxis in order to select "Yes."

    Examples:

    - Bleeding, no pharmacologic prophylaxis, no mechanical prophylaxis.
    - Active GI bleed – low molecular weight heparin contraindicated, no mechanical prophylaxis needed.
    - "No VTE Prophylaxis", "No VTE Prophylaxis needed" [no reason given].
- If Comfort Measures Only (CMO) was documented after the day after arrival (Day 1) but by the day after hospital admission, select "Yes."

  Example:

  - Patient arrives in the ED on 06/01/20xx but is in observation until admission to the hospital on 06/03/20xx. If CMO is documented by 06/04/20xx, select "Yes."
- Documentation that the patient is adequately anticoagulated or already anticoagulated on warfarin, select "Yes."

  Examples:

  - Patient is already anticoagulated, taking Coumadin at home prior to admission.

- INR therapeutic and adequately anticoagulated at this time.

- Documentation synonymous with “abruptly reversed anticoagulation for major bleeding,” select “Yes.”
  Examples:
  - INR reversal for major bleeding.
  - Reverse anticoagulation for intracranial hemorrhage.
- Documentation of administration of IV alteplase / tPA is **NOT** a stand-alone reason for no VTE prophylaxis.

Suggested Data Sources:

ONLY PHYSICIAN/APN/PA OR PHARMACIST DOCUMENTATION OF A REASON FOR NOT ADMINISTERING VTE PROPHYLAXIS:

- Consultation notes
- Emergency Department record
- History and physical
- Physician orders
- Physician progress notes
- Risk assessment form
- Transfer form
- Medication administration record
- Nurses notes
- Risk Assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None Refer to Appendix H, Table 2.7 Anticoagulation Therapy for Atrial Fibrillation and Other Conditions.	• Unchecked checkbox next to a reason (e.g., blank checkbox on a form or electronic template next to “cogulapathy” or "bilateral amputee"). • Checked checkbox next to "other reason" with a blank space for the specific reason.

Name: *Reason for Not Administering a Procoagulant Reversal Agent*

Collected For: CSTK-04

Definition: Reason for not administering a procoagulant reversal agent.

- Adverse reaction to a procoagulant reversal agent
- Other reasons documented by physician/advanced practice nurse/physician assistant (physician/APN/PA) or pharmacist.

Procoagulant reversal agents are medications that increase coagulation factors to promote clotting.

Question: Is there documentation by a physician/APN/PA or pharmacist in the medical record of a reason for not administering a procoagulant reversal agent?

Format: **Length:** 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of a reason for not administering a procoagulant reversal agent.

N (No) There is no documentation of a reason for not administering a procoagulant reversal agent OR unable to determine from medical record documentation.

Notes for Abstraction:

- Reasons for not administering a procoagulant reversal agent must be documented by the physician/APN/PA or pharmacist.
- **If reasons are not mentioned in the context of a procoagulant reversal agent, do not make inferences** (e.g., do not assume that a procoagulant reversal agent was not administered because of an adverse reaction to a procoagulant reversal agent unless documentation explicitly states so.)
  - Reasons must be explicitly documented (e.g., "Allergic to cow milk. Do not give NovoSeven.
  - Physician/APN/PA or pharmacist documentation of a hold on a procoagulant reversal agent or discontinuation of a procoagulant reversal agent constitutes a "clearly implied" reason for not administering the procoagulant reversal agent.
- When conflicting information is documented in the medical record, select "Yes".

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Discharge summary

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Patient/family refusal	None

Name: *Reason for Not Administering Antithrombotic Therapy by End of Hospital Day 2*

Collected For: ASR-IP-2, STK-5

Definition: Reason for not administering antithrombotic therapy by end of hospital day 2.

- Other reasons documented by physician/APN/PA or pharmacist.

Question: Is there documentation by a physician/advanced practice nurse/physician assistant (physician/APN/PA) or pharmacist in the medical record of a reason for not administering antithrombotic therapy by end of hospital day 2?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is physician/APN/PA or pharmacist documentation of a reason for not administering antithrombotic therapy by end of hospital day 2.

N (No) There is no physician/APN/PA or pharmacist documentation of a reason for not administering antithrombotic therapy by end of hospital day 2 or unable to determine from the medical record documentation.

Notes for Abstraction:

- Documentation for allowable value “Yes” must be found within the timeframe of arrival to the end of hospital day 2. It is not necessary to review documentation outside of this timeframe to answer this data element.
- To compute end of hospital day 2, count the arrival date as hospital day 1. If a reason for not administering antithrombotic therapy was documented by 11:59 P.M. of hospital day 2, select “Yes” for this data element.
- Reasons for not administering antithrombotic therapy must be documented by a physician/APN/PA or pharmacist with one exception: Patient/family refusal of any form of antithrombotic therapy (e.g., “ASA refused,” “Patient refusing antithrombotic therapy”) may be documented by a nurse. However, it must be documented in the timeframe of arrival to the end of hospital day 2.
  Example:
  Patient arrived on 03/01/20XX. Nursing notes on 03/02/20XX indicates that patient refused antithrombotic therapy, select “Yes.”
- **If reasons are not mentioned in the context of antithrombotics, do not make inferences** (e.g., do not assume that antithrombotic therapy was not administered because of a bleeding disorder unless documentation explicitly states so).
  - Reasons must be explicitly documented (e.g., “Hemorrhagic transformation – do not give aspirin,” “Active GI bleed – antithrombotic therapy contraindicated,” “H/O bleeding disorder – anticoagulation therapy contraindicated,” “Low platelet count - do not give antiplatelet medications,” “No ASA” [no reason given]).
  - Consider the terms "anticoagulant", "antiplatelet", and "blood thinners" synonymous with antithrombotic therapy. Physician/APN/PA or pharmacist documentation,(e.g., "no blood thinners", "no anticoagulant medications", "no antiplatelet medications"), select "Yes".

- For patients receiving ticagrelor as antithrombotic therapy for acute coronary syndrome (ACS), NSTE-ACS treated with early invasive strategy and/or coronary stenting, or other indications, select "Yes" if it is administered on the day of or day after hospital arrival.
- For patients with an order for ANY antithrombotic that was NOT administered without a documented reason or administered after day 2, select "No."
  Example:
  Patient has documentation of an order for aspirin on day 2. No documentation that aspirin was administered by end of day 2. No documentation of a hold or discontinuation of the aspirin order or other documented reason, select "No."
- NPO is NOT a reason for not administering antithrombotic therapy without explicit documentation that no antithrombotic medication should be given. Another route of administration can be used.
- An allergy or adverse reaction to one type of antithrombotic would NOT be a reason for not administering all antithrombotics. Another medication can be ordered.
- For patients on warfarin therapy prior to hospital arrival and no order for warfarin on the day of or day after arrival due to "high INR," select "Yes."

Suggested Data Sources:

ONLY PHYSICIAN/APN/PA OR PHARMACIST DOCUMENTATION OF A REASON FOR NOT ADMINISTERING ANTITHROMBOTIC THERAPY:

- Consultation notes
- Emergency room records
- History and physical
- Medication reconciliation form
- Progress Notes

SUGGESTED DATA SOURCES FOR PATIENT/FAMILY REFUSAL (other than physician/APN/PA or pharmacist documentation of a reason for not administering antithrombotic therapy as noted above):

- Medication Administration Record
- Nurses notes

Excluded Data Sources:
Any documentation dated/timed prior to hospital arrival or after hospital day 2.

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• None • Refer to Appendix C, Table 8.2 for a comprehensive list of Antithrombotic Medications	• Delay in stroke diagnosis • Antithrombotic medication allergy described using one of the negative modifiers or qualifiers listed in Appendix H, Table 2.6, Qualifiers and Modifiers Table.

Name: *Reason for Not Administering Nimodipine Treatment*

Collected For: CSTK-06

Definition: Reason for not administering nimodipine treatment:

- Nimodipine allergy
- Non-aneurysmal subarachnoid hemorrhage (SAH)
- Reversible cerebral vasoconstriction syndrome
- Cerebral amyloid angiopathy
- Other reasons documented by physician/advanced practice nurse/physician assistant (physician/APN/PA) or pharmacist

Nimodipine inhibits calcium transport into vascular smooth muscle cells, thereby preventing or limiting cerebral vasospasm.

Question: Is there documentation by a physician/APN/PA or pharmacist in the medical record of a reason for not administering nimodipine treatment?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of a reason for not administering nimodipine treatment.

N (No) There is no documentation of a reason for not administering nimodipine treatment, OR unable to determine from medical record documentation.

Notes for Abstraction:

- Reasons for not administering nimodipine must be documented by the physician/APN/PA or pharmacist within 24 hours of hospital arrival. It is not necessary to review documentation outside of this timeframe.
- The following are acceptable as stand-alone reasons for not administering nimodipine treatment – Nimodipine linkage is not needed:
  - Non-aneurysmal subarachnoid hemorrhage (SAH)
  - Reversible cerebral vasoconstriction syndrome
  - Cerebral amyloid angiopathy
- **If reasons are not mentioned in the context of nimodipine treatment, do not make inferences** (e.g., do not assume that nimodipine was not administered because of hypotension unless documentation explicitly states so.)
  - Reasons must be explicitly documented (e.g., “BP 80/40 — No nimodipine.”)
  - Physician/APN/PA or pharmacist documentation of a hold on nimodipine or discontinuation of nimodipine that occurs within the first 24 hours of hospital arrival constitutes a “clearly implied” reason for not administering nimodipine treatment. A hold/discontinuation of all P.O. medications counts if nimodipine (i.e., Nimotop, Nymalize) was on order at the time of the notation.

    EXCEPTION:
    Documentation of a conditional hold or discontinuation of nimodipine (e.g., “Hold nimodipine if SBP < 100 mm/Hg”, “Stop nimodipine if AST > 50 IU/L”.

- When conflicting information is documented in the medical record, select “Yes”.
- Documentation that the patient is NPO or has a nasogastric tube (NGT) without mention that nimodipine should not be administered is insufficient. Do not infer that nimodipine is not needed unless explicitly documented.
  - Physician orders for “NPO except medications” does not count as a reason for not administering nimodipine, select “No”.

Suggested Data Sources:

- Emergency department record
- Nursing flow sheet
- Progress notes
- Medication administration record (MAR)
- Medication reconciliation form

Additional Notes:

Excluded Data Sources:

- Any documentation dated/timed later than 24 hours after hospital arrival.

Guidelines for Abstraction:

Inclusion	Exclusion
• Patient/family refusal	None

Name: *Reason for Not Initiating Antenatal Steroids*

Collected For: PC-03

Definition: Reasons for not initiating antenatal steroids before delivery are clearly documented in the medical record. Reasons for not initiating antenatal steroids may include fetal distress, imminent delivery or other reasons documented by physician/advanced practice nurse (APN)/physician assistant (PA)/certified nurse midwife (CNM).

Initial antenatal steroids are 12mg betamethasone IM or 6mg dexamethasone IM.

Question: Is there documentation in the medical record of reasons for not initiating antenatal steroids before delivery?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation by physician/APN/PA/CNM that the patient has one or more reasons for not initiating antenatal steroids before delivery.

N (No) There is no documentation by physician/APN/PA/CNM of a reason for not initiating antenatal steroids before delivery or unable to determine from medical record documentation.

Notes for Abstraction: When determining whether there is a reason documented by a physician/APN/PA or CNM for not initiating antenatal steroids, reasons must be explicitly documented (e.g., "patient had an adverse reaction to the medication in the past - unable to initiate antenatal steroids") or clearly implied (i.e., there is documentation of an imminent delivery which occurs within 2 hours after admission to the hospital, there is documentation the fetus has anomalies which are not compatible with life, there is documentation that the patient has chorioamnionitis).

Suggested Data Sources:

PHYSICIAN/APN/PA/CNM DOCUMENTATION ONLY

- History and physical
- Physician progress notes
- Prenatal forms

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Reason for Not Initiating IV Alteplase*

Collected For: ASR-IP-1, ASR-OP-1, STK-4

Definition: Reasons for not initiating IV alteplase.

- Documentation that intravenous (IV) or intra-arterial (IA) alteplase was initiated by a transferring hospital or emergency medical staff (EMS) prior to hospital arrival
- Documentation of patient/family refusal of IV alteplase
- Documentation of a National Institutes for Health Stroke Scale (NIHSS) score of zero in the emergency department
- Documentation by a physician/APN/PA that the patient has "no neurological deficit" or "normal neurological exam" in the emergency department
- Documentation of cardiac arrest, respiratory arrest, cardiopulmonary resuscitation, defibrillation, or intubation in the emergency department
- *Comfort Measures Only* documented by a physician/APN/PA
- Other reasons for not initiating IV alteplase documented by physician/APN/PA or pharmacist

Question: Is there documentation on the day of or day after hospital arrival of a reason for not initiating IV alteplase?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation on the day of or the day after hospital arrival of a reason for not initiating IV alteplase.

N (No) There is no documentation on the day of or day after hospital arrival of a reason for not initiating IV alteplase, OR unable to determine from the medical record documentation.

Notes for Abstraction:

- **Documentation of a reason for not initiating IV alteplase must be done on the day of or the day after hospital arrival. It is not necessary to review documentation outside of this timeframe to answer this data element.**
- "Other" reasons for not initiating IV alteplase must be documented by a physician/APN/PA or pharmacist.
  EXCEPTION:
  Nursing documentation of a telemedicine/teleneurology reason for not initiating IV alteplase is acceptable.
- The following are acceptable as **stand-alone reasons** for not initiating IV alteplase – IV alteplase linkage is not needed:
  - Documentation that intravenous (IV) or intra-arterial (IA) alteplase was initiated by a transferring hospital or EMS prior to hospital arrival
  - Documentation of patient/family refusal of IV alteplase
  - Documentation of NIHSS score of zero in the emergency department
  - Documentation by a physician/APN/PA that the patient has "no neurological deficit" or "normal neuro exam" in the emergency department

- Documentation of cardiac arrest, respiratory arrest, cardiopulmonary resuscitation, defibrillation, or intubation in the emergency department
- *Comfort Measures Only* documented by a physician/APN/PA

- **If "other" reasons are not mentioned in the context of IV alteplase, do not make inferences** (e.g., do not assume that IV alteplase was not initiated because of a bleeding disorder unless explicitly stated in the documentation).
  Acceptable examples (select "Yes"):
  - "Patient with Stage IV cancer – No t-PA"
  - "Increased risk of bleeding – hold t-PA for further evaluation"
  Unacceptable examples (select "No"):
  - "Age"
  - "Stroke too mild"
  - "Stroke too severe"
  - "Symptoms resolving"
  - "No gait deficit"
  - "Metastatic brain tumor"
- Documentation by a physician/APN/PA or pharmacist that the patient is not a t-PA candidate, not eligible for IV alteplase, thrombolytics are not indicated, or t-PA is contraindicated, without mention of the underlying reason, is acceptable as an "other" reason if it is documented on the day of or day after hospital arrival.
- Reason documentation which refers to intravenous medications only (e.g., "Hold IV medications," "No IVs"), is not acceptable.
- **System reasons are not acceptable as "other" reasons, regardless of any linkage to IV alteplase:**
  - Equipment-related (e.g., CT not available, IV pump malfunction)
  - Pharmacy-related (e.g., alteplase not available from pharmacy)
  - Staff-related (e.g., unable to contact consulting MD)

Suggested Data Sources:

- Consultation notes
- History and physical
- Nursing notes
- Progress notes
- Physician orders
- Medical transport records
- Medication reconciliation form
- Transfer Form
- Emergency room record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Thrombolytic therapy • t-PA	• Delay in hospital arrival greater than 2 hours • Delay in stroke diagnosis • Hold IV alteplase without a documented reason • No IV access

Name: *Reason for Not Prescribing **Anticoagulation** Therapy at Discharge*

Collected For: STK-3

Definition: Reason for not prescribing anticoagulation therapy at hospital discharge.

- Other reason documented by physician/APN/PA or pharmacist

The administration of anticoagulation therapy, unless there are contraindications, is an established effective strategy in preventing recurrent stroke in high stroke risk-atrial fibrillation patients with TIA or prior stroke.

Question: Is there documentation by a physician/advanced practice nurse/physician assistant (physician/APN/PA) or pharmacist in the medical record of a reason for not prescribing anticoagulation therapy at hospital discharge?

Format: **Length:** 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of a reason for not prescribing anticoagulation therapy at hospital discharge.

N (No) There is no documentation of a reason for not prescribing anticoagulation therapy at hospital discharge, OR unable to determine from the medical record documentation.

Notes for Abstraction:

- Reasons for not prescribing anticoagulation therapy at hospital discharge must be documented by a physician/APN/PA or pharmacist with one exception: Patient/family refusal of any form of anticoagulation therapy (e.g., “Coumadin refused,” “Patient refusing anticoagulation therapy”) may be documented by a nurse.
- If reasons are not mentioned in the context of anticoagulation therapy, do not make inferences (e.g., do not assume that anticoagulation therapy was not prescribed because of a bleeding disorder unless documentation explicitly states so).
  - Reasons must be explicitly documented (e.g., “Active GI bleed – anticoagulation therapy contraindicated,” “No warfarin” [no reason given]).
  - Consider the term "blood thinners" synonymous with anticoagulant therapy. Physician/APN/PA or pharmacist documentation, e.g., "no blood thinners", select "Yes".
  - Documentation of "do not continue" or “do not convert” a home anticoagulant medication to an inpatient medication, or an inpatient anticoagulant medication to a discharge medication, does not count as a reason for not prescribing anticoagulation therapy at discharge. Do not infer that an anticoagulant medication was not prescribed or discontinued without explicit documentation of a reason for not prescribing an anticoagulant medication at discharge.
    Example:
    Patient on Coumadin 2.5 mg while an inpatient. During discharge medication

reconciliation, physician checks “do not convert” box next to Coumadin, select “No.”

- Deferral of anticoagulation therapy from one physician/APN/PA or pharmacist to another does NOT count as a reason for not prescribing anticoagulation therapy at discharge unless the problem underlying the deferral is also noted.
  Examples:
  - “Consulting neurologist to evaluate pt. for warfarin therapy.” - select “No.”
  - “Rule out GI bleed. Start Coumadin if OK with gastroenterology” - select "Yes.”
- If there is documentation of a plan to initiate/restart anticoagulation therapy, and the reason/problem underlying the delay in starting/restarting anticoagulation therapy is also noted, this constitutes a “clearly implied” reason for not prescribing anticoagulation therapy at discharge.
  Acceptable examples (select “Yes”):
  - “Stool Occult Blood positive. May start Coumadin as outpatient.”
  - “Start warfarin if hematuria subsides.”
  Unacceptable examples (select “No”):
  - “Consider starting Coumadin in a.m.”
  - “May add warfarin when pt. can tolerate”
- Reasons do NOT need to be documented at discharge or otherwise linked to the discharge timeframe: Documentation of reasons anytime during the hospital stay are acceptable (e.g., mid-hospitalization note stating “no warfarin due to rectal bleeding” - select “Yes,” even if documentation indicates that the rectal bleeding has resolved by the time of discharge and warfarin was restarted).

- An allergy or adverse reaction to one type of anticoagulant would NOT be a reason for not administering all anticoagulants. Another medication can be ordered.
- When conflicting information is documented in a medical record, select “Yes.”
- When the current record includes documentation of a pre-arrival reason for no antithrombotic therapy, the following counts regardless of whether this documentation is included in a pre-arrival record made part of the current record or whether it is noted by hospital staff during the current hospital stay:
  Example:
  "Hx GI bleeding with warfarin" documented in a transferring record.

Suggested Data Sources:

ONLY PHYSICIAN/APN/PA OR PHARMACIST DOCUMENTATION OF A REASON FOR NOT PRESCRIBING ANTICOAGULATION THERAPY AT HOSPITAL DISCHARGE:

- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Physician orders
- Discharge summary
- After Visit Summary (AVS)
- Medication administration record (MAR)

Excluded Data Sources: Any documentation dated/timed after discharge, except discharge summary.

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None Refer to Appendix C, Table 8.3 for a comprehensive list of Anticoagulant Medications.	Anticoagulant medication allergy described using one of the negative modifiers or qualifiers listed in Appendix H, Table 2.6, Qualifiers and Modifiers Table.

Name: *Reason for Not Prescribing **Antithrombotic** Therapy at Discharge*

Collected For: ASR-IP-3, STK-2

Definition: Reason for not prescribing **antithrombotic** therapy at hospital discharge.

- Other reason documented by physician/APN/PA or pharmacist

Antithrombotic therapy is administered to reduce morbidity, mortality, and recurrence rate in stroke.

Question: Is there documentation by a physician/advanced practice nurse/physician assistant (physician/APN/PA) or pharmacist in the medical record of a reason for not prescribing antithrombotic therapy at hospital discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of a reason for not prescribing **antithrombotic** therapy at hospital discharge.

N (No) There is no documentation of a reason for not prescribing **antithrombotic** therapy at hospital discharge, OR unable to determine from the medical record documentation.

Notes for Abstraction:

- Reasons for not prescribing antithrombotic therapy at hospital discharge must be documented by a physician/APN/PA or pharmacist with one exception: Patient/family refusal of any form of antithrombotic therapy (e.g., “ASA refused,” “Patient refusing antithrombotic therapy”) may be documented by a nurse. .
- **If reasons are not mentioned in the context of antithrombotics, do not make inferences** (e.g., do not assume that antithrombotic therapy was not prescribed because of a bleeding disorder unless documentation explicitly states so).
  - Reasons must be explicitly documented (e.g., “Active GI bleed – antithrombotic therapy contraindicated,” “H/O bleeding disorder – anticoagulation therapy contraindicated,” “Low platelet count – do not give antiplatelet medications,” “No ASA” [no reason given]).
  - Consider the terms "anticoagulant", "antiplatelet", and "blood thinners" synonymous with antithrombotic therapy. Physician/APN/PA or pharmacist documentation, (e.g., "no blood thinners", "no anticoagulant medications", "no antiplatelet medications"), select "Yes".
  - Documentation of "do not continue" or “do not convert” a home antithrombotic medication to an inpatient medication, or an inpatient antithrombotic medication to a discharge medication, does not count as a reason for not prescribing antithrombotic therapy at discharge. Do not infer that an antithrombotic medication was not prescribed or discontinued without explicit documentation of a reason for not prescribing an antithrombotic medication at discharge.
    Example:
    Patient on Plavix 75 mg daily while an inpatient. During discharge medication

reconciliation, physician checks “do not convert” box next to Plavix, select “No.”

- Deferral of antithrombotic therapy from one physician/APN/PA or pharmacist to another does NOT count as a reason for not prescribing antithrombotic therapy at discharge unless the problem underlying the deferral is also noted.
  Examples:
  - “Consulting neurologist to evaluate pt. for warfarin therapy.” - select “No.”
  - “Rule out GI bleed. Start ASA if OK with gastroenterology.” - select “Yes.”
- If there is documentation of a plan to initiate/restart antithrombotic therapy, and the reason/problem underlying the delay in starting/restarting antithrombotic therapy is also noted, this constitutes a “clearly implied” reason for not prescribing antithrombotic therapy at discharge.
  Acceptable examples (select “Yes”):
  - “Stool Occult Blood positive.
  - May start Coumadin as outpatient.”
  - “Start ASA if hematuria subsides.”
  Unacceptable examples (select “No”):
  - “Consider starting Coumadin in a.m.”
  - “May add Plavix when pt. can tolerate”
- Reasons do NOT need to be documented at discharge or otherwise linked to the discharge timeframe: Documentation of reasons anytime during the hospital stay are acceptable (e.g., mid-hospitalization note stating “no ASA due to rectal bleeding” - select “Yes,” even if documentation indicates that the rectal bleeding has resolved by the time of discharge and ASA was restarted).

- An allergy or adverse reaction to one type of antithrombotic would NOT be a reason for not administering all antithrombotics. Another medication can be ordered.
- When conflicting information is documented in a medical record, select “Yes.”
- When the current record includes documentation of a pre-arrival reason for no antithrombotic therapy, the following counts regardless of whether this documentation is included in a pre-arrival record made part of the current record or whether it is noted by hospital staff during the current hospital stay:
  Example:
  "Hx GI bleeding with ASA" documented in a transferring record.
- For patients prescribed ticagrelor as antithrombotic therapy at discharge due to a history of acute coronary syndrome (ACS), NSTE-ACS treated with early invasive strategy and/or coronary stenting, or other indications, select “Yes.”

Suggested Data Sources:

ONLY PHYSICIAN/APN/PA OR PHARMACIST DOCUMENTATION OF A REASON FOR NOT PRESCRIBING ANTITHROMBOTIC THERAPY AT HOSPITAL DISCHARGE:

- Consultation notes
- Discharge summary
- After Visit Summary (AVS)
- Emergency Department record
- History and physical

- Medication administration record
- Medication reconciliation form
- Physician orders
- Progress Notes

Excluded Data Sources:
Any documentation dated/timed after discharge, except discharge summary.

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None Refer to Appendix C, Table 8.2 for a comprehensive list of Antithrombotic Medications.	Antithrombotic medication allergy described using one of the negative modifiers or qualifiers listed in Appendix H, Table 2.6, Qualifiers and Modifiers Table.

Name: *Reason for Not Prescribing Statin Medication at Discharge*

Collected For: STK-6

Definition: Reasons for not prescribing a statin medication at discharge:

- Statin medication allergy
- LDL-c less than 70 mg/dL
- Other reasons documented by physician/advanced practice nurse/physician assistant (physician/APN/PA) or pharmacist

Statins are a class of pharmaceutical agents that modify LDL cholesterol by blocking the action of an enzyme in the liver which is needed to synthesize cholesterol thereby decreasing the level of cholesterol circulating in the blood.

Question: Is there documentation of a reason for not prescribing a statin medication at discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of a reason for not prescribing a statin medication at discharge.

N (No) There is no documentation of a reason for not prescribing a statin medication at discharge, OR unable to determine from medical record documentation.

Notes for Abstraction:

- A statin medication "allergy" or "sensitivity" documented at any time during the hospital stay counts as an allergy regardless of what type of reaction might be noted (e.g., "Allergies: Atorvastatin – Nausea" – select "Yes").
- Documentation of an allergy/sensitivity to one particular statin medication is acceptable to take as an allergy to the entire class of statin medications (e.g., "Allergic to Lipitor").
- Documentation of a LDL-c less than 70 mg/dL anytime during the hospital stay is an acceptable stand-alone reason for not prescribing statin medication at discharge – Linkage with statin is not needed. If more than one LDL value is documented, the highest value must be less than 70 mg/dL. Direct or calculated fasting or non-fasting values are both acceptable. LDL values obtained within 30 days prior to hospital arrival are acceptable to select "Yes."
- When conflicting information is documented in a medical record, select "Yes."
- Reasons for not administering statin therapy must be documented by a physician/APN/PA or pharmacist with one exception: Patient/family refusal of any form of statin therapy (e.g., "Lipitor refused," "Patient refusing statin therapy") may be documented by a nurse.
- In determining whether there is a reason documented by physician/APN/PA or pharmacist for not prescribing a statin medication at discharge:
  - Reasons must be explicitly documented (e.g., "Chronic liver failure – Statins contraindicated," "Hx muscle soreness with statins in past") or clearly implied

(e.g., “No evidence of atherosclerosis – no statin therapy,” “Pt. refusing all medications,” “Supportive care only – no medication,” “Statins not indicated,” “No statin medications” [no reason given]). If reasons are not mentioned in the context of statin medications, do not make inferences (e.g., do not assume that a statin medication is not being prescribed because of the patient’s history of alcoholism or severe liver disease alone).

- Documentation of "do not continue" or “do not convert” a home statin medication to an inpatient medication, or an inpatient statin medication to a discharge medication, does not count as a reason for not prescribing statin medication at discharge. Do not infer that a statin medication was not prescribed or discontinued without explicit documentation of a reason for not prescribing a statin medication at discharge.
  Example:
  Patient on Atorvastatin 80 mg while an inpatient. During discharge medication reconciliation, physician checks “do not convert” box next to atorvastatin, select “No.”
- Reason documentation which refers to a more general medication class is not acceptable (e.g., “No cholesterol-reducers,” “Hold all lipid-lowering medications”).
- Deferral of statin medication from one physician/APN/PA or pharmacist to another does NOT count as a reason for not prescribing a statin medication unless the problem underlying the deferral is also noted.
  Examples:
  - “Consulting neurologist to evaluate pt. for statin therapy” - select “No.”
  - “Severe diarrhea. Start statin if OK with neurology.” - select "Yes.”
- If there is documentation of a plan to initiate/restart a statin medication, and the reason/problem underlying the delay in starting/restarting the medication is also noted, this constitutes a “clearly implied” reason for not prescribing a statin medication at discharge.
  Acceptable examples (select “Yes”):
  - “Liver enzymes high. May start lovastatin as outpatient.”
  - “Add statin if myalgias resolve”
  Unacceptable examples (select “No”):
  - “Consider starting statins in a.m.”
  - “May add Zocor when pt. can tolerate.”
- Reasons do NOT need to be documented at discharge or otherwise linked to the discharge timeframe: Documentation of reasons anytime during the hospital stay are acceptable (e.g., mid-hospitalization note stating “no statin medications due to abnormal liver enzymes” - select “Yes,” even if documentation indicates that the liver enzyme levels normalized by the time of discharge and the lipid-lowering medication was restarted).
- Statin medications may also be referred to as HMG CoA reductase inhibitors
- When the current record includes documentation of a pre-arrival reason for no statin medication, the following counts regardless of whether this documentation is included in a pre-arrival record made part of the current

record or whether it is noted by hospital staff during the current hospital stay:
Examples:

- "Pre-arrival statin allergy"
- "Hx muscle soreness to statins in past" documented in a transferring record.

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Physician orders
- Discharge summary
- Medication administration record (MAR)
- After Visit Summary (AVS)
- Medication reconciliation form

Excluded Data Sources: Any documentation dated/timed after discharge, except discharge summary.

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None Refer to Appendix C, Table 8.1 for a comprehensive list of Statin Medications.	Statin medication allergy described using one of the negative modifiers or qualifiers listed in Appendix H, Table 2.6, Qualifiers and Modifiers Table.

Name: *Reason for Oral Factor Xa Inhibitor*

Collected For: STK-1

Definition: Documentation why Oral Factor Xa Inhibitor was administered for VTE prophylaxis.

Question: Is there physician/APN/PA or pharmacist documentation why Oral Factor Xa Inhibitor was administered for VTE prophylaxis?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is physician/APN/PA or pharmacist documentation why Oral Factor Xa Inhibitor was administered for VTE Prophylaxis.

N (No) There is no physician/APN/PA or pharmacist documentation why Oral Factor Xa Inhibitor was administered for VTE Prophylaxis, OR unable to determine from the medical record documentation.

Notes for Abstraction:

- **The only acceptable reasons are identified in the list of inclusions. No other reasons will be accepted.**
- History of atrial fibrillation/flutter or current finding of atrial fibrillation/flutter, select “Yes.”
- If the patient has a history of previous strokes and/or taking an Oral Factor Xa Inhibitor prior to hospital arrival, select "Yes".
- History of hip or knee replacement surgery, select “Yes.”
- When conflicting information is documented in the medical record, select “Yes.”
- History of treatment for venous thromboembolism or current treatment for venous thromboembolism, select “Yes.”

Suggested Data Sources:

PHYSICIAN/APN/PA or PHARMACIST DOCUMENTATION ONLY IN THE FOLLOWING ONLY ACCEPTABLE SOURCES:

- Anesthesia record
- Consultation notes
- Emergency Department record
- History and physical
- Operative Note
- Physician orders
- Progress notes
- Risk assessment form
- Transfer sheet

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
This list is all inclusive • AF • A-fib	• Hip fracture • History of atrial fibrillation or flutter that terminated within 8 weeks following CABG

• Atrial fibrillation • Atrial flutter • History of any remote episode of documented atrial fibrillation or flutter except within 8 weeks following CABG • PAF • Paroxysmal atrial fibrillation • Partial hip arthroplasty • Partial hip replacement • Persistent atrial fibrillation • Stroke prevention / history of stroke • THR • TKR • Total hip arthroplasty • Total hip replacement • Total knee arthroplasty • Total knee replacement • Treatment of venous thromboembolism	• History of transient and entirely reversible episode of documented atrial fibrillation or flutter due to thyrotoxicosis • PAC • Paroxysmal atrial tachycardia • Paroxysmal supraventricular tachycardia • PAT • Premature atrial contraction • PST

Name: *Sample Size — Medicare Only*

Collected For: All Records, Transmission, Patient Population Data File, Used in transmission of the Hospital Initial Patient Population Data file.

Note:
For more information refer to the Population and Sampling Specifications section and Hospital Initial Patient Population Data XML File Layout in the Transmission section of this manual.

Definition: Indicates the number of episode of care (EOC) records identified for a hospital with Medicare listed as a payment source for a hospital to perform data abstraction on. This count is after the appropriate sampling methodology, if any, has been applied for the specific time period.

Notes for discharge measures (eg. HBIPS-1, STK-1, PC-01):

- If the hospital is sampling the discharge measures, then the Sample Size — Medicare Only should be equal or less than the Initial Patient Population Size — Medicare Only for the set, stratum, or sub-population.
- If the hospital is not sampling the discharge measures, then the Sample Size — Medicare Only will equal the Initial Patient Population Size — Medicare Only for the set, stratum, or sub-population.

Notes for HBIPS event measures (HBIPS-2 and 3):

- Hospitals may not sample the HBIPS event measures. For these two measures, the Sample Size — Medicare Only equals the Initial Patient Population Size — Medicare Only for the set, stratum, or sub-population.

Question: Not Applicable

Format:

Length: 6
Type: Numeric
Occurs:

Non-stratified Measure Sets:

One Sample Size — Medicare Only per hospital's measure set (e.g., GLB).

Stratified Measure Sets:

One Sample Size — Medicare Only per measure set stratum or sub-population the hospital is participating in:
* The PC measure set has four occurrences, one for the mother sub-population and three for the newborn sub-populations.
* The HBIPS measure set has four occurrences, one for each age stratum.
* The STK measure set has two occurrences, one for each sub-population.

Note:
Refer to the appropriate version of the Specifications Manual for National Quality Inpatient Measures for the number of occurrences for the VTE measure set.

Allowable Values:

0 through 999,999

Notes for Abstraction: For Discharge measures (eg. HBIPS-1,PC-01), when Sampling Frequency = N/A' because the hospital has five or fewer discharges (both Medicare and non-Medicare combined) in a quarter and has decided to not submit patient level data, Sample Size — Medicare Only should equal zero.

Suggested Data Sources: Not Applicable

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Sample Size — Non-Medicare Only*

Collected For: All Records, Transmission, Patient Population Data File, Used in transmission of the Hospital Initial Patient Population Data file.

Note:

- For more information, refer to the Population and Sampling Specifications section and Hospital Initial Patient Population Data XML File Layout in the Transmission section of this manual.

Definition: Indicates the number of episode of care (EOC) records identified for a hospital with Medicare NOT listed as a payment source for a hospital to perform data abstraction on. This count is after the appropriate sampling methodology, if any, has been applied for the specific time period.

Notes for discharge measures (eg HBIPS-1, STK-1, PC-01):

- If the hospital is sampling the HBIPS discharge measures, then the Sample Size — Non-Medicare Only should be equal or less than the Initial Patient Population Size — Non-Medicare Only for the set, stratum, or sub-population.
- If the hospital is not sampling the discharge measures, then the Sample Size — Non-Medicare Only will equal the Initial Patient Population Size — Non-Medicare Only for the set, stratum, or sub-population.

Notes for HBIPS event measures (HBIPS-2 and 3):

- Hospitals may not sample the HBIPS event measures. For these two measures, the Sample Size — Non-Medicare Only equals the Initial Patient Population Size — Non-Medicare Only for the set, stratum, or sub-population.

Question: Not Applicable

Format:

Length: 6
Type: Numeric
Occurs:

Non-stratified Measure Sets:

One Sample Size — Non Medicare Only per hospital's measure set (e.g., GLB).

Stratified Measure Sets:

One Sample Size — Non Medicare Only per measure set stratum or sub-population the hospital is participating in:
* The PC measure set has four occurrences, one for the mother sub-population and three for the newborn sub-populations.
* The HBIPS measure set has four occurrences, one for each age stratum.
* The STK measure set has two occurrences, one for each sub-population.

Note:
Refer to the appropriate version of the Specifications Manual for National

Quality Inpatient Measures for the number of occurrences for the VTE measure set.

Allowable Values:

0 through 999,999

Notes for Abstraction: For Discharge measures (eg. HBIPS-1,PC-01), when Sampling Frequency = N/A' because the hospital has five or fewer discharges (both Medicare and non-Medicare combined) in a quarter and has decided to not submit patient level data, Sample Size — Non-Medicare Only should equal zero.

Suggested Data Sources: Not Applicable

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Sample*

Collected For: All Records, Transmission, Hospital Clinical Data File

Definition: Indicates if the data being transmitted for a hospital has been sampled, or represent an entire population for the specified time period.

Question: Does this case represent part of a sample?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) The data represents part of a sample.

N (No) The data is not part of a sample; this indicates the hospital is performing 100 percent of the discharges eligible for this topic.

Notes for Abstraction: When *Sampling Frequency* equals '3' (No, the hospital is not sampling) or '4' (N/A, submission of patient level data is not required), then abstract *Sample* as "No".

Suggested Data Sources: Not Applicable

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• None	• None

Name: *Sampling Frequency*

Collected For: All Records, Transmission, Patient Population Data File, Used in transmission of the Hospital Initial Patient Population Data file.

Note:
Refer to the Population and Sampling Specifications section and Hospital Initial Patient Population Data XML File Layout in the Transmission section of this manual.

Definition: Indicates if the data being transmitted for a hospital has been sampled (either monthly or quarterly), or represents an entire population for the specified time period.

Question: Not Applicable

Format:

Length: 1
Type: Character
Occurs:

Non-stratified Measure Sets:

One Sampling Frequency per hospital's measure set (e.g. GLB).

Stratified Measure Sets:

One Sampling Frequency per measure set stratum or sub-population the hospital is participating in:
* The PC measure set has four occurrences, one for the mother sub-population and three for the newborn sub-populations.
* The HBIPS measure set has four occurrences, one for each age stratum.
* The STK measure set has two occurrences, one for each sub-population.

Note:
Refer to the appropriate version of the Specifications Manual for National Quality Inpatient Measures for the number of occurrences for the VTE measure sets.

Allowable Values:

1 Yes, the hospital is sampling data monthly.

2 Yes, the hospital is sampling data quarterly.

3 No, the hospital is not sampling.

4 N/A, submission of patient level data is not required.

Notes for Abstraction:

- Sampling Frequency must be consistent across a discharge time period.
  Example:
  If the Sampling Frequency for April is monthly, then the Sampling Frequency for May and June must be monthly.

- For Discharge measures (e.g., HBIPS-1, STK-1, PC-01): Hospitals with five or fewer discharges (both Medicare and Non-Medicare combined) in a quarter are not required to submit patient level data.
- For Event measures (eg., HBIPS-2 and 3): This data element will always be equal to 3' (No, the hospital is not sampling).

Suggested Data Sources: Not Applicable

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Sex*

Collected For: All Records

Definition: The patient's documented sex on arrival at the hospital.

Question: What is the patient's sex on arrival?

Format:
Length: 1
Type: Character
Occurs: 1

Allowable Values:

M = Male
F = Female
U = Unknown

Notes for Abstraction:
- Collect the documented patient's sex at admission or the first documentation after arrival.
- Consider the sex to be unable to be determined and select “Unknown” if:
  - The patient refuses to provide their sex.
  - Documentation is contradictory.
  - Documentation indicates the patient is a Transexual.
  - Documentation indicates the patient is a Hermaphrodite.

Suggested Data Sources:
- Consultation notes
- Emergency department record
- History and physical
- Face sheet
- Progress notes
- Nursing admission notes
- UB-04

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• None	• None

Name: *Site of Primary Vessel Occlusion*

Collected For: CSTK-08, CSTK-11, CSTK-12

Definition: Documentation in the medical record of the clinical location of the primary occluded vessel.

Question: What cerebral artery is occluded?

Format:
Length: 2
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 Anterior cerebral artery (ACA)

2 A1 ACA

3 Anterior communicating artery

4 Internal carotid artery (ICA)

5 ICA terminus (T-lesion; T occlusion)

6 Middle cerebral artery (MCA)

7 M1 MCA

8 M2 MCA

9 M3/M4 MCA

10 Vertebral artery (VA)

11 Basilar artery (BA)

12 Posterior cerebral artery (PCA)

13 Other cerebral artery branch/segment

14 The clinical location of the primary occluded vessel was not documented, OR unable to determine (UTD) from the medical record documentation.

Notes for Abstraction:
- Collect the documented clinical location of the primary occluded arterial segment treated with IA alteplase therapy and/or mechanical endovascular reperfusion therapy.

Suggested Data Sources:
- Consultation notes
- Emergency department record
- History and physical

- Progress notes
- Discharge summary
- Diagnostic test reports
- Operative notes
- Procedure notes
- Admitting notes
- Procedure reports

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Skin Puncture Date*

Collected For: CSTK-09, CSTK-12

Definition: The date associated with the time of skin puncture at this hospital to access the arterial site selected for endovascular treatment of a cerebral artery occlusion.

Question: What is the date associated with the time of skin puncture at this hospital to access the arterial site selected for endovascular treatment of a cerebral artery occlusion?

Format:
Length: 10 — MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2012-Current Year)
UTD = Unable to Determine

Notes for Abstraction:

- If the date of skin puncture at this hospital is unable to be determined from medical record documentation, select "UTD".
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid date/format) and no other documentation is found that provides this information, the abstractor should select UTD.
  Examples:
  - Documentation indicates that the *Skin Puncture Date* was 03-**42**-20xx. No other documentation in the medical record provides a valid date. Since the *Skin Puncture Date* is outside of the range listed in the Allowable Values for "Day," it is not a valid date and the abstractor should select "UTD".
  - Patient expires on 02-12-20xx and documentation indicates the *Skin Puncture Date* was 03-12-20xx. Other documentation in the medical record supports the date of death as being accurate. Since the *Skin Puncture Date* is after the *Discharge Date* (death), it is outside of the parameters of care and the abstractor should select "UTD."

Note: Transmission of a case with an invalid date as described above will be rejected from the Joint Commission's Data Warehouse. Use of "UTD" for *Skin Puncture Date* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Consultation notes
- Diagnostic test reports
- Operative notes
- Operative report
- Procedure notes
- Procedure report

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Skin Puncture Time*

Collected For: CSTK-09, CSTK-12

Definition: The time (military time) of skin puncture at this hospital to access the arterial site selected for endovascular treatment of a cerebral artery occlusion.

Question: What is the time of skin puncture at this hospital to access the arterial site selected for endovascular treatment of a cerebral artery occlusion?

Format:
Length: 5 - HH-MM (with or without colon) or UTD
Type: Time
Occurs: 1

Allowable Values:

HH = Hour (00-23)
MM = Minutes (00-59)
UTD = Unable to Determine

Time must be recorded in military time format. With the exception of Midnight and Noon:

- If the time is in the a.m., conversion is not required
- If the time is in the p.m., add 12 to the clock time hour

Examples:

Midnight = 00:00
Noon = 12:00
5:31 am = 05:31
5:31 pm = 17:31
11:59 am = 11:59
11:59 pm = 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20xx, review supporting documentation to determine if the *Skin Puncture Date* should remain 11-24-20xx or if it should be converted to 11-25-20xx.

When converting Midnight or 24:00 to 00:00, do not forget to change the *Skin Puncture Date*.
Example:
Midnight or 24:00 on 11-24-20xx = 00:00 on 11-25-20xx

Notes for Abstraction:

- For times that include "seconds"", remove the seconds and record the time as is. Example: 15:00:35 would be recorded as 15:00.
- If the *Skin Puncture Time* is unable to be determined from medical record documentation, select "UTD".
- The medical record must be abstracted as documented (taken at "face value"). When the time documented is obviously in error (not a valid time) **and** no other

documentation is found that provides this information, the abstractor should select “UTD”.
Examples:
Documentation indicates the *Skin Puncture Time* was 3300. No other documentation in the medical record provides a valid time. Since the *Skin Puncture Time* is outside of the range listed in the Allowable Values for “Hour,” it is not a valid time and the abstractor should select “UTD”.
Note: Transmission of a case with an invalid time as described above will be rejected from the Joint Commission's Data Warehouse. Use of “UTD” for *Skin Puncture Time* allows the case to be accepted into the warehouse.

- Abstract the *Skin Puncture Time* documented for endovascular treatment of the occluded cerebral artery.”
  Examples:
  Arrival time 1400. A-line started in the emergency department at 1425. Entered interventional suite at 1600. Anesthesia start time 1607. Groin puncture at 1615. Select 1615.
- If multiple skin puncture times are documented for the same endovascular procedure, then select the earliest time.

Suggested Data Sources:

- Consultation notes
- Diagnostic test reports
- Operative notes
- Operative report
- Procedure notes
- Procedure report

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Carotid puncture time • Brachial puncture time • Femoral puncture time • Groin puncture time • Radial puncture time	None

Name: *Skin Puncture*

Collected For: CSTK-09, CSTK-12

Definition: Puncture of the skin with a needle or introducer to provide an entry site for arterial access. Arterial access (e.g., brachial, carotid, femoral, radial) is needed for endovascular treatment of a cerebral artery occlusion with a device (e.g., stent-retriever) and/or intra-arterial thrombolysis (alteplase / t-PA).

Question: Is there documentation of skin puncture at this hospital to access the arterial site selected for endovascular treatment of a cerebral artery occlusion?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of skin puncture at this hospital to access the arterial site selected for endovascular treatment of a cerebral artery occlusion.

N (No) There is no documentation of skin puncture at this hospital to access the arterial site selected for endovascular treatment of a cerebral artery occlusion, OR unable to determine from medical record documentation.

Notes for Abstraction:
- If skin puncture was done at this hospital and documented in the medical record, select "Yes".
- If skin puncture was not done at this hospital, select "No".
- If skin puncture at this hospital is not documented or unable to determine from medical record documentation, select "No".

Suggested Data Sources:
- Consultation notes
- Diagnostic test reports
- Operative notes
- Operative report
- Procedure notes *Procedure report

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Arterial access	None

Name: *Statin Medication Prescribed at Discharge*

Collected For: STK-6

Definition: Documentation that a statin medication was prescribed or continued at hospital discharge. Statins are a class of pharmaceutical agents that modify LDL cholesterol by blocking the action of an enzyme in the liver which is needed to synthesize cholesterol thereby decreasing the level of cholesterol circulating in the blood.

Question: Was a statin medication prescribed at discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) Statin medication prescribed at discharge.

N (No) Statin medication not prescribed at discharge OR unable to determine from medical record documentation.

Notes for Abstraction:

- If there is documentation in the medical record that a statin medication was prescribed at discharge, then select "Yes". Documentation that the patient should **continue to take a statin medication** that was administered during the hospital stay or taken prior to hospital admission (e.g., home medication) is also acceptable. At minimum, the name of the statin medication must be documented.
- In determining whether a statin medication was prescribed at discharge, it is not uncommon to see conflicting documentation amongst different medical record sources. For example, the discharge summary may list a statin medication that is not included in any of the other discharge medication sources (e.g., discharge orders). All discharge medication documentation available in the chart should be reviewed and taken into account by the abstractor.
  - In cases where there is a statin medication in one source that is not mentioned in other sources, it should be interpreted as a discharge medication (select "Yes") unless documentation elsewhere in the medical record suggests that it was NOT prescribed at discharge - **Consider it a discharge medication in the absence of contradictory documentation.**
  - If documentation is contradictory (e.g., physician noted “d/c lovastatin” in the discharge orders, but lovastatin is listed in the discharge summary’s discharge medication list), or after careful examination of circumstances, context, timing, etc, documentation raises enough questions, the case should be deemed "unable to determine" (select "No").
  - Consider documentation of a hold on a statin medication after discharge in one location and a listing of that statin medication as a discharge medication in another location as contradictory ONLY if the timeframe on the hold is not **defined** (e.g., “Hold lovastatin”). Examples of a hold with a defined timeframe include “Hold Vytorin x2 days” and “Hold lovastatin until ALT/AST normalize.”

- If a statin medication is NOT listed as a discharge medication, and there is only documentation of a hold or plan to delay initiation/restarting of a statin medication after discharge (e.g., "Hold Vytorin x2 days," "Start statins as outpatient," "Hold lovastatin"), select "No."
- If two discharge summaries are included in the medical record, use the one with the latest date/time. If one or both are not dated or timed, and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms. Use the dictated date/time over transcribed date/time, file date/time, etc.
  Examples:
  - Two discharge summaries, one dictated 5/22 (day of discharge) and one dictated 5/27 - Use the 5/27 discharge summary.
  - Two discharge medication reconciliation forms, one not dated and one dated 4/24 (day of discharge) - Use both.

- Disregard a statin medication documented only as a recommended medication for discharge (e.g., "Recommend sending patient home on lovastatin"). Documentation must be clearer that a statin was actually prescribed at discharge.
- Disregard documentation of statin prescribed at discharge when noted only by medication class (e.g., "Statin Prescribed at Discharge: Yes" on a core measures form). The statin must be listed by name.

Suggested Data Sources:

- Consultation notes
- Progress notes
- Physician orders
- Discharge summary
- Medication reconciliation form
- After Visit Summary (AVS)

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Refer to Appendix C, Table 8.1 for a comprehensive list of Statin Medications.	None

Name: *Substance Use*

Collected For: HBIPS-1

Definition: Documentation in the medical record that an admission screening for substance use and alcohol use which occurred over the past twelve (12) months was performed within the first three days of admission. The screening must include: the type, amount, frequency of use and any problems due to past use.

Question: Is there documentation in the medical record that the patient was screened for substance use and alcohol use which occurred over the past twelve (12) months within the first three days of admission?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) Documentation in the medical record includes a screening for substance use and alcohol use which occurred over the past twelve (12) months performed within the first three days of admission.

N (No) Documentation in the medical record does not include a screening for substance use and alcohol use which occurred over the past twelve (12) months OR the screening was not performed within the first three days of admission OR unable to determine from medical record documentation.

X (Unable to complete admission screening) Documentation in the medical record that a screening for substance use and alcohol use cannot be completed due to the patient's inability or unwillingness to answer assessment questions within the first three days of admission OR patient has a previous admission to the psychiatric unit during a single hospitalization.

Notes for Abstraction:

- For the purpose of this data element, substance refers to alcohol, drugs and any other substances used for purposes other than intended.
- A screening for substance use and alcohol use must be completed by a qualified psychiatric practitioner e.g., psychiatrist, registered nurse (RN), physician's assistant (PA) or Master of Social Work (MSW) within the first three days of admission. Titles of qualified psychiatric practitioners vary from state to state.
- The intent of this data element is to screen the patient for substance use within the 12 months prior to admission. Documentation of substance use must at a minimum state over the past 12 months. Documentation of a past history of substance use should differentiate the use being either within the past 12 months or prior to the 12 month time frame.

- Documentation of "no history" cannot be used, unless it is associated with a time frame. For example:
  - “No history of substance use within the past 12 months.”
    Or
  - “History of substance use 2 years ago.”

- The admission screening timeframe must have occurred within the first three days of admission for psychiatric care. The day after admission is defined as the first day. An admission screen performed in an ambulatory setting, i.e. emergency department, crisis center which results in an admission to an inpatient psychiatric care setting can be used if the screen becomes a permanent part of the medical record.

- Substance use is defined as the use of psychoactive or mood altering substances, i.e., prescription medications, over the counter medications, inhalants, organic substances, illegal substances and street drugs.

- If there is documentation that the patient is not a reliable historian, a relative or guardian if available, may answer the screening questions on behalf of the patient.

- If the patient was in an acute-care hospital and had multiple admissions to the psychiatric unit during his or her hospitalization, select the first admission to the psychiatric unit.

Suggested Data Sources:

- Biopsychosocial assessment
- Emergency department record
- Functional skills assessment
- History and physical
- Individual plan of service
- Initial assessment form
- Nursing notes
- Physician progress notes
- Psychiatrist assessment/admission form
- Referral packet
- School report
- Social worker assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Some examples of problems due to past substance and/or alcohol use include, but are not limited to: • Job loss • Feeling that life is out of control and fear of what might happen	• None

• Loss of family support • Arrested for drug possession • Sustained bodily harm for failure to pay for drugs • Girlfriend/boyfriend/spouse ended relationship • Loss of driver's license • Uncontrolled anger • Attempted suicide • Estranged from family members	

Name: *Term Newborn*

Collected For: PC-05, PC-06

Definition: Documentation that the newborn was at term or >= 37 completed weeks of gestation at the time of birth.

Question: Is there documentation that the newborn was at term or >= 37 completed weeks of gestation at the time of birth?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation that the newborn was at term or >= 37 completed weeks of gestation at the time of birth.

N (No) There is no documentation that the newborn was at term or >= 37 completed weeks of gestation at the time of birth OR unable to determine from medical record documentation.

Notes for Abstraction: Gestational age should be rounded off to the nearest completed week, not the following week. For example, an infant born on the 5th day of the 36th week (35 weeks and 5/7 days) is at a gestational age of 35 weeks, not 36 weeks. Estimated gestational age (EGA) may be used to determine gestational age, including a range of numbers that are 37 weeks or greater, e.g., 37-38 weeks gestation.

It is acceptable to use data derived from vital records reports received from state or local departments of public health, delivery logs or clinical information systems if they are available and are directly derived from the medical record with a process in place to confirm their accuracy. If this is the case, these may be used in lieu of the acceptable data sources listed below.

The mother's medical record ALONE cannot be used to determine the newborn's gestational age. This documentation must appear in the newborn's medical record without using the mother's medical record to perform the abstraction even if there is a link between the mother and newborn medical records in the EHR.

In cases when there is conflicting documentation, e.g., both term and a gestational age of 36 weeks are documented, the gestational age takes precedence.

In cases where there are two different values documented for gestational age and one is determined by examination and the other is determined by the best obstetrical estimate (OE) based on dates, abstract the value determined by dates.

Suggested Data Sources:
- History and physical
- Nursing notes
- Nursing admission assessment
- Progress notes

- Physician's notes
- Discharge summary

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Gestational age of 37 weeks or more • Early term • Full term • Late term • Post term • Term	• Gestational age of 36 weeks or less • Preterm • Early preterm • Late preterm

Name: *Time Last Known Well*

Collected For: ASR-IP-1, ASR-OP-1, STK-4

Definition: The time prior to hospital arrival at which the patient was last known to be without the signs and symptoms of the current stroke or at his or her baseline state of health.

Question: At what time was the patient last known to be well or at his or her prior baseline state of health?

Format:
Length: 5 - HH-MM (with or without colon) or UTD
Type: Time
Occurs: 1

Allowable Values:

HH = Hour (00-23)
MM = Minutes (00-59)
UTD = Unable to Determine

Time must be recorded in military time format. With the exception of Midnight and Noon:

- If the time is in the a.m., conversion is not required
- If the time is in the p.m., add 12 to the clock time hour

Examples:

Midnight = 00:00
Noon = 12:00
5:31 am = 05:31
5:31 pm = 17:31
11:59 am = 11:59
11:59 pm = 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20xx, review supporting documentation to determine if the *Date Last Known Well* should remain 11-24-20xx or if it should be converted to 11-25-20xx.

When converting Midnight or 24:00 to 00:00, do not forget to change the *Date Last Known Well*.
Example:
Midnight or 24:00 on 11-24-20xx = 00:00 on 11-25-20xx

Notes for Abstraction:

- The *Time Last Known Well* must be a time prior to the patient's *Arrival Time*. Do not use times after hospital arrival for *Time Last Known Well*.
- For times that include "seconds," remove the seconds and record the time as is. Example:

15:00:35 would be recorded as 15:00

- If the *Time Last Known Well* is unable to be determined from medical record documentation, select "UTD."

  EXCEPTION:

  If the only *Time Last Known Well* is documented as a time immediately before hospital arrival without a specific time range in minutes, e.g., "symptoms started just prior to ED arrival," and no other documentation mentioning time last known well is available in the medical record, use the *Arrival Time* for *Time Last Known Well*.
- The medical record must be abstracted as documented (taken at "face value"). When the time documented is obviously in error (not a valid time) **and** no other documentation is found that provides this information, the abstractor should select "UTD."

  Example:

  Documentation indicates the *Time Last Known Well* was 3300. No other documentation in the medical record provides a valid time. Since the *Time Last Known Well* is outside of the range listed in the Allowable Values for "Hour," it is not a valid time and the abstractor should select "UTD."

  Note: Transmission of a case with an invalid time as described above will be rejected from the CMS Clinical Warehouse and the Joint Commission's Data Warehouse. Use of "UTD" for *Time Last Known Well* allows the case to be accepted into the warehouse.
- If the *Time Last Known Well* is documented as one **specific time** and entered as *Time Last Known Well* on a "Code Stroke" form or stroke-specific electronic template, enter that time as the *Time Last Known Well*. Documentation of *Time Last Known Well* on a stroke-specific form or template should be selected regardless of other times last known well documented elsewhere in the medical record.

  EXCEPTIONS:

  - ANY physician/APN/PA documentation that *Last Known Well* /onset of signs/symptoms is unknown/uncertain/unclear takes precedence over specific time on "Code Stroke" form.
  - Crossing out of a specific time on a Code Stroke Form and a specific time documented on the same or different Code Stroke Form, use the specific time that is not crossed out.
  - A specific time on a Code Stroke Form and another time reference documented, e.g. <8 hours, on the same or different Code Stroke Forms, use the specific time.
  - Multiple specific times on the same or different Code Stroke Forms, use abstraction guidelines for multiple Times Last Known Well.
  - Unable to determine if a form is a Code Stroke Form, continue to review the medical record for *Time Last Known Well* documentation in other sources.
- A Code Stroke Form is used by the stroke team or ED staff to document the acute stroke process.
- See the inclusion list for acceptable terms used for a Code Stroke Form. The list is not all-inclusive.

- *Time Last Known Well* on a Code Stroke Form may be documented by a nurse.
- If the *Time Last Known Well* is documented as being a specific number of hours prior to arrival (e.g., felt left side go numb 2 hours ago) rather than a specific time, subtract that number from the time of ED arrival and enter that time as the *Time Last Known Well*.
- If the *Time Last Known Well* is noted to be a range of time prior to ED arrival (e.g., felt left side go numb 2-3 hours ago), assume the maximum time from the range (e.g., 3 hours), and subtract that number of hours from the time of arrival to compute the time last known well.
- If the time is noted to be "less than" a period of time prior to ED arrival, assume the maximum range.
  Example:
  Time Last Known Well less than one hour ago. Subtract one hour from the time of arrival to compute time last known well.
- If both the *Time Last Known Well* and the time of symptom onset are documented, select the *Time Last Known Well*.
  Examples:
  - H&P states, "Patient watching TV with family and complained of blurred vision in both eyes at 8:30 PM." ED MD notes, "Patient normal at 8:30 PM." *Time Last Known Well* is 2030.
  - "Patient was doing well at 4:30 PM – noticed difficulty speaking around 6 PM." *Time Last Known Well* is 1630.
  - Patient normal at 2200 before going to bed. Awoke at 0200 with headache and took two aspirin before returning to sleep. OK at 0700 and went to work. Felt confused, unable to speak without slurring at 0800. *Time Last Known Well* is 0700.
- If the only time documented is time of symptom onset without mention of when the patient was last known well, use the time of symptom onset for time last known well.
  Example:
  "Sudden onset headache one hour before ED arrival," documented by ED MD. Arrival time 19:24. No other documentation referencing time last known well available in medical record. *Time Last Known Well* is 18:24.
- If there are multiple times of last known well documented in the absence of the *Time Last Known Well* explicitly documented on a "Code Stroke" form, use physician documentation first before other sources, e.g., nursing, EMS.
  Example:
  "Patient last seen normal this morning at 1000" per H&P. ED nurse documented 09:50 as time last well. *Time Last Known Well* is 1000.
- If multiple times last known well are documented by different physicians or by the same provider, use the earliest time documented.
- If there is documentation of one or more episodes of stroke symptoms **AND** documentation of symptom resolution between episodes, use the time of the most recent (last) episode prior to arrival, regardless if all symptoms resolved prior to arrival.
  Examples:

- "Patient reported right hand paresthesia two days ago that resolved spontaneously after a few minutes. New onset of symptoms today around 0700 involving right arm and right leg." *Time Last Known Well* is 0700.
- "Wife states that he was having trouble with slurred speech and confusion yesterday. Symptom free this morning. Return of symptoms with facial droop noted around noon." *Time Last Known Well* is 1200.
- "Wife noticed slurred speech at 8:30 last night. Without symptoms early this morning. Wife noticed slurred speech again at 0900 during breakfast conversation." *Time Last Known Well* is 0900.
- "Wife noticed slurred speech at 8:30 last night. Symptom-free this morning. Came to ED to get checked out." *Time Last Known Well* is 2030.

Suggested Data Sources:

- Emergency department record
- History and physical
- Nursing flow sheet
- Progress notes
- Medication administration record (MAR)
- Transfer sheet
- Ambulance record
- Code Stroke form/template
- IV flow sheets

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Signs and Symptoms of Stroke • Sudden numbness or weakness of the face, arm or leg, especially on one side of the body • Sudden confusion, trouble speaking or understanding • Sudden trouble seeing in one or both eyes • Sudden trouble walking, dizziness, loss of balance or coordination • Sudden severe headache **Code Stroke Form** • Stroke Activation Form • Stroke Alert Form • Stroke Assessment Form • Stroke Intervention Form • Stroke Rapid Response Form • Thrombolysis Checklist • tPA Eligibility Form	**Code Stroke Form** • Stroke Education Form • Core Measure Form

Name: *Total Leave Days - Medicare Only*

Collected For: HBIPS-2, HBIPS-3

Definition: Total leave days-Medicare only is the aggregate number of leave days for Medicare patients during the month. A leave day-Medicare only is defined as an authorized or unauthorized absence of a Medicare patient from a psychiatric care setting, excluding discharges, during which the patient is absent from the psychiatric care setting at the time of the daily census and is not under the direct supervision of psychiatric care setting staff while absent.

This data element is used to calculate the *Initial Patient Population Size —Medicare Only* data element and the denominator for HBIPS-2 and 3. ORYX vendors can refer to the Joint Commission's *ORYX Technical Implementation Guide* for more information.

Question: What is the sum of the number of days each Medicare patient was absent from the facility?

Format:
Length: 6
Type: Numeric
Occurs: 5 (Overall rate and once per sub-strata)

Allowable Values:

0-999999

Programming Note: The value of the *Total Leave Days-Medicare Only* may be determined electronically using a source such as an Electronic Record (EHR/EMR) or hospital billing system. Hospitals must document the specific data source (field and application) that is used and make this information available to their vendor. This information must be made available to The Joint Commission upon request.

Notes for Abstraction:

- If Medicare is listed as the primary, secondary, tertiary, or even lower down on the list of payers, the patient should be counted in the Medicare inpatient days.
- If the patient is an Undocumented Alien or Illegal immigrant, the patient should be counted in the Medicare inpatient days: Section 1011 of the Medicare Modernization Act of 2003 allows for reimbursement for services rendered to patients who are: Undocumented or illegal aliens (immigrants), Aliens who have been paroled a United States port of entry and Mexican citizens to enter the United States on a laser visa.

Suggested Data Sources:

- Nursing notes
- Progress notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Therapeutic pass	None

Name: *Total Leave Days-Non-Medicare Only*

Collected For: HBIPS-2, HBIPS-3

Definition: Total leave days-Non-Medicare only is the aggregate number of leave days for Non-Medicare patients during the month. A leave day-Non-Medicare only is defined as an authorized or unauthorized absence of a Non-Medicare patient from a psychiatric care setting, excluding discharges, during which the patient is absent from the psychiatric care setting at the time of the daily census and is not under the direct supervision of psychiatric care setting staff while absent.

This data element is used to calculate the the *Initial Patient Population Size — Non-Medicare Only* data element and denominator for HBIPS-2 and 3. ORYX vendors can refer to the Joint Commission's *ORYX Technical Implementation Guide* for more information.

Question: What is the sum of the number of days each Non-Medicare patient was absent from the facility?

Format:
Length: 6
Type: Numeric
Occurs: 5 (Overall rate and once per sub-strata)

Allowable Values:

0-999999

Programming Note: The value of the *Total Leave Days-Non-Medicare Only* may be determined electronically using a source such as an Electronic Record (EHR/EMR) or hospital billing system. Hospitals must document the specific data source (field and application) that is used and make this information available to their vendor. This information must be made available to The Joint Commission upon request.

Notes for Abstraction: If Medicare is **not** listed as the primary, secondary, tertiary, or even lower down on the list of payers, the patient should be counted in the Non-Medicare total leave days.

Suggested Data Sources:
- Nursing notes
- Progress notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Therapeutic pass	None

Name: *Treatment Preferences Document*

Collected For: PAL-05

Definition: Patients preference regarding goals of care and treatment preferences are documented and accompany the patient to the next level of care at the time of discharge from the hospital.

Question: Was a transition of care document detailing goals of care and treatment preferences developed and did it accompany the patient to the next level of care at the time of discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 Yes, there is documentation in the medical record that a transition of care document detailing goals of care and treatment preferences was developed and sent with the patient at the time of discharge.

2 There is documentation in the medical record that the organization attempted either to have the discussion or complete the document but patient and/or responsible party declined.

3 No, a transition of care document detailing goals of care and treatment preferences was not developed and/or was not sent with the patient at the time of discharge, or unable to determine from medical record documentation.

4 Patient expired prior to discharge.

Notes for Abstraction:

- Documented treatment preferences, as appropriate to the patient's condition, may include, but are not limited to:
  - Blood transfusion
  - CPR preference
  - Dialysis
  - Hospitalization or transfer preference
  - Intravenous [IV] fluids
  - Mechanical ventilation
  - Surrogate decision maker
  - Tube feeding
  - Use of antibiotics
- Goals of care may be curative, rehabilitative, life-prolonging, or comfort focused.
- Any documentation in the medical record that the document was given to the patient and/or sent to the next care setting or provider may be used to select "1". This documentation is NOT restricted to the palliative care team.
- If a document was previously completed prior to this admission there must be documentation of a conversation that the document continues to reflect the patients' treatment preferences and care goals.

- If documentation is not clear that the treatment preferences document was sent with patient at discharge, select “3.”
- Documentation must include both the patient’s preference regarding goals of care and treatment preferences in order to select “1.” For example: "patient's goal is to attend their daughter's wedding in 4 months, wishes to continue with all treatments and full code status"; "patient wants to be kept comfortable; DNR, no tube feedings, IVs or return to hospital."
- “Responsible party” refers to the legally responsible or authorized individual, such as the Health Care Power of Attorney or legal guardian. In cases where there is no legal guardian or power of attorney identified, the organization should use state law guidance to identify the appropriate surrogate decision-maker.

Suggested Data Sources:

- Advanced directives
- Discharge summary
- Care transition record
- Discharge planning form
- State specific patient treatment preferences forms

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion

• Advance care plan
• Advance decision
• Advance directive
• Advance healthcare directive
• Goals of care
• Health care proxy
• Living will
• Personal directive
• Power of attorney for healthcare
• Treatment preferences
• State specific treatment preference forms may include:
  ◦ COLST (Clinician Orders for Life Sustaining Treatment)
  ◦ MOLST (Medical Orders for Life-Sustaining Treatment)
  ◦ MOST (Medical Orders for Scope of Treatment)
  ◦ POLST (Physician/Practitioner Orders for Life-Sustaining Treatment)
  ◦ POST (Physician Orders for Scope of Treatment)
  ◦ TPOPP (Transportable Physician Orders for Patient Preferences)
	None

Name: *Treatment Preferences*

Collected For: PAL-04

Definition: Medical record documentation includes the patient's preferences regarding life-sustaining treatments, or there is documentation of a discussion or attempted discussion regarding life-sustaining treatment preferences.

Documentation should include CPR preference as well as other life-sustaining treatments including, but not limited to:

- Blood transfusion
- Dialysis
- Hospitalization or transfer preference
- Intravenous [IV] fluids
- Mechanical ventilation
- Surrogate decision maker
- Tube feeding
- Use of antibiotics

Question: Does the medical record indicate the patients' preferences regarding or discussion of life-sustaining treatments?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 Yes, there is documentation of the patients' preferences regarding life-sustaining treatments.

2 Yes, there is documentation of a discussion or attempted discussion about the patients' preferences regarding life-sustaining treatments.

3 No, there is no documentation of the patients' preferences or discussion of preferences or unable to determine from medical record documentation.

Notes for Abstraction:

- "Responsible party" refers to the legally responsible or authorized individual, such as the Health Care Power of Attorney or legal guardian. In cases where there is no legal guardian or power of attorney identified, the organization should use state law guidance to identify the appropriate surrogate decision-maker.
- In order to select "1" or "2" if a party other than the patient was asked about preferences regarding life-sustaining treatments, there must be evidence in the clinical record that the responsible party as defined above was asked about preferences.
- If there is no documentation that a discussion occurred or was attempted with the patient or responsible party, select value "3."
- A discussion about preference for life-sustaining treatment can be initiated by any member of the palliative care core interdisciplinary team. The core interdisciplinary team is comprised of the following: Physician(s); Registered

nurse(s) or advanced practice nurse(s); Chaplain(s) or, spiritual care professional(s); Social worker(s).

- Orders or short statements alone, such as “DNR/DNI” or “full code” without evidence of discussion or involvement from patient/responsible party, are not sufficient to select “1”. For example "discussed CPR status, patient wishes to remain full code" select value "1".
- If there is no discussion regarding CPR preferences, select value "3".
- There is no comprehensive list of life-sustaining treatments. Documentation in the clinical record indicating CPR preference and any life-sustaining treatments is sufficient to select “1” or “2”. Examples may include, as appropriate for the patient: ventilator support, tube feeding, dialysis, blood transfusion, antibiotics, and intravenous [IV] fluids.
- Documentation must include the specific life-sustaining treatments discussed, for example “discussed use of tube feeding, IV fluids, ventilator, and CPR, patients does not wish to have any of these treatments” select value "1".
- A newly completed Physician/Practitioner Orders for Life-Sustaining Treatment (POLST) form (or other state specific treatment preference form) that is signed by the organization clinician after the admission to organization is sufficient to select “1”, provided there is evidence of involvement from patient/responsible party, such as signature of the patient or responsible party on POLST forms, or clinical documentation, such as “treatment preference confirmed with responsible party.”
- If a patient is admitted to organization with a pre-existing POLST that was signed in a prior care setting, the organization should re-affirm the patient’s preferences that appear in the pre-existing POLST. This re-affirmation of preferences should be documented in the medical record. Documentation, such as “discussed life-sustaining treatment preferences during the admission visit with patient” select “1”. If the clinical record is ambiguous as to whether the organization attempted to re-affirm patient preferences present in a pre-existing POLST, select “3.”
- If there is documentation in the medical record that the organization attempted to have a conversation with the patient and responsible party, but both the patient and responsible party explicitly refused to discuss the topic with the organization, select value “2.” This would include statements such as, “I don’t want to talk about this” or “I’m only going to talk to my priest about this”.
- If the organization attempted to discuss the topic, but the patient was unable to discuss because of their clinical status and the responsible party explicitly refused to discuss, select value “2.”
- If there is documentation in the medical record that the organization brought up the topic of life-sustaining treatment, and there was a conversation with the patient and/or responsible party, but the conversation does not result in the patient stating a preference, select value “2”

Suggested Data Sources:

- History and physical
- Progress notes
- Discharge summary
- Care transition record

- Consultation form
- Discharge planning form
- Palliative care consultation notes
- Palliative care team progress notes
- Palliative care initial encounter notes
- Palliative care admission assessment
- State specific treatment preference forms may include:
  - COLST (Clinician Orders for Life Sustaining Treatment)
  - MOLST (Medical Orders for Life-Sustaining Treatment)
  - MOST (Medical Orders for Scope of Treatment)
  - POLST (Physician/Practitioner Orders for Life-Sustaining Treatment)
  - POST (Physician Orders for Scope of Treatment)
  - TPOPP (Transportable Physician Orders for Patient Preferences)

Additional Notes: Notes adapted from: Guidance Manual for Completion of the Hospice Item Set (HIS), Centers for Medicare and Medicaid Services, Hospice Quality Reporting Program, V 1.02 Effective June 28, 2015

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Vendor Tracking Identifier*

Collected For: All Records, Transmission, Hospital Clinical Data File

Definition: An ORYX Vendor® -generated identifier that uniquely identifies this patient's stay or episode of care. It is a fictitious identifier generated by the ORYX Vendor to differentiate between individual patient records in each hospital.

This identifier cannot be derived from or related to information about the patient in such a way that it is possible to identify the patient via a review or manipulation of the data.

Since this identifier is transmitted to The Joint Commission, ORYX Vendors must be able to link this tracking identifier to the original record (patient) in the event that data quality issues arise. Any data that require correction and re-transmission must use the same tracking identifier as that used in the original transmission or a duplication of data within the Joint Commission's database will occur.

This identifier is linked to a patient's episode of care, not to a specific event that occurs during the episode of care. The Vendor Tracking ID must be the same each time data for a unique patient's episode of care is transmitted; regardless of whether this is the second or thirty-second record being transmitted for the patient.

Question: Not applicable, this data element is not data entered.

Format:
Length: 100
Type: Character
Occurs: 1

Allowable Values:

Up to 100 letters, numbers, and/or special characters can be entered.

NOTE: Only the following special characters will be allowed: ~ ! @ # $ % ^ * ( ) _ + { } | : ? ` - = [ ] ; . , / and space

The identifier cannot be left blank or be the patient's social security number, Medicare number, driver license number, medical record number, account number, or other identifier assigned to the patient for purposes other than transmission of data to The Joint Commission. In addition, this identifier cannot be a combination of data in which one portion of the data directly identifies the patient or the combination of data identifies the patient.

Notes for Abstraction: For each patient episode of care, the *Vendor Tracking ID* should match for each *Measure Set* that is submitted. For example, if the hospital submits a separate XML file for PC, ED, and TOB, the *Vendor Tracking ID* should be the same in each XML file.

Suggested Data Sources: Unique ORYX Vendor generated identifier

NOTE TO PROGRAMMERS:

- An ORYX Vendor may have its own case identifier. We are not requesting that ORYX Vendors change their internal processes; rather, this tracking identifier is needed for transmission of the hospital clinical data to The Joint Commission.

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *Violence Risk to Others*

Collected For: HBIPS-1

Definition: Documentation in the medical record that an admission screening for violence risk to others over the past six months was performed within the first three days of admission. Violence Risk to Others includes: threats of violence and/or actual commission of violence toward others. Documentation should include violence risk within the 6 months prior to admission AND any lifetime risk of violence to others beyond the 6 months prior to admission.

Question: Is there documentation in the medical record that the patient was screened for violence risk to others over the past six months was performed within the first three days of admission?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) Documentation in the medical record includes a screening for violence risk to others over the past six months performed within the first three days of admission.

N (No) Documentation in the medical record does not include a screening for violence risk to others over the past six months OR the screening was not performed within the first three days of admission OR unable to determine from medical record documentation.

X (Unable to complete admission screening) Documentation in the medical record that a screening for violence risk to others over the past six months can not be completed due to the patient's inability or unwillingness to answer assessment questions within the first three days of admission OR patient has a previous admission the psychiatric unit during a single hospitalization.

Notes for Abstraction:

- A screening for violence risk to others must be completed by a qualified psychiatric practitioner e.g., psychiatrist, registered nurse (RN), physician's assistant (PA) or Master of Social Work (MSW) within the first three days of admission. Titles of qualified psychiatric practitioners vary from state to state.

- The intent of this data element is to screen the patient for being a violence risk to others within the 6 months prior to admission. Documentation of violence risk must at a minimum state over the past 6 months. Documentation of a past history of violence risk should differentiate the risk being either within the past 6 months or prior to the 6 month time frame.

- Documentation of "no history" cannot be used, unless it is associated with a time frame. For example:
  - “No history of violence risk to others within the past 6 months.”

Or

- "History of violence risk to others over a year ago."

- If the patient was in an acute-care hospital and had multiple admissions to the psychiatric unit during his or her hospitalization, select the first admission to the psychiatric unit.

- The admission screening timeframe must have occurred within the first three days of admission for psychiatric care. The day after admission is defined as the first day. An admission screen performed in an ambulatory setting, i.e. emergency department, crisis center which results in an admission to an inpatient psychiatric care setting can be used if the screen becomes a permanent part of the medical record.

- Some examples of violence risk to others include but are not limited to the following: thoughts of harm to others, intentional infliction of harm on someone else by the patient, homicidal thoughts by the patient and thoughts of harming someone else by the patient.

- If there is documentation that the patient is not a reliable historian, a relative or guardian if available, may answer the screening questions on behalf of the patient.

Suggested Data Sources:

- Biopsychosocial assessment
- Emergency department record
- Functional skills assessment
- History and physical
- Individual plan of service
- Initial assessment form
- Nursing notes
- Physician progress notes
- Psychiatrist assessment/admission form
- Referral packet
- School report
- Social worker assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• None	• None

Name: *Violence Risk to Self*

Collected For: HBIPS-1

Definition: Documentation in the medical record that an admission screening for violence risk to self over the past six months was performed within the first three days of admission. Violence Risk to Self includes: ideation, plans/preparation and/or intent to act if ideation present, past suicidal behavior and risk/protective factors within the 6 months prior to admission.

Question: Is there documentation in the medical record that the patient was screened for violence risk to self over the past six months within the first three days of admission?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) Documentation in the medical record includes a screening for violence risk to self over the past six months was performed within the first three days of admission.

N (No) Documentation in the medical record does not include a screening for risk to self over the past six months OR the screening was not performed within the first three days of admission OR unable to determine from medical record documentation.

X (Unable to complete admission screening) Documentation in the medical record that a screening for risk of violence to self over the past six months can not be completed due to the patient's inability or unwillingness to answer assessment questions within the first three days of admission OR patient has a previous admission to the psychiatric unit during a single hospitalization.

Notes for Abstraction:

- A screening for risk of violence to self and others must be completed by a qualified psychiatric practitioner e.g., psychiatrist, registered nurse (RN), physician's assistant (PA) or Master of Social Work (MSW) within the first three days of admission. Titles of qualified psychiatric practitioners vary from state to state.

- The intent of this data element is to screen the patient for being a violence risk to self within the 6 months prior to admission. Documentation of violence risk must at a minimum state over the past 6 months. Documentation of a past history of violence risk should differentiate the risk being either within the past 6 months or prior to the 6 month time frame.

- Documentation of "no history" cannot be used, unless it is associated with a time frame. For example:
  - “No history of violence risk to self within the past 6 months.”

Or

- "History of violence risk to self over a year ago."

- If the patient was in an acute-care hospital and had multiple admissions to the psychiatric unit during his or her hospitalization, select the first admission to the psychiatric unit.

- The admission screening must have occurred within the first three days of admission for psychiatric care. The day after admission is defined as the first day. An admission screen performed in an ambulatory setting, i.e. emergency department, crisis center which results in an admission to an inpatient psychiatric care setting can be used if the screen becomes a permanent part of the medical record.

- Some examples of violence to self include but are not limited to: past suicide attempts by the patient, intentional cutting, burning, bruising or damaging of self by the patient, inappropriate substance use, suicidal thoughts in the past six months by the patient, specific suicidal plan in the past six months by the patient and past suicide attempts by anyone in patient's family.

- If there is documentation that the patient is not a reliable historian, a relative or guardian if available, may answer the screening questions on behalf of the patient.

Suggested Data Sources:

- Biopsychosocial assessment
- Emergency department record
- Functional skills assessment
- History and physical
- Individual plan of service
- Initial assessment form
- Nursing notes
- Physician progress notes
- Psychiatrist assessment/admission form
- Referral packet
- School report
- Social worker assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Examples of risk factors may include but are not limited to: • Family history of suicide • Previous suicide attempt(s) • History of alcohol and substance abuse	• None

• History of mental disorders, particularly clinical depression • Feelings of hopelessness • Impulsive and/or aggressive tendencies • Cultural and religious beliefs, such as the belief that suicide is a noble resolution of a personal dilemma • Local clusters of suicide • Lack of social support and sense of isolation • Loss (relational, social, work, or financial) • Physical illness • Easy access to lethal means, e.g., weapons, etc. • History of trauma or abuse • Unwillingness to seek help because of the stigma attached to mental health and substance abuse disorders or to suicidal thoughts • Barriers to accessing mental health treatment • Exposure to others who have died by suicide (in real life or via the media and Internet) Examples of protective factors may include but are not limited to: • Receiving clinical care for mental, physical and substance use disorders • Access to a variety of clinical interventions and support for help seeking • Restricted access to highly lethal means of suicide, e.g., weapons, etc. • Interpersonal relationships and supports, i.e., family, friends, peers, community • Support through ongoing medical and mental health care relationships • Skills in problem solving, conflict resolution and nonviolent handling of disputes • Cultural and religious beliefs that discourage suicide and support self-preservation	

Name: *VTE Prophylaxis Date*

Collected For: STK-1

Definition: The month, day, and year that VTE prophylaxis (mechanical and/or pharmacologic) was administered **after hospital admission**.

Question: What date was the VTE prophylaxis administered **after hospital admission**?

Format:
Length: 10
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (20xx)

Notes for Abstraction:

- The earliest date associated with a form of prophylaxis should be entered.
  Example:
  If the patient was admitted on 12-08-20xx and IPCs were applied at 13:00 on 12-08-20xx and LMWH was administered at 02:00 on 12-09-20xx, record the 12-08-20xx date.
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid date/format) **AND** no other documentation is found that provides this information, the abstractor should select "UTD."
  Example:
  Documentation indicates the VTE Prophylaxis Date was 03- **42** -20xx. No other documentation in the medical record provides a valid date. Since the VTE Prophylaxis Date is outside of the range listed in the Allowable Values for "Day," it is not a valid date and the abstractor should select "UTD."

Suggested Data Sources:

- Graphic/flow sheets
- Medication administration record
- Nursing notes
- Physician notes
- Progress notes

Additional Notes: **Note:** Transmission of a case with an invalid date as described above will be rejected from the CMS Clinical Warehouse and the Joint Commission's Data Warehouse. Use of "UTD" allows the case to be accepted into warehouses.

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Name: *VTE Prophylaxis*

Collected For: STK-1

Definition: The type of venous thromboembolism (VTE) prophylaxis documented in the medical record.

Question: What type of VTE prophylaxis was documented in the medical record?

Format:
Length: 1
Type: Alphanumeric
Occurs: 7

Allowable Values:

1 Low dose unfractionated heparin (LDUH)

2 Low molecular weight heparin (LMWH)

3 Intermittent pneumatic compression devices (IPC)

5 Factor Xa Inhibitor

6 Warfarin

7 Venous foot pumps (VFP)

8 Oral Factor Xa Inhibitor

A None of the above or not documented or unable to determine from medical record documentation

Notes for Abstraction:

- No value should be selected more than once. If a Value of "A" is selected, no other selection should be recorded.
  Example:
  Lovenox is ordered and substituted with dalteparin. Only abstract Value "2" once, as both are LMWH.
- Application of mechanical prophylaxis may be documented by any personnel.
  Example:
  Nursing assistant documentation of IPC application during the allowable timeframe is acceptable.
- Selection of Allowable Values 1-8 includes any prophylaxis that was administered in the allowable time frame.
  Example:
  If a patient was admitted on 12/8/20xx and had IPCs applied at 13:00 on 12/09/20xx and LMWH was administered at 22:00 on 12/8/20xx, select Values “2” and “3.”
- Only select prophylaxis if there is documentation that it was administered. Documentation in the physician progress notes under assessment/Plan: “DVT prophylaxis – IPC” is not enough to select Value “3.”

- If one pharmacological medication is ordered and another medication is substituted (such as per pharmacy formulary substitution or protocol), abstract the medication administered.
  Note: No copy of the formulary or protocol is required in the medical record.
  Example:
  Lovenox is ordered, but not received and is substituted with fondaparinux sodium, which is received by the patient. Abstract fondaparinux sodium as Value "5" for VTE Prophylaxis and abstract the date it was administered for VTE Prophylaxis Date.
- Abstract ALL VTE prophylaxis(s) that was administered on the day of or the day after hospital admission. If no VTE prophylaxis was administered during this timeframe, select "A."
- VTE Prophylaxis administered in the ED or Observation prior to the hospital admission order is not sufficient.

Suggested Data Sources:

PHARMACOLOGICAL AND MECHANICAL

- Emergency Department record
- Graphic/flow sheets
- Medication administration record
- Nursing notes
- Physician notes
- Progress notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Refer to Appendix H, Table 2.1 VTE Prophylaxis Inclusion Table.	None

Missing and Invalid Data

Introduction

Missing data refers to data elements, required for calculating a national hospital quality measure, that have no values present for one or more episodes of care (EOC) or event records. Invalid data refers to data element values, required for calculating a national hospital quality measure, that fall outside of the range of allowable values defined by The Joint Commission for that data element.

Reducing missing and invalid data minimizes the bias to a measure rate, because episodes of care with missing or invalid data cannot be included in the calculation of the observed measure rate. A measure's observed rate may not accurately reflect the patient population, if the excluded EOC and event records differ significantly from the EOCs and events with no missing data that were included in the measure calculation.

Data Collection and the Unable to be Determined (UTD) Allowable Value

Abstractors must touch and provide an answer to every data element that is applicable per the combined skip logic of all of the measures in a topic. While there is an expectation that all data elements are collected, it is recognized that in certain situations information may not be available (dates, times, codes, etc.). If, after due diligence, the abstractor determines that a value is not documented or is not able to determine the answer value, the abstractor must select “Unable to Determine (UTD)” as the answer. The “UTD” allowable value is used as follows:

- *Admission Date*, *Birthdate*, *Discharge Date*, *Event Date*, *Event Type*, *ICD-10-CM Principal and Other Diagnosis Codes*, *ICD-10-PCS Principal and Other Procedure Codes*, *Psychiatric Care Setting* for inpatient measure sets; *Outpatient Encounter Date and E/M Code* for outpatient measure sets; and, *Psychiatric Inpatient Days-Medicare Only*, *Psychiatric Inpatient Days-Non-Medicare Only*, *Total Leave Days-Medicare Only*, and *Total Leave Days-Non-Medicare Only* for the HBIPS measures do not have an “UTD” allowable value for transmission to The Joint Commission. EOC and event records containing “UTD” for any of these data elements are rejected when submitted to the Joint Commission's Data Warehouse.
- Date, time, and numeric data elements, other than those listed above have an “UTD” allowable value option.
    - Rate-based proportion algorithms evaluate EOC records to a *Measure Category Assignment* = “D” or "E" (failed) depending on the desired direction improvement of the associated measure when a date, time, or numeric data element containing an allowable value of “UTD” is evaluated. When the direction of the improvement is an increase in rate, the algorithm will evaluate the EOC records to a *Measure Category Assignment* = "D". When the direction of improvement is a decrease in rate, the algorithm will evaluate the EOC record to a *Measure Category Assignment* = "E".
    - Continuous variable and rate-based ratio algorithms evaluate EOC records to a *Measure Category Assignment* = “Y” (UTD value exists) when a date, time, or numeric data element containing an allowable value of “UTD” is evaluated.
    - The method by which data collection software collects “UTD' information is determined by each software vendor; except the **software cannot automatically default an “UTD” answer.** The

decision to enter an “UTD” for each data element is up to the abstractor, not the software.
    - There are specific requirements pertaining to the transmission of this value. Refer to the Transmission section in this manual for more information.
- Yes/No data elements: The allowable value “No” incorporates “UTD” into the definition. Refer to the measure algorithms in which each Yes/No data element is used to determine how the EOC and event records are treated.
- Data elements containing two or more categorical values: The “UTD” value is either classified as a separate allowable value or included in the same category as “None of the above/Not documented”. Refer to the measure algorithms in which each categorical data element is used to determine how the EOC record is treated.

Missing and Invalid Episode of Care (EOC) and Event Data

The Joint Commission's Data Warehouse evaluates patient data using the missing, invalid and data integrity edits. Refer to the Edit Feedback Messages documents located on Joint Commission PET, in Manuals and Guides tab, Data Transmission Technical Documentation page, Hospital Clinical Data (HCD) link, for a complete listing of all critical and informational edits.

Rejected data must be corrected and resubmitted before the transmission deadline in order for it to be accepted by the Joint Commission's Data Warehouse.

- The majority of general data elements that are missing data cause the EOC and event records to be rejected. These data elements for *Discharge measure* include but not limited to *Admission Date*, *Birthdate*, *Discharge Date*, and *ICD-10-CM Principal Diagnosis Codes*. For *Event measures* such general data elements include but not limited to *event-type*, *event-date*, *Admission Date*, and *Birthdate*. For outpatient measures such general data elements include but not limited to *Outpatient Encounter Date*, *E/M Code*, *ICD-10-CM Principal Diagnosis Codes*, *Birthdate* and *Arrival Time*. Refer to the Introduction to the Data Dictionary in this manual for the complete list of general data elements.
    - Not all patients have an ICD-10-CM Other Diagnosis Code or an ICD-10-PCS Principal and Other Procedure Codes. Records will be accepted with missing data for this data element.
- Measure-specific data elements that are missing data cause the EOC and event records to be rejected if any measure algorithm results in a *Measure Category Assignment* = “X” (missing data). If no measure evaluates to a category assignment of “X”, the EOC record will be accepted.
- General and measure specific data elements that contain invalid data cause the EOC and events record to be rejected.

Abstraction Software Skip Logic and Missing Data

Skip logic allows hospitals and vendors to minimize abstraction burden by using vendor software edit logic to bypass abstraction of data elements not utilized in the measure algorithm. However, these bypassed elements also negatively impact data quality when elements are incorrectly abstracted and subsequent data elements are bypassed and left blank.

The use of skip logic by hospitals and ORYX vendors is optional and not required by The Joint Commission. Hospitals should be aware the potential impact of skip logic on data quality and abstraction burden. Vendors and hospitals utilizing skip logic should closely monitor the accuracy rate of abstracted data elements, particularly data elements placed higher in the algorithm flow.

Note:
*A missing value occurs when the abstractor does not select an answer for a data element (leaves it blank) or the software incorrectly transmits a “null” instead of the correct value for a data element. An “UTD” allowable value is not considered missing data.

Population and Sampling:

Population and Sampling elements do not allow “UTD” or missing value. Therefore, PaS application will reject data file with missing data or “UTD” value.

Missing, Invalid, UTD Data Summary:

Missing Data	Invalid Data	UTD
No data element value is present. (blank or “null”)	The data element value falls outside of the range of defined allowable values.	The allowable value of “UTD” is present for the data element.

Population and Sampling Specifications

Introduction

Population

Defining the population is the first step to estimate a hospital's performance. A population is generally defined as a collection of patients sharing a common set of universally measured characteristics, such as an ICD-10-CM Principal Diagnosis Code or ICD-10-PCS Procedure Code. The Initial Patient Population and diagnosis codes meet this description for the national quality measures. For the purpose of measuring national quality measures, the term "Initial Patient Population" is defined below:

- An "Initial Patient Population" refers to all patients (Medicare and non-Medicare) who share a common set of specified, administratively derived data elements. This may include ICD-10-CM Diagnosis Codes or other population characteristics such as age. For example, the population for the HBIPS discharge measures (e.g., HBIPS-1 and 5) includes all patients having a principal or secondary psychiatric diagnosis code from Appendix A, Table 10.01.

Cases identified as being in the Initial Patient Population for the measure set, or strata (e.g., HBIPS), or Sub-Population (e.g. CSTK) or sampling group (e.g., PC-Mother and PC-Breast Feeding) are eligible to be sampled. For the definition of the Initial Patient Population(s) for each measure set, refer to the appropriate Initial Patient Population discussion in the Measure Information section of this manual.

Sampling

Sampling is a process of selecting a representative part of a population in order to estimate the hospital's performance, without collecting data for its entire population. Using a statistically valid sample, a hospital can measure its performance in an effective and efficient manner. Sampling is a particularly useful technique for performance measures that require primary data collection from a source such as the medical record. Sampling should not be used unless the hospital has a large number of cases in the Initial Patient Population because a fairly large number of sample cases are needed to achieve a representative sample of the population. For the purpose of sampling national quality measures, the terms "sample" and "case" are defined as below:

- The "sample" is the fraction of the population that is selected for further study.
- A "case" refers to a single record (or an episode of care [EOC] or event) within the population. For example, during the first quarter a hospital may have 100 patients who had principal or secondary psychiatric diagnosis code associated to the HBIPS-1 and HBIPS-5 measures. The hospital's Initial Patient Population would include 100 cases or 100 patient records for these measures during the first quarter.

To obtain statistically valid sample data, the sample size should be carefully determined and the sample cases should be randomly selected in such a way that the individual cases in the population have an equal chance of being selected. Only when the sample data truly represent the whole population can the sample-based performance measure data be meaningful and useful.

Each hospital is ultimately responsible that sampling techniques applied for their hospital adhere to the sampling requirements outlined in this manual. ORYX® Vendors are responsible for ensuring that the sampling techniques are applied consistently across their client hospitals.

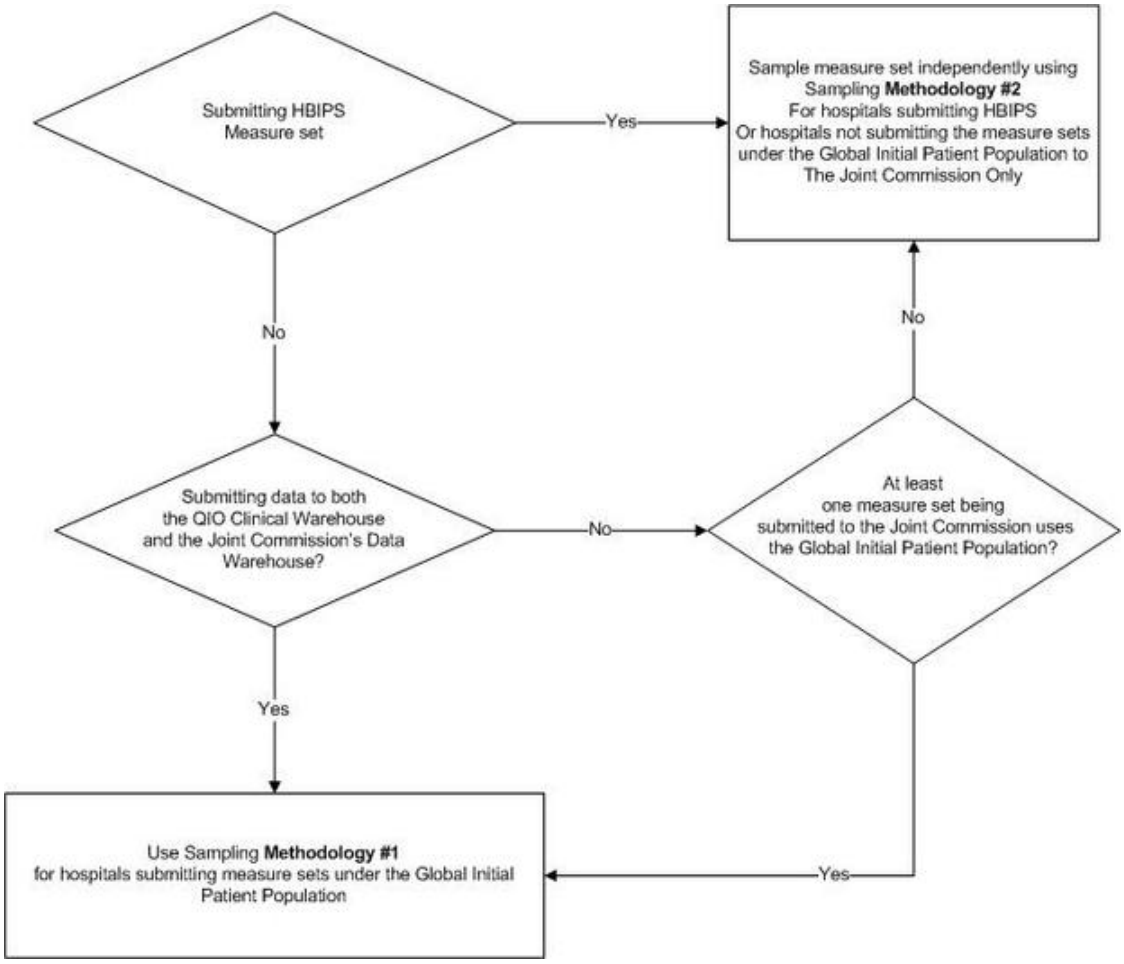
Sampling is done by national quality inpatient measure set; however, for Perinatal Care (PC), Stroke (STK) Comprehensive Stroke (CSTK), and Hospital-Based Inpatient Psychiatric Services (HBIPS) are done by strata, sub-population or sampling group. For measures requiring medical record abstraction, sampling must be done using available databases that contain all discharges for the transmission quarter.

Note:
Hospitals are NOT required to sample their data. If sampling offers minimal benefit (e.g., a hospital has 80 cases for the quarter and must select a sample of 76 cases) the hospital may choose to use all cases.

Order of Data Flow

The sampling methodology defined in the *Specifications Manual for National Hospital Inpatient Quality Measures* encourages hospitals submitting data for any measure set, except HBIPS, that utilizes the Global Initial Patient Population to use the associated sampling methodology for all measure sets being submitted.

- If the hospital is submitting data to both the CMS Warehouse and the Joint Commission's Data Warehouse, use sampling methodology number one.
- If the hospital is submitting data to only The Joint Commission:
    - If the hospital is submitting at least one measure set that uses the Global Initial Patient Population, use sampling methodology number one.
    - If the hospital is not submitting any of the measure sets that uses the Global Initial Patient Population, sample each measure set independently using sampling methodology number two.
    - If the hospital is submitting HBIPS, sample independently using sampling methodology number two



1. Hospitals Submitting Measure Sets Under the Global Initial Patient Population to Both the CMS Warehouse and The Joint Commission's Data Warehouse

For the submission of the Global Initial Patient Population and associated measure sets (i.e., ED, IMM, TOB, and/or SUB) the following data flow or process steps should be used to identify the data for all measure sets or stratum that are transmitted to the Joint Commission's Data Warehouse, including PC, however excluding HBIPS. These process steps are:

Identify Global Cases To Be Abstracted (ED, IMM, SUB, TOB)

- Identify the Global Initial Patient Population. The Global Initial Patient Population is used for the ED, IMM, TOB, and SUB measure sets. This data pull utilizes administrative data such as admission date and discharge date. This identification process must be completed prior to the application of data integrity filter, measure exclusions, and the application of sampling methodology. For specific Global Initial Patient Population definitions, refer to the Global Initial Patient Population discussion in the Measure Information section of the *Specifications Manual for National Hospital Inpatient Quality Measures*. This data pull is completed once for each hospital. This is not performed for each measure set that utilizes the Global population.
    - If the hospital is sampling, use the Global Initial Patient Population identified above and pull the sample of medical records for the ED, IMM, TOB, and/or SUB measure sets using the

Sample Size Requirements defined in the Global Initial Patient Population Information section of the *Specifications Manual for National Hospital Inpatient Quality Measures*. Note: This is completed once for each hospital. This is not performed for each measure set that utilizes the Global population.

- Collect or abstract from the identified medical records the general and measure specific data elements that are needed for the measure set. Run the data through the algorithms for the measure sets under the Global Initial Patient Population (ED, IMM, SUB and/or TOB). The count of the number of cases used in this step is collected in the Global Initial Patient Population and Sample Size data elements.
- If the hospital is only submitting the measure sets under the Global Initial Patient Population (i.e., ED, IMM, SUB or TOB), the process is complete.

Identify Cases To Be Abstracted For The Remaining Measure Sets, Strata, and Sub-populations (PC, STK, VTE, CSTK, ASR)

- Identify the Initial Patient Population for the other measure sets, strata or sub-populations (PC, STK, VTE, CSTK, ASR). This data pull utilizes administrative data such as ICD-10-CM Diagnosis Codes and ICD-10-PCS Procedure Codes, admission date, and birthdate. All ICD-10-CM Diagnosis Codes and ICD-10-PCS Procedure Codes included in the Initial Patient Population definition must be applied. This identification process must be completed prior to the application of data integrity filter, measure exclusions, and the application of sampling methodology. For specific PC measure set definitions, refer to the Initial Patient Population discussion in the Measure Information section of this manual. For all other measures, refer to the Initial Patient Population discussion in the Measure Information section of the *Specifications Manual for National Hospital Inpatient Quality Measures*. The number of cases in the Initial Patient Population of each measure set, strata, and sub-population are collected in the appropriate Initial Patient Population Size data elements.
    - If the hospital is not sampling, collect or abstract from the identified medical records the general and measure specific data elements that are needed for the measure set(s), strata or sub-populations. The count of the number of cases used in this step is collected in the Sample Size data elements.
    - If the hospital is sampling, use the Initial Patient Population (*N*) identified above and pull the sample of medical records for the measure set, strata or sub-population using the "Sample Size Requirements" in the appropriate sampling discussion in the Measure Information section of this manual for PC and STK. For all other measures, refer to the "Sample Size Requirements" in the appropriate sampling discussion in the Measure Information section of the *Specifications Manual for National Hospital Inpatient Quality Measures*.
- Using the Global Initial Patient Population identified above, identify and count the number of cases that are also in the other Measure Sets, strata, or sub-populations (e.g., PC, STK or VTE, CSTK, ASR) Initial Patient Population(s). Determine the number of cases that need to be sampled (*n*) from the cases in the other measure set(s) or stratum(s) Initial Patient Population (*N*). Use the "Sample Size Requirements" in the appropriate sampling discussion in the Measure Information section of this manual for PC, STK, CSTK, ASR and HBIPS. For all other measures, refer to the "Sample Size Requirements" in the appropriate sampling discussion in the Measure Information section of the *Specifications Manual for National Hospital Inpatient Quality Measures*.
    - If there are enough Initial Patient Population cases in the Global sample pull to meet the specific initial patient population and sampling requirements for the measure set(s), strata, or

sub-populations, then no additional sampling is required. Collect or abstract from the identified medical records the general and measure specific data elements that are needed for the measure set(s), strata, or sub-populations. The count of the number of cases used in this step is collected in the *Sample Size* data elements.

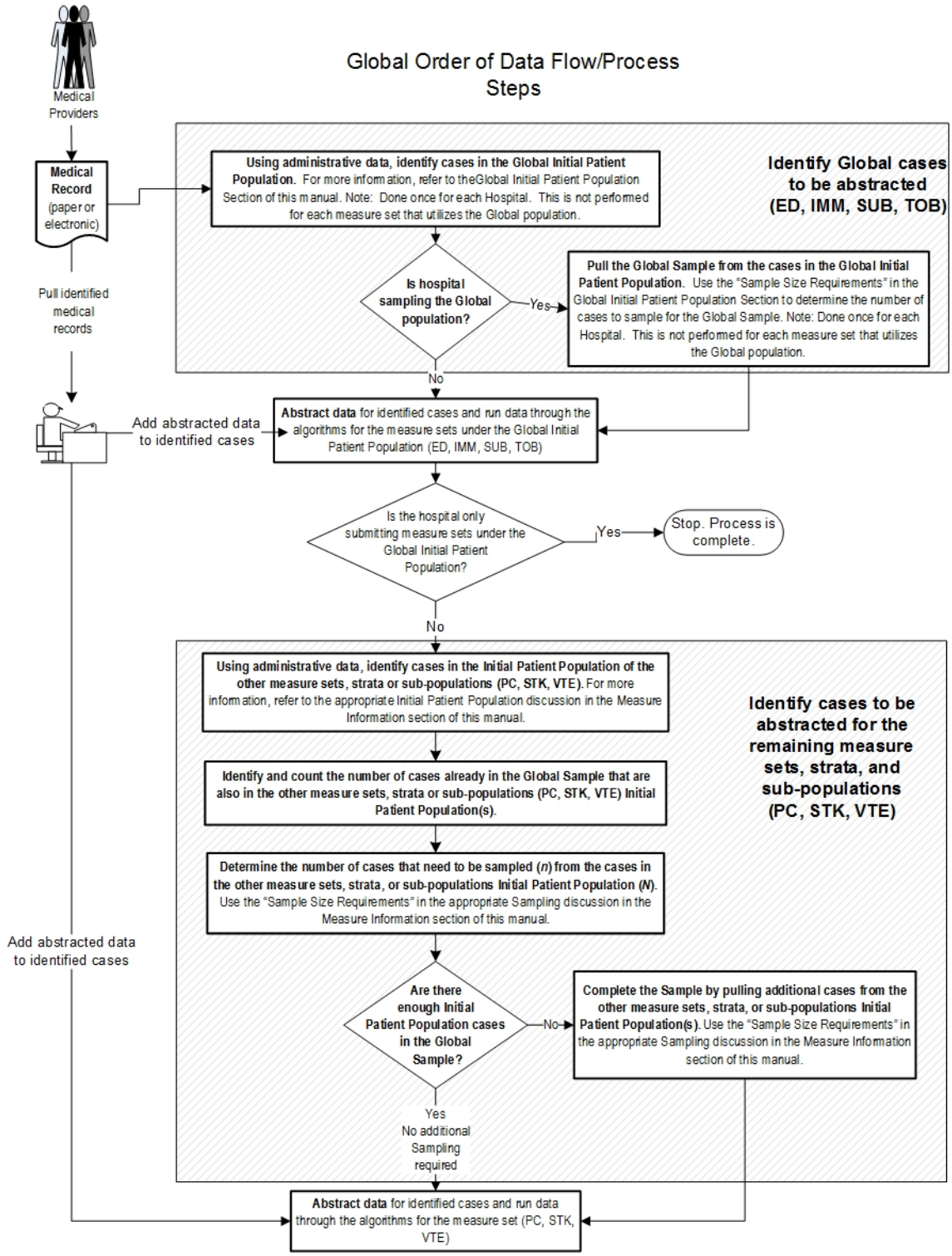
- If there are not enough Initial Patient Population cases in the Global sample pull to meet the specific initial patient population and sampling requirements for the measure set(s), strata or sub-populations, complete the sample by pulling additional cases from the other measure set(s), strata or sub-populations Initial Patient Population(s). Use the "Sample Size Requirements" in the appropriate Sampling discussion in the Measure Information section of this manual for PC, CSTK, ASR and STK. For all other measures, refer to the "Sample Size Requirements" in the appropriate sampling discussion in the Measure Information section of the *Specifications Manual for National Hospital Inpatient Quality Measures*. Collect or abstract from the identified medical records the general and measure specific data elements that are needed for the measure set(s). The count of the number of cases used in this step is collected in the *Sample Size* data elements.

Example: For 4th quarter the Global Initial Patient Population is 1550, 250 for PC-Mothers, and 300 for PC-Newborns with Breast Feeding. If the hospital is sampling, the minimum number of cases that would be required to be sampled would be 306 for Global (ED, IMM, TOB, and/or SUB), 75 for PC-Mothers, and 37 for PC-Newborns with Breast Feeding.

The hospital would pull 306 cases for the Global sample. From those 306 cases the hospital would determine how many of those cases were also PC-Mothers, PC-Newborns with Breast Feeding cases that met the initial patient population criteria for the specific measure set. If there are enough PC-Mothers, and PC-Newborns with Breast Feeding cases in the Global sample pull to meet the minimum sampling requirements for those measure sets, then no additional sample pull is needed.

If there are not enough cases in the Global sample pull to meet the other measure sets minimum sampling requirements then an additional sample pull is needed. For example, from the Global sample pull there were 20 PC-Mothers, and 5 PC-Newborns with Breast Feeding cases identified that met the initial population criteria for the specific measure set. As the minimum sample requirements for PC-Mothers is 75, an additional 55 cases would need to be pulled from the PC-Mothers Initial Patient Population. As the minimum sample requirements for PC-Newborns with Breast Feeding is 37, an additional 32 cases would need to be pulled from the PC-Newborns with Breast Feeding Initial Patient Population.

Note: PC-Newborns with BSI, PC-Newborns with Unexpected Complications, ASR-IP and ASR-OP populations, HBIPS-event and STK-OP are not eligible for sampling and will use the entire Initial Patient sampling group, as appropriate, for reporting.


Global Order of Data Flow/Process Steps
Medical Providers
Medical Record (paper or electronic)
Pull identified medical records
Using administrative data, identify cases in the Global Initial Patient Population. For more information, refer to theGlobal Initial Patient Population Section of this manual. Note: Done once for each Hospital. This is not performed for each measure set that utilizes the Global population.
Identify Global cases to be abstracted (ED, IMM, SUB, TOB)
Is hospital sampling the Global population?
Yes
Pull the Global Sample from the cases in the Global Initial Patient Population. Use the "Sample Size Requirements" in the Global Initial Patient Population Section to determine the number of cases to sample for the Global Sample. Note: Done once for each Hospital. This is not performed for each measure set that utilizes the Global population.
No
Add abstracted data to identified cases
Abstract data for identified cases and run data through the algorithms for the measure sets under the Global Initial Patient Population (ED, IMM, SUB, TOB)
Is the hospital only submitting measure sets under the Global Initial Patient Population?
Yes
Stop. Process is complete.
No
Using administrative data, identify cases in the Initial Patient Population of the other measure sets, strata or sub-populations (PC, STK, VTE). For more information, refer to the appropriate Initial Patient Population discussion in the Measure Information section of this manual.
Identify cases to be abstracted for the remaining measure sets, strata, and sub-populations (PC, STK, VTE)
Identify and count the number of cases already in the Global Sample that are also in the other measure sets, strata or sub-populations (PC, STK, VTE) Initial Patient Population(s).
Determine the number of cases that need to be sampled (n) from the cases in the other measure sets, strata, or sub-populations Initial Patient Population (N). Use the "Sample Size Requirements" in the appropriate Sampling discussion in the Measure Information section of this manual.
Add abstracted data to identified cases
Are there enough Initial Patient Population cases in the Global Sample?
No
Complete the Sample by pulling additional cases from the other measure sets, strata, or sub-populations Initial Patient Population(s). Use the "Sample Size Requirements" in the appropriate Sampling discussion in the Measure Information section of this manual.
Yes
No additional Sampling required
Abstract data for identified cases and run data through the algorithms for the measure set (PC, STK, VTE)

2. Hospitals Submitting HBIPS or Hospitals Not Submitting the Measure Sets Under the Global Initial Patient Population to The Joint Commission Only

For hospitals submitting HBIPS or hospitals not submitting the measure sets under the Global Initial Patient Population to The Joint Commission only, an independent sample pull should be used to pull the sample for the applicable measure sets (i.e., PC, HBIPS, STK and VTE).

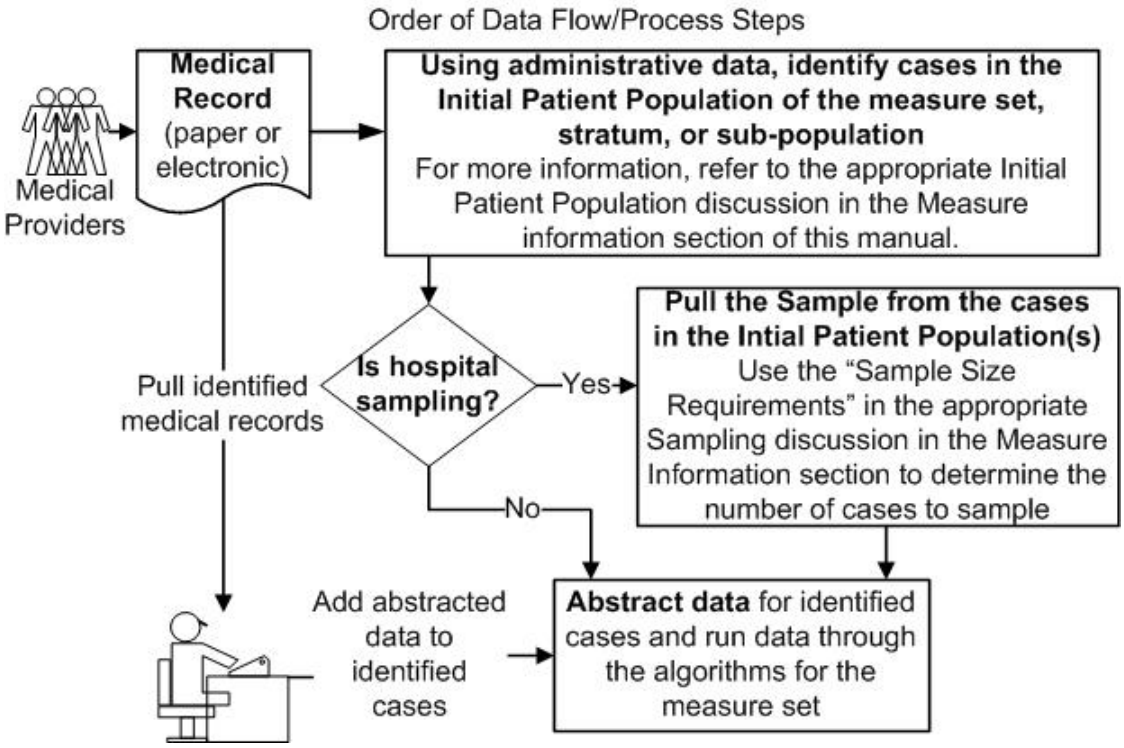
Each measure set, stratum, or sub-population has a unique definition of Initial Patient Population and sample size requirement. However, the same data flow or process steps can be used to identify the data that is transmitted to the Joint Commission's Data Warehouse. These process steps are:

- First, identify the Initial Patient Population for the measure set. An Initial Patient Population is defined for each measure set, stratum, and sampling group and the count is collected in the Initial Patient Population Size data elements.

All data elements in the appropriate Initial Patient Population definition, including ICD-10-CM Diagnosis Codes when appropriate, must be applied. This identification process must be completed prior to the application of data integrity filter, measure exclusions, and the application of sampling methodology.

For specific measure set, stratum, and sampling group definitions, refers to the appropriate Initial Patient Population discussion in the Measure Information section of this manual for PC, STK and HBIPS. For all other measures, refer to the “Sample Size Requirements” in the appropriate sampling discussion in the Measure Information section of the *Specifications Manual for National Hospital Inpatient Quality Measures*.

- Second, if the measure allows sampling and the hospital is sampling, use the Initial Patient Population identified above and pull the sample of medical records for each measure set, stratum, or sub-population using the Sample Size Requirements defined in the appropriate Measure Information section of this manual for PC. STK and HBIPS. For all other measures, refer to the “Sample Size Requirements” in the appropriate sampling discussion in the Measure Information section of the *Specifications Manual for National Hospital Inpatient Quality Measures*.
- Third, collect or abstract from the identified medical records the general and measure specific data elements that are needed for the measure set. The count of the number of cases used in this step is collected in the *Sample Size* data elements.
    - If the hospital is not sampling, use the medical records identified in the first data pull.
    - If the measure allows sampling and the hospital is sampling, use the medical records from the cases in the identified sample.



Sample Size Requirements

Hospitals that choose to sample have the option of sampling quarterly or sampling monthly. The sample size requirements for each of these options are described in turn. Hospitals need to use the next highest whole number when determining their required sample size. See below for rounding examples. For each measure sets sample size requirements, refer to the appropriate measure set's Measure Information section in this manual.

Hospitals selecting sample cases for measure sets that are not stratified must ensure that its Initial Patient Population(s) and sample size(s) meet the conditions stated in the measure set's Sample Size Requirements.

For hospitals selecting sample cases for stratified measure sets or measure sets with sampling groups (e.g., HBIPS, CSTK, ASR and PC), a modified sampling procedure is required. Hospitals selecting samples cases for these sets must ensure that each individual stratum's Population/sampling group and sample size meets the conditions stated in the measure set's Sample Size Requirements.

Regardless of the option used, hospital samples must be monitored to ensure that sampling procedures consistently produce statistically valid and useful data. Due to exclusions and contraindications, hospitals selecting sample cases MUST submit AT LEAST the minimum required sample size. The sample size tables for each option automatically build the number of cases needed to obtain the required sample sizes.

Hospitals that sample, should sample by their Joint Commission's *Health Care Organization Identifier*. All data that are sampled must be transmitted to The Joint Commission.

A hospital may choose to use a larger sample size than is required. Hospitals whose Initial Patient Population size is less than the minimum number of cases per quarter/month for the stratum cannot sample. For the Discharge measures (e.g., HBIPS-1, 5 and PC), hospitals that have five or fewer discharges (both Medicare and non-Medicare combined) are not required to submit patient level data to the Joint Commission's Data Warehouse. For the event measures (e.g., HBIPS-2, and 3), hospitals must submit patient level data to The Joint Commission regardless of the number of discharges or events they have each quarter. Refer to the Sample Size Requirement tables provided in the Measure Information section to determine the minimum number of cases that need to be sampled for each HBIPS, CSTK, ASR measure sets.

Quarterly Sampling Examples

Quarterly Example 1: Measure set is Not Stratified
Hospitals selecting sample cases for measure set ABC, which is not stratified, must ensure that its Initial Patient Population and quarterly sample size meet the following conditions:

Quarterly Sample Size
Based on Initial Patient Population for the ABC Measure set

Hospital's Measures	
Average Quarterly Initial Patient Population "N"	Minimum Required Sample Size "n"
≥ 1551	311
391 - 1550	20% of the Initial Patient Population
78-390	78
6 - 77	No sampling; 100% of the Initial Patient Population is required
0 - 5	Submission of patient level data is not required; if submission occurs, 100% Initial Patient Population required.

Examples

- A hospital's ABC Initial Patient Population is 77 patients during the first quarter. Using the above table, no sampling is allowed — 100% of the population is required.
- A hospital's ABC Initial Patient Population is 100 patients during the second quarter. Using the above table, the required sample size is seen to be a minimum of 78 ABC patients for this quarter.
- A hospital's ABC Initial Patient Population is 401 patients during the third quarter. Using the above table, the required sample size is seen to be 20% of the population, or 81 cases for the quarter (twenty percent of 401 equals 80.2 rounded to the next whole number = 81).
- A hospital's ABC Initial Patient Population is 5 patients during the first quarters. Using the above table, submission of patient level data is not required. If the hospital chooses to submit patient level data, the required quarterly sample size would be 100% of the patient population or 5 cases for the quarter.

Quarterly Example 2: Measure set is stratified
For hospitals selecting sample cases for measure set XYZ which contains 8 strata, a modified sampling procedure is required. Hospitals selecting sample cases for these sets must ensure that each individual stratum's population and quarterly sample size meets the following conditions.

- *Select within each of the seven individual measure stratum and the 8th XYZ stratum*.

Quarterly Sample Size
Based on Initial Patient Population for the XYZ measure set

Hospital's Measures	
Average Quarterly Stratum Initial Patient Population "N"	Minimum Required Stratum Sample Size "n"
≥ 471	48
161 - 470	10% of the Initial Patient Population
16 - 160	16
< 16	No sampling; 100% of the Initial Patient Population is required

Example

- The XYZ Initial Patient Population sizes for a hospital are 5, 50, 15, 140, 35, 201, 3, and 481 patients respectively per stratum for the quarter. Since the total Initial Patient Population for XYZ is 930, the hospital must submit patient level data. The required quarterly sample sizes for each stratum would be 5, 16, 15, 16, 16, 21, 3, and 48.
    - The 1st, 3rd, and 7th strata are less than the minimum required quarterly sample size, so 100% of each of these strata are sampled.
    - The 2nd, 4th, and 5th strata each require 16 cases to be sampled.
    - The 6th stratum has 201 patients per quarter, which requires a 10% sample size, or 21 cases (twenty percent of 201 equals 20.1 rounded to the next whole number = 21).
    - The 8th stratum is more than the maximum required quarterly sample size, so this stratum requires 48 cases to be sampled.

- The XYZ Initial Patient Population sizes for a hospital 1, 1, 0, 0, 1, 0, 1, and 1 patients respectively per stratum for the quarter. Since the total Initial Patient Population for XYZ is 5, the hospital may choose to not submit patient level data. If the hospital chooses to submit patient level data, the required quarterly sample sizes for each stratum would be 1, 1, 0, 0, 1, 0, 1, and 1.
- The 1st, 2nd, 5th, 7th, and 8th strata are less than the minimum required quarterly sample size, so 100% of each of these strata are sampled.
- There is no data to sample for the 3rd, 4th, and 6th strata.

Quarterly Example 3: Measure set has sub-populations
For hospitals selecting sample cases for measure set DEF which contains 3 independent sub-populations a modified sampling procedure is required. The three sub-populations must be sampled independently from each other.

1-Hospitals selecting sample cases for sub-population 1 must ensure that the Initial Patient Population and sample size for the sub-population 1 meet the following conditions:

Quarterly Sample Size
Based on Initial Patient Population for the Patient Sub-Population 1

Hospital's Measures	
Average Quarterly Initial Patient Sub-Population Size "N"	Minimum Required Sub-Population Sample Size "n"
≥ 896	180
226 - 895	20% of the Initial Patient Population Size
45 - 225	45
< 45	No sampling; 100% of the Initial Patient Population required
0 - 45	Submission of patient level data is not required; if submission occurs, 100% Initial Patient Population required.

2 - Hospitals selecting sample cases for sub-population 2 must ensure that the initial Patient Population and sample size for sub-population 2 meet the following conditions:

Quarterly Sample Size
Based on Initial Patient Population Size for the
Patient Sub-Population 2

Hospital's Measures	
Average Quarterly Initial Patient Sub-Population Size "N"	Minimum Required Sub-Population Sample Size "n"
≥ 1796	360
451 - 1795	20% of the Initial Patient Population
90 - 450	90
< 90	No sampling; 100% of the Initial Patient Population required

3 - Sub-population 3 *is not eligible* for sampling and will use the entire Initial Patient Population for reporting.

Example
1. Quarterly sampling for sub-population 1:

- A hospital's sub-population 1 is 752 during the second quarter. Using the quarterly sampling table for sub-population 1, the sample size required is 20% of this sub-population, or 151 cases for the quarter (twenty percent of 752 equals 150.4 rounded up to the next whole number = 151).

- A hospital's sub-population 1 is 5 during the first quarter. Using the quarterly sampling table for sub-population 1, the sample size is less than the minimum required quarterly sample size, so 100% of this sub-population is sampled.
- A hospital's sub-population 1 is 99 during the third quarter. The required quarterly sample is 45 cases.

2. Quarterly sampling for sub-population 2:

- A hospital's sub-population 2 is 511 during the second quarter. Using the quarterly sampling table for sub-population 2, the sample size required is 20% of this sub-population, or 103 cases for the quarter (twenty percent of 511 equals 102.2 rounded up to the next whole number = 103).
- A hospital's sub-population 2 is 3 during the first quarter. Using the quarterly sampling table for sub-population 2, the sample size is less than the minimum required quarterly sample size, so 100% of this sub-population is sampled.
- A hospital's sub-population 2 is 300 during the third quarter. The required quarterly sample is 90 cases.

3. Quarterly sampling for sub-population 3:

- Sub-population *is not eligible* for sampling and will use the entire initial Patient Sub-Population for reporting.

Quarterly Example 4: Measure set has Sampling Groups
For hospitals selecting sample cases for measure set HGI which contains 3 independent sampling groups a modified sampling procedure is required. The three sampling groups are sampled independently from each other. A patient falls into multiple sampling groups but may not actually be sampled for all the groups for which the patient is eligible.

1-Hospitals selecting sample cases for sampling group 1 must ensure that the Initial Patient Population and sample size for the sampling group 1 meet the following conditions:

Quarterly Sample Size
Based on Initial Patient Population Size for the
Patient Sampling Group 1

Hospital's Measures	
Average Quarterly Initial Patient Sampling Group Size "N"	Minimum Required Sampling Group Sample Size "n"
≥ 801	161
201 - 800	20% of the Initial Patient Population Size
40 - 200	40
< 40	No sampling; 100% Initial Patient Population required

2 - Hospitals selecting sample cases for sampling group 2 must ensure that the initial Patient Population and sample size for the sampling group 2 meet the following conditions:

Quarterly Sample Size
Based on Initial Patient Population Size for the
Patient Sampling Group 2

Hospital's Measures	
Average Quarterly Initial Patient Sampling Group Size "N"	**Minimum Required Sampling Group Sample Size "n"**
≥ 2001	401
501 - 2000	20% of the Initial Patient Population
100 - 500	100
< 100	No sampling; 100% Initial Patient Population required

3 - Hospitals selecting sample cases for sampling group 3 must ensure that the Initial Patient Population and sample size for the sampling group 3 meet the following conditions:

Quarterly Sample Size
Based on Initial Patient Population Size for the
Patient Sampling Group 3

Hospital's Measures	
Average Quarterly Initial Patient Sampling Group Size "N"	**Minimum Required Sampling Group Sample Size "n"**
≥ 2001	401
501 - 2000	20% of the Initial Patient Population
100 - 500	100
< 100	No sampling; 100% Initial Patient Population required

Example

1. A Hospital's sampling group 1 size 347 during the second quarter. The required sample size is 20% of the patient population or 70 cases for the quarter (twenty percent of 347 equals 69.4 rounded up to the next highest whole number is 70.)
2. A Hospital's sampling group 2 size is 250 patients during the second quarter. The required sample size is seen to be 100 patients for this quarter.
3. A Hospital's sampling group 3 size is 700 patients during the second quarter. The required sample size is seen to be 140 patients for this quarter.

Monthly Sampling Examples

Monthly Example 1: Measure set is Not Stratified
Hospitals selecting sample cases for ABC measure set must ensure that its Initial Patient Population and effective monthly sample size meet the following conditions:

Monthly Sample Size
Based on Initial Patient Population for the ABC measure set

Hospital's Measures	
Average Monthly Initial Patient Population "N"	Minimum Required Sample Size "n"
≥ 516	104
131 — 515	20% of the Initial Patient Population
26 — 130	26
< 26	No sampling; 100% of the Initial Patient Population is required

Examples

- A hospital's ABC Initial Patient Population is 25 patients during January. Using the above table, no sampling is allowed — 100% of the population is required.
- A hospital's ABC Initial Patient Population is 130 patients during February. Using the above table, the required sample size is seen to be a minimum of 26 ABC patients for this month.
- A hospital's ABC Initial Patient Population is 301 patients during March. Using the above table, the required sample size is seen to be 20% of the population, or 61 cases for the month (twenty percent of 301 equals = 60.2 rounded to the next whole number = 61.
- A hospital's ABC Initial Patient Population is 516 patients during April. Using the above table, the required sample size is seen to be a minimum of 104 ABC patients for this month.

Monthly Example 2: Measure set is Stratified
For hospitals selecting sample cases for the XYZ measure set, a modified sampling procedure is required. Hospitals selecting sample cases for this set must ensure that each individual strata population and effective monthly sample size meets the following conditions:

- *Select within each of the seven individual measure stratum and the 8th XYZ stratum*.

Monthly Sample Size
Based on Initial Patient Population for the XYZ measure set

Hospital's Measures	
Average Monthly Stratum Initial Patient Population "N"	Minimum Required Stratum Sample Size "n"

Hospital's Measures	
Average Monthly Stratum Initial Patient Population "N"	Minimum Required Stratum Sample Size "n"
≥ 151	16
61 - 150	10% of the Initial Patient Population
6 - 60	6
< 6	No sampling; 100% of the Initial Patient Population is required

Example

- The XYZ Initial Patient Population sizes for a hospital are 5, 50, 15, 141, 35, 201, 3, and 481 patients respectively in June. The required monthly sample sizes would be 5, 6, 6, 15, 6, 16, 3, and 16.
    - The 1st and 7th strata are less than the minimum required monthly sample size, so 100% of each of these strata is sampled.
    - The 2nd, 3rd, and 5th strata each require 6 cases to be sampled.
    - The 4th stratum has 141 patients per month, which requires a 10% sample size, or 15 cases (twenty percent of 141 equals 14.1 rounded to the next whole number = 15).
    - The 6th and 8th strata are each more than the maximum required monthly sample size, so this stratum requires 16 cases to be sampled.

Monthly Example 3: Measure set has sub-populations
For hospitals selecting sample cases for measure set DEF which contains 3 independent sub-populations a modified sampling procedure is required. The three sub-populations must be sampled independently from each other.

1 - Hospitals selecting sample cases for sub-population 1 must ensure that the Initial Patient Population and sample size for sub-population and sample size for sub-population 1 meet the following conditions:

Monthly Sample Size
Based on Initial Patient Population Size for the
Patient Sub-Population 1

Hospital's Measures	
Average Monthly Initial Patient Sub-Population Size "N"	Minimum Required Sub-Population Sample Size "n"
≥ 296	60
76 - 295	20% of the Initial Patient Population
15 - 75	15
< 15	No sampling; 100% of the Initial Patient Population is required

2 - Hospitals selecting sample cases for sub=population 2 must ensure that the Initial Patient Population and sample size for sub-population and sample size for sub-population 2 meet the following conditions:

Monthly Sample Size
Based on Initial Patient Population Size for the
Patient Sub-Population 2

Hospital's Measures	
Average Monthly Initial Patient Sub-Population Size "N"	**Minimum Required Sub-Population Sample Size "n"**
≥ 596	120
151 - 595	20% of the Initial Patient Population
30 - 150	30
< 30	No sampling; 100% of the Initial Patient Population is required

3 - Sub-population 3 *is not eligible* for sampling and will use the entire Initial Patient Sub-Population for reporting.

Example
1. Monthly sampling for sub-population 1:

- A hospital's sub-population 1 is 81 during March. Using the monthly sampling table for sub-population 1, the sample size required is 20% of this sub-population, or 17 cases for the month (twenty percent of 81 equals 16.2 rounded up to the next whole number = 17).
- A hospital's sub-population 1 is 5 during February. Using the monthly sampling table for sub-population 1, the sample size is less than the minimum required monthly sample size, so 100% of this sub-population is sampled.
- A hospital's sub-population 1 is 45 during January. The required monthly sample is 15 cases.

2. Monthly sampling for sub-population 2:

- A hospital's sub-population is 387 during March. Using the monthly sampling table for sub-population 2, the sample size required is 20% of this sub-population, or 78 cases for the month (twenty percent of 387 equals 77.4 rounded up to the next whole number = 78).
- A hospital's sub-population 2 is 3 during February. Using the monthly sampling table for sub-population 2, the sample size is less than the minimum required monthly sample size, so 100% of this sub-population is sampled.
- A hospital's sub-population 2 is 47 during January. The required monthly sample is 30 cases.

3. Monthly sampling for sub-population 3:

- Sub-population 3 *is not eligible* for sampling and will use the entire initial Patient Sub-Population for reporting.

Monthly Example 4: Measure set has Sampling Groups

1 - Hospitals selecting sample cases for sampling group 1 must ensure that the Initial Patient Population and sample size for the sampling group 1 meet the following conditions:

Monthly Sample Size
Based on Initial Patient Population Size for the
Patient Sampling Group 1

Hospital's Measures	
Average Monthly Initial Patient Sampling Group Size "N"	Minimum Required Sampling Group Sample Size "n"
≥ 201	41
51 - 200	20% of the Initial Patient Population Size
10 - 50	10
< 50	No sampling; 100% Initial Patient Population required

2 - Hospitals selecting sample cases for sampling group 2 must ensure that the initial Patient Population and sample size for the sampling group 2 meet the following conditions:

Monthly Sample Size
Based on Initial Patient Population Size for the
Patient Sampling Group 2

Hospital's Measures	
Average Monthly Initial Patient Sampling Group Size "N"	Minimum Required Sampling Group Sample Size "n"
≥ 501	101
126 - 500	20% of the Initial Patient Population
25 - 125	25
< 25	No sampling; 100% Initial Patient Population required

3 - Hospitals selecting sample cases for sampling group 3 must ensure that the Initial Patient Population and sample size for the sampling group 3 meet the following conditions:

Monthly Sample Size
Based on Initial Patient Population Size for the
Patient Sampling Group 3

Hospital's Measures	
Average Monthly Initial Patient Sampling Group Size "N"	Minimum Required Sampling Group Sample Size "n"
≥ 501	101
126 - 500	20% of the Initial Patient Population
25 - 125	25
< 25	No sampling; 100% Initial Patient Population required

Example
1. Monthly sampling for sampling group 1:

- A hospital's sampling group 1 is 81 during March. Using the monthly sampling table for sampling group 1, the sample size required is 20% of this sampling group, or 17 cases for the month (twenty percent of 81 equals 16.2 rounded up to the next whole number = 17).
- A hospital's sampling group 1 is 5 during February. Using the monthly sampling table for sub-population 1, the sample size is less than the minimum required monthly sample size, so 100% of this sampling group is sampled.
- A hospital's sampling group 1 is 45 during January. The required monthly sample is 10 cases.

2. Monthly sampling for sampling group 2:

- A hospital's sampling group is 2 is 387 during March. Using the monthly sampling table for sampling group 2, the sample size required is 20% of this sampling group, or 78 cases for the month (twenty percent of 387 equals 77.4 rounded up to the next whole number = 78).
- A hospital's sampling group 2 is 3 during February. Using the monthly sampling table for sampling group 2, the sample size is less than the minimum required monthly sample size, so 100% of this sampling group is sampled.
- A hospital's sampling group 2 is 47 during January. The required monthly sample is 25 cases.

3. Monthly sampling for sampling group 3:

- A hospital's sampling group 3 is 125 during January. The required monthly sample is 25 cases.

Sampling Approaches

As previously stated in this section, hospitals have the option to sample from their population, or submit their entire population. Hospitals that choose to sample must ensure that the sampled data represent their Initial Patient Population by using either the simple random sampling or systematic random sampling methods and that the sampling techniques are applied consistently within a quarter. For example, monthly samples for a measure set, stratum, or sampling group must use consistent sampling techniques across the quarterly submission period.

- Simple random sampling - selecting a sample size *(n)* from a population of size *(N)* in such a way that every case has the same chance of being selected.
- Systematic random sampling - selecting every kth record from a population of size N in such a way that a sample size of n is obtained, where k ≤ N/n. The first sample record (i.e., the starting point) must be randomly selected before taking every kth record. This is a two-step process: a) Randomly select the starting point by choosing a number between one and k using a table of random numbers or a computer-generated random number; and b) Then select every kth record thereafter until the selection of the sample size is completed.

Each hospital is ultimately responsible that sampling techniques applied for their hospital adhere to the sampling requirements outlined in this manual. ORYX Vendors are responsible for ensuring that the sampling techniques are applied consistently across their client hospitals.

Sampling Approach Examples

For a hospital with an Initial Patient Population size of 350 ABC measure set discharges per quarter, the sample size would be 78. To select a random sample of 78 ABC patients:

- Simple random sampling:
    1. Generate random numbers for individual ABC patient records from a random number function using a statistical software package or computer programming language.
    2. Sort data by the random numbers either in an increasing or decreasing order.
    3. Select the first 78 ABC patient records as the random sample.

- Systematic random sampling:
    1. In this example, the hospital's Initial Patient Population size= 350 and the sample size = 78. Divide the Initial Patient Population size by the sample size and take the quotient (i.e., the integer portion) as the sampling interval k. The sampling interval k = 350/78 = 4.5. Thus, every 4th ABC patient record will be selected from the Initial Patient Population until 78 cases are selected.
    2. To ensure that each ABC patient has an equal chance of being selected, the “starting point” must be randomly determined before selecting every 4th ABC patient record. This can be done using a computer random number generator or a random number table to randomly choose a number between 1 and 4 as the starting point.

Transmission of Initial Patient Population and Sample Data Elements

The Joint Commission requires transmission of Initial Patient Population and sample count data. Transmission of Initial Patient Population and sample count data elements are used to assist in evaluating completeness of submission in accordance with The Joint Commission sampling requirements.

The Initial Patient Population Size refers to all patients (Medicare and non-Medicare) who share common payment sources which can be identified by utilizing administrative data such as the UB-04. All ICD-10-CM Diagnosis and ICD-10-PCS Procedure Codes included in the appropriate Initial Patient Population definition must be applied. This identification process must be completed prior to the application of data integrity filter,

measure exclusions, and the application of sampling methodology. For specific measure set and strata definitions, refer to the appropriate Initial Patient Population discussion in the Measure Information section of this manual.

The Initial Patient Population and sample data elements are:

- *Initial Patient Population Size — Medicare Only*
- *Initial Patient Population Size — Non-Medicare Only*
- *Sampling Frequency*
- *Sample Size — Medicare Only*
- *Sample Size — Non-Medicare Only*

These elements are transmitted in the Population and Sampling (PaS) data file. Refer to the Hospital ICD Population XML Layout File Layout in the Transmission section of this manual.

Sample indicates whether or not the hospital has sampled data for the specified time period. *Sampling Frequency* indicates if the hospital has sampled using the monthly or quarterly methodology, or whether the entire population was used for the specified time period or the hospital had five or fewer discharges for the discharge quarter and did not submit patient level data.

Initial Patient Population Size — Medicare Only includes all patients that are billed under Medicare or Title 18. Medicare can be listed as a primary, secondary, tertiary or lower on the list of payment sources for the patient. In addition, patients who are participating as a member of a Medicare HMO/Medicare Advantage are included in the Medicare counts, e.g., Medicare Blue, Humana gold, Secure Horizons, AARP, Coventry Advantra, etc.

Initial Patient Population and Sample Size Examples

Example 1 — Hospital does not sample
A hospital uses the Initial Patient Population(s) for the ABC measure set to identify 120 cases in the ABC Initial Patient Population during the second quarter. The hospital does not sample the ABC measure set, so data for all 120 cases are collected and used to calculate the hospital's rate for each ABC measure. 40 of the 120 cases in the ABC Initial Patient Population are Medicare patients.

Note: Sampling Frequency = 3 (not sampling) is the only valid value for HBIPS-event, STK-OP and ASR measure sets, PC-BSI (PC-04), PC-Unexpected Complications (PC-06) Subpopulations.

The breakdown of data by month and Medicare / Non-Medicare is:

	April	May	June	Total
Initial Patient Population — Medicare patients	10	15	15	**40**
Initial Patient Population — Non-Medicare patients	20	30	30	**80**
Total Initial Patient Population Size	**30**	**45**	**45**	**120**
Sample Size — Medicare patients	10	15	15	**40**

	April	May	June	Total
Initial Patient Population — Medicare patients	10	15	15	**40**
Sample Size — Non-Medicare patients	20	30	30	**80**
Total Sample Size	**30**	**45**	**45**	**120**

The following is transmitted for each month in the quarter:

	April	May	June
Initial Patient Population Size — Medicare Only	10	15	15
Initial Patient Population Size — Non-Medicare Only	20	30	30
Sampling Frequency (3 = not sampling)	3	3	3
Sample Size — Medicare Only	10	15	15
Sample Size — Non-Medicare Only	20	30	30

Example 2 — Hospital samples monthly
A hospital uses the Initial Patient Population(s) for the ABC measure set to identify 120 cases in the ABC Initial Patient Population during the second quarter. From these 120 cases, the hospital uses the monthly sample size requirements and randomly selects a sample of 26 cases for each month. Data for these 26 cases are collected and used to calculate the hospital's rate for each ABC measure. 40 of the 120 cases in the ABC Initial Patient Population are Medicare patients and 24 of these cases were included in the sample.

Note: *Sampling Frequency* = 1 (sampling data monthly) is not valid for HBIPS-event, STK-OP and ASR measure sets, PC-BSI (PC-04), PC-Unexpected Complications (PC-06) Subpopulations.

The breakdown of data by month and Medicare / Non-Medicare is:

	April	May	June	Total
Initial Patient Population — Medicare patients	10	15	15	**40**
Initial Patient Population — Non-Medicare patients	20	30	30	**80**
Total Initial Patient Population Size	**30**	**45**	**45**	**120**
Sample Size — Medicare patients	8	9	7	**24**
Sample Size — Non-Medicare patients	18	17	19	**54**
Total Sample Size	**26**	**26**	**26**	**78**

The following is transmitted for each month in the quarter:

	April	May	June
Initial Patient Population Size — Medicare Only	10	15	15
Initial Patient Population Size — Non-Medicare Only	20	30	30
Sampling Frequency (1 = sampling data monthly)	1	1	1

	April	May	June
Initial Patient Population Size — Medicare Only	10	15	15
Sample Size — Medicare Only	8	9	7
Sample Size — Non-Medicare Only	18	17	19

Example 3 — Hospital samples quarterly
A hospital uses the Initial Patient Population(s) for the ABC measure set to identify 120 cases in the ABC Initial Patient Population during the second quarter. From these 120 cases, the hospital uses the quarterly sample size requirements and randomly selects a sample of 78 cases. Data for these 78 cases are collected and are then used to calculate the hospital's rate for each ABC measure. 40 of the 120 cases in the ABC Initial Patient Population are Medicare patients and 20 of these cases were included in the sample.

Note: *Sampling Frequency* = 2 (sampling data quarterly) is not valid for HBIPS-event, STK-OP and ASR measure sets, PC-BSI (PC-04), PC-Unexpected Complications (PC-06) Subpopulations.

The breakdown of data by month and Medicare / Non-Medicare is:

	April	May	June	Total
Initial Patient Population — Medicare patients	10	15	15	**40**
Initial Patient Population — Non-Medicare patients	20	30	30	**80**
Total Initial Patient Population Size	**30**	**45**	**45**	**120**
Sample Size — Medicare patients	5	10	5	**20**
Sample Size — Non-Medicare patients	10	20	28	**58**
Total Sample Size	**15**	**30**	**33**	**78**

The following is transmitted for each month in the quarter:

	April	May	June
Initial Patient Population Size — Medicare Only	10	15	15
Initial Patient Population Size — Non-Medicare Only	20	30	30
Sampling Frequency (2 = sampling data quarterly)	2	2	2
Sample Size — Medicare Only	5	10	5
Sample Size — Non-Medicare Only	10	20	28

Example 4 — Hospital has five or fewer discharges and chooses not to submit patient level data
Note: This example is only valid for the HBIPS Discharge measures (HBIPS-1, and 5). This is not valid for the HBIPS Event measures (HBIPS-2 and 3) since all data must be submitted for these measures regardless of the number of discharges or events that occur during the quarter.

A hospital uses the Initial Patient Population(s) for the ABC measure set to identify 5 cases in the ABC Initial Patient Population for the entire measure set during the second quarter. Since the total Initial Patient

Population for ABC is 5, the hospital chooses to not submit patient level data.

Note: *Sampling Frequency* = 4 (N/A, submission of patient level data is not required) is not valid for HBIPS-event, STK-OP and ASR measure sets, PC-BSI (PC-04), PC-Unexpected Complications (PC-06) Subpopulations.

The breakdown of data by month and Medicare / Non-Medicare is:

	April	May	June	Total
Initial Patient Population — Medicare patients	1	0	2	**3**
Initial Patient Population — Non-Medicare patients	0	1	1	**2**
Total Initial Patient Population Size	**1**	**1**	**3**	**5**
Sample Size — Medicare patients	0	0	0	**0**
Sample Size — Non-Medicare patients	0	0	0	**0**
Total Sample Size	**0**	**0**	**0**	**0**

The following is transmitted for each month in the quarter:

	April	May	June
Initial Patient Population Size — Medicare Only	1	0	2
Initial Patient Population Size — Non-Medicare Only	0	1	1
Sampling Frequency (2 = sampling data quarterly)	4	4	4
Sample Size — Medicare Only	0	0	0
Sample Size — Non-Medicare Only	0	0	0

Example 5 — Hospital has five or fewer discharges and chooses to submit patient level data
Note: This example is only valid for the HBIPS Discharge measures (HBIPS-1, and 5). This is not valid for the HBIPS Event measures (HBIPS-2 and 3) since all data must be submitted for these measures regardless of the number of discharges or events that occur during the quarter.

A hospital uses the Initial Patient Population(s) for the ABC measure set to identify 5 cases in the ABC Initial Patient Population for the entire measure set during the second quarter. Even though the total Initial Patient Population for ABC is 5, the hospital chooses to submit patient level data.

Note: *Sampling Frequency* = 4 (N/A, submission of patient level data is not required) is not valid for HBIPS-event, STK-OP and ASR measure sets, PC-BSI (PC-04), PC-Unexpected Complications (PC-06) Subpopulations.

The breakdown of data by month and Medicare / Non-Medicare is:

	April	May	June	Total

Initial Patient Population — Medicare patients	April 1	May 0	June 2	Total 3
Initial Patient Population — Medicare patients	1	0	2	3
Initial Patient Population — Non-Medicare patients	0	1	1	2
Total Initial Patient Population Size	**1**	**1**	**3**	**5**
Sample Size — Medicare patients	1	0	2	3
Sample Size — Non-Medicare patients	0	1	1	2
Total Sample Size	**1**	**1**	**3**	**5**

The following is transmitted for each month in the quarter:

	April	May	June
Initial Patient Population Size — Medicare Only	1	0	2
Initial Patient Population Size — Non-Medicare Only	0	1	1
Sampling Frequency (2 = sampling data quarterly)	3	3	3
Sample Size — Medicare Only	1	0	2
Sample Size — Non-Medicare Only	0	1	1

The Joint Commission National Quality Measures Data Transmission

Introduction

This section of the manual is provided to highlight the unique data transmission specifications for The Joint Commission national quality measure data.

This section is divided into four parts: National Quality Measure Data Transmission, Guidelines for Submission of Data, Transmission Alphabetical Data Dictionary, and Transmission Data Processing Flows.

The Data Transmission section provides information related to the transmission of national quality measure data to the Joint Commission's Data Warehouse.

The Guidelines for Submission of Data includes an overview of the data required to be submitted to the Joint Commission's Data Warehouse, as well as the Hospital Clinical Data XML file layout and the Hospital Initial Patient Population Data XML file Layout.

The Transmission Alphabetical Data Dictionary describes the data elements that are either used to identify the hospital and measure set associated to the transmitted data or are calculated by the vendor using the hospital's patient-level data and measure results. These data elements are not used in the Initial Patient Population Algorithms or Measure Algorithms.

The Transmission Data Processing Flows contain information regarding the order in which the Joint Commission's Data Warehouse evaluates the national hospital quality measures and the associated population and sampling data. In addition, it highlights the decision points as to when cases are rejected from the warehouse. Refer to the Edit Message documents located on The Joint Commission PET, in Manuals and Guides tab, Data Transmission Technical Documentation page, Hospital Clinical Data (HCD) link for a complete listing of all critical and informational edits.

Note: The Stroke (STK) and Comprehensive Stroke (CSTK) measures data for certification can be submitted through an ORYX vendor, however the **Advanced Certification Heart Failure (ACHF)** and **Advanced Certification Heart Failure Outpatient(ACHFOP)** measures data cannot be submitted through an ORYX vendor and may only be submitted through the Certification Measure Information Process (CMIP).

The Joint Commission National Quality Measure Data Transmission

Overview

The Joint Commission requires two different data transmissions related to the national quality measure data. All of these transmissions are submitted by ORYX® Vendors and follow the same data transmission schedule used to submit ORYX data to The Joint Commission. The most significant items related to the

transmission of national quality measure data are listed here, but this is not an exhaustive list. Refer to the appropriate documents as detailed below for more information.

Download File Layouts

- Download Hospital Clinical Data XML File Layout (MS Excel)
- Download ICD Population XML File Layout (MS Excel)

Hospital Initial Patient Population Data

The Joint Commission collects Initial Patient Population and sampling information by *Measure Set*. This data is required to be submitted to The Joint Commission on a quarterly basis. All Initial Patient Population and sampling data will be submitted in an XML file that adheres to the *Hospital Initial Patient Population Data XML File Layout* specifications and guidelines provided later in this section. Each file may contain data for only one provider.

Hospital Clinical Data

Hospital clinical data is required to be submitted to The Joint Commission no less than on a quarterly basis. All patient-level data submitted to The Joint Commission must adhere to the *Hospital Clinical Data XML File Layout* specifications and guidelines provided later in this section. The hospital clinical data submitted to The Joint Commission is anonymous because no direct patient identifiers are included in the *Hospital Clinical Data XML File*.

Each case must have a separate XML file. For example, if 12 records have been abstracted, there must be 12 separate XML files. If a patient has also been sampled for a different national hospital quality measure set, then a separate XML file must be created for the additional measure set. Each measure set can only be abstracted once for the same medical record. Refer to the applicable version of the *Specifications Manual for National Hospital Inpatient Quality Measures* for information on how to create and transmit the data for the other measure sets which are not presented in The Joint Commission Only Manual such as VTE, and ED.

Each HBIPS discharge case and event case must have a separate XML file. For example:
Example #1: During the quarter, 10 patients are discharged (*Discharge Date*) and no restraint or seclusion events occurred for any patient (not just those discharged). Ten (10) separate XML files are created and transmitted, one for each discharged patient.

Example #2: During the quarter, no patients are discharged (*Discharge Date*) and 4 unique patients have restraint or seclusion events for a total of 11 events. Eleven (11) separate XML files are created and transmitted, one for each event (*Event Date*). Multiple events (*Event Date*) for a patient **cannot** be combined into one XML file. If the same patient is restrained and seclude (*Event Type*) on the same day (*Event Date*), the two events must be transmitted in separate XML files.

Example #3: During the quarter, 1 patient is discharged (*Discharge Date*) and 1 unique patient has a restraint event and a seclusion event (*Event Date*) for a total of 2 events. The patient with the events is the same patient that was discharged. Three (3) separate XML files are created and transmitted, one for the patient's

discharge information (*Discharge Date*) and one for each event (*Event Date and Event Type*). A patient's discharge information and event information **cannot** be combined into the same XML file.

File submission for different Stroke certification programs

• STK files when submitted for the same patients, will apply to all Stroke certification programs and there is no need to submit the STK file more than once.

Following table depicts the measures that are required for each certification program:

Joint Commission Stroke Certification Measure Table
Effective for discharges on and after January 1, 2019

	Primary Stroke Center (PSC)	Thrombectomy-capable Stroke Center (TSC)	Comprehensive Stroke Center (CSC)
STK-1	X	X	X
STK-2	X	X	X
STK-3	X	X	X
STK-4	X	X	X
STK-5	X	X	X
STK-6	X	X	X
STK-8	X	X	X
STK-10	X	X	X
STK-OP-1	X		
STK-OP-1a	Not Reported		
STK-OP-1b	X		
STK-OP-1c	X		
STK-OP-1d	X		
STK-OP-1e	X		
STK-OP-1f	X		
CSTK-01	X	X	X
CSTK-02		X	
CSTK-03 (Overall) CSTK-03a CSTK-03b			X

	Primary Stroke Center (PSC)	Thrombectomy-capable Stroke Center (TSC)	Comprehensive Stroke Center (CSC)
CSTK-04			X
CSTK-05 (Overall) CSTK-05a CSTK-05b		X	X
CSTK-06			X
CSTK-08		X	X
CSTK-09		X	X
CSTK-10			X
CSTK-11			X
CSTK-12			X

Submission of CSTK Clinical Data
This measure set is reported for three certification programs, **Comprehensive Stroke Center (CSC)** certification, **Thrombectomy-capable Stroke Center (TSC)** Certification, and **Primary Stroke Center (PSC)** Certification. Processing CSTK patient data in HCD is different from other measure sets since discharged patient requires follow-up within a certain number of days after the discharge date. The CSTK-05 measure has been used as the benchmark to define which records require a follow-up. Certification programs, **Comprehensive Stroke Center (CSC)**, and **Thrombectomy-capable Stroke Center (TSC)** require follow-ups. To allow proper tracking and processing of the follow-up measure in HCD, the CSTK topic has been divided into two different submissions, one xml file with data for discharged measures and one xml file with data for follow-up measure submitted after the discharged file.

Sites with CSC certification

Following points provide the detail of how a CSTK file is expected and processed, specifically for CSC certification:

a. Discharge measures, CSTK-01, 03, 04, 05, 06, 08, 09, 11 and 12 are submitted in one XML file with measure-set=CSTK.

b. A CSTK file submitted for a patient discharged from CSC certified site is encouraged to report the element CERTYPE = “CSC” in the detail section of XML file to indicate the patient has been discharged from a CSC certified site. Refer to XML file layout for more info on this element.
Please note, if this element is missing from the CSTK discharge file, CERTYPE = “CSC” is used as default value.
The element CERTYPE should be added to

```
<Detail>
```

section of the CSTK discharge files.

c. The follow up measure, CSTK-10 and it's data, for CSC certification should be submitted in a different XML file with measure set= CSTK-MRS at a later time after follow-up has happened.

The detailed steps of the submission and processing of a CSTK case are as follows:
• A CSTK record is reported to HCD in one XML file as a discharge file.
• This XML file is reported during the normal Transmission period for the discharge date.
• The discharge CSTK file record should report 9 of the 10 measures in the CSTK measure set, i.e., CSTK-01, CSTK-03, CSTK-04, CSTK-05, CSTK-06, CSTK-08, CSTK-09, CSTK-11 and CSTK-12. This file must contain the following tag in the header

```
<episode-of-care measure-set=“CSTK">
<discharge-date>
```

• The CSTK-10 measure is not reported in this CSTK Discharge file since it’s a follow-up measure.
• All cases that have category assignment of E (in numerator) or D (in denominator) for the CSTK-05 measure are expected to have a follow-up in the specific timeframe window.
• The CSTK-10 Measure defines this timeframe or follow-up window (i.e., 75 to 105 days after the discharge date)
• For each expected follow-up for CSTK-05, an event XML file is expected to be reported to HCD in the first transmission period that follows the event/follow-up date, and should only report follow up measure, CSTK-10 data and measure result.
• The CSTK event XML file must contain the following tag in the header

```
<episode-of-care measureset=“CSTK-MRS">
 <event-date>
 <event-type>
```

• The event-date is the same date as the ‘Modified Rankin Score Date’ reported inside the section of the event file. Refer to the Hospital Clinical Data XML File Layout for information on this element.
• In the Event file, ALL the Key elements of the corresponding discharge file, which this event file is following, must be present with this exact value.

Key elements are:
* vendor-id (collected during PET login)
* *hcoid*
* *admit-date*
* *vendor-tracking-id*
* *discharge-date*

Discharge-date in the header of the CSTK discharge file is compared with the discharge-date provided in the detail section of the CSTK-MRS event file.

It’s imperative that the data submitted for the CSTK event case use the exact *discharge-date* and *vendor-tracking-id* that is used in the corresponding discharge-file. If the correct corresponding discharge file is not submitted already, the discharge file needs to be submitted (or retransmitted) first with new/correct keys, before the event date is submitted.

• The follow-up, CSTK-10 must be submitted for CSTK certified facilities after follow-up has happened.
• An Event file that does not match with an associated CSTK discharge file for corresponding certification will be rejected from the warehouse database.
• The event/follow-up schema also requires an *event-type* in the XML file, which should be submitted with a default value=1.
• If discharge file is Retransmitted and the keys are changed, it's considered a new record. The vendor needs to delete the old data (discharge data, and event files if it has been submitted). If the old discharge file is not deleted, most likely its event file would not be submitted, and the follow-up is treated as missing for the old discharge file.

Note:
a. For a patient who expired during hospitalization, the MRS Date and Event date should report the discharge date.
b. For a patient who expired after discharge date, the MRS date and event date both should be the date hospital was informed of the death and not the actual date of death.

The following table should be referenced to find the transmission period for discharge or event date:

Discharged Data or Event Date	Transmission Quarter
1Q data	July
2Q data	October
3Q data	January
4Q data	April

Example:
CSTK-10 measure flow/definition assigns E if the event/follow-up date is between 75 to 105 days after the discharge date and assigns D to any follow-up file submitted with an event date before or after the window (before 75 days or after 105 days) of discharge date.

The following example should clarify the details of the file submission for such a CSTK case, assuming the July 2018 transmission is the current transmission time:

a. Case 1 has been discharged from a CSC Certified site and discharge date of January 1, 2018. One XML file is submitted to HCD with Measure set="CSTK" and it reports all CSTK measures data and result except CSTK-10.

b. This XML file's CSTK-05 result is E, therefore a follow-up is required.

c. HCD calculates Jan 1 + 75= March 17, 2018, as the earliest expected date of follow-up and calculates Jan 1+105= April 16, 2018 as the latest expected date of follow-up.

d. The event of follow-up occurred 75 days after discharge on March 17th, therefore the event has happened in the same quarter as the discharge date (1Q2018).

e. An XML should also be submitted as a CSTK Event file, with Measure Set=CSTK-MRS with CSTK-10 data and result. CSTK-10 result is E since the follow-up happened during the expected window.

f. HCD should receive both the discharge file and the event file in July 2018.

Sites with TSC certification

The data submission for TSC Certification is very similar to data submission for CSC certification as discussed in the **sites with CSC certification** section above, except the following differences:

• When these sites report a discharged CSTK file, they should only report the results for 4 of the 10 CSTK measures. (i.e., CSTK-01, CSTK-05, CSTK-08, CSTK-09).
• A CSTK file submitted for a patient discharged from TSC certified site **must** report the element CERTYPE = "TSC" in the detail section of XML file.
• The follow up, CSTK-02 must be submitted for TSC certified site in an event file.
• The follow up CSTK-02 Measure defines this timeframe or follow-up window (i.e., 75 to 105 days after the discharge date)
• For each expected follow-up for CSTK-05, an event XML file is expected to be reported to HCD in the first transmission period that follows the event date and should report only CSTK-02 data and measure result.

Sites with PSC certification

The data submission for PSC Certification is very similar to data submission for CSC certification as discussed in the **sites with CSC certification** section above, except the following differences:

• When these sites report a discharged CSTK file, they should only report the results for 1 CSTK measure. (i.e., CSTK-01)
• A CSTK file submitted for a patient discharged from PSC certified site **must** report the element CERTYPE = "PSC" in the detail section of XML file.
• There is no follow up for PSC certification.

CSC/TSC Validations

Following validation are performed to ensure the accuracy of execution of CSTK data for each certification accordingly.

a) The engine will validate that a CSC certified site submits CSTK-10 as follow-up measure and TSC certified site submits CSTK-02 as follow-up measure, otherwise the file will be rejected. The type of site's certification is indicated in CERTYPE element in the discharge file.
b) The submission of CERTYPE is optional for patients treated in CSC Certified sites and the value of CSC is used as default, but files submitted for TSC certified site **must** submit this element.
c) Since the default value for CERTYPE is CSC, engine will generate the results for 10 measures. When CERTYPE is missing or empty in the section, the site will be considered as CSC Certified and will be evaluated against all CSTK measures and the file might be rejected due to missing data for the CSTK measures that only belong to CSC certification.
d) A Retransmitted data will be validated to ensure the CERTYPE of the new file is similar to the original file.

If the file with same vendor-tracking-id, hco-id and quarter and year is reporting a different CERTYPE, the Retransmitted file will be rejected. If it's necessary to change this information, the original file must be deleted from warehouse using DELETE feature before submitting the new file.
e) For CSTK-10 and CSTK-02, the discharge date in the detail section of the event file must be the same as the discharge date in the header of the discharge file.

Note: Regarding PaS data submission, CSTK Follow-up file does not affect the population size. No PaS file is expected in the quarter that Follow-up file is submitted.

STK data transmission section

Starting from 1Q2019 discharged data, STK patient can be inpatient or outpatient. But each STK inpatient or outpatient case must have a separate XML file. A patient cannot be inpatient and outpatient at the same time, therefore cannot be combined into the same XML file.

• STK inpatient measures (STK-01, 02, 03, 04, 05, 06, 08 and 10), which are submitted in one XML file with measure-set= "STK"

• STK outpatient measure (STK-OP-1) which is submitted in one XML file with measure-set= "STK-OP"

- Outpatient XML must have Outpatient Encounter Date and E/M Code.

Additional information:

For more information concerning the *Performance Measurement System Identifier*, refer to the *ORYX Technical Implementation Guide* . For more information concerning the *Vendor Tracking ID* and *Health Care Organization Identifier*, refer to the Transmission Alpha Data Dictionary in this manual.

- **Unique Key Identifier for Discharge Measures (e.g., HBIPS-1, PC-01, CSTK-03, ASR-IP-1)**:
    - *Performance Measurement System Identifier* — - not part of the file, captured at the point the file is uploaded to The Joint Commission
    - *Vendor Tracking ID* — - fictitious identifier generated by the measurement system to differentiate between individual patient records from each hospital
    - *Admission Date*
    - *Discharge Date*
    - *Measure Set*
    - *Health Care Organization Identifier*

- **Unique Key Identifier for Event Measures (i.e., HBIPS-2 and HBIPS-3, CSTK-10 or CSTK-02)**:
    - *Performance Measurement System Identifier* — - not part of the file, captured at the point the file is uploaded to The Joint Commission
    - *Vendor Tracking ID* — - fictitious identifier generated by the ORYX Vendor to differentiate between individual patient records from each hospital
    - *Admission Date*
    - *Event Date*
    - *Event Type*

- *Measure Set*
- *Health Care Organization Identifier*

- **Unique Key Identifier for Outpatient Measures (e.g., ASR-OP-1, STK-OP-1)**:
  - *Performance Measurement System Identifier* — - not part of the file, captured at the point the file is uploaded to The Joint Commission
  - *Vendor Tracking ID* — - fictitious identifier generated by the ORYX Vendor to differentiate between individual patient records from each hospital
  - *Arrival Date*
  - *Encounter Date*
  - *Measure Set*
  - *Health Care Organization Identifier*

- **Transaction Processing:** Data can be added, replaced, and deleted during the current reporting quarter using the Action-Code in the XML file. In order to replace or delete an existing file at The Joint Commission, the files must match on the unique key data elements as defined above. In order to update a key element in an existing file, the file must be deleted and a new file must be submitted. If the element to update is not a key element, then the file can be resubmitted using the Add' Action-Code; there is no need to delete the file first as long as the file matches on the unique key data elements.

- **Measure Selection:** Data that passes all edits and contains all data required to calculate the measures will be accepted as long as the hospital (identified by the *Health Care Organization Identifier*) has selected the measure set for the reporting quarter with the ORYX Vendor that is submitting the data.

- **Sample:** All EOC and event records included in the sample, or if the hospital is not sampling the Initial Patient Population, must be transmitted to The Joint Commission. This is true regardless of whether or not any measure for the record calculates to a *Measure Category Assignment* = "X". **Note:** — the HBIPS event measures (HBIPS-2 and 3) do not allow sampling, all data in the Initial Patient Population of these two measures must be transmitted.

- **Data Elements Not Accepted by The Joint Commission:** The following data elements may be transmitted to the Centers for Medicare and Medicaid Services (CMS) for the aligned national hospital quality measures but cannot be transmitted to The Joint Commission for any measure because the data transmitted to The Joint Commission are anonymous. For information concerning these data elements, refer to the applicable version of the *Specifications Manual for National Hospital Inpatient Quality Measures*. Files transmitted to The Joint Commission that contain the following data will be rejected:
  - *Patient Identifier*
  - *First Name*
  - *Last Name*
  - *Postal Code*

- **Data Elements Required by The Joint Commission:** In order to support the Joint Commission's data quality analysis and continuous measure verification process the following data elements are required to be transmitted for each measure in the measure set.

- *Measure Category Assignment*
- *Measurement Value* (Note: Currently there is no active Continuous Variable measure in The Joint Commission Manual that uses this data element)
- *Predicted Value*
- *Vendor Tracking ID*

  Note — *Vendor Tracking ID* is a fictitious identifier that is generated by the ORYX Vendor to differentiate between individual patient records from each hospital because the Joint Commission's data are blinded as to whom the patient is. *Vendor Tracking ID* data element is used to transmit this fictitious identifier. This identifier is unique to a patient.

- **For each patient episode of care the following patient identifiers should match for each *Measure Set* that is submitted for Discharge Measures (e.g., HBIPS-1, PC-01, CSTK-05, ASR-IP-1).**
  - *Vendor Tracking ID*
  - *Admission Date*
  - *Discharge Date*
  - *Birthdate*
  - *Health Care Organization Identifier*
    For example, if the hospital submits a separate XML file for STK, PC, HBIPS, and TOB, the above identifiers should be the same in each of the discharge XML files.

- **For HBIPS or CSTK records, if the patient has multiple events(e.g., HBIPS-2 and HBIPS-3, CSTK-10 or CSTK-02), the following patient identifiers should match for each event record transmitted.**
  - *Vendor Tracking ID*
  - *Admission Date*
  - *Birthdate*
  - *Health Care Organization Identifier*
    In addition, the discharge record must also be transmitted with the same identifiers.

- **HBIPS Specific Data Elements Not Accepted by The Joint Commission As Part of HCD:** The following data elements will not be transmitted to The Joint Commission in the Hospital Clinical Data (HCD) file. These data are aggregated at the hospital level and are not patient specific data. Files transmitted to The Joint Commission that contain the following data will be rejected:
  - *Psychiatric Inpatient Days - Medicare Only*
  - *Psychiatric Inpatient Days - Non-Medicare Only*
  - *Total Leave Days - Medicare Only*
  - *Total Leave Days - Non-Medicare Only*

Data Re-transmission

- The Joint Commission acknowledges that it is appropriate to allow ORYX data to be updated. We are interested in assuring the best possible data quality, especially in light of public reporting. With each regularly scheduled transmission deadline, we routinely accept retransmission of up to four quarters of Hospital Clinical data (HCD) and Population and Sampling data (PaS). The purposes of the accepting the retransmitted data is to update the data for the ORYX Performance Measure Reports, national comparison group data, and the health care organization Quality Report postings. These

retransmitted data may be inclusive of updated data previously submitted and/or data that may have been erroneously omitted.

ORYX Vendors are required to correct their recognized data integrity issues and retransmit up to four quarters of updated HCD and PaS data for national quality measures by the next regularly scheduled quarterly transmission deadline. Retransmission of corrected data from issues emanating at the client health care organization-level is encouraged whenever feasible. It is the responsibility of the ORYX Vendor to notify their clients that updated data were retransmitted to The Joint Commission, and that the subsequent Quality Report posting and future ORYX Performance Measure Reports will reflect these data. It is important to note, these retransmitted data will refresh the *following quarter's* ORYX Performance Measure Reports and Quality Report, and update the national comparison group rates.

Refer to the ORYX Performance Measurement System Agreement, ORYX Data Retransmission Process, for further details and associated fees that apply. ORYX Vendor inquires related to the retransmission of ORYX data should be directed to http://manual.jointcommission.org.

Information The Joint Commission Provides To ORYX Vendors

Risk Adjustment: The Joint Commission will provide ORYX Vendors with risk adjustment model information for the active national quality measures (e.g., PC, CSTK) that require risk adjustment. ORYX Vendors must apply the risk model information to their patient-level data. Additional specifics include:

- ORYX Vendors will have access to current national quality measure risk model information files through the Performance Measurement System Extranet Track (PET).
- Details related to the risk model information file, its usage by ORYX Vendors and a list of significant risk factors are provided in the *ORYX Risk Adjustment Guide*. This guide is available to the public on the Joint Commission's website and, in addition, it is available to ORYX Vendors via the Joint Commission's extranet site for ORYX Vendors (PET).
- National quality measure risk models must not be used for any purposes other than calculating risk-adjusted data elements.
- For assistance with the national quality measure risk model information, please contact the ORYX statistical support staff at http://manual.jointcommission.org and click on Statistical Support.

National Comparison Group: The Joint Commission will provide ORYX Vendors participating in the ORYX national quality measure initiative with national comparison group data. ORYX Vendors may use this information to prepare feedback reports for client organizations. Additional details in regard to this process include:

- ORYX Vendors will have access to national comparison group data through the Performance Measurement System Extranet Track (PET).
- Refer to the *ORYX Data Quality Manual* for the list of national comparison group data elements, how ORYX Vendors may utilize this data, and related information.
- For assistance with the national quality measure national comparison group, please contact the ORYX statistical support staff at http://manual.jointcommission.org and click on Statistical Support.

Joint Commission Guidelines for Submission of Data

Overview

The below guidelines are for the submission of Hospital Clinical Data and Hospital Initial Patient Population Data to The Joint Commission. Additionally, for the Joint Commission's Hospital Clinical Data Edit and Algorithm Error Feedback Messages, please refer to the Joint Commission's extranet for measurement systems (PET).

- Error Messages provide feedback regarding submitted data, file structure and data integrity that either cause the case to be rejected from the warehouse (Critical) or ask for further verification (Informational). Cases with any critical error messages will not be processed or stored in the warehouse. For cases to be accepted into the warehouse all critical errors must be corrected and the case resubmitted. Informational errors are feedback that warn of potential issues and ask for verification. Cases that receive no error messages or that receive informational messages only will be processed as per the measure algorithm.
- Missing Messages are critical edits that will cause the case to be rejected from the warehouse due to missing data, as per the measure algorithms, resulting in a measure outcome of “X” (Data are Missing).
- Measure Messages provide feedback related to the outcome of the case, as per the measure algorithm, resulting in any other measure outcome, i.e., “B” (Not in Measure Population/Excluded), “D” (In Measure Population/Failed), “E” (In Numerator Population/Passed), or “Y” (Unable to Determine Allowable Value Does Not Allow Calculation of the Measure/UTD).

Joint Commission Guidelines for Submission of Hospital Clinical Data

Minimum Data Requirements Prior to processing measure outcomes all data will be verified according to the rules in the data transmission section and the Feedback Messages documents. Cases submitted to the the Joint Commission’s Data Warehouse that does not meet the requirements outlined in these documents will be rejected.

Allowable Measure Set Combination per Patient Episode of Care A patient episode of care might be qualified to be submitted for multiple measure sets. However, the population definition of the measure sets dictate which measure sets combination is possible and they could be reported for a single episode of care and which combination of measure sets are not possible and therefore are not allowed to be submitted for the same episode of care. 'TJC Allowable Measure Set Combinations' file provides guidance on allowable Measure Set combinations that are acceptable into The Joint Commission’s Data Warehouse. Refer to TJC Allowable Measure Set Combinations file for further guidance.

- Download TJC_Allowable_Measure_Sets_Combination (MS Excel)

Requirements for XML Tags and Associated Data
Do not put spaces between XML tags and associated data. Cases with inappropriate spaces will be rejected from the Joint Commission’s Data Warehouse.

Export File Character Limitations
ORYX Vendors should refer to the ORYX Technical Implementation Guide for guidelines related to file naming for submission of data to the Joint Commission's Data Warehouse.

Missing Data Policy
All cases submitted to The Joint Commission's Data Warehouse must have all data required to calculate the measures. Any case, which is missing data required to calculate measures and would result in a Measure Category "X" assignment, will be rejected for all measures for that record. These cases should be reviewed by the provider and resubmitted with an allowable value indicated for any data element that was missing. Please refer to the Missing and Invalid Data Section for additional information.

* If the abstractor, after due diligence, is not able to determine an answer, a value of "UTD" must be selected for the applicable data element. This includes ICD-10-PCS Principal Procedure Date and ICD-10-PCS Other Procedure Dates, which are required data elements if ICD-10-PCS Principal Procedure Code and ICD-10-PCS Other Procedure Codes are submitted for the case. Please see the data element definitions for further details on allowable values. If the case is missing the corresponding allowable answer value, the case will be rejected from the Joint Commission's Data Warehouse.

Data Elements Not Accepted by The Joint Commission
The following data elements are transmitted to CMS, but cannot be transmitted to The Joint Commission. Files transmitted to The Joint Commission that contain the following data will be rejected:

- Patient Identifier
- First Name
- Last Name
- Postal Code

Data Elements Required by the Joint Commission In order to support the Joint Commission's data quality analysis and continuous measure verification process the following data elements are required to be transmitted for each measure in the measure set. All hospital measures use these data elements. The ORYX Vendor's calculated Measure Category Assignment will be transmitted to The Joint Commission on a quarterly basis with the associated hospital clinical data. These measure results will be used in the Joint Commission's data quality analysis and continuous measure verification process. ORYX Vendors can refer to the Joint Commission's ORYX Data Quality Manual for more information.

- Measure Category Assignment
- Measurement Value (Note: Currently there is no active Continuous Variable measure which uses this data element)
- Predicted Value

Note: These data elements must be transmitted to The Joint Commission but cannot be transmitted to CMS. Files transmitted to the QIO Clinical Warehouse that contain Measure Category Assignment will be rejected.

Unique Record Key (What fields make a record unique?)

Discharge Measures: Performance Measurement System Identifier , Vendor Tracking Identifier , Admission Date , Discharge Date , Health Care Organization Identifier , and Measure Set

For each patient episode of care the following patient identifiers should match for each Measure Set that is submitted for Discharge Measures (e.g., HBIPS-1, PC-01, CSTK-05, ASR-IP-1). For example, if the hospital submits a separate XML file for STK, PC, HBIPS, CSTK, ASR and TOB, the above identifiers should be the same in each of the discharge XML files.

1. Vendor Tracking ID
2. Admission Date
3. Discharge Date
4. Birthdate
5. Health Care Organization Identifier

For Event Measures: Performance Measurement System Identifier , Vendor Tracking Identifier , Admission Date , Event Date , Event Type , Health Care Organization Identifier , and Measure Set

For HBIPS records, if the patient has multiple events (e.g., HBIPS-2 and HBIPS-3), the following patient identifiers should match for each event record transmitted. In addition, the discharge record must also be transmitted with the same identifiers.

1. Vendor Tracking ID
2. Admission Date
3. Birthdate
4. Health Care Organization Identifier

Refer to the Transmission Alpha Data Dictionary for more information concerning the Vendor Tracking ID and Health Care Organization Identifier.

Note: Refer to the ORYX Technical Implementation Guide for more information concerning the Performance Measurement System Identifier.

Principal and Other Diagnosis and Procedure Codes Effective March 1, 2007, The National Uniform Billing Committee has implemented a Present on Admission indicator for Principal and Other Diagnosis codes. Data submitted to the Joint Commission's Data Warehouse must have the Present on Admission Indicator removed prior to submission. Failure to remove the indicator will result in cases being rejected from both warehouses.

Patient-Level Clinical Data XML File Layout
The XML File Layout is divided into the following five main sections (Please refer to Hospital Clinical Data XML File Layout for details).

Submission

1. Type – Describes the setting for which the data is being collected (Hospital)
2. Data – Describes the type of data being submitted (Clinical).

3. Version – Describes the version of the XML file layout.
4. Action-Code – Describes the action intended with the submission of the file. Options include:
    a. Add (applicable to a file submitted for the first time for the hospital/time period or to a file being submitted as an update/replacement of an existing file already submitted for a provider).
    b. Delete (utilize when the file is submitted for the purpose of deleting a file already submitted to the Joint Commission's Data Warehouse.)

Note: In order to replace or delete an existing file utilizing the Add or Delete action codes, the files must match on the following fields in the Joint Commission's Data Warehouse: Performance Measurement System Identifier*, Vendor Tracking ID, Admission Date, Discharge Date, Measure Set, and Health Care Organization Identifier.

File Audit Data

Note: This section is not required

1. Create-Date – Indicates the date the file was created.
2. Create-Time – Indicates the time the file was created.
3. Create-By – Indicates who created the file.
4. Version – Indicates the version of the file being submitted.
5. Create-by-Tool – Indicates the software tool utilized to create the file.

Abstraction Audit Data

Note: This section is not required

1. Abstraction-Date – Indicates the date the file was abstracted.
2. Abstractor-id – Indicates the person who abstracted the file.
3. Total-Abstraction-Time – Indicates the time required to abstract the file (in seconds).
4. Comments – Area for entry of any comments regarding the abstraction.

Provider

Data elements in this section of the XML file relate to Provider identification. These data elements include:

1. CMS Certification Number - Hospital's six digit acute CMS Certification Number (CCN), which is allowed and is optional for The Joint Commission.
2. NPI - National Provider Identifier as assigned by CMS, optional for The Joint Commission.
3. HCOID - Identifies the healthcare organization that is accredited by The Joint Commission and is required as a key element of the patient file for The Joint Commission.

Patient

Data elements in this section of the XML file relate to patient demographic information such as Birthdate and Sex.

For algorithms that calculate the patient age, Admission Date minus the Birthdate, use the month and day portion of admission date and birthdate to yield the most accurate age. The traditional approach of counting months or years by the birthday date or the first day of the next month, when the exact date does not exist in the calendar for the end point, must be used when calculating the patient age. For example, if calculating the age by year, a patient born on March 31st turns one year older on March 31st. A patient born on February

29th, in a leap year, has a birthday on February 29th on all leap years, and March 1st in all non-leap years. Or if calculating age by month, if a patient is born on March 31st the patient turns 6 months on October 1st and not on September 30th. Since the date 31 does not exist in September, you would move to the first day of the next month, which would be October 1st, to add one month to the patient age.

Episode of Care

Data in this section of the XML file relate to the acute inpatient stay and clinical data associated with the stay. Examples of associated data elements include:

1. Admission Date
2. Discharge Date (discharge measures)
3. Event Date (event measures)
4. Event Type (event measures)
5. Vendor Tracking Identifier
6. Measure Set
7. Clinical Questions and answer codes

The Joint Commission

Data in this section of the XML file support the Joint Commission's data quality analysis and continuous measure verification process of ORYX Vendors. The following data elements are required to be transmitted to The Joint Commission for each measure in the measure set.

1. Measure Category Assignment
2. Measurement Value (Note: Currently there is no active Continuous Variable measure which uses this data element)
3. Predicted Value

Please refer to the data dictionary for further definition of these data elements.

Abstraction Software Skip Logic and Missing Data

Skip logic allows hospitals and vendors to minimize abstraction burden by using vendor software edit logic to bypass abstraction of data elements not utilized in the measure algorithm. However, these bypassed elements also negatively impact data quality when elements are incorrectly abstracted and subsequent data elements are bypassed and left blank.

The use of skip logic by hospitals and ORYX vendors is optional and not required by The Joint Commission. Hospitals should be aware the potential impact of skip logic on data quality and abstraction burden. Vendors and hospitals utilizing skip logic should closely monitor the accuracy rate of abstracted data elements, particularly data elements placed higher in the algorithm flow.

Joint Commission Guidelines for Submission of Hospital Initial Patient Population Data

Hospitals must submit to The Joint Commission on a quarterly basis the aggregate population and sample counts for Medicare and non-Medicare discharges for each of the measure sets. If the aggregate population

count is zero, the hospital is still required to submit the Hospital Initial Inpatient Population Data file and would submit zero as the population and sample counts. In addition, The Hospital Initial Inpatient Population Data file must be transmitted to the Joint Commission's Data Warehouse even if the hospital has elected to not report the patient data for the Discharge measures (e.g., HBIPS1, 4, PC-01, CSTK-05, ASR-IP-01, ASR-OP-1) when they have five or fewer cases for an appropriate measure set during the quarter.

Hospital Initial Patient Population Data XML File Layout

The XML File Layout is divided into the following five main sections (Please refer to Hospital Initial Patient Population Data XML File Layout for details).

Submission

1. Type — Describes the setting for which the data is being collected (Hospital)
2. Data — Describes the type of data being submitted (Population).
3. Version — Describes the version of the XML file layout.
4. Action-Code — Describes the action intended with the submission of the file. The “Add” action-code is required for all initial patient population files submitted.

Note: In order to replace an existing file at the utilizing the Add action code, the files must match on: *Health Care Organization ID*, Time-Period and Measure-Set

In order to replace an existing file all XML tags must be present, however, only the XML tags mentioned above (Health Care Organization ID, Time-Period, and Measure-Set) need to be submitted with values.

File Audit Data

Note: This section is not required

1. Create-Date — Indicates the date the file was created.
2. Create-Time — Indicates the time the file was created.
3. Create-By — Indicates who created the file.
4. Version — Indicates the version of the file being submitted.
5. Create-by-Tool — Indicates the software tool utilized to create the file.

Provider Data

Data elements in this section of the XML file relate to Provider identification. These data elements include:

1. *Provider-Id* - Hospital's six digit acute care CMS Certification Number (CCN), which is allowed and it's optional for The Joint Commission.
2. *NPI* - National Provider Identifier as assigned by CMS, and is optional for The Joint Commission.
3. *HCOID* - Identifies the healthcare organization that is accredited by The Joint Commission and is required as a key element of the patient file.

Time Period

Time-Period-— Dates in this field should reflect the discharge time period related to the data being submitted. Time period start and end dates must reflect full month increments, and may not be greater than one month. Files submitted to the Joint Commission's Data Warehouse are required to contain a three monthly time periods which comprise the calendar quarter for which data is being submitted.

Example: If the Hospital Initial Patient Population File is being submitted for fourth quarter 2008, the file must contain the following time periods and appropriate associated data (including all data elements is the Population Details section that follows):
October 2008
November 2008
December 2008

Files submitted with time periods that do not meet the above requirements will be rejected from the Joint Commission's Data Warehouse.

Population Details

1. Measure-Set — Indicates the Measure Set for which the data is being submitted.
2. Stratum — Indicates the stratum (e.g., HBIPS) or sub-population (e.g., PC) related to the data being submitted.

Additional data elements include *Initial Patient Population Size — Medicare, Initial Patient Population Size — Non-Medicare, Sampling Frequency, Sample Size — Medicare, and Sample Size — Non-Medicare*. Please refer to the Transmission Data Dictionary for further definition of these data elements. Please refer to Hospital Initial Patient Population Data XML File Layout for further information on details of the XML file format. All data elements are based on discharges or events that occurred during the associated time period.

Transmission Alphabetical Data Dictionary

These data elements are either used to identify the hospital and measure set associated to the transmitted data or are calculated by the vendor using the hospital's patient-level data and measure results. These data elements are not used in the Initial Patient Population Algorithms or Measure Algorithms.

Data Element Name	Collected For
CMS Certification Number	Transmission, Hospital Clinical Data File, Optional for All Records
Certification Type	Joint Commission Only, Transmission, Hospital Clinical Data File
Health Care Organization Identifier	All Records, Patient Population Data File, Hospital Clinical Data File
Initial Patient Population Size — Medicare Only	All Records, Transmission, Patient Population Data File
Initial Patient Population Size — Non-Medicare Only	All Records, Transmission, Patient Population Data File
Measure Set	All Records, Transmission, Patient Population Data File, Hospital Clinical Data File
Measurement Value	Calculation, Transmission, Hospital Clinical Data File
National Provider Identifier	Transmission
Predicted Value	Transmission, Risk Adjustment, Hospital Clinical Data File
Sample	All Records, Transmission, Hospital Clinical Data File
Sample Size — Medicare Only	All Records, Transmission, Patient Population Data File
Sample Size — Non-Medicare Only	All Records, Transmission, Patient Population Data File
Sampling Frequency	All Records, Transmission, Patient Population Data File
Vendor Tracking Identifier	All Records, Transmission, Hospital Clinical Data File

Go to: Alphabetical List of all Data Elements

Transmission Data Processing Flow: Clinical

Introduction

This section contains information regarding the order in which the Joint Commission's Data Warehouse evaluates the Joint Commission national quality core measures.

The transmission data processing flow ensures that only valid data are used in the measure algorithms. Each case that is rejected by the process will be listed on a report along with a brief description of the problem. Vendors will access the Joint Commission's HCD Report via the Performance Measurement System Extranet Track (PET).

Transmission Data Processing Flow for The Joint Commission

Note: HBIPS contains two Initial Patient Populations, discharges and events. Discharge information and event information are transmitted in separate XML files. All events of the same type occurring on the same day are transmitted in one XML file. However, different types of events occurring on the same day are transmitted in separate XML files. PC measure set contains 4 sub-populations, PC-Mother, PC-BSI, PC-Breast Feeding and PC- Unexpected Complications sub-populations. Each PC Mother case needs to be reported in one xml file, and each PC-Baby case needs to be reported in one xml. If the PC-Baby case belongs to all three Baby-BSI, Baby Breast Feeding and Baby Unexpected Complications sub-populations and is sampled for Baby-Breast Feeding, it should report all three PC-04, PC-05 and PC-06 measures in the same xml file.

Note: For each case that belongs to CSTK measure set, 9 of 10 measures in CSTK are reported in one XML file as CSTK discharge file during discharge period submission (regardless of which CSTK sub-population it belongs to). If the case is in the denominator or Numerator for CSTK-05, CSTK-02 (For TSC certification) or CSTK-10 (For CSC certification) measure is reported as an event measure in different XML event file 75-105 days after submission of the first file.

All data transmitted pass through the following process:

1. If appropriate, files are verified to be proper zip and XML files.
    - If the files are invalid, reject the file(s) and stop processing.
    - If the files are valid, continue processing.

2. The data are verified that no unexpected protected health information (PHI) (e.g., Postal Code) is present.
    - If unexpected PHI exists, reject the file(s) and stop processing.
    - If **no** unexpected PHI exists, continue processing.

    Starting with this step, processing is per case (individual XML file):
3. Data are evaluated to ensure the quarter associated to the *Discharge Date* or *Event Date* is open for data transmission.
    - If the Data Collection quarter is closed, reject the XML file and stop processing.

- If the Data Collection quarter is open, continue processing.

4. Data are evaluated to ensure the *Measure Set* is expected from the submitter for the time frame (*Discharge Date* or *Event Date*) and the *Healthcare Organization Identifier* in question.
    - If the data are not expected, reject the XML file and stop processing.
    - If the data are expected, continue processing.

5. Check the action-code
    - If the action-code = ADD, continue with step #6.
    - If the action-code = DELETE, continue with step #14.

6. The general data elements, as defined in the Introduction to the Data Dictionary section, are evaluated to ensure they exist and contain valid allowable values. The HBIPS measure set is unique in that it has three different groups of general data elements. The first group is "general" for all measures in the set. The second group is only "general" for the HBIPS discharge measures. The third group is only "general" for the HBIPS event measures.

    In addition, HBIPS data elements may be "measure set specific" for one type of HBIPS measure and "general" for the other type. For example, *Psychiatric Care Setting* is a "measure set specific" data element for the discharge measures and a "general" data element for the event measures. See #8 for information concerning the processing of "measure set specific" data elements.
    - If any general data elements fall outside of the data integrity checks, reject the XML file and stop processing.
    - If any general data element is missing or invalid, reject the XML file and stop processing.
    - If all general data elements exist and contain valid allowable values, continue processing.

7. The Initial Patient Population Algorithm associated to the *Measure Set* is evaluated to ensure that the data is in the population of the set. Refer to the appropriate *Measure Set* Data Element List for the algorithm.
    - If the Initial Patient Population Algorithm returns an **Initial Patient Population Reject Case Flag** = “Yes” (case is not in the Initial Patient Population), reject the XML file and stop processing.
    - If the Initial Patient Population Algorithm returns an **Initial Patient Population Reject Case Flag** = “No” (case is in the Initial Patient Population), continue processing.

8. The *Measure Set* specific data elements are evaluated to ensure they contain valid allowable values. This step does not evaluate for missing data because that is performed by the measure algorithms.
    - If any measure set specific data elements fall outside of the data integrity checks, reject the XML file and stop processing.
    - If any measure set specific data elements are invalid, reject the XML file and stop processing.
    - If all measure set specific data elements contain valid allowable values, continue processing.

9. If appropriate for the *Measure Set*, grid data elements are evaluated to ensure each row does not contain missing data. This step does not ensure that the entire grid is empty because that evaluation is performed by the measure algorithms.
    - If any row of the grid is missing data, reject the XML file and stop processing.
    - If the grid is empty or all data elements exist in each row, continue processing.

10. Each XML file is evaluated for unexpected data. While a case may be in the population of more than one measure set, each XML file is associated to only one set.
    - If any data exists that is not expected for the *Measure Set*, reject the XML file and stop processing.
    - If no unexpected data for the *Measure Set* exists, continue processing.

11. Each XML file is evaluated to ensure that it and existing data in the database for the patient does not create an incorrect measure set combinations. For example if *Measure Set* = HBIPS for a patient less than 18 years old and a record for the same patient has previously been accepted by the Warehouse for the *Measure Set* of STK, then the new record will create an incorrect measure set combination. Refer to the Joint Commission Guidelines for Submission of Data in the Data Transmission section, for list of invalid measure set combinations.
    - If this record will create an incorrect measure set combination, reject the XML file and stop processing.
    - If this record will not create an incorrect measure set combination, continue processing.

12. Execute each measure algorithm associated to the measures the hospital has selected for the *Measure Set*. Refer to the appropriate Measure Information Forms for the *Measure Set* for the measure algorithms.
    - If any measure evaluates with a *Measure Category Assignment* = “X”, reject the XML file and stop processing.
    - If all measures evaluate with *Measure Category Assignments* = “B”, “D”, “E”, "U", and/or “Y”, continue processing.

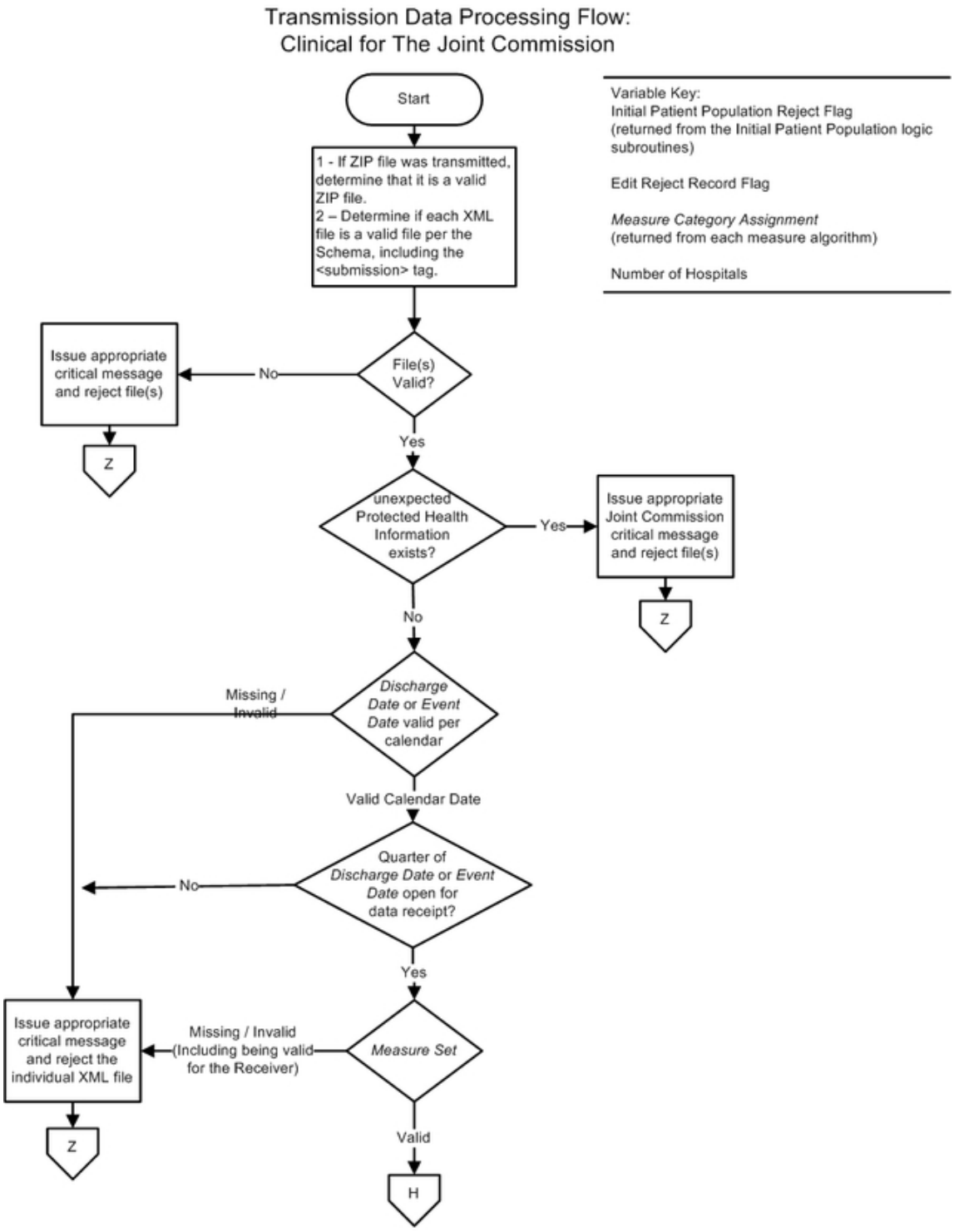
13. The case is accepted into the Joint Commission's Data Warehouse. If any of the measures in the measure set are Risk Adjusted:
    - If yes, then execute the measure risk model on xml file and then stop processing.
    - If no, stop processing.

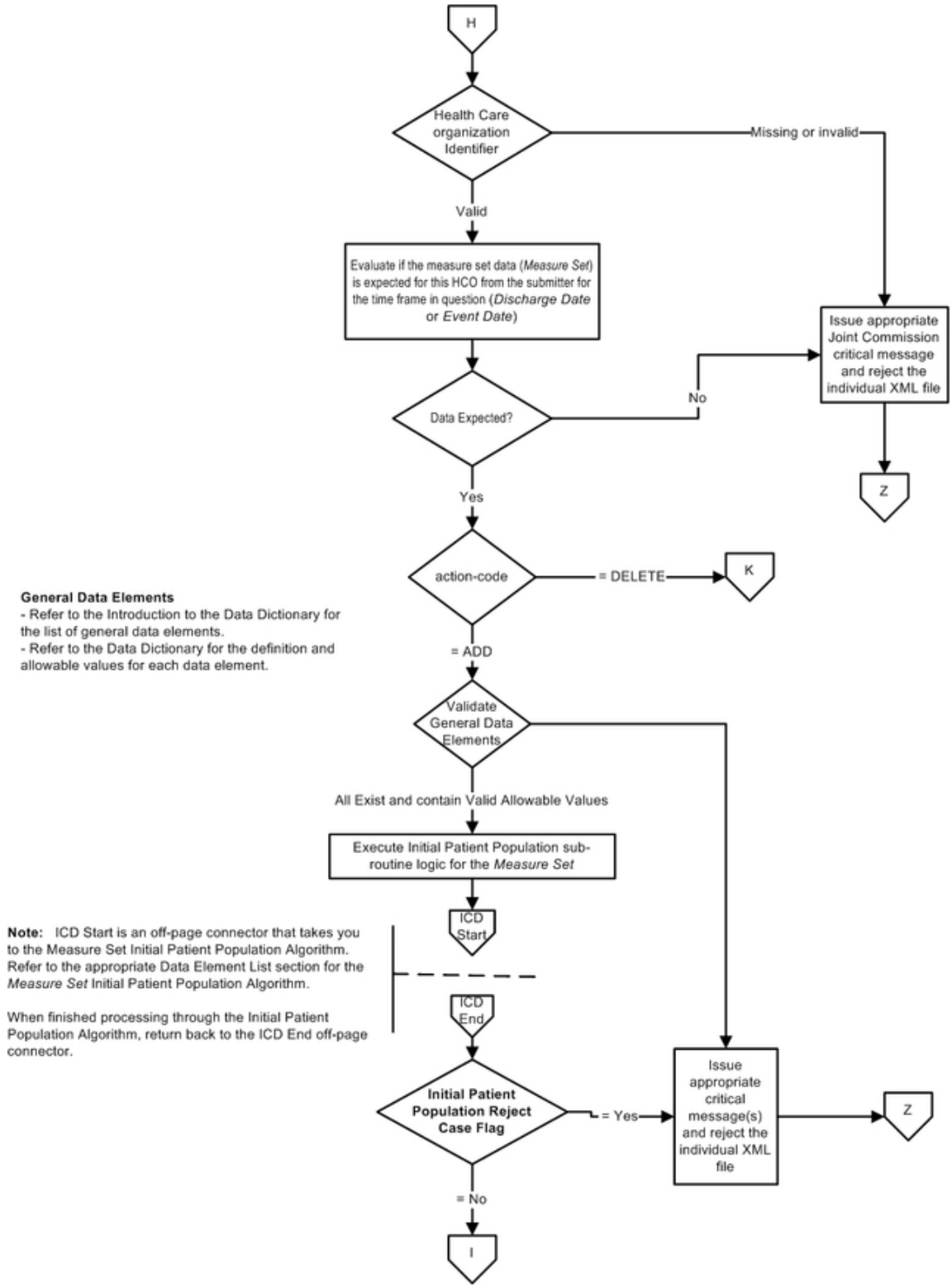
    The following steps are performed if the record's action-code = DELETE:

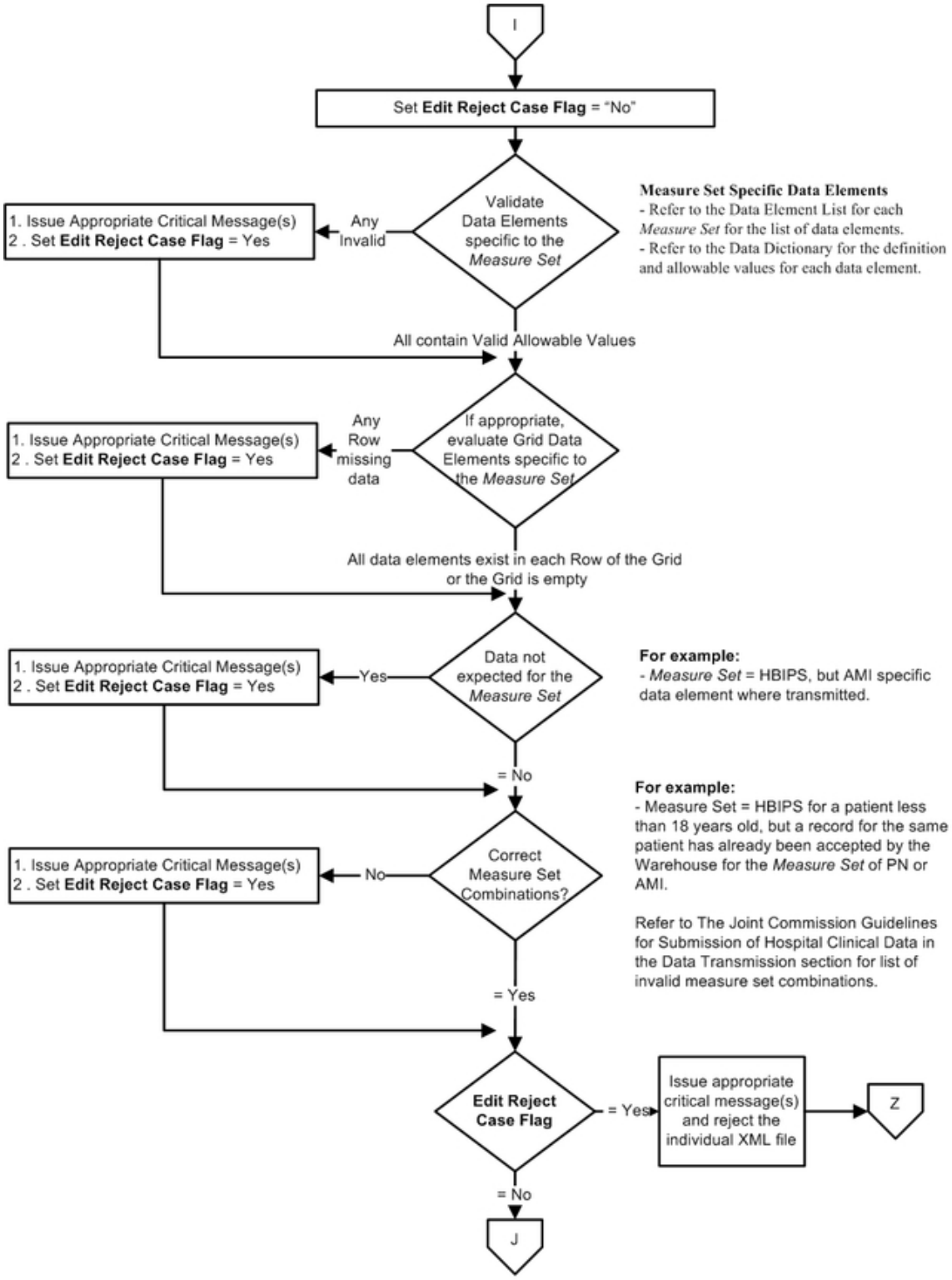
14. The remaining data elements that are part of the Unique Record Key, as defined in the Joint Commission Guidelines for Submission of Hospital Clinical Data in the Data Transmission section, are evaluated to ensure they exist and contain valid allowable values. These data elements are required for all *Measure Sets*.
    - If any Unique Record Key data element is missing or invalid, reject the XML file and stop processing.
    - If all Unique Record Key data elements exist and contain valid allowable values, continue processing.

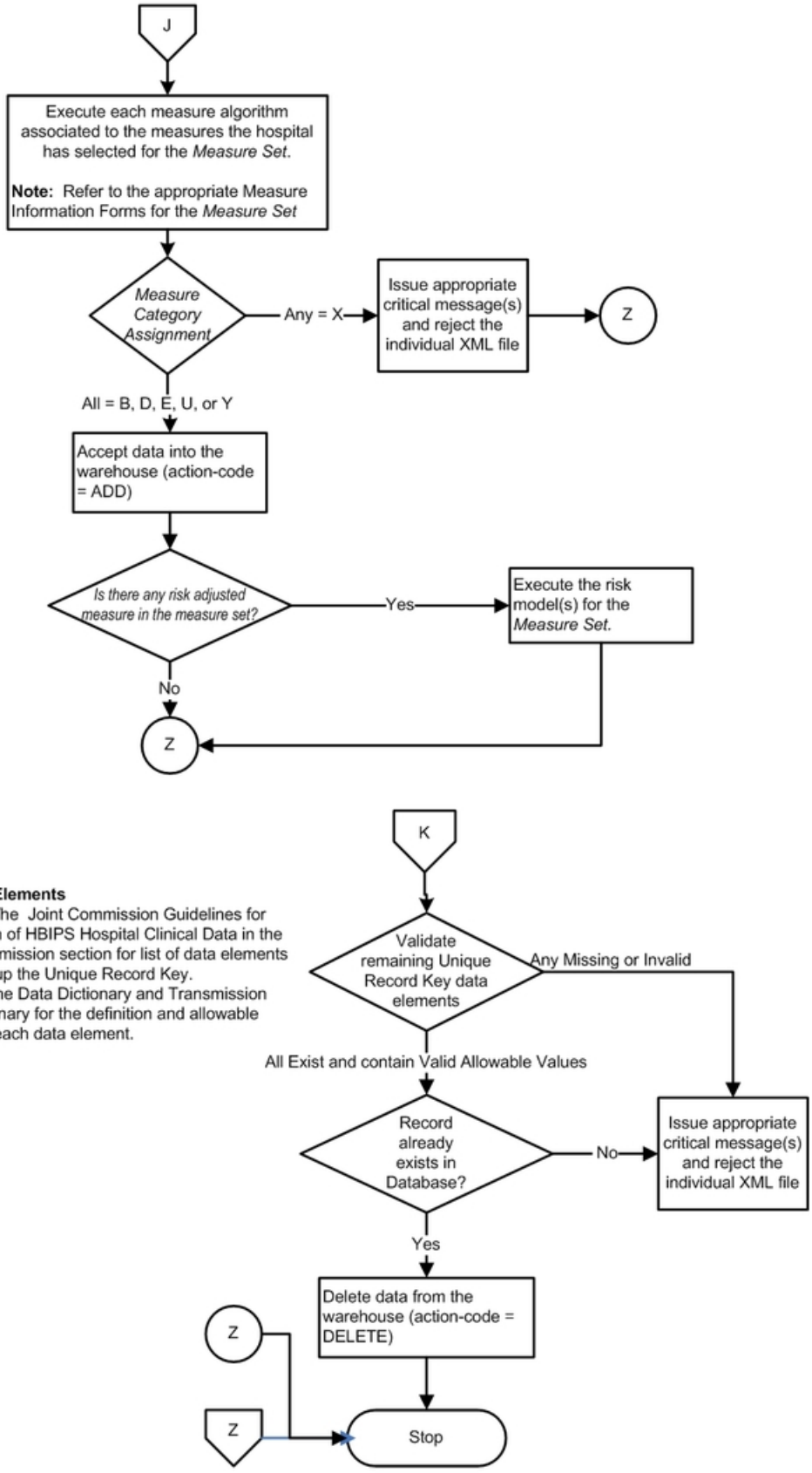
15. The database is checked to see if a record with the same Unique Record Key already exists.
    - If the case does not already exist in the database, then the transmitted DELETE record is rejected.
    - If the record already exists in the database, it is deleted.

Transmission Data Processing Flow: Clinical Algorithm




H
Health Care organization Identifier
Missing or invalid
Valid
Evaluate if the measure set data (Measure Set) is expected for this HCO from the submitter for the time frame in question (Discharge Date or Event Date)
Issue appropriate Joint Commission critical message and reject the individual XML file
Data Expected?
No
Z
Yes
action-code
= DELETE
K
= ADD
General Data Elements
- Refer to the Introduction to the Data Dictionary for the list of general data elements.
- Refer to the Data Dictionary for the definition and allowable values for each data element.
Validate General Data Elements
All Exist and contain Valid Allowable Values
Execute Initial Patient Population sub-routine logic for the Measure Set
ICD Start
Note: ICD Start is an off-page connector that takes you to the Measure Set Initial Patient Population Algorithm. Refer to the appropriate Data Element List section for the Measure Set Initial Patient Population Algorithm.
When finished processing through the Initial Patient Population Algorithm, return back to the ICD End off-page connector.
ICD End
Initial Patient Population Reject Case Flag
= Yes
Issue appropriate critical message(s) and reject the individual XML file
Z
= No
I


I
Set Edit Reject Case Flag = "No"
Validate Data Elements specific to the Measure Set
Any Invalid
1. Issue Appropriate Critical Message(s)
2 . Set Edit Reject Case Flag = Yes
Measure Set Specific Data Elements
- Refer to the Data Element List for each Measure Set for the list of data elements.
- Refer to the Data Dictionary for the definition and allowable values for each data element.
All contain Valid Allowable Values
If appropriate, evaluate Grid Data Elements specific to the Measure Set
Any Row missing data
1. Issue Appropriate Critical Message(s)
2 . Set Edit Reject Case Flag = Yes
All data elements exist in each Row of the Grid or the Grid is empty
Data not expected for the Measure Set
Yes
1. Issue Appropriate Critical Message(s)
2 . Set Edit Reject Case Flag = Yes
For example:
- Measure Set = HBIPS, but AMI specific data element where transmitted.
= No
Correct Measure Set Combinations?
No
1. Issue Appropriate Critical Message(s)
2 . Set Edit Reject Case Flag = Yes
For example:
- Measure Set = HBIPS for a patient less than 18 years old, but a record for the same patient has already been accepted by the Warehouse for the Measure Set of PN or AMI.
Refer to The Joint Commission Guidelines for Submission of Hospital Clinical Data in the Data Transmission section for list of invalid measure set combinations.
= Yes
Edit Reject Case Flag
= Yes
Issue appropriate critical message(s) and reject the individual XML file
Z
= No
J



Key Data Elements
- Refer to The Joint Commission Guidelines for Submission of HBIPS Hospital Clinical Data in the Data Transmission section for list of data elements that make up the Unique Record Key.
- Refer to the Data Dictionary and Transmission Data Dictionary for the definition and allowable values for each data element.

Transmission Data Processing Flow: Population and Sampling

Introduction

This section contains information regarding the order in which the Joint Commission's Data Warehouse evaluate submitted files, which contain aggregate population and sampling counts. Transmission of population and sampling counts are used to assist in evaluating completeness of submission in accordance with The Joint Commission's sampling requirements.

Each case that is rejected by the process will be listed on a report along with a brief description of the problem. Vendors will access the Joint Commission's HCD Reports via the Performance Measurement System Extranet Track (PET).

Transmission Data Processing Flow

All data transmitted pass through the following process:

1. If appropriate, files are verified to be proper zip and XML files.
    - If the files are invalid, reject the file(s) and stop processing.
    - If the files are valid, continue processing.

    Starting with this step, processing is per XML file:
2. Data are evaluated to ensure that three individual time periods, which make up a calendar quarter, exist within the file.
    - If the data are not expected, reject the XML file and stop processing.
    - If the data are expected, continue processing.

3. The *Measure Set* /Stratum is evaluated to ensure a valid value is submitted.
    - If the data are not expected, reject the XML file and stop processing.
    - If the data are expected, continue processing.

4. Data are evaluated to ensure the quarter for Time Periods is open for data submission.
    - If the Data Collection quarter is closed, reject the XML file and stop processing.
    - If the Data Collection quarter is open, continue processing.

5. If the files are submitted to The Joint Commission: The *Health Care Organization Identifier* is evaluated to ensure a valid value is submitted.
    - If the data are not expected, reject the XML file and stop processing.
    - If the data are expected, continue processing.

6. If the files are submitted to The Joint Commission: Data are evaluated to ensure the Measure Set(s) or Strata are expected from the submitter.
    - If the data are not expected, set the reject 'Pending Database' flag = Yes, continue processing.

- If the data are expected, set the reject 'Pending Database' flag = No, continue processing.

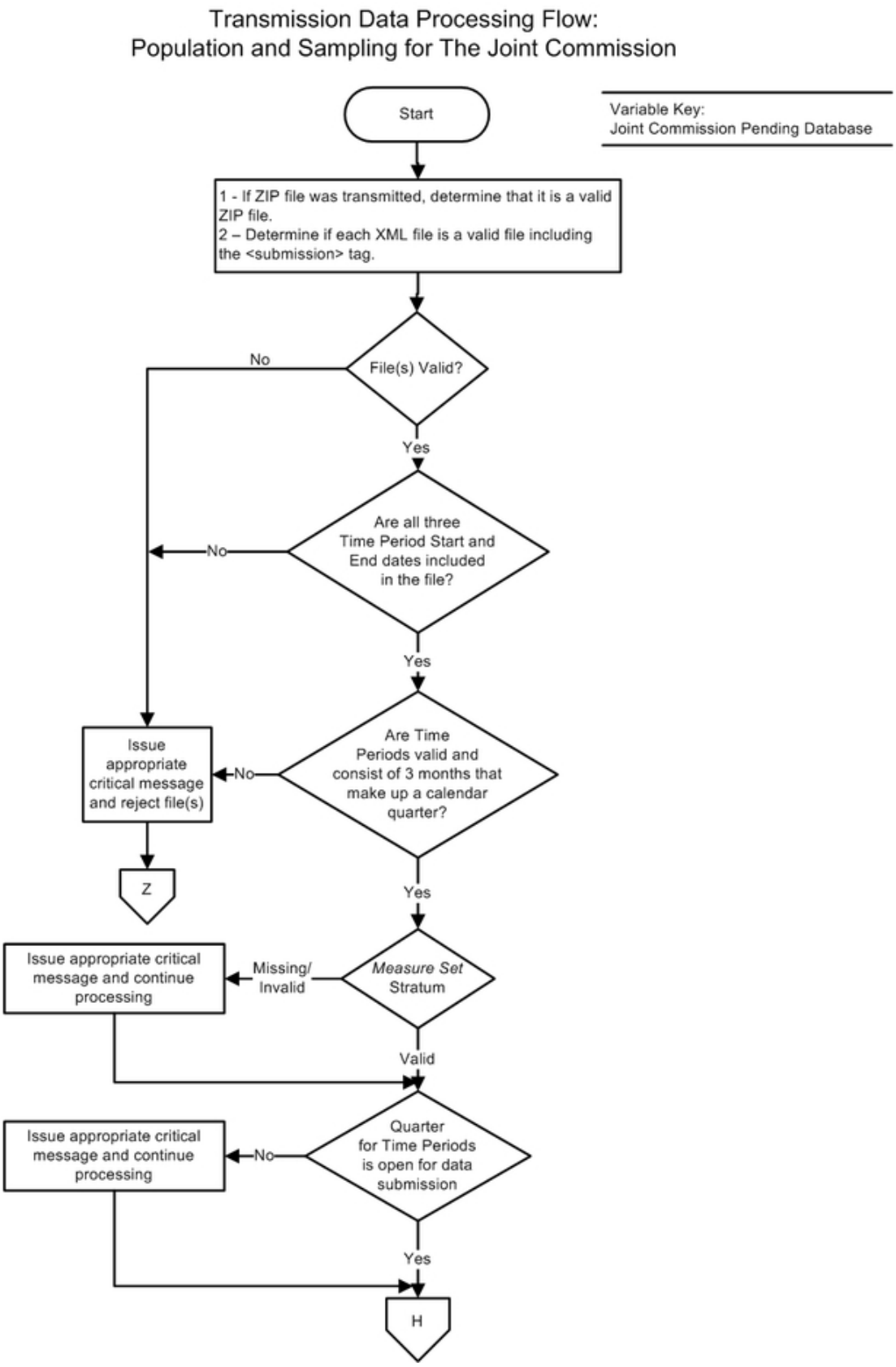
7. Check the action-code
    - If action-code equals Add, continue with processing.
    - If the action-code is missing or invalid, reject the XML file and stop processing..

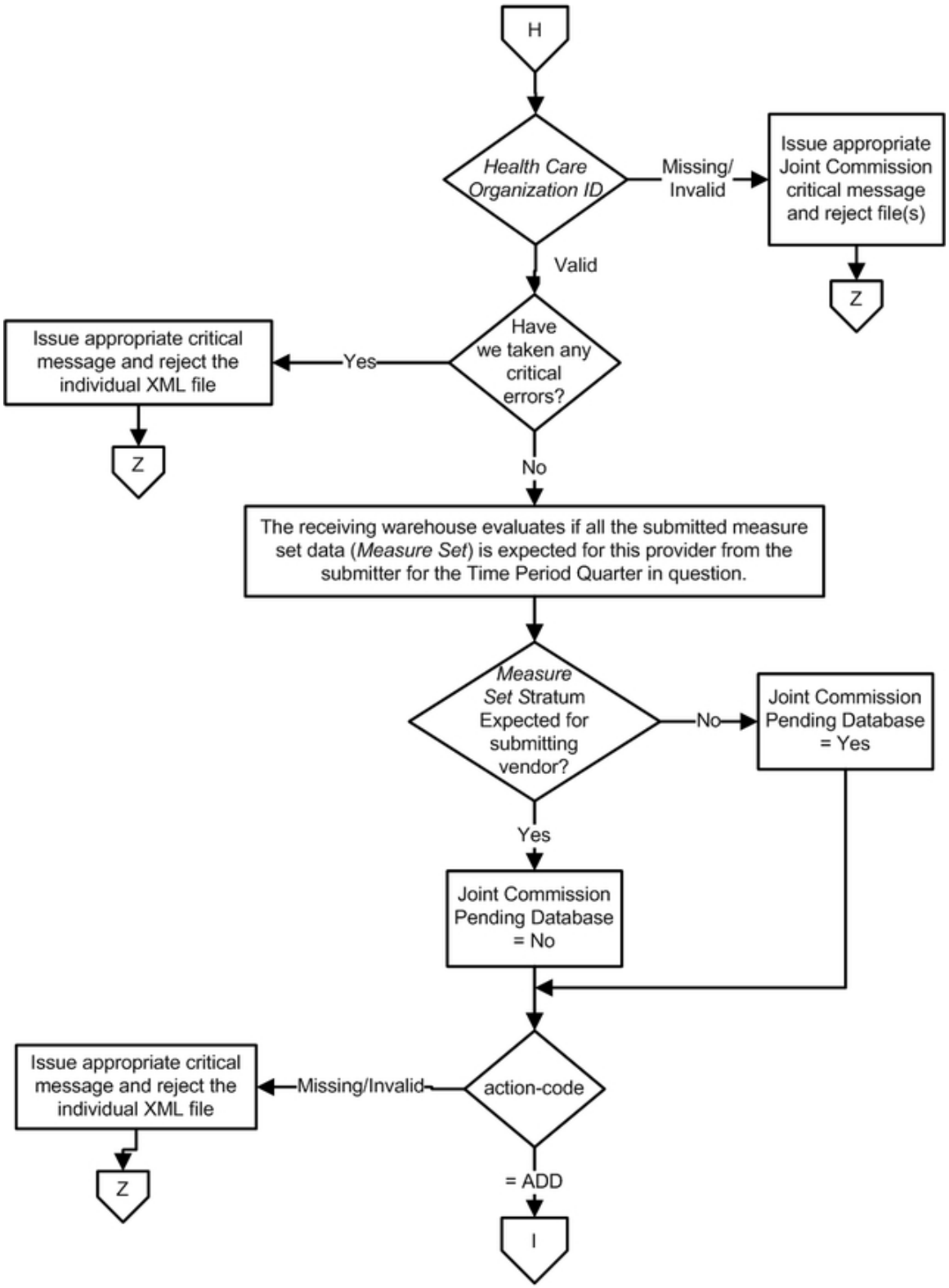
8. The transmission data elements, as defined in the Transmission Alphabetical Data Dictionary, are evaluated to ensure they exist and contain valid allowable values. These transmission data elements are required for all submitted files.
    - If any transmission data elements fall outside of the data integrity checks, reject the XML file and stop processing.
    - If any transmission data element is missing or invalid, reject the XML file and stop processing.
    - If all transmission data elements exist and contain valid allowable values, continue processing.

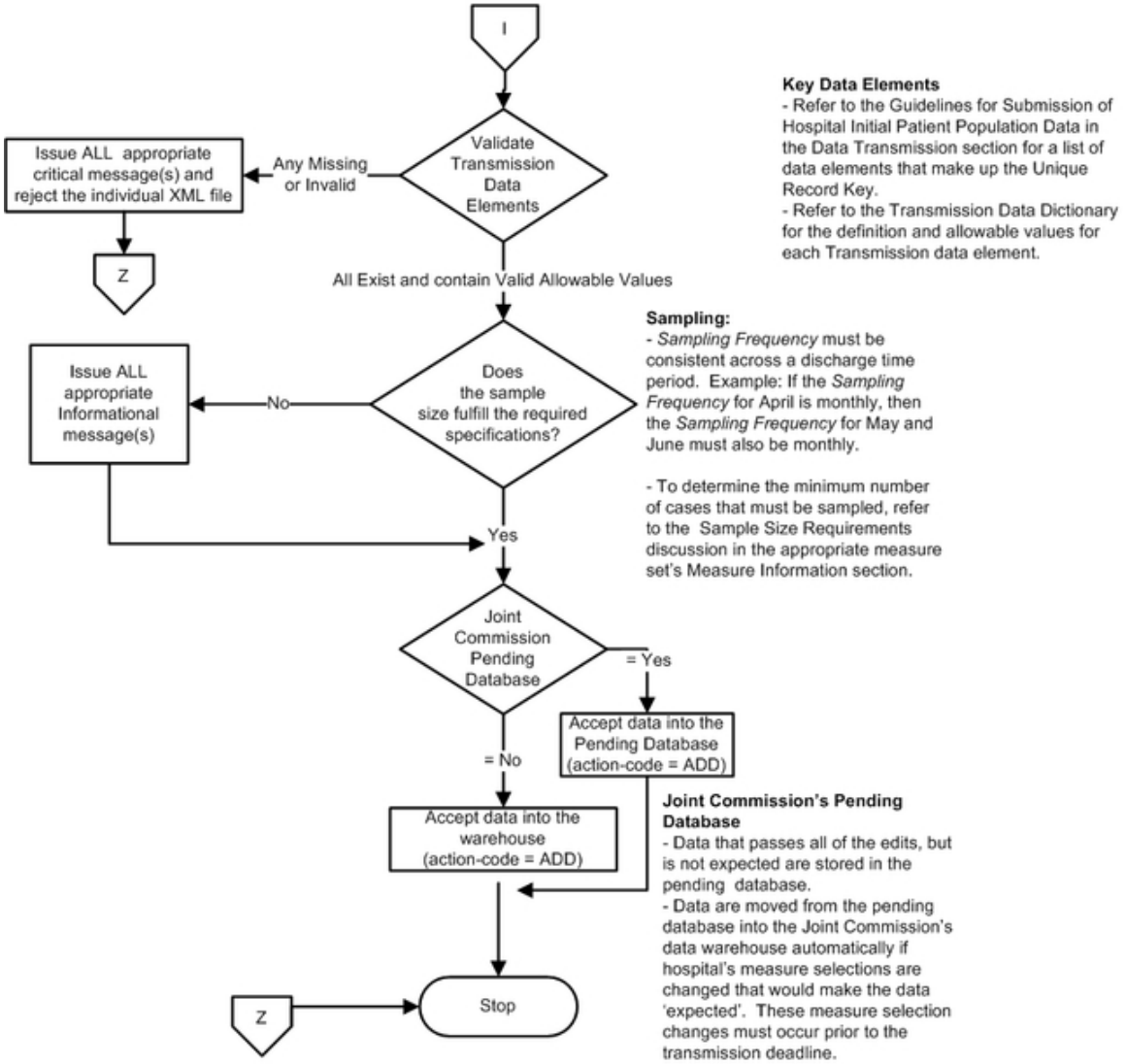
9. Data are evaluated to ensure that the sample size fulfills the required specifications. *Sample Frequency* must be consistent across all three time periods within a calendar quarter.
    - If the data are not expected, informational messages generated, continue processing.
    - If the data are expected, continue processing.

10. a. Check the Pending Database Flag
    - If the Pending Database flag = No, the case is accepted into the Joint Commission's Data Warehouse.
    - If the Pending Database flag = Yes, the case is accepted into the Joint Commission's Data Warehouse automatically if hospital's measure selections are changed that would make the data 'expected' (refer to step #6b above). These measure selection changes must occur prior to the transmission deadline.

Transmission Data Processing Flow Algorithm




H
Health Care Organization ID
Missing/ Invalid
Issue appropriate Joint Commission critical message and reject file(s)
Z
Valid
Have we taken any critical errors?
Yes
Issue appropriate critical message and reject the individual XML file
Z
No
The receiving warehouse evaluates if all the submitted measure set data (Measure Set) is expected for this provider from the submitter for the Time Period Quarter in question.
Measure Set Stratum Expected for submitting vendor?
No
Joint Commission Pending Database = Yes
Yes
Joint Commission Pending Database = No
action-code
Missing/Invalid
Issue appropriate critical message and reject the individual XML file
Z
= ADD
I


I
Validate Transmission Data Elements
Any Missing or Invalid
Issue ALL appropriate critical message(s) and reject the individual XML file
Z
All Exist and contain Valid Allowable Values
Does the sample size fulfill the required specifications?
No
Issue ALL appropriate Informational message(s)
Yes
Joint Commission Pending Database
= Yes
Accept data into the Pending Database (action-code = ADD)
= No
Accept data into the warehouse (action-code = ADD)
Stop
Z
Key Data Elements
- Refer to the Guidelines for Submission of Hospital Initial Patient Population Data in the Data Transmission section for a list of data elements that make up the Unique Record Key.
- Refer to the Transmission Data Dictionary for the definition and allowable values for each Transmission data element.
Sampling:
- Sampling Frequency must be consistent across a discharge time period. Example: If the Sampling Frequency for April is monthly, then the Sampling Frequency for May and June must also be monthly.
- To determine the minimum number of cases that must be sampled, refer to the Sample Size Requirements discussion in the appropriate measure set's Measure Information section.
Joint Commission's Pending Database
- Data that passes all of the edits, but is not expected are stored in the pending database.
- Data are moved from the pending database into the Joint Commission's data warehouse automatically if hospital's measure selections are changed that would make the data 'expected'. These measure selection changes must occur prior to the transmission deadline.

Appendix A
ICD-10 Code Tables

Table Number 1.0: ASR-OP/STK-OP E/M Codes for Emergency Department Encounters

Code	Shortened Description
99281	Emergency department visit, new or established patient
99282	Emergency department visit, new or established patient
99283	Emergency department visit, new or established patient
99284	Emergency department visit, new or established patient
99285	Emergency department visit, new or established patient
99291	Critical care, evaluation and management

Table Number 2.0: ACHFOP E/M Codes for Hospital Outpatient Encounters

Code	Shortened Description
99201	OFFICE OUTPATIENT NEW 10 MINUTES
99202	OFFICE OUTPATIENT NEW 20 MINUTES
99203	OFFICE OUTPATIENT NEW 30 MINUTES
99204	OFFICE OUTPATIENT NEW 45 MINUTES
99205	OFFICE OUTPATIENT NEW 60 MINUTES
99211	OFFICE OUTPATIENT VISIT 5 MINUTES
99212	OFFICE OUTPATIENT VISIT 10 MINUTES
99213	OFFICE OUTPATIENT VISIT 15 MINUTES
99214	OFFICE OUTPATIENT VISIT 25 MINUTES
99215	OFFICE OUTPATIENT VISIT 40 MINUTES

Table Number 2.1: Heart Failure

Code	Shortened Description
I110	Hypertensive heart disease with heart failure
I130	Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease
I132	Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease

Code	Shortened Description
I501	Left ventricular failure, unspecified
I5020	Unspecified systolic (congestive) heart failure
I5021	Acute systolic (congestive) heart failure
I5022	Chronic systolic (congestive) heart failure
I5023	Acute on chronic systolic (congestive) heart failure
I5030	Unspecified diastolic (congestive) heart failure
I5031	Acute diastolic (congestive) heart failure
I5032	Chronic diastolic (congestive) heart failure
I5033	Acute on chronic diastolic (congestive) heart failure
I5040	Unspecified combined systolic (congestive) and diastolic (congestive) heart failure
I5041	Acute combined systolic (congestive) and diastolic (congestive) heart failure
I5042	Chronic combined systolic (congestive) and diastolic (congestive) heart failure
I5043	Acute on chronic combined systolic (congestive) and diastolic (congestive) heart failure
I50810	Right heart failure, unspecified
I50811	Acute right heart failure
I50812	Chronic right heart failure
I50813	Acute on chronic right heart failure
I50814	Right heart failure due to left heart failure
I5082	Biventricular heart failure
I5083	High output heart failure
I5084	End stage heart failure
I5089	Other heart failure
I509	Heart failure, unspecified

Table Number 2.2: Left Ventricular Assistive Device (LVAD) and Heart Transplant

Code	Shortened Description
02HA0QZ	Insertion of Implantable Heart Assist System into Heart, Open Approach
02HA0RJ	Insertion of Short-term External Heart Assist System into Heart, Intraoperative, Open Approach
02HA0RS	Insertion of Biventricular Short-term External Heart Assist System into Heart, Open Approach
02HA0RZ	Insertion of Short-term External Heart Assist System into Heart, Open Approach
02HA3QZ	Insertion of Implantable Heart Assist System into Heart, Percutaneous Approach
02HA3RJ	Insertion of Short-term External Heart Assist System into Heart, Intraoperative, Percutaneous Approach

Code	Shortened Description
02HA3RS	Insertion of Biventricular Short-term External Heart Assist System into Heart, Percutaneous Approach
02HA3RZ	Insertion of Short-term External Heart Assist System into Heart, Percutaneous Approach
02HA4QZ	Insertion of Implantable Heart Assist System into Heart, Percutaneous Endoscopic Approach
02HA4RJ	Insertion of Short-term External Heart Assist System into Heart, Intraoperative, Percutaneous Endoscopic Approach
02HA4RS	Insertion of Biventricular Short-term External Heart Assist System into Heart, Percutaneous Endoscopic Approach
02HA4RZ	Insertion of Short-term External Heart Assist System into Heart, Percutaneous Endoscopic Approach
02HL3DZ	Insertion of Intraluminal Device into Left Ventricle, Percutaneous Approach
02WA0JZ	Revision of Synthetic Substitute in Heart, Open Approach
02WA0QZ	Revision of Implantable Heart Assist System in Heart, Open Approach
02WA0RS	Revision of Biventricular Short-term External Heart Assist System in Heart, Open Approach
02WA0RZ	Revision of Short-term External Heart Assist System in Heart, Open Approach
02WA3QZ	Revision of Implantable Heart Assist System in Heart, Percutaneous Approach
02WA3RS	Revision of Biventricular Short-term External Heart Assist System in Heart, Percutaneous Approach
02WA3RZ	Revision of Short-term External Heart Assist System in Heart, Percutaneous Approach
02WA4QZ	Revision of Implantable Heart Assist System in Heart, Percutaneous Endoscopic Approach
02WA4RS	Revision of Biventricular Short-term External Heart Assist System in Heart, Percutaneous Endoscopic Approach
02WA4RZ	Revision of Short-term External Heart Assist System in Heart, Percutaneous Endoscopic Approach
02YA0Z0	Transplantation of Heart, Allogeneic, Open Approach
02YA0Z1	Transplantation of Heart, Syngeneic, Open Approach
02YA0Z2	Transplantation of Heart, Zooplastic, Open Approach

Table Number 8.1: Ischemic Stroke

Code	Shortened Description
I6300	Cerebral infarction due to thrombosis of unspecified precerebral artery
I63011	Cerebral infarction due to thrombosis of right vertebral artery
I63012	Cerebral infarction due to thrombosis of left vertebral artery
I63013	Cerebral infarction due to thrombosis of bilateral vertebral arteries
I63019	Cerebral infarction due to thrombosis of unspecified vertebral artery
I6302	Cerebral infarction due to thrombosis of basilar artery
I63031	Cerebral infarction due to thrombosis of right carotid artery
I63032	Cerebral infarction due to thrombosis of left carotid artery
I63033	Cerebral infarction due to thrombosis of bilateral carotid arteries

Code	Shortened Description
I63039	Cerebral infarction due to thrombosis of unspecified carotid artery
I6309	Cerebral infarction due to thrombosis of other precerebral artery
I6310	Cerebral infarction due to embolism of unspecified precerebral artery
I63111	Cerebral infarction due to embolism of right vertebral artery
I63112	Cerebral infarction due to embolism of left vertebral artery
I63113	Cerebral infarction due to embolism of bilateral vertebral arteries
I63119	Cerebral infarction due to embolism of unspecified vertebral artery
I6312	Cerebral infarction due to embolism of basilar artery
I63131	Cerebral infarction due to embolism of right carotid artery
I63132	Cerebral infarction due to embolism of left carotid artery
I63133	Cerebral infarction due to embolism of bilateral carotid arteries
I63139	Cerebral infarction due to embolism of unspecified carotid artery
I6319	Cerebral infarction due to embolism of other precerebral artery
I6320	Cerebral infarction due to unspecified occlusion or stenosis of unspecified precerebral arteries
I63211	Cerebral infarction due to unspecified occlusion or stenosis of right vertebral artery
I63212	Cerebral infarction due to unspecified occlusion or stenosis of left vertebral artery
I63213	Cerebral infarction due to unspecified occlusion or stenosis of bilateral vertebral arteries
I63219	Cerebral infarction due to unspecified occlusion or stenosis of unspecified vertebral artery
I6322	Cerebral infarction due to unspecified occlusion or stenosis of basilar artery
I63231	Cerebral infarction due to unspecified occlusion or stenosis of right carotid arteries
I63232	Cerebral infarction due to unspecified occlusion or stenosis of left carotid arteries
I63233	Cerebral infarction due to unspecified occlusion or stenosis of bilateral carotid arteries
I63239	Cerebral infarction due to unspecified occlusion or stenosis of unspecified carotid artery
I6329	Cerebral infarction due to unspecified occlusion or stenosis of other precerebral arteries
I6330	Cerebral infarction due to thrombosis of unspecified cerebral artery
I63311	Cerebral infarction due to thrombosis of right middle cerebral artery
I63312	Cerebral infarction due to thrombosis of left middle cerebral artery
I63313	Cerebral infarction due to thrombosis of bilateral middle cerebral arteries
I63319	Cerebral infarction due to thrombosis of unspecified middle cerebral artery
I63321	Cerebral infarction due to thrombosis of right anterior cerebral artery
I63322	Cerebral infarction due to thrombosis of left anterior cerebral artery
I63323	Cerebral infarction due to thrombosis of bilateral anterior cerebral arteries

Code	Shortened Description
I63329	Cerebral infarction due to thrombosis of unspecified anterior cerebral artery
I63331	Cerebral infarction due to thrombosis of right posterior cerebral artery
I63332	Cerebral infarction due to thrombosis of left posterior cerebral artery
I63333	Cerebral infarction due to thrombosis of bilateral posterior cerebral arteries
I63339	Cerebral infarction due to thrombosis of unspecified posterior cerebral artery
I63341	Cerebral infarction due to thrombosis of right cerebellar artery
I63342	Cerebral infarction due to thrombosis of left cerebellar artery
I63343	Cerebral infarction due to thrombosis of bilateral cerebellar arteries
I63349	Cerebral infarction due to thrombosis of unspecified cerebellar artery
I6339	Cerebral infarction due to thrombosis of other cerebral artery
I6340	Cerebral infarction due to embolism of unspecified cerebral artery
I63411	Cerebral infarction due to embolism of right middle cerebral artery
I63412	Cerebral infarction due to embolism of left middle cerebral artery
I63413	Cerebral infarction due to embolism of bilateral middle cerebral arteries
I63419	Cerebral infarction due to embolism of unspecified middle cerebral artery
I63421	Cerebral infarction due to embolism of right anterior cerebral artery
I63422	Cerebral infarction due to embolism of left anterior cerebral artery
I63423	Cerebral infarction due to embolism of bilateral anterior cerebral arteries
I63429	Cerebral infarction due to embolism of unspecified anterior cerebral artery
I63431	Cerebral infarction due to embolism of right posterior cerebral artery
I63432	Cerebral infarction due to embolism of left posterior cerebral artery
I63433	Cerebral infarction due to embolism of bilateral posterior cerebral arteries
I63439	Cerebral infarction due to embolism of unspecified posterior cerebral artery
I63441	Cerebral infarction due to embolism of right cerebellar artery
I63442	Cerebral infarction due to embolism of left cerebellar artery
I63443	Cerebral infarction due to embolism of bilateral cerebellar arteries
I63449	Cerebral infarction due to embolism of unspecified cerebellar artery
I6349	Cerebral infarction due to embolism of other cerebral artery
I6350	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebral artery
I63511	Cerebral infarction due to unspecified occlusion or stenosis of right middle cerebral artery
I63512	Cerebral infarction due to unspecified occlusion or stenosis of left middle cerebral artery
I63513	Cerebral infarction due to unspecified occlusion or stenosis of bilateral middle cerebral arteries

Code	Shortened Description
I63519	Cerebral infarction due to unspecified occlusion or stenosis of unspecified middle cerebral artery
I63521	Cerebral infarction due to unspecified occlusion or stenosis of right anterior cerebral artery
I63522	Cerebral infarction due to unspecified occlusion or stenosis of left anterior cerebral artery
I63523	Cerebral infarction due to unspecified occlusion or stenosis of bilateral anterior cerebral arteries
I63529	Cerebral infarction due to unspecified occlusion or stenosis of unspecified anterior cerebral artery
I63531	Cerebral infarction due to unspecified occlusion or stenosis of right posterior cerebral artery
I63532	Cerebral infarction due to unspecified occlusion or stenosis of left posterior cerebral artery
I63533	Cerebral infarction due to unspecified occlusion or stenosis of bilateral posterior cerebral arteries
I63539	Cerebral infarction due to unspecified occlusion or stenosis of unspecified posterior cerebral artery
I63541	Cerebral infarction due to unspecified occlusion or stenosis of right cerebellar artery
I63542	Cerebral infarction due to unspecified occlusion or stenosis of left cerebellar artery
I63543	Cerebral infarction due to unspecified occlusion or stenosis of bilateral cerebellar arteries
I63549	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebellar artery
I6359	Cerebral infarction due to unspecified occlusion or stenosis of other cerebral artery
I636	Cerebral infarction due to cerebral venous thrombosis, nonpyogenic
I6381	Other cerebral infarction due to occlusion or stenosis of small artery
I6389	Other cerebral infarction
I639	Cerebral infarction, unspecified

Table Number 8.1a: Thrombolytic Agent Procedures

Code	Shortened Description
3E03017	Introduction of Other Thrombolytic into Peripheral Vein, Open Approach
3E03317	Introduction of Other Thrombolytic into Peripheral Vein, Percutaneous Approach
3E04017	Introduction of Other Thrombolytic into Central Vein, Open Approach
3E04317	Introduction of Other Thrombolytic into Central Vein, Percutaneous Approach
3E05017	Introduction of Other Thrombolytic into Peripheral Artery, Open Approach
3E05317	Introduction of Other Thrombolytic into Peripheral Artery, Percutaneous Approach
3E06017	Introduction of Other Thrombolytic into Central Artery, Open Approach
3E06317	Introduction of Other Thrombolytic into Central Artery, Percutaneous Approach

Table Number 8.1b: Mechanical Endovascular Reperfusion Procedures

Code	Shortened Description
03CG3Z6	Extirpation of Matter from Intracranial Artery, Bifurcation, Percutaneous Approach
03CG3Z7	Extirpation of Matter from Intracranial Artery using Stent Retriever, Percutaneous Approach
03CG3ZZ	Extirpation of Matter from Intracranial Artery, Percutaneous Approach
03CG4Z6	Extirpation of Matter from Intracranial Artery, Bifurcation, Percutaneous Endoscopic Approach
03CG4ZZ	Extirpation of Matter from Intracranial Artery, Percutaneous Endoscopic Approach
03CH3Z6	Extirpation of Matter from Right Common Carotid Artery, Bifurcation, Percutaneous Approach
03CH3Z7	Extirpation of Matter from Right Common Carotid Artery using Stent Retriever, Percutaneous Approach
03CH3ZZ	Extirpation of Matter from Right Common Carotid Artery, Percutaneous Approach
03CH4Z6	Extirpation of Matter from Right Common Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
03CH4ZZ	Extirpation of Matter from Right Common Carotid Artery, Percutaneous Endoscopic Approach
03CJ3Z6	Extirpation of Matter from Left Common Carotid Artery, Bifurcation, Percutaneous Approach
03CJ3Z7	Extirpation of Matter from Left Common Carotid Artery using Stent Retriever, Percutaneous Approach
03CJ3ZZ	Extirpation of Matter from Left Common Carotid Artery, Percutaneous Approach
03CJ4Z6	Extirpation of Matter from Left Common Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
03CJ4ZZ	Extirpation of Matter from Left Common Carotid Artery, Percutaneous Endoscopic Approach
03CK3Z6	Extirpation of Matter from Right Internal Carotid Artery, Bifurcation, Percutaneous Approach
03CK3Z7	Extirpation of Matter from Right Internal Carotid Artery using Stent Retriever, Percutaneous Approach
03CK3ZZ	Extirpation of Matter from Right Internal Carotid Artery, Percutaneous Approach
03CK4Z6	Extirpation of Matter from Right Internal Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
03CK4ZZ	Extirpation of Matter from Right Internal Carotid Artery, Percutaneous Endoscopic Approach
03CL3Z6	Extirpation of Matter from Left Internal Carotid Artery, Bifurcation, Percutaneous Approach
03CL3Z7	Extirpation of Matter from Left Internal Carotid Artery using Stent Retriever, Percutaneous Approach
03CL3ZZ	Extirpation of Matter from Left Internal Carotid Artery, Percutaneous Approach
03CL4Z6	Extirpation of Matter from Left Internal Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
03CL4ZZ	Extirpation of Matter from Left Internal Carotid Artery, Percutaneous Endoscopic Approach
03CM3Z6	Extirpation of Matter from Right External Carotid Artery, Bifurcation, Percutaneous Approach
03CM3Z7	Extirpation of Matter from Right External Carotid Artery using Stent Retriever, Percutaneous Approach
03CM3ZZ	Extirpation of Matter from Right External Carotid Artery, Percutaneous Approach
03CM4Z6	Extirpation of Matter from Right External Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
03CM4ZZ	Extirpation of Matter from Right External Carotid Artery, Percutaneous Endoscopic Approach
03CN3Z6	Extirpation of Matter from Left External Carotid Artery, Bifurcation, Percutaneous Approach
03CN3Z7	Extirpation of Matter from Left External Carotid Artery using Stent Retriever, Percutaneous Approach

Code	Shortened Description
03CN3ZZ	Extirpation of Matter from Left External Carotid Artery, Percutaneous Approach
03CN4Z6	Extirpation of Matter from Left External Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
03CN4ZZ	Extirpation of Matter from Left External Carotid Artery, Percutaneous Endoscopic Approach
03CP3Z6	Extirpation of Matter from Right Vertebral Artery, Bifurcation, Percutaneous Approach
03CP3Z7	Extirpation of Matter from Right Vertebral Artery using Stent Retriever, Percutaneous Approach
03CP3ZZ	Extirpation of Matter from Right Vertebral Artery, Percutaneous Approach
03CP4Z6	Extirpation of Matter from Right Vertebral Artery, Bifurcation, Percutaneous Endoscopic Approach
03CP4ZZ	Extirpation of Matter from Right Vertebral Artery, Percutaneous Endoscopic Approach
03CQ3Z6	Extirpation of Matter from Left Vertebral Artery, Bifurcation, Percutaneous Approach
03CQ3Z7	Extirpation of Matter from Left Vertebral Artery using Stent Retriever, Percutaneous Approach
03CQ3ZZ	Extirpation of Matter from Left Vertebral Artery, Percutaneous Approach
03CQ4Z6	Extirpation of Matter from Left Vertebral Artery, Bifurcation, Percutaneous Endoscopic Approach
03CQ4ZZ	Extirpation of Matter from Left Vertebral Artery, Percutaneous Endoscopic Approach

Table Number 8.1c: Thrombectomy Root Procedures

Code	Shortened Description
037G3Z6	Dilation of Intracranial Artery, Bifurcation, Percutaneous Approach
037G3ZZ	Dilation of Intracranial Artery, Percutaneous Approach
037G4Z6	Dilation of Intracranial Artery, Bifurcation, Percutaneous Endoscopic Approach
037G4ZZ	Dilation of Intracranial Artery, Percutaneous Endoscopic Approach
037H3Z6	Dilation of Right Common Carotid Artery, Bifurcation, Percutaneous Approach
037H3ZZ	Dilation of Right Common Carotid Artery, Percutaneous Approach
037H4Z6	Dilation of Right Common Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
037H4ZZ	Dilation of Right Common Carotid Artery, Percutaneous Endoscopic Approach
037J3Z6	Dilation of Left Common Carotid Artery, Bifurcation, Percutaneous Approach
037J3ZZ	Dilation of Left Common Carotid Artery, Percutaneous Approach
037J4Z6	Dilation of Left Common Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
037J4ZZ	Dilation of Left Common Carotid Artery, Percutaneous Endoscopic Approach
037K3Z6	Dilation of Right Internal Carotid Artery, Bifurcation, Percutaneous Approach
037K3ZZ	Dilation of Right Internal Carotid Artery, Percutaneous Approach
037K4Z6	Dilation of Right Internal Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
037K4ZZ	Dilation of Right Internal Carotid Artery, Percutaneous Endoscopic Approach

Code	Shortened Description
037L3Z6	Dilation of Left Internal Carotid Artery, Bifurcation, Percutaneous Approach
037L3ZZ	Dilation of Left Internal Carotid Artery, Percutaneous Approach
037L4Z6	Dilation of Left Internal Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
037L4ZZ	Dilation of Left Internal Carotid Artery, Percutaneous Endoscopic Approach
037P3Z6	Dilation of Right Vertebral Artery, Bifurcation, Percutaneous Approach
037P3ZZ	Dilation of Right Vertebral Artery, Percutaneous Approach
037P4Z6	Dilation of Right Vertebral Artery, Bifurcation, Percutaneous Endoscopic Approach
037P4ZZ	Dilation of Right Vertebral Artery, Percutaneous Endoscopic Approach
037Q3Z6	Dilation of Left Vertebral Artery, Bifurcation, Percutaneous Approach
037Q3ZZ	Dilation of Left Vertebral Artery, Percutaneous Approach
037Q4Z6	Dilation of Left Vertebral Artery, Bifurcation, Percutaneous Endoscopic Approach
037Q4ZZ	Dilation of Left Vertebral Artery, Percutaneous Endoscopic Approach
03JY3ZZ	Inspection of Upper Artery, Percutaneous Approach
03JY4ZZ	Inspection of Upper Artery, Percutaneous Endoscopic Approach

Table Number 8.2: Hemorrhagic Stroke

Code	Shortened Description
I6000	Nontraumatic subarachnoid hemorrhage from unspecified carotid siphon and bifurcation
I6001	Nontraumatic subarachnoid hemorrhage from right carotid siphon and bifurcation
I6002	Nontraumatic subarachnoid hemorrhage from left carotid siphon and bifurcation
I6010	Nontraumatic subarachnoid hemorrhage from unspecified middle cerebral artery
I6011	Nontraumatic subarachnoid hemorrhage from right middle cerebral artery
I6012	Nontraumatic subarachnoid hemorrhage from left middle cerebral artery
I602	Nontraumatic subarachnoid hemorrhage from anterior communicating artery
I6030	Nontraumatic subarachnoid hemorrhage from unspecified posterior communicating artery
I6031	Nontraumatic subarachnoid hemorrhage from right posterior communicating artery
I6032	Nontraumatic subarachnoid hemorrhage from left posterior communicating artery
I604	Nontraumatic subarachnoid hemorrhage from basilar artery
I6050	Nontraumatic subarachnoid hemorrhage from unspecified vertebral artery
I6051	Nontraumatic subarachnoid hemorrhage from right vertebral artery
I6052	Nontraumatic subarachnoid hemorrhage from left vertebral artery
I606	Nontraumatic subarachnoid hemorrhage from other intracranial arteries

Code	Shortened Description
I607	Nontraumatic subarachnoid hemorrhage from unspecified intracranial artery
I608	Other nontraumatic subarachnoid hemorrhage
I609	Nontraumatic subarachnoid hemorrhage, unspecified
I610	Nontraumatic intracerebral hemorrhage in hemisphere, subcortical
I611	Nontraumatic intracerebral hemorrhage in hemisphere, cortical
I612	Nontraumatic intracerebral hemorrhage in hemisphere, unspecified
I613	Nontraumatic intracerebral hemorrhage in brain stem
I614	Nontraumatic intracerebral hemorrhage in cerebellum
I615	Nontraumatic intracerebral hemorrhage, intraventricular
I616	Nontraumatic intracerebral hemorrhage, multiple localized
I618	Other nontraumatic intracerebral hemorrhage
I619	Nontraumatic intracerebral hemorrhage, unspecified

Table Number 8.2a: Subarachnoid Hemorrhage

Code	Shortened Description
I6000	Nontraumatic subarachnoid hemorrhage from unspecified carotid siphon and bifurcation
I6001	Nontraumatic subarachnoid hemorrhage from right carotid siphon and bifurcation
I6002	Nontraumatic subarachnoid hemorrhage from left carotid siphon and bifurcation
I6010	Nontraumatic subarachnoid hemorrhage from unspecified middle cerebral artery
I6011	Nontraumatic subarachnoid hemorrhage from right middle cerebral artery
I6012	Nontraumatic subarachnoid hemorrhage from left middle cerebral artery
I602	Nontraumatic subarachnoid hemorrhage from anterior communicating artery
I6030	Nontraumatic subarachnoid hemorrhage from unspecified posterior communicating artery
I6031	Nontraumatic subarachnoid hemorrhage from right posterior communicating artery
I6032	Nontraumatic subarachnoid hemorrhage from left posterior communicating artery
I604	Nontraumatic subarachnoid hemorrhage from basilar artery
I6050	Nontraumatic subarachnoid hemorrhage from unspecified vertebral artery
I6051	Nontraumatic subarachnoid hemorrhage from right vertebral artery
I6052	Nontraumatic subarachnoid hemorrhage from left vertebral artery
I606	Nontraumatic subarachnoid hemorrhage from other intracranial arteries
I607	Nontraumatic subarachnoid hemorrhage from unspecified intracranial artery
I608	Other nontraumatic subarachnoid hemorrhage

Code	Shortened Description
I609	Nontraumatic subarachnoid hemorrhage, unspecified

Table Number 8.2b: Intracerebral Hemorrhage

Code	Shortened Description
I610	Nontraumatic intracerebral hemorrhage in hemisphere, subcortical
I611	Nontraumatic intracerebral hemorrhage in hemisphere, cortical
I612	Nontraumatic intracerebral hemorrhage in hemisphere, unspecified
I613	Nontraumatic intracerebral hemorrhage in brain stem
I614	Nontraumatic intracerebral hemorrhage in cerebellum
I615	Nontraumatic intracerebral hemorrhage, intraventricular
I616	Nontraumatic intracerebral hemorrhage, multiple localized
I618	Other nontraumatic intracerebral hemorrhage
I619	Nontraumatic intracerebral hemorrhage, unspecified

Table Number 8.2c: Primary Parenchymal Intracerebral Hemorrhage

Code	Shortened Description
I610	Nontraumatic intracerebral hemorrhage in hemisphere, subcortical
I611	Nontraumatic intracerebral hemorrhage in hemisphere, cortical
I612	Nontraumatic intracerebral hemorrhage in hemisphere, unspecified
I613	Nontraumatic intracerebral hemorrhage in brain stem
I614	Nontraumatic intracerebral hemorrhage in cerebellum
I615	Nontraumatic intracerebral hemorrhage, intraventricular
I616	Nontraumatic intracerebral hemorrhage, multiple localized
I618	Other nontraumatic intracerebral hemorrhage
I619	Nontraumatic intracerebral hemorrhage, unspecified
I6200	Nontraumatic subdural hemorrhage, unspecified
I6201	Nontraumatic acute subdural hemorrhage
I6202	Nontraumatic subacute subdural hemorrhage
I6203	Nontraumatic chronic subdural hemorrhage
I629	Nontraumatic intracranial hemorrhage, unspecified

Table Number 8.2d: Aneurysm Repair Procedures

Code	Shortened Description
03LG3DZ	Occlusion of Intracranial Artery with Intraluminal Device, Percutaneous Approach
03LK3DZ	Occlusion of Right Internal Carotid Artery with Intraluminal Device, Percutaneous Approach
03LL3DZ	Occlusion of Left Internal Carotid Artery with Intraluminal Device, Percutaneous Approach
03LP3DZ	Occlusion of Right Vertebral Artery with Intraluminal Device, Percutaneous Approach
03LQ3DZ	Occlusion of Left Vertebral Artery with Intraluminal Device, Percutaneous Approach
03VG0BZ	Restriction of Intracranial Artery with Bioactive Intraluminal Device, Open Approach
03VG0CZ	Restriction Intracranial Artery with Extraluminal Device, Open Approach
03VG0DZ	Restriction of Intracranial Artery with Intraluminal Device, Open Approach
03VG0ZZ	Restriction of Intracranial Artery, Open Approach
03VG3BZ	Restriction of Intracranial Artery with Bioactive Intraluminal Device, Percutaneous Approach
03VG3CZ	Restriction Intracranial Artery with Extraluminal Device, Percutaneous Approach
03VG3DZ	Restriction of Intracranial Artery with Intraluminal Device, Percutaneous Approach
03VG3ZZ	Restriction Intracranial Artery, Percutaneous Approach
03VG4BZ	Restriction of Intracranial Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03VG4CZ	Restriction Intracranial Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03VG4DZ	Restriction of Intracranial Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VG4ZZ	Restriction of Intracranial Artery, Percutaneous Endoscopic Approach
03VH0BZ	Restriction of Right Common Carotid Artery with Bioactive Intraluminal Device, Open Approach
03VH0CZ	Restriction of Right Common Carotid Artery with Extraluminal Device, Open Approach
03VH0DZ	Restriction of Right Common Carotid Artery with Intraluminal Device, Open Approach
03VH0ZZ	Restriction of Right Common Carotid Artery, Open Approach
03VH3BZ	Restriction of Right Common Carotid Artery with Bioactive Intraluminal Device, Percutaneous Approach
03VH3CZ	Restriction of Right Common Carotid Artery with Extraluminal Device, Percutaneous Approach
03VH3DZ	Restriction of Right Common Carotid Artery with Intraluminal Device, Percutaneous Approach
03VH3ZZ	Restriction Common Carotid Artery, Right, Percutaneous Approach
03VH4BZ	Restriction of Right Common Carotid Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03VH4CZ	Restriction of Right Common Carotid Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03VH4DZ	Restriction of Right Common Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VH4ZZ	Restriction of Right Common Carotid Artery, Percutaneous Endoscopic Approach
03VJ0BZ	Restriction of Left Common Carotid Artery with Bioactive Intraluminal Device, Open Approach
03VJ0CZ	Restriction of Left Common Carotid Artery with Extraluminal Device, Open Approach

Code	Shortened Description
03VJ0DZ	Restriction of Left Common Carotid Artery with Intraluminal Device, Open Approach
03VJ0ZZ	Restriction of Left Common Carotid Artery, Open Approach
03VJ3BZ	Restriction of Left Common Carotid Artery with Bioactive Intraluminal Device, Percutaneous Approach
03VJ3CZ	Restriction of Left Common Carotid Artery with Extraluminal Device, Percutaneous Approach
03VJ3DZ	Restriction of Left Common Carotid Artery with Intraluminal Device, Percutaneous Approach
03VJ3ZZ	Restriction Common Carotid Artery, Left, Percutaneous Approach
03VJ4BZ	Restriction of Left Common Carotid Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03VJ4CZ	Restriction of Left Common Carotid Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03VJ4DZ	Restriction of Left Common Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VJ4ZZ	Restriction of Left Common Carotid Artery, Percutaneous Endoscopic Approach
03VK0BZ	Restriction of Right Internal Carotid Artery with Bioactive Intraluminal Device, Open Approach
03VK0CZ	Restriction of Right Internal Carotid Artery with Extraluminal Device, Open Approach
03VK0DZ	Restriction of Right Internal Carotid Artery with Intraluminal Device, Open Approach
03VK0ZZ	Restriction of Right Internal Carotid Artery, Open Approach
03VK3BZ	Restriction of Right Internal Carotid Artery with Bioactive Intraluminal Device, Percutaneous Approach
03VK3CZ	Restriction of Right Internal Carotid Artery with Extraluminal Device, Percutaneous Approach
03VK3DZ	Restriction of Right Internal Carotid Artery with Intraluminal Device, Percutaneous Approach
03VK3ZZ	Restriction Internal Carotid Artery, Right, Percutaneous Approach
03VK4BZ	Restriction of Right Internal Carotid Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03VK4CZ	Restriction of Right Internal Carotid Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03VK4DZ	Restriction of Right Internal Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VK4ZZ	Restriction of Right Internal Carotid Artery, Percutaneous Endoscopic Approach
03VL0BZ	Restriction of Left Internal Carotid Artery with Bioactive Intraluminal Device, Open Approach
03VL0CZ	Restriction of Left Internal Carotid Artery with Extraluminal Device, Open Approach
03VL0DZ	Restriction of Left Internal Carotid Artery with Intraluminal Device, Open Approach
03VL0ZZ	Restriction of Left Internal Carotid Artery, Open Approach
03VL3BZ	Restriction of Left Internal Carotid Artery with Bioactive Intraluminal Device, Percutaneous Approach
03VL3CZ	Restriction of Left Internal Carotid Artery with Extraluminal Device, Percutaneous Approach
03VL3DZ	Restriction of Left Internal Carotid Artery with Intraluminal Device, Percutaneous Approach
03VL3ZZ	Restriction Internal Carotid Artery, Left, Percutaneous Approach
03VL4BZ	Restriction of Left Internal Carotid Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03VL4CZ	Restriction of Left Internal Carotid Artery with Extraluminal Device, Percutaneous Endoscopic Approach

Code	Shortened Description
03VL4DZ	Restriction of Left Internal Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VL4ZZ	Restriction of Left Internal Carotid Artery, Percutaneous Endoscopic Approach
03VM0BZ	Restriction of Right External Carotid Artery with Bioactive Intraluminal Device, Open Approach
03VM0CZ	Restriction of Right External Carotid Artery with Extraluminal Device, Open Approach
03VM0DZ	Restriction of Right External Carotid Artery with Intraluminal Device, Open Approach
03VM0ZZ	Restriction of Right External Carotid Artery, Open Approach
03VM3BZ	Restriction of Right External Carotid Artery with Bioactive Intraluminal Device, Percutaneous Approach
03VM3CZ	Restriction of Right External Carotid Artery with Extraluminal Device, Percutaneous Approach
03VM3DZ	Restriction of Right External Carotid Artery with Intraluminal Device, Percutaneous Approach
03VM3ZZ	Restriction External Carotid Artery, Right, Percutaneous Approach
03VM4BZ	Restriction of Right External Carotid Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03VM4CZ	Restriction of Right External Carotid Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03VM4DZ	Restriction of Right External Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VM4ZZ	Restriction of Right External Carotid Artery, Percutaneous Endoscopic Approach
03VN0BZ	Restriction of Left External Carotid Artery with Bioactive Intraluminal Device, Open Approach
03VN0CZ	Restriction of Left External Carotid Artery with Extraluminal Device, Open Approach
03VN0DZ	Restriction of Left External Carotid Artery with Intraluminal Device, Open Approach
03VN0ZZ	Restriction of Left External Carotid Artery, Open Approach
03VN3BZ	Restriction of Left External Carotid Artery with Bioactive Intraluminal Device, Percutaneous Approach
03VN3CZ	Restriction of Left External Carotid Artery with Extraluminal Device, Percutaneous Approach
03VN3DZ	Restriction of Left External Carotid Artery with Intraluminal Device, Percutaneous Approach
03VN3ZZ	Restriction External Carotid Artery, Left, Percutaneous Approach
03VN4BZ	Restriction of Left External Carotid Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03VN4CZ	Restriction of Left External Carotid Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03VN4DZ	Restriction of Left External Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VN4ZZ	Restriction of Left External Carotid Artery, Percutaneous Endoscopic Approach
03VP0BZ	Restriction of Right Vertebral Artery with Bioactive Intraluminal Device, Open Approach
03VP0CZ	Restriction of Right Vertebral Artery with Extraluminal Device, Open Approach
03VP0DZ	Restriction of Right Vertebral Artery with Intraluminal Device, Open Approach
03VP0ZZ	Restriction of Right Vertebral Artery, Open Approach
03VP3BZ	Restriction of Right Vertebral Artery with Bioactive Intraluminal Device, Percutaneous Approach
03VP3CZ	Restriction of Right Vertebral Artery with Extraluminal Device, Percutaneous Approach

Code	Shortened Description
03VP3DZ	Restriction of Right Vertebral Artery with Intraluminal Device, Percutaneous Approach
03VP3ZZ	Restriction Vertebral Artery, Right, Percutaneous Approach
03VP4BZ	Restriction of Right Vertebral Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03VP4CZ	Restriction of Right Vertebral Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03VP4DZ	Restriction of Right Vertebral Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VP4ZZ	Restriction of Right Vertebral Artery, Percutaneous Endoscopic Approach
03VQ0BZ	Restriction of Left Vertebral Artery with Bioactive Intraluminal Device, Open Approach
03VQ0CZ	Restriction of Left Vertebral Artery with Extraluminal Device, Open Approach
03VQ0DZ	Restriction of Left Vertebral Artery with Intraluminal Device, Open Approach
03VQ0ZZ	Restriction of Left Vertebral Artery, Open Approach
03VQ3BZ	Restriction of Left Vertebral Artery with Bioactive Intraluminal Device, Percutaneous Approach
03VQ3CZ	Restriction of Left Vertebral Artery with Extraluminal Device, Percutaneous Approach
03VQ3DZ	Restriction of Left Vertebral Artery with Intraluminal Device, Percutaneous Approach
03VQ3ZZ	Restriction Vertebral Artery, Left, Percutaneous Approach
03VQ4BZ	Restriction of Left Vertebral Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03VQ4CZ	Restriction of Left Vertebral Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03VQ4DZ	Restriction of Left Vertebral Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VQ4ZZ	Restriction of Left Vertebral Artery, Percutaneous Endoscopic Approach

Table Number 8.2e: Surgical Intervention Procedures

Code	Shortened Description
009000Z	Drainage of Brain with Drainage Device, Open Approach
00900ZZ	Drainage of Brain, Open Approach
009030Z	Drainage of Brain with Drainage Device, Percutaneous Approach
00903ZZ	Drainage of Brain, Percutaneous Approach
009040Z	Drainage of Brain with Drainage Device, Percutaneous Endoscopic Approach
00904ZZ	Drainage of Brain, Percutaneous Endoscopic Approach
009100Z	Drainage of Cerebral Meninges with Drainage Device, Open Approach
00910ZZ	Drainage of Cerebral Meninges, Open Approach
009130Z	Drainage of Cerebral Meninges with Drainage Device, Percutaneous Approach
00913ZZ	Drainage of Cerebral Meninges, Percutaneous Approach
009140Z	Drainage of Cerebral Meninges with Drainage Device, Percutaneous Endoscopic Approach

Code	Shortened Description
00914ZZ	Drainage of Cerebral Meninges, Percutaneous Endoscopic Approach
009200Z	Drainage of Dura Mater with Drainage Device, Open Approach
00920ZZ	Drainage of Dura Mater, Open Approach
009230Z	Drainage of Dura Mater with Drainage Device, Percutaneous Approach
00923ZZ	Drainage of Dura Mater, Percutaneous Approach
009240Z	Drainage of Dura Mater with Drainage Device, Percutaneous Endoscopic Approach
00924ZZ	Drainage of Dura Mater, Percutaneous Endoscopic Approach
009300Z	Drainage of Intracranial Epidural Space with Drainage Device, Open Approach
00930ZZ	Drainage of Intracranial Epidural Space, Open Approach
009330Z	Drainage of Intracranial Epidural Space with Drainage Device, Percutaneous Approach
00933ZZ	Drainage of Intracranial Epidural Space, Percutaneous Approach
009340Z	Drainage of Intracranial Epidural Space with Drainage Device, Percutaneous Endoscopic Approach
00934ZZ	Drainage of Intracranial Epidural Space, Percutaneous Endoscopic Approach
009400Z	Drainage of Intracranial Subdural Space with Drainage Device, Open Approach
00940ZZ	Drainage of Intracranial Subdural Space, Open Approach
009430Z	Drainage of Intracranial Subdural Space with Drainage Device, Percutaneous Approach
00943ZZ	Drainage of Intracranial Subdural Space, Percutaneous Approach
009440Z	Drainage of Intracranial Subdural Space with Drainage Device, Percutaneous Endoscopic Approach
00944ZZ	Drainage of Intracranial Subdural Space, Percutaneous Endoscopic Approach
009600Z	Drainage of Cerebral Ventricle with Drainage Device, Open Approach
00960ZZ	Drainage of Cerebral Ventricle, Open Approach
009630Z	Drainage of Cerebral Ventricle with Drainage Device, Percutaneous Approach
00963ZZ	Drainage of Cerebral Ventricle, Percutaneous Approach
009640Z	Drainage of Cerebral Ventricle with Drainage Device, Percutaneous Endoscopic Approach
00964ZZ	Drainage of Cerebral Ventricle, Percutaneous Endoscopic Approach
009700Z	Drainage of Cerebral Hemisphere with Drainage Device, Open Approach
00970ZZ	Drainage of Cerebral Hemisphere, Open Approach
009730Z	Drainage of Cerebral Hemisphere with Drainage Device, Percutaneous Approach
00973ZZ	Drainage of Cerebral Hemisphere, Percutaneous Approach
009740Z	Drainage of Cerebral Hemisphere with Drainage Device, Percutaneous Endoscopic Approach
00974ZZ	Drainage of Cerebral Hemisphere, Percutaneous Endoscopic Approach
009B00Z	Drainage of Pons with Drainage Device, Open Approach

Code	Shortened Description
009B0ZZ	Drainage of Pons, Open Approach
009B30Z	Drainage of Pons with Drainage Device, Percutaneous Approach
009B3ZZ	Drainage of Pons, Percutaneous Approach
009B40Z	Drainage of Pons with Drainage Device, Percutaneous Endoscopic Approach
009B4ZZ	Drainage of Pons, Percutaneous Endoscopic Approach
009C00Z	Drainage of Cerebellum with Drainage Device, Open Approach
009C0ZZ	Drainage of Cerebellum, Open Approach
009C30Z	Drainage of Cerebellum with Drainage Device, Percutaneous Approach
009C3ZZ	Drainage of Cerebellum, Percutaneous Approach
009C40Z	Drainage of Cerebellum with Drainage Device, Percutaneous Endoscopic Approach
009C4ZZ	Drainage of Cerebellum, Percutaneous Endoscopic Approach
009D00Z	Drainage of Medulla Oblongata with Drainage Device, Open Approach
009D0ZZ	Drainage of Medulla Oblongata, Open Approach
009D30Z	Drainage of Medulla Oblongata with Drainage Device, Percutaneous Approach
009D3ZZ	Drainage of Medulla Oblongata, Percutaneous Approach
009D40Z	Drainage of Medulla Oblongata with Drainage Device, Percutaneous Endoscopic Approach
009D4ZZ	Drainage of Medulla Oblongata, Percutaneous Endoscopic Approach
00C00ZZ	Extirpation of Matter from Brain, Open Approach
00C03ZZ	Extirpation of Matter from Brain, Percutaneous Approach
00C04ZZ	Extirpation of Matter from Brain, Percutaneous Endoscopic Approach
00C10ZZ	Extirpation of Matter from Cerebral Meninges, Open Approach
00C13ZZ	Extirpation of Matter from Cerebral Meninges, Percutaneous Approach
00C14ZZ	Extirpation of Matter from Cerebral Meninges, Percutaneous Endoscopic Approach
00C20ZZ	Extirpation of Matter from Dura Mater, Open Approach
00C23ZZ	Extirpation of Matter from Dura Mater, Percutaneous Approach
00C24ZZ	Extirpation of Matter from Dura Mater, Percutaneous Endoscopic Approach
00C30ZZ	Extirpation of Matter from Intracranial Epidural Space, Open Approach
00C33ZZ	Extirpation of Matter from Intracranial Epidural Space, Percutaneous Approach
00C34ZZ	Extirpation of Matter from Intracranial Epidural Space, Percutaneous Endoscopic Approach
00C40ZZ	Extirpation of Matter from Intracranial Subdural Space, Open Approach
00C43ZZ	Extirpation of Matter from Intracranial Subdural Space, Percutaneous Approach
00C44ZZ	Extirpation of Matter from Intracranial Subdural Space, Percutaneous Endoscopic Approach

Code	Shortened Description
00C60ZZ	Extirpation of Matter from Cerebral Ventricle, Open Approach
00C63ZZ	Extirpation of Matter from Cerebral Ventricle, Percutaneous Approach
00C64ZZ	Extirpation of Matter from Cerebral Ventricle, Percutaneous Endoscopic Approach
00C70ZZ	Extirpation of Matter from Cerebral Hemisphere, Open Approach
00C73ZZ	Extirpation of Matter from Cerebral Hemisphere, Percutaneous Approach
00C74ZZ	Extirpation of Matter from Cerebral Hemisphere, Percutaneous Endoscopic Approach
00CB0ZZ	Extirpation of Matter from Pons, Open Approach
00CB3ZZ	Extirpation of Matter from Pons, Percutaneous Approach
00CB4ZZ	Extirpation of Matter from Pons, Percutaneous Endoscopic Approach
00CC0ZZ	Extirpation of Matter from Cerebellum, Open Approach
00CC3ZZ	Extirpation of Matter from Cerebellum, Percutaneous Approach
00CC4ZZ	Extirpation of Matter from Cerebellum, Percutaneous Endoscopic Approach
00CD0ZZ	Extirpation of Matter from Medulla Oblongata, Open Approach
00CD3ZZ	Extirpation of Matter from Medulla Oblongata, Percutaneous Approach
00CD4ZZ	Extirpation of Matter from Medulla Oblongata, Percutaneous Endoscopic Approach
00H002Z	Insertion of Monitoring Device into Brain, Open Approach
00H003Z	Insertion of Infusion Device into Brain, Open Approach
00H004Z	Insertion of Radioactive Element, Cesium-131 Collagen Implant into Brain, Open Approach
00H00MZ	Insertion of Neurostimulator Lead into Brain, Open Approach
00H00YZ	Insertion of Other Device into Brain, Open Approach
00H032Z	Insertion of Monitoring Device into Brain, Percutaneous Approach
00H033Z	Insertion of Infusion Device into Brain, Percutaneous Approach
00H03MZ	Insertion of Neurostimulator Lead into Brain, Percutaneous Approach
00H03YZ	Insertion of Other Device into Brain, Percutaneous Approach
00H042Z	Insertion of Monitoring Device into Brain, Percutaneous Endoscopic Approach
00H043Z	Insertion of Infusion Device into Brain, Percutaneous Endoscopic Approach
00H04MZ	Insertion of Neurostimulator Lead into Brain, Percutaneous Endoscopic Approach
00H04YZ	Insertion of Other Device into Brain, Percutaneous Endoscopic Approach
00H602Z	Insertion of Monitoring Device into Cerebral Ventricle, Open Approach
00H603Z	Insertion of Infusion Device into Cerebral Ventricle, Open Approach
00H60MZ	Insertion of Neurostimulator Lead into Cerebral Ventricle, Open Approach
00H60YZ	Insertion of Other Device into Cerebral Ventricle, Open Approach

Code	Shortened Description
00H632Z	Insertion of Monitoring Device into Cerebral Ventricle, Percutaneous Approach
00H633Z	Insertion of Infusion Device into Cerebral Ventricle, Percutaneous Approach
00H63MZ	Insertion of Neurostimulator Lead into Cerebral Ventricle, Percutaneous Approach
00H63YZ	Insertion of Other Device into Cerebral Ventricle, Percutaneous Approach
00H642Z	Insertion of Monitoring Device into Cerebral Ventricle, Percutaneous Endoscopic Approach
00H643Z	Insertion of Infusion Device into Cerebral Ventricle, Percutaneous Endoscopic Approach
00H64MZ	Insertion of Neurostimulator Lead into Cerebral Ventricle, Percutaneous Endoscopic Approach
00H64YZ	Insertion of Other Device into Cerebral Ventricle, Percutaneous Endoscopic Approach
00J00ZZ	Inspection of Brain, Open Approach
00P000Z	Removal of Drainage Device from Brain, Open Approach
00P002Z	Removal of Monitoring Device from Brain, Open Approach
00P003Z	Removal of Infusion Device from Brain, Open Approach
00P007Z	Removal of Autologous Tissue Substitute from Brain, Open Approach
00P00JZ	Removal of Synthetic Substitute from Brain, Open Approach
00P00KZ	Removal of Nonautologous Tissue Substitute from Brain, Open Approach
00P00MZ	Removal of Neurostimulator Lead from Brain, Open Approach
00P00YZ	Removal of Other Device from Brain, Open Approach
00P030Z	Removal of Drainage Device from Brain, Percutaneous Approach
00P032Z	Removal of Monitoring Device from Brain, Percutaneous Approach
00P033Z	Removal of Infusion Device from Brain, Percutaneous Approach
00P037Z	Removal of Autologous Tissue Substitute from Brain, Percutaneous Approach
00P03JZ	Removal of Synthetic Substitute from Brain, Percutaneous Approach
00P03KZ	Removal of Nonautologous Tissue Substitute from Brain, Percutaneous Approach
00P03MZ	Removal of Neurostimulator Lead from Brain, Percutaneous Approach
00P03YZ	Removal of Other Device from Brain, Percutaneous Approach
00P040Z	Removal of Drainage Device from Brain, Percutaneous Endoscopic Approach
00P042Z	Removal of Monitoring Device from Brain, Percutaneous Endoscopic Approach
00P043Z	Removal of Infusion Device from Brain, Percutaneous Endoscopic Approach
00P047Z	Removal of Autologous Tissue Substitute from Brain, Percutaneous Endoscopic Approach
00P04JZ	Removal of Synthetic Substitute from Brain, Percutaneous Endoscopic Approach
00P04KZ	Removal of Nonautologous Tissue Substitute from Brain, Percutaneous Endoscopic Approach
00P04MZ	Removal of Neurostimulator Lead from Brain, Percutaneous Endoscopic Approach

Code	Shortened Description
00P04YZ	Removal of Other Device from Brain, Percutaneous Endoscopic Approach
00P600Z	Removal of Drainage Device from Cerebral Ventricle, Open Approach
00P602Z	Removal of Monitoring Device from Cerebral Ventricle, Open Approach
00P603Z	Removal of Infusion Device from Cerebral Ventricle, Open Approach
00P60JZ	Removal of Synthetic Substitute from Cerebral Ventricle, Open Approach
00P60MZ	Removal of Neurostimulator Lead from Cerebral Ventricle, Open Approach
00P60YZ	Removal of Other Device from Cerebral Ventricle, Open Approach
00P630Z	Removal of Drainage Device from Cerebral Ventricle, Percutaneous Approach
00P632Z	Removal of Monitoring Device from Cerebral Ventricle, Percutaneous Approach
00P633Z	Removal of Infusion Device from Cerebral Ventricle, Percutaneous Approach
00P63JZ	Removal of Synthetic Substitute from Cerebral Ventricle, Percutaneous Approach
00P63MZ	Removal of Neurostimulator Lead from Cerebral Ventricle, Percutaneous Approach
00P63YZ	Removal of Other Device from Cerebral Ventricle, Percutaneous Approach
00P640Z	Removal of Drainage Device from Cerebral Ventricle, Percutaneous Endoscopic Approach
00P642Z	Removal of Monitoring Device from Cerebral Ventricle, Percutaneous Endoscopic Approach
00P643Z	Removal of Infusion Device from Cerebral Ventricle, Percutaneous Endoscopic Approach
00P64JZ	Removal of Synthetic Substitute from Cerebral Ventricle, Percutaneous Endoscopic Approach
00P64MZ	Removal of Neurostimulator Lead from Cerebral Ventricle, Percutaneous Endoscopic Approach
00P64YZ	Removal of Other Device from Cerebral Ventricle, Percutaneous Endoscopic Approach
00W000Z	Revision of Drainage Device in Brain, Open Approach
00W002Z	Revision of Monitoring Device in Brain, Open Approach
00W003Z	Revision of Infusion Device in Brain, Open Approach
00W007Z	Revision of Autologous Tissue Substitute in Brain, Open Approach
00W00JZ	Revision of Synthetic Substitute in Brain, Open Approach
00W00KZ	Revision of Nonautologous Tissue Substitute in Brain, Open Approach
00W00MZ	Revision of Neurostimulator Lead in Brain, Open Approach
00W00YZ	Revision of Other Device in Brain, Open Approach
00W030Z	Revision of Drainage Device in Brain, Percutaneous Approach
00W032Z	Revision of Monitoring Device in Brain, Percutaneous Approach
00W033Z	Revision of Infusion Device in Brain, Percutaneous Approach
00W037Z	Revision of Autologous Tissue Substitute in Brain, Percutaneous Approach
00W03JZ	Revision of Synthetic Substitute in Brain, Percutaneous Approach

Code	Shortened Description
00W03KZ	Revision of Nonautologous Tissue Substitute in Brain, Percutaneous Approach
00W03MZ	Revision of Neurostimulator Lead in Brain, Percutaneous Approach
00W03YZ	Revision of Other Device in Brain, Percutaneous Approach
00W040Z	Revision of Drainage Device in Brain, Percutaneous Endoscopic Approach
00W042Z	Revision of Monitoring Device in Brain, Percutaneous Endoscopic Approach
00W043Z	Revision of Infusion Device in Brain, Percutaneous Endoscopic Approach
00W047Z	Revision of Autologous Tissue Substitute in Brain, Percutaneous Endoscopic Approach
00W04JZ	Revision of Synthetic Substitute in Brain, Percutaneous Endoscopic Approach
00W04KZ	Revision of Nonautologous Tissue Substitute in Brain, Percutaneous Endoscopic Approach
00W04MZ	Revision of Neurostimulator Lead in Brain, Percutaneous Endoscopic Approach
00W04YZ	Revision of Other Device in Brain, Percutaneous Endoscopic Approach
00W600Z	Revision of Drainage Device in Cerebral Ventricle, Open Approach
00W602Z	Revision of Monitoring Device in Cerebral Ventricle, Open Approach
00W603Z	Revision of Infusion Device in Cerebral Ventricle, Open Approach
00W60JZ	Revision of Synthetic Substitute in Cerebral Ventricle, Open Approach
00W60MZ	Revision of Neurostimulator Lead in Cerebral Ventricle, Open Approach
00W60YZ	Revision of Other Device in Cerebral Ventricle, Open Approach
00W630Z	Revision of Drainage Device in Cerebral Ventricle, Percutaneous Approach
00W632Z	Revision of Monitoring Device in Cerebral Ventricle, Percutaneous Approach
00W633Z	Revision of Infusion Device in Cerebral Ventricle, Percutaneous Approach
00W63JZ	Revision of Synthetic Substitute in Cerebral Ventricle, Percutaneous Approach
00W63MZ	Revision of Neurostimulator Lead in Cerebral Ventricle, Percutaneous Approach
00W63YZ	Revision of Other Device in Cerebral Ventricle, Percutaneous Approach
00W640Z	Revision of Drainage Device in Cerebral Ventricle, Percutaneous Endoscopic Approach
00W642Z	Revision of Monitoring Device in Cerebral Ventricle, Percutaneous Endoscopic Approach
00W643Z	Revision of Infusion Device in Cerebral Ventricle, Percutaneous Endoscopic Approach
00W64JZ	Revision of Synthetic Substitute in Cerebral Ventricle, Percutaneous Endoscopic Approach
00W64MZ	Revision of Neurostimulator Lead in Cerebral Ventricle, Percutaneous Endoscopic Approach
00W64YZ	Revision of Other Device in Cerebral Ventricle, Percutaneous Endoscopic Approach
021P08D	Bypass Pulmonary Trunk from Carotid with Zooplastic Tissue, Open Approach
021P09D	Bypass Pulmonary Trunk from Carotid with Autologous Venous Tissue, Open Approach
021P0AD	Bypass Pulmonary Trunk from Carotid with Autologous Arterial Tissue, Open Approach

Code	Shortened Description
021P0JD	Bypass Pulmonary Trunk from Carotid with Synthetic Substitute, Open Approach
021P0KD	Bypass Pulmonary Trunk from Carotid with Nonautologous Tissue Substitute, Open Approach
021P0ZD	Bypass Pulmonary Trunk from Carotid with No Device, Open Approach
021P48D	Bypass Pulmonary Trunk from Carotid with Zooplastic Tissue, Percutaneous Endoscopic Approach
021P49D	Bypass Pulmonary Trunk from Carotid with Autologous Venous Tissue, Percutaneous Endoscopic Approach
021P4AD	Bypass Pulmonary Trunk from Carotid with Autologous Arterial Tissue, Percutaneous Endoscopic Approach
021P4JD	Bypass Pulmonary Trunk from Carotid with Synthetic Substitute, Percutaneous Endoscopic Approach
021P4KD	Bypass Pulmonary Trunk from Carotid with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
021P4ZD	Bypass Pulmonary Trunk from Carotid with No Device, Percutaneous Endoscopic Approach
021Q08D	Bypass Right Pulmonary Artery from Carotid with Zooplastic Tissue, Open Approach
021Q09D	Bypass Right Pulmonary Artery from Carotid with Autologous Venous Tissue, Open Approach
021Q0AD	Bypass Right Pulmonary Artery from Carotid with Autologous Arterial Tissue, Open Approach
021Q0JD	Bypass Right Pulmonary Artery from Carotid with Synthetic Substitute, Open Approach
021Q0KD	Bypass Right Pulmonary Artery from Carotid with Nonautologous Tissue Substitute, Open Approach
021Q0ZD	Bypass Right Pulmonary Artery from Carotid with No Device, Open Approach
021Q48D	Bypass Right Pulmonary Artery from Carotid with Zooplastic Tissue, Percutaneous Endoscopic Approach
021Q49D	Bypass Right Pulmonary Artery from Carotid with Autologous Venous Tissue, Percutaneous Endoscopic Approach
021Q4AD	Bypass Right Pulmonary Artery from Carotid with Autologous Arterial Tissue, Percutaneous Endoscopic Approach
021Q4JD	Bypass Right Pulmonary Artery from Carotid with Synthetic Substitute, Percutaneous Endoscopic Approach
021Q4KD	Bypass Right Pulmonary Artery from Carotid with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
021Q4ZD	Bypass Right Pulmonary Artery from Carotid with No Device, Percutaneous Endoscopic Approach
021R08D	Bypass Left Pulmonary Artery from Carotid with Zooplastic Tissue, Open Approach
021R09D	Bypass Left Pulmonary Artery from Carotid with Autologous Venous Tissue, Open Approach
021R0AD	Bypass Left Pulmonary Artery from Carotid with Autologous Arterial Tissue, Open Approach
021R0JD	Bypass Left Pulmonary Artery from Carotid with Synthetic Substitute, Open Approach
021R0KD	Bypass Left Pulmonary Artery from Carotid with Nonautologous Tissue Substitute, Open Approach
021R0ZD	Bypass Left Pulmonary Artery from Carotid with No Device, Open Approach
021R48D	Bypass Left Pulmonary Artery from Carotid with Zooplastic Tissue, Percutaneous Endoscopic Approach
021R49D	Bypass Left Pulmonary Artery from Carotid with Autologous Venous Tissue, Percutaneous Endoscopic Approach
021R4AD	Bypass Left Pulmonary Artery from Carotid with Autologous Arterial Tissue, Percutaneous Endoscopic Approach
021R4JD	Bypass Left Pulmonary Artery from Carotid with Synthetic Substitute, Percutaneous Endoscopic Approach

Code	Shortened Description
021R4KD	Bypass Left Pulmonary Artery from Carotid with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
021R4ZD	Bypass Left Pulmonary Artery from Carotid with No Device, Percutaneous Endoscopic Approach
021W08D	Bypass Thoracic Aorta, Descending to Carotid with Zooplastic Tissue, Open Approach
021W09D	Bypass Thoracic Aorta, Descending to Carotid with Autologous Venous Tissue, Open Approach
021W0AD	Bypass Thoracic Aorta, Descending to Carotid with Autologous Arterial Tissue, Open Approach
021W0JD	Bypass Thoracic Aorta, Descending to Carotid with Synthetic Substitute, Open Approach
021W0KD	Bypass Thoracic Aorta, Descending to Carotid with Nonautologous Tissue Substitute, Open Approach
021W0ZD	Bypass Thoracic Aorta, Descending to Carotid, Open Approach
021W48D	Bypass Thoracic Aorta, Descending to Carotid with Zooplastic Tissue, Percutaneous Endoscopic Approach
021W49D	Bypass Thoracic Aorta, Descending to Carotid with Autologous Venous Tissue, Percutaneous Endoscopic Approach
021W4AD	Bypass Thoracic Aorta, Descending to Carotid with Autologous Arterial Tissue, Percutaneous Endoscopic Approach
021W4JD	Bypass Thoracic Aorta, Descending to Carotid with Synthetic Substitute, Percutaneous Endoscopic Approach
021W4KD	Bypass Thoracic Aorta, Descending to Carotid with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
021W4ZD	Bypass Thoracic Aorta, Descending to Carotid, Percutaneous Endoscopic Approach
021X08D	Bypass Thoracic Aorta, Ascending/Arch to Carotid with Zooplastic Tissue, Open Approach
021X09D	Bypass Thoracic Aorta, Ascending/Arch to Carotid with Autologous Venous Tissue, Open Approach
021X0AD	Bypass Thoracic Aorta, Ascending/Arch to Carotid with Autologous Arterial Tissue, Open Approach
021X0JD	Bypass Thoracic Aorta, Ascending/Arch to Carotid with Synthetic Substitute, Open Approach
021X0KD	Bypass Thoracic Aorta, Ascending/Arch to Carotid with Nonautologous Tissue Substitute, Open Approach
021X0ZD	Bypass Thoracic Aorta, Ascending/Arch to Carotid, Open Approach
021X48D	Bypass Thoracic Aorta, Ascending/Arch to Carotid with Zooplastic Tissue, Percutaneous Endoscopic Approach
021X49D	Bypass Thoracic Aorta, Ascending/Arch to Carotid with Autologous Venous Tissue, Percutaneous Endoscopic Approach
021X4AD	Bypass Thoracic Aorta, Ascending/Arch to Carotid with Autologous Arterial Tissue, Percutaneous Endoscopic Approach
021X4JD	Bypass Thoracic Aorta, Ascending/Arch to Carotid with Synthetic Substitute, Percutaneous Endoscopic Approach
021X4KD	Bypass Thoracic Aorta, Ascending/Arch to Carotid with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
021X4ZD	Bypass Thoracic Aorta, Ascending/Arch to Carotid, Percutaneous Endoscopic Approach
031G09G	Bypass Intracranial Artery to Intracranial Artery with Autologous Venous Tissue, Open Approach
031G0AG	Bypass Intracranial Artery to Intracranial Artery with Autologous Arterial Tissue, Open Approach
031G0JG	Bypass Intracranial Artery to Intracranial Artery with Synthetic Substitute, Open Approach

Code	Shortened Description
031G0KG	Bypass Intracranial Artery to Intracranial Artery with Nonautologous Tissue Substitute, Open Approach
031G0ZG	Bypass Intracranial Artery to Intracranial Artery, Open Approach
031H09G	Bypass Right Common Carotid Artery to Intracranial Artery with Autologous Venous Tissue, Open Approach
031H09J	Bypass Right Common Carotid Artery to Right Extracranial Artery with Autologous Venous Tissue, Open Approach
031H09K	Bypass Right Common Carotid Artery to Left Extracranial Artery with Autologous Venous Tissue, Open Approach
031H09Y	Bypass Right Common Carotid Artery to Upper Artery with Autologous Venous Tissue, Open Approach
031H0AG	Bypass Right Common Carotid Artery to Intracranial Artery with Autologous Arterial Tissue, Open Approach
031H0AJ	Bypass Right Common Carotid Artery to Right Extracranial Artery with Autologous Arterial Tissue, Open Approach
031H0AK	Bypass Right Common Carotid Artery to Left Extracranial Artery with Autologous Arterial Tissue, Open Approach
031H0AY	Bypass Right Common Carotid Artery to Upper Artery with Autologous Arterial Tissue, Open Approach
031H0JG	Bypass Right Common Carotid Artery to Intracranial Artery with Synthetic Substitute, Open Approach
031H0JJ	Bypass Right Common Carotid Artery to Right Extracranial Artery with Synthetic Substitute, Open Approach
031H0JK	Bypass Right Common Carotid Artery to Left Extracranial Artery with Synthetic Substitute, Open Approach
031H0JY	Bypass Right Common Carotid Artery to Upper Artery with Synthetic Substitute, Open Approach
031H0KG	Bypass Right Common Carotid Artery to Intracranial Artery with Nonautologous Tissue Substitute, Open Approach
031H0KJ	Bypass Right Common Carotid Artery to Right Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031H0KK	Bypass Right Common Carotid Artery to Left Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031H0KY	Bypass Right Common Carotid Artery to Upper Artery with Nonautologous Tissue Substitute, Open Approach
031H0ZG	Bypass Right Common Carotid Artery to Intracranial Artery, Open Approach
031H0ZJ	Bypass Right Common Carotid Artery to Right Extracranial Artery, Open Approach
031H0ZK	Bypass Right Common Carotid Artery to Left Extracranial Artery, Open Approach
031H0ZY	Bypass Right Common Carotid Artery to Upper Artery, Open Approach
031J09G	Bypass Left Common Carotid Artery to Intracranial Artery with Autologous Venous Tissue, Open Approach
031J09J	Bypass Left Common Carotid Artery to Right Extracranial Artery with Autologous Venous Tissue, Open Approach
031J09K	Bypass Left Common Carotid Artery to Left Extracranial Artery with Autologous Venous Tissue, Open Approach
031J09Y	Bypass Left Common Carotid Artery to Upper Artery with Autologous Venous Tissue, Open Approach
031J0AG	Bypass Left Common Carotid Artery to Intracranial Artery with Autologous Arterial Tissue, Open Approach
031J0AJ	Bypass Left Common Carotid Artery to Right Extracranial Artery with Autologous Arterial Tissue, Open Approach
031J0AK	Bypass Left Common Carotid Artery to Left Extracranial Artery with Autologous Arterial Tissue, Open Approach
031J0AY	Bypass Left Common Carotid Artery to Upper Artery with Autologous Arterial Tissue, Open Approach
031J0JG	Bypass Left Common Carotid Artery to Intracranial Artery with Synthetic Substitute, Open Approach

Code	Shortened Description
031J0JJ	Bypass Left Common Carotid Artery to Right Extracranial Artery with Synthetic Substitute, Open Approach
031J0JK	Bypass Left Common Carotid Artery to Left Extracranial Artery with Synthetic Substitute, Open Approach
031J0JY	Bypass Left Common Carotid Artery to Upper Artery with Synthetic Substitute, Open Approach
031J0KG	Bypass Left Common Carotid Artery to Intracranial Artery with Nonautologous Tissue Substitute, Open Approach
031J0KJ	Bypass Left Common Carotid Artery to Right Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031J0KK	Bypass Left Common Carotid Artery to Left Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031J0KY	Bypass Left Common Carotid Artery to Upper Artery with Nonautologous Tissue Substitute, Open Approach
031J0ZG	Bypass Left Common Carotid Artery to Intracranial Artery, Open Approach
031J0ZJ	Bypass Left Common Carotid Artery to Right Extracranial Artery, Open Approach
031J0ZK	Bypass Left Common Carotid Artery to Left Extracranial Artery, Open Approach
031J0ZY	Bypass Left Common Carotid Artery to Upper Artery, Open Approach
031K09J	Bypass Right Internal Carotid Artery to Right Extracranial Artery with Autologous Venous Tissue, Open Approach
031K09K	Bypass Right Internal Carotid Artery to Left Extracranial Artery with Autologous Venous Tissue, Open Approach
031K0AJ	Bypass Right Internal Carotid Artery to Right Extracranial Artery with Autologous Arterial Tissue, Open Approach
031K0AK	Bypass Right Internal Carotid Artery to Left Extracranial Artery with Autologous Arterial Tissue, Open Approach
031K0JJ	Bypass Right Internal Carotid Artery to Right Extracranial Artery with Synthetic Substitute, Open Approach
031K0JK	Bypass Right Internal Carotid Artery to Left Extracranial Artery with Synthetic Substitute, Open Approach
031K0KJ	Bypass Right Internal Carotid Artery to Right Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031K0KK	Bypass Right Internal Carotid Artery to Left Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031K0ZJ	Bypass Right Internal Carotid Artery to Right Extracranial Artery, Open Approach
031K0ZK	Bypass Right Internal Carotid Artery to Left Extracranial Artery, Open Approach
031L09J	Bypass Left Internal Carotid Artery to Right Extracranial Artery with Autologous Venous Tissue, Open Approach
031L09K	Bypass Left Internal Carotid Artery to Left Extracranial Artery with Autologous Venous Tissue, Open Approach
031L0AJ	Bypass Left Internal Carotid Artery to Right Extracranial Artery with Autologous Arterial Tissue, Open Approach
031L0AK	Bypass Left Internal Carotid Artery to Left Extracranial Artery with Autologous Arterial Tissue, Open Approach
031L0JJ	Bypass Left Internal Carotid Artery to Right Extracranial Artery with Synthetic Substitute, Open Approach
031L0JK	Bypass Left Internal Carotid Artery to Left Extracranial Artery with Synthetic Substitute, Open Approach
031L0KJ	Bypass Left Internal Carotid Artery to Right Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031L0KK	Bypass Left Internal Carotid Artery to Left Extracranial Artery with Nonautologous Tissue Substitute, Open Approach

Code	Shortened Description
031L0ZJ	Bypass Left Internal Carotid Artery to Right Extracranial Artery, Open Approach
031L0ZK	Bypass Left Internal Carotid Artery to Left Extracranial Artery, Open Approach
031M09J	Bypass Right External Carotid Artery to Right Extracranial Artery with Autologous Venous Tissue, Open Approach
031M09K	Bypass Right External Carotid Artery to Left Extracranial Artery with Autologous Venous Tissue, Open Approach
031M0AJ	Bypass Right External Carotid Artery to Right Extracranial Artery with Autologous Arterial Tissue, Open Approach
031M0AK	Bypass Right External Carotid Artery to Left Extracranial Artery with Autologous Arterial Tissue, Open Approach
031M0JJ	Bypass Right External Carotid Artery to Right Extracranial Artery with Synthetic Substitute, Open Approach
031M0JK	Bypass Right External Carotid Artery to Left Extracranial Artery with Synthetic Substitute, Open Approach
031M0KJ	Bypass Right External Carotid Artery to Right Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031M0KK	Bypass Right External Carotid Artery to Left Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031M0ZJ	Bypass Right External Carotid Artery to Right Extracranial Artery, Open Approach
031M0ZK	Bypass Right External Carotid Artery to Left Extracranial Artery, Open Approach
031N09J	Bypass Left External Carotid Artery to Right Extracranial Artery with Autologous Venous Tissue, Open Approach
031N09K	Bypass Left External Carotid Artery to Left Extracranial Artery with Autologous Venous Tissue, Open Approach
031N0AJ	Bypass Left External Carotid Artery to Right Extracranial Artery with Autologous Arterial Tissue, Open Approach
031N0AK	Bypass Left External Carotid Artery to Left Extracranial Artery with Autologous Arterial Tissue, Open Approach
031N0JJ	Bypass Left External Carotid Artery to Right Extracranial Artery with Synthetic Substitute, Open Approach
031N0JK	Bypass Left External Carotid Artery to Left Extracranial Artery with Synthetic Substitute, Open Approach
031N0KJ	Bypass Left External Carotid Artery to Right Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031N0KK	Bypass Left External Carotid Artery to Left Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031N0ZJ	Bypass Left External Carotid Artery to Right Extracranial Artery, Open Approach
031N0ZK	Bypass Left External Carotid Artery to Left Extracranial Artery, Open Approach
031S09G	Bypass Right Temporal Artery to Intracranial Artery with Autologous Venous Tissue, Open Approach
031S0AG	Bypass Right Temporal Artery to Intracranial Artery with Autologous Arterial Tissue, Open Approach
031S0JG	Bypass Right Temporal Artery to Intracranial Artery with Synthetic Substitute, Open Approach
031S0KG	Bypass Right Temporal Artery to Intracranial Artery with Nonautologous Tissue Substitute, Open Approach
031S0ZG	Bypass Right Temporal Artery to Intracranial Artery, Open Approach
031T09G	Bypass Left Temporal Artery to Intracranial Artery with Autologous Venous Tissue, Open Approach
031T0AG	Bypass Left Temporal Artery to Intracranial Artery with Autologous Arterial Tissue, Open Approach
031T0JG	Bypass Left Temporal Artery to Intracranial Artery with Synthetic Substitute, Open Approach

Code	Shortened Description
031T0KG	Bypass Left Temporal Artery to Intracranial Artery with Nonautologous Tissue Substitute, Open Approach
031T0ZG	Bypass Left Temporal Artery to Intracranial Artery, Open Approach
037G046	Dilation of Intracranial Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037G04Z	Dilation of Intracranial Artery with Drug-eluting Intraluminal Device, Open Approach
037G056	Dilation of Intracranial Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037G05Z	Dilation of Intracranial Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037G066	Dilation of Intracranial Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037G06Z	Dilation of Intracranial Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037G076	Dilation of Intracranial Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037G07Z	Dilation of Intracranial Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037G0D6	Dilation of Intracranial Artery, Bifurcation, with Intraluminal Device, Open Approach
037G0DZ	Dilation of Intracranial Artery with Intraluminal Device, Open Approach
037G0E6	Dilation of Intracranial Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037G0EZ	Dilation of Intracranial Artery with Two Intraluminal Devices, Open Approach
037G0F6	Dilation of Intracranial Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037G0FZ	Dilation of Intracranial Artery with Three Intraluminal Devices, Open Approach
037G0G6	Dilation of Intracranial Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037G0GZ	Dilation of Intracranial Artery with Four or More Intraluminal Devices, Open Approach
037G0Z6	Dilation of Intracranial Artery, Bifurcation, Open Approach
037G0ZZ	Dilation of Intracranial Artery, Open Approach
037G346	Dilation of Intracranial Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037G34Z	Dilation of Intracranial Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037G356	Dilation of Intracranial Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037G35Z	Dilation of Intracranial Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037G366	Dilation of Intracranial Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037G36Z	Dilation of Intracranial Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037G376	Dilation of Intracranial Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037G37Z	Dilation of Intracranial Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037G3D6	Dilation of Intracranial Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037G3DZ	Dilation of Intracranial Artery with Intraluminal Device, Percutaneous Approach
037G3E6	Dilation of Intracranial Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037G3EZ	Dilation of Intracranial Artery with Two Intraluminal Devices, Percutaneous Approach

Code	Shortened Description
037G3F6	Dilation of Intracranial Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037G3FZ	Dilation of Intracranial Artery with Three Intraluminal Devices, Percutaneous Approach
037G3G6	Dilation of Intracranial Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037G3GZ	Dilation of Intracranial Artery with Four or More Intraluminal Devices, Percutaneous Approach
037G3Z6	Dilation of Intracranial Artery, Bifurcation, Percutaneous Approach
037G3ZZ	Dilation of Intracranial Artery, Percutaneous Approach
037G446	Dilation of Intracranial Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037G44Z	Dilation of Intracranial Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037G456	Dilation of Intracranial Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037G45Z	Dilation of Intracranial Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037G466	Dilation of Intracranial Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037G46Z	Dilation of Intracranial Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037G476	Dilation of Intracranial Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037G47Z	Dilation of Intracranial Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037G4D6	Dilation of Intracranial Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037G4DZ	Dilation of Intracranial Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037G4E6	Dilation of Intracranial Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037G4EZ	Dilation of Intracranial Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037G4F6	Dilation of Intracranial Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037G4FZ	Dilation of Intracranial Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037G4G6	Dilation of Intracranial Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037G4GZ	Dilation of Intracranial Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037G4Z6	Dilation of Intracranial Artery, Bifurcation, Percutaneous Endoscopic Approach
037G4ZZ	Dilation of Intracranial Artery, Percutaneous Endoscopic Approach
037H046	Dilation of Right Common Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037H04Z	Dilation of Right Common Carotid Artery with Drug-eluting Intraluminal Device, Open Approach
037H056	Dilation of Right Common Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037H05Z	Dilation of Right Common Carotid Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037H066	Dilation of Right Common Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach

Code	Shortened Description
037H06Z	Dilation of Right Common Carotid Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037H076	Dilation of Right Common Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037H07Z	Dilation of Right Common Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037H0D6	Dilation of Right Common Carotid Artery, Bifurcation, with Intraluminal Device, Open Approach
037H0DZ	Dilation of Right Common Carotid Artery with Intraluminal Device, Open Approach
037H0E6	Dilation of Right Common Carotid Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037H0EZ	Dilation of Right Common Carotid Artery with Two Intraluminal Devices, Open Approach
037H0F6	Dilation of Right Common Carotid Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037H0FZ	Dilation of Right Common Carotid Artery with Three Intraluminal Devices, Open Approach
037H0G6	Dilation of Right Common Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037H0GZ	Dilation of Right Common Carotid Artery with Four or More Intraluminal Devices, Open Approach
037H0Z6	Dilation of Right Common Carotid Artery, Bifurcation, Open Approach
037H0ZZ	Dilation of Right Common Carotid Artery, Open Approach
037H346	Dilation of Right Common Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037H34Z	Dilation of Right Common Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037H356	Dilation of Right Common Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037H35Z	Dilation of Right Common Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037H366	Dilation of Right Common Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037H36Z	Dilation of Right Common Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037H376	Dilation of Right Common Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037H37Z	Dilation of Right Common Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037H3D6	Dilation of Right Common Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037H3DZ	Dilation of Right Common Carotid Artery with Intraluminal Device, Percutaneous Approach
037H3E6	Dilation of Right Common Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037H3EZ	Dilation of Right Common Carotid Artery with Two Intraluminal Devices, Percutaneous Approach
037H3F6	Dilation of Right Common Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037H3FZ	Dilation of Right Common Carotid Artery with Three Intraluminal Devices, Percutaneous Approach
037H3G6	Dilation of Right Common Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037H3GZ	Dilation of Right Common Carotid Artery with Four or More Intraluminal Devices, Percutaneous Approach

Code	Shortened Description
037H3Z6	Dilation of Right Common Carotid Artery, Bifurcation, Percutaneous Approach
037H3ZZ	Dilation of Right Common Carotid Artery, Percutaneous Approach
037H446	Dilation of Right Common Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037H44Z	Dilation of Right Common Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037H456	Dilation of Right Common Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037H45Z	Dilation of Right Common Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037H466	Dilation of Right Common Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037H46Z	Dilation of Right Common Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037H476	Dilation of Right Common Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037H47Z	Dilation of Right Common Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037H4D6	Dilation of Right Common Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037H4DZ	Dilation of Right Common Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037H4E6	Dilation of Right Common Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037H4EZ	Dilation of Right Common Carotid Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037H4F6	Dilation of Right Common Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037H4FZ	Dilation of Right Common Carotid Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037H4G6	Dilation of Right Common Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037H4GZ	Dilation of Right Common Carotid Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037H4Z6	Dilation of Right Common Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
037H4ZZ	Dilation of Right Common Carotid Artery, Percutaneous Endoscopic Approach
037J046	Dilation of Left Common Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037J04Z	Dilation of Left Common Carotid Artery with Drug-eluting Intraluminal Device, Open Approach
037J056	Dilation of Left Common Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037J05Z	Dilation of Left Common Carotid Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037J066	Dilation of Left Common Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037J06Z	Dilation of Left Common Carotid Artery with Three Drug-eluting Intraluminal Devices, Open Approach

Code	Shortened Description
037J076	Dilation of Left Common Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037J07Z	Dilation of Left Common Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037J0D6	Dilation of Left Common Carotid Artery, Bifurcation, with Intraluminal Device, Open Approach
037J0DZ	Dilation of Left Common Carotid Artery with Intraluminal Device, Open Approach
037J0E6	Dilation of Left Common Carotid Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037J0EZ	Dilation of Left Common Carotid Artery with Two Intraluminal Devices, Open Approach
037J0F6	Dilation of Left Common Carotid Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037J0FZ	Dilation of Left Common Carotid Artery with Three Intraluminal Devices, Open Approach
037J0G6	Dilation of Left Common Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037J0GZ	Dilation of Left Common Carotid Artery with Four or More Intraluminal Devices, Open Approach
037J0Z6	Dilation of Left Common Carotid Artery, Bifurcation, Open Approach
037J0ZZ	Dilation of Left Common Carotid Artery, Open Approach
037J346	Dilation of Left Common Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037J34Z	Dilation of Left Common Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037J356	Dilation of Left Common Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037J35Z	Dilation of Left Common Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037J366	Dilation of Left Common Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037J36Z	Dilation of Left Common Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037J376	Dilation of Left Common Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037J37Z	Dilation of Left Common Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037J3D6	Dilation of Left Common Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037J3DZ	Dilation of Left Common Carotid Artery with Intraluminal Device, Percutaneous Approach
037J3E6	Dilation of Left Common Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037J3EZ	Dilation of Left Common Carotid Artery with Two Intraluminal Devices, Percutaneous Approach
037J3F6	Dilation of Left Common Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037J3FZ	Dilation of Left Common Carotid Artery with Three Intraluminal Devices, Percutaneous Approach
037J3G6	Dilation of Left Common Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037J3GZ	Dilation of Left Common Carotid Artery with Four or More Intraluminal Devices, Percutaneous Approach
037J3Z6	Dilation of Left Common Carotid Artery, Bifurcation, Percutaneous Approach
037J3ZZ	Dilation of Left Common Carotid Artery, Percutaneous Approach

Code	Shortened Description
037J446	Dilation of Left Common Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037J44Z	Dilation of Left Common Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037J456	Dilation of Left Common Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037J45Z	Dilation of Left Common Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037J466	Dilation of Left Common Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037J46Z	Dilation of Left Common Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037J476	Dilation of Left Common Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037J47Z	Dilation of Left Common Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037J4D6	Dilation of Left Common Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037J4DZ	Dilation of Left Common Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037J4E6	Dilation of Left Common Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037J4EZ	Dilation of Left Common Carotid Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037J4F6	Dilation of Left Common Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037J4FZ	Dilation of Left Common Carotid Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037J4G6	Dilation of Left Common Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037J4GZ	Dilation of Left Common Carotid Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037J4Z6	Dilation of Left Common Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
037J4ZZ	Dilation of Left Common Carotid Artery, Percutaneous Endoscopic Approach
037K046	Dilation of Right Internal Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037K04Z	Dilation of Right Internal Carotid Artery with Drug-eluting Intraluminal Device, Open Approach
037K056	Dilation of Right Internal Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037K05Z	Dilation of Right Internal Carotid Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037K066	Dilation of Right Internal Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037K06Z	Dilation of Right Internal Carotid Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037K076	Dilation of Right Internal Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037K07Z	Dilation of Right Internal Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach

Code	Shortened Description
037K0D6	Dilation of Right Internal Carotid Artery, Bifurcation, with Intraluminal Device, Open Approach
037K0DZ	Dilation of Right Internal Carotid Artery with Intraluminal Device, Open Approach
037K0E6	Dilation of Right Internal Carotid Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037K0EZ	Dilation of Right Internal Carotid Artery with Two Intraluminal Devices, Open Approach
037K0F6	Dilation of Right Internal Carotid Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037K0FZ	Dilation of Right Internal Carotid Artery with Three Intraluminal Devices, Open Approach
037K0G6	Dilation of Right Internal Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037K0GZ	Dilation of Right Internal Carotid Artery with Four or More Intraluminal Devices, Open Approach
037K0Z6	Dilation of Right Internal Carotid Artery, Bifurcation, Open Approach
037K0ZZ	Dilation of Right Internal Carotid Artery, Open Approach
037K346	Dilation of Right Internal Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037K34Z	Dilation of Right Internal Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037K356	Dilation of Right Internal Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037K35Z	Dilation of Right Internal Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037K366	Dilation of Right Internal Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037K36Z	Dilation of Right Internal Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037K376	Dilation of Right Internal Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037K37Z	Dilation of Right Internal Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037K3D6	Dilation of Right Internal Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037K3DZ	Dilation of Right Internal Carotid Artery with Intraluminal Device, Percutaneous Approach
037K3E6	Dilation of Right Internal Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037K3EZ	Dilation of Right Internal Carotid Artery with Two Intraluminal Devices, Percutaneous Approach
037K3F6	Dilation of Right Internal Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037K3FZ	Dilation of Right Internal Carotid Artery with Three Intraluminal Devices, Percutaneous Approach
037K3G6	Dilation of Right Internal Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037K3GZ	Dilation of Right Internal Carotid Artery with Four or More Intraluminal Devices, Percutaneous Approach
037K3Z6	Dilation of Right Internal Carotid Artery, Bifurcation, Percutaneous Approach
037K3ZZ	Dilation of Right Internal Carotid Artery, Percutaneous Approach
037K446	Dilation of Right Internal Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037K44Z	Dilation of Right Internal Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach

Code	Shortened Description
037K456	Dilation of Right Internal Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037K45Z	Dilation of Right Internal Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037K466	Dilation of Right Internal Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037K46Z	Dilation of Right Internal Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037K476	Dilation of Right Internal Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037K47Z	Dilation of Right Internal Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037K4D6	Dilation of Right Internal Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037K4DZ	Dilation of Right Internal Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037K4E6	Dilation of Right Internal Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037K4EZ	Dilation of Right Internal Carotid Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037K4F6	Dilation of Right Internal Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037K4FZ	Dilation of Right Internal Carotid Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037K4G6	Dilation of Right Internal Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037K4GZ	Dilation of Right Internal Carotid Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037K4Z6	Dilation of Right Internal Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
037K4ZZ	Dilation of Right Internal Carotid Artery, Percutaneous Endoscopic Approach
037L046	Dilation of Left Internal Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037L04Z	Dilation of Left Internal Carotid Artery with Drug-eluting Intraluminal Device, Open Approach
037L056	Dilation of Left Internal Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037L05Z	Dilation of Left Internal Carotid Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037L066	Dilation of Left Internal Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037L06Z	Dilation of Left Internal Carotid Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037L076	Dilation of Left Internal Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037L07Z	Dilation of Left Internal Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037L0D6	Dilation of Left Internal Carotid Artery, Bifurcation, with Intraluminal Device, Open Approach
037L0DZ	Dilation of Left Internal Carotid Artery with Intraluminal Device, Open Approach
037L0E6	Dilation of Left Internal Carotid Artery, Bifurcation, with Two Intraluminal Devices, Open Approach

Code	Shortened Description
037L0EZ	Dilation of Left Internal Carotid Artery with Two Intraluminal Devices, Open Approach
037L0F6	Dilation of Left Internal Carotid Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037L0FZ	Dilation of Left Internal Carotid Artery with Three Intraluminal Devices, Open Approach
037L0G6	Dilation of Left Internal Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037L0GZ	Dilation of Left Internal Carotid Artery with Four or More Intraluminal Devices, Open Approach
037L0Z6	Dilation of Left Internal Carotid Artery, Bifurcation, Open Approach
037L0ZZ	Dilation of Left Internal Carotid Artery, Open Approach
037L346	Dilation of Left Internal Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037L34Z	Dilation of Left Internal Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037L356	Dilation of Left Internal Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037L35Z	Dilation of Left Internal Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037L366	Dilation of Left Internal Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037L36Z	Dilation of Left Internal Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037L376	Dilation of Left Internal Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037L37Z	Dilation of Left Internal Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037L3D6	Dilation of Left Internal Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037L3DZ	Dilation of Left Internal Carotid Artery with Intraluminal Device, Percutaneous Approach
037L3E6	Dilation of Left Internal Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037L3EZ	Dilation of Left Internal Carotid Artery with Two Intraluminal Devices, Percutaneous Approach
037L3F6	Dilation of Left Internal Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037L3FZ	Dilation of Left Internal Carotid Artery with Three Intraluminal Devices, Percutaneous Approach
037L3G6	Dilation of Left Internal Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037L3GZ	Dilation of Left Internal Carotid Artery with Four or More Intraluminal Devices, Percutaneous Approach
037L3Z6	Dilation of Left Internal Carotid Artery, Bifurcation, Percutaneous Approach
037L3ZZ	Dilation of Left Internal Carotid Artery, Percutaneous Approach
037L446	Dilation of Left Internal Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037L44Z	Dilation of Left Internal Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037L456	Dilation of Left Internal Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037L45Z	Dilation of Left Internal Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach

Code	Shortened Description
037L466	Dilation of Left Internal Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037L46Z	Dilation of Left Internal Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037L476	Dilation of Left Internal Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037L47Z	Dilation of Left Internal Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037L4D6	Dilation of Left Internal Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037L4DZ	Dilation of Left Internal Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037L4E6	Dilation of Left Internal Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037L4EZ	Dilation of Left Internal Carotid Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037L4F6	Dilation of Left Internal Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037L4FZ	Dilation of Left Internal Carotid Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037L4G6	Dilation of Left Internal Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037L4GZ	Dilation of Left Internal Carotid Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037L4Z6	Dilation of Left Internal Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
037L4ZZ	Dilation of Left Internal Carotid Artery, Percutaneous Endoscopic Approach
037M046	Dilation of Right External Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037M04Z	Dilation of Right External Carotid Artery with Drug-eluting Intraluminal Device, Open Approach
037M056	Dilation of Right External Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037M05Z	Dilation of Right External Carotid Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037M066	Dilation of Right External Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037M06Z	Dilation of Right External Carotid Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037M076	Dilation of Right External Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037M07Z	Dilation of Right External Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037M0D6	Dilation of Right External Carotid Artery, Bifurcation, with Intraluminal Device, Open Approach
037M0DZ	Dilation of Right External Carotid Artery with Intraluminal Device, Open Approach
037M0E6	Dilation of Right External Carotid Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037M0EZ	Dilation of Right External Carotid Artery with Two Intraluminal Devices, Open Approach
037M0F6	Dilation of Right External Carotid Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037M0FZ	Dilation of Right External Carotid Artery with Three Intraluminal Devices, Open Approach

Code	Shortened Description
037M0G6	Dilation of Right External Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037M0GZ	Dilation of Right External Carotid Artery with Four or More Intraluminal Devices, Open Approach
037M0Z6	Dilation of Right External Carotid Artery, Bifurcation, Open Approach
037M0ZZ	Dilation of Right External Carotid Artery, Open Approach
037M346	Dilation of Right External Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037M34Z	Dilation of Right External Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037M356	Dilation of Right External Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037M35Z	Dilation of Right External Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037M366	Dilation of Right External Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037M36Z	Dilation of Right External Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037M376	Dilation of Right External Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037M37Z	Dilation of Right External Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037M3D6	Dilation of Right External Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037M3DZ	Dilation of Right External Carotid Artery with Intraluminal Device, Percutaneous Approach
037M3E6	Dilation of Right External Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037M3EZ	Dilation of Right External Carotid Artery with Two Intraluminal Devices, Percutaneous Approach
037M3F6	Dilation of Right External Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037M3FZ	Dilation of Right External Carotid Artery with Three Intraluminal Devices, Percutaneous Approach
037M3G6	Dilation of Right External Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037M3GZ	Dilation of Right External Carotid Artery with Four or More Intraluminal Devices, Percutaneous Approach
037M3Z6	Dilation of Right External Carotid Artery, Bifurcation, Percutaneous Approach
037M3ZZ	Dilation of Right External Carotid Artery, Percutaneous Approach
037M446	Dilation of Right External Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037M44Z	Dilation of Right External Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037M456	Dilation of Right External Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037M45Z	Dilation of Right External Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037M466	Dilation of Right External Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037M46Z	Dilation of Right External Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach

Code	Shortened Description
037M476	Dilation of Right External Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037M47Z	Dilation of Right External Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037M4D6	Dilation of Right External Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037M4DZ	Dilation of Right External Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037M4E6	Dilation of Right External Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037M4EZ	Dilation of Right External Carotid Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037M4F6	Dilation of Right External Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037M4FZ	Dilation of Right External Carotid Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037M4G6	Dilation of Right External Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037M4GZ	Dilation of Right External Carotid Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037M4Z6	Dilation of Right External Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
037M4ZZ	Dilation of Right External Carotid Artery, Percutaneous Endoscopic Approach
037N046	Dilation of Left External Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037N04Z	Dilation of Left External Carotid Artery with Drug-eluting Intraluminal Device, Open Approach
037N056	Dilation of Left External Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037N05Z	Dilation of Left External Carotid Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037N066	Dilation of Left External Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037N06Z	Dilation of Left External Carotid Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037N076	Dilation of Left External Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037N07Z	Dilation of Left External Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037N0D6	Dilation of Left External Carotid Artery, Bifurcation, with Intraluminal Device, Open Approach
037N0DZ	Dilation of Left External Carotid Artery with Intraluminal Device, Open Approach
037N0E6	Dilation of Left External Carotid Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037N0EZ	Dilation of Left External Carotid Artery with Two Intraluminal Devices, Open Approach
037N0F6	Dilation of Left External Carotid Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037N0FZ	Dilation of Left External Carotid Artery with Three Intraluminal Devices, Open Approach
037N0G6	Dilation of Left External Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037N0GZ	Dilation of Left External Carotid Artery with Four or More Intraluminal Devices, Open Approach
037N0Z6	Dilation of Left External Carotid Artery, Bifurcation, Open Approach

Code	Shortened Description
037N0ZZ	Dilation of Left External Carotid Artery, Open Approach
037N346	Dilation of Left External Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037N34Z	Dilation of Left External Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037N356	Dilation of Left External Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037N35Z	Dilation of Left External Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037N366	Dilation of Left External Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037N36Z	Dilation of Left External Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037N376	Dilation of Left External Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037N37Z	Dilation of Left External Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037N3D6	Dilation of Left External Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037N3DZ	Dilation of Left External Carotid Artery with Intraluminal Device, Percutaneous Approach
037N3E6	Dilation of Left External Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037N3EZ	Dilation of Left External Carotid Artery with Two Intraluminal Devices, Percutaneous Approach
037N3F6	Dilation of Left External Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037N3FZ	Dilation of Left External Carotid Artery with Three Intraluminal Devices, Percutaneous Approach
037N3G6	Dilation of Left External Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037N3GZ	Dilation of Left External Carotid Artery with Four or More Intraluminal Devices, Percutaneous Approach
037N3Z6	Dilation of Left External Carotid Artery, Bifurcation, Percutaneous Approach
037N3ZZ	Dilation of Left External Carotid Artery, Percutaneous Approach
037N446	Dilation of Left External Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037N44Z	Dilation of Left External Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037N456	Dilation of Left External Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037N45Z	Dilation of Left External Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037N466	Dilation of Left External Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037N46Z	Dilation of Left External Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037N476	Dilation of Left External Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037N47Z	Dilation of Left External Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach

Code	Shortened Description
037N4D6	Dilation of Left External Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037N4DZ	Dilation of Left External Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037N4E6	Dilation of Left External Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037N4EZ	Dilation of Left External Carotid Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037N4F6	Dilation of Left External Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037N4FZ	Dilation of Left External Carotid Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037N4G6	Dilation of Left External Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037N4GZ	Dilation of Left External Carotid Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037N4Z6	Dilation of Left External Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
037N4ZZ	Dilation of Left External Carotid Artery, Percutaneous Endoscopic Approach
037P046	Dilation of Right Vertebral Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037P04Z	Dilation of Right Vertebral Artery with Drug-eluting Intraluminal Device, Open Approach
037P056	Dilation of Right Vertebral Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037P05Z	Dilation of Right Vertebral Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037P066	Dilation of Right Vertebral Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037P06Z	Dilation of Right Vertebral Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037P076	Dilation of Right Vertebral Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037P07Z	Dilation of Right Vertebral Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037P0D6	Dilation of Right Vertebral Artery, Bifurcation, with Intraluminal Device, Open Approach
037P0DZ	Dilation of Right Vertebral Artery with Intraluminal Device, Open Approach
037P0E6	Dilation of Right Vertebral Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037P0EZ	Dilation of Right Vertebral Artery with Two Intraluminal Devices, Open Approach
037P0F6	Dilation of Right Vertebral Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037P0FZ	Dilation of Right Vertebral Artery with Three Intraluminal Devices, Open Approach
037P0G6	Dilation of Right Vertebral Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037P0GZ	Dilation of Right Vertebral Artery with Four or More Intraluminal Devices, Open Approach
037P0Z6	Dilation of Right Vertebral Artery, Bifurcation, Open Approach
037P0ZZ	Dilation of Right Vertebral Artery, Open Approach
037P346	Dilation of Right Vertebral Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037P34Z	Dilation of Right Vertebral Artery with Drug-eluting Intraluminal Device, Percutaneous Approach

Code	Shortened Description
037P356	Dilation of Right Vertebral Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037P35Z	Dilation of Right Vertebral Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037P366	Dilation of Right Vertebral Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037P36Z	Dilation of Right Vertebral Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037P376	Dilation of Right Vertebral Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037P37Z	Dilation of Right Vertebral Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037P3D6	Dilation of Right Vertebral Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037P3DZ	Dilation of Right Vertebral Artery with Intraluminal Device, Percutaneous Approach
037P3E6	Dilation of Right Vertebral Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037P3EZ	Dilation of Right Vertebral Artery with Two Intraluminal Devices, Percutaneous Approach
037P3F6	Dilation of Right Vertebral Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037P3FZ	Dilation of Right Vertebral Artery with Three Intraluminal Devices, Percutaneous Approach
037P3G6	Dilation of Right Vertebral Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037P3GZ	Dilation of Right Vertebral Artery with Four or More Intraluminal Devices, Percutaneous Approach
037P3Z6	Dilation of Right Vertebral Artery, Bifurcation, Percutaneous Approach
037P3ZZ	Dilation of Right Vertebral Artery, Percutaneous Approach
037P446	Dilation of Right Vertebral Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037P44Z	Dilation of Right Vertebral Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037P456	Dilation of Right Vertebral Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037P45Z	Dilation of Right Vertebral Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037P466	Dilation of Right Vertebral Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037P46Z	Dilation of Right Vertebral Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037P476	Dilation of Right Vertebral Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037P47Z	Dilation of Right Vertebral Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037P4D6	Dilation of Right Vertebral Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037P4DZ	Dilation of Right Vertebral Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037P4E6	Dilation of Right Vertebral Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037P4EZ	Dilation of Right Vertebral Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037P4F6	Dilation of Right Vertebral Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach

Code	Shortened Description
037P4FZ	Dilation of Right Vertebral Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037P4G6	Dilation of Right Vertebral Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037P4GZ	Dilation of Right Vertebral Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037P4Z6	Dilation of Right Vertebral Artery, Bifurcation, Percutaneous Endoscopic Approach
037P4ZZ	Dilation of Right Vertebral Artery, Percutaneous Endoscopic Approach
037Q046	Dilation of Left Vertebral Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037Q04Z	Dilation of Left Vertebral Artery with Drug-eluting Intraluminal Device, Open Approach
037Q056	Dilation of Left Vertebral Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037Q05Z	Dilation of Left Vertebral Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037Q066	Dilation of Left Vertebral Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037Q06Z	Dilation of Left Vertebral Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037Q076	Dilation of Left Vertebral Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037Q07Z	Dilation of Left Vertebral Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037Q0D6	Dilation of Left Vertebral Artery, Bifurcation, with Intraluminal Device, Open Approach
037Q0DZ	Dilation of Left Vertebral Artery with Intraluminal Device, Open Approach
037Q0E6	Dilation of Left Vertebral Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037Q0EZ	Dilation of Left Vertebral Artery with Two Intraluminal Devices, Open Approach
037Q0F6	Dilation of Left Vertebral Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037Q0FZ	Dilation of Left Vertebral Artery with Three Intraluminal Devices, Open Approach
037Q0G6	Dilation of Left Vertebral Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037Q0GZ	Dilation of Left Vertebral Artery with Four or More Intraluminal Devices, Open Approach
037Q0Z6	Dilation of Left Vertebral Artery, Bifurcation, Open Approach
037Q0ZZ	Dilation of Left Vertebral Artery, Open Approach
037Q346	Dilation of Left Vertebral Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037Q34Z	Dilation of Left Vertebral Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037Q356	Dilation of Left Vertebral Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037Q35Z	Dilation of Left Vertebral Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037Q366	Dilation of Left Vertebral Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037Q36Z	Dilation of Left Vertebral Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037Q376	Dilation of Left Vertebral Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037Q37Z	Dilation of Left Vertebral Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach

Code	Shortened Description
037Q3D6	Dilation of Left Vertebral Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037Q3DZ	Dilation of Left Vertebral Artery with Intraluminal Device, Percutaneous Approach
037Q3E6	Dilation of Left Vertebral Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037Q3EZ	Dilation of Left Vertebral Artery with Two Intraluminal Devices, Percutaneous Approach
037Q3F6	Dilation of Left Vertebral Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037Q3FZ	Dilation of Left Vertebral Artery with Three Intraluminal Devices, Percutaneous Approach
037Q3G6	Dilation of Left Vertebral Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037Q3GZ	Dilation of Left Vertebral Artery with Four or More Intraluminal Devices, Percutaneous Approach
037Q3Z6	Dilation of Left Vertebral Artery, Bifurcation, Percutaneous Approach
037Q3ZZ	Dilation of Left Vertebral Artery, Percutaneous Approach
037Q446	Dilation of Left Vertebral Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037Q44Z	Dilation of Left Vertebral Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037Q456	Dilation of Left Vertebral Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037Q45Z	Dilation of Left Vertebral Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037Q466	Dilation of Left Vertebral Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037Q46Z	Dilation of Left Vertebral Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037Q476	Dilation of Left Vertebral Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037Q47Z	Dilation of Left Vertebral Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037Q4D6	Dilation of Left Vertebral Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037Q4DZ	Dilation of Left Vertebral Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037Q4E6	Dilation of Left Vertebral Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037Q4EZ	Dilation of Left Vertebral Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037Q4F6	Dilation of Left Vertebral Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037Q4FZ	Dilation of Left Vertebral Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037Q4G6	Dilation of Left Vertebral Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037Q4GZ	Dilation of Left Vertebral Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037Q4Z6	Dilation of Left Vertebral Artery, Bifurcation, Percutaneous Endoscopic Approach
037Q4ZZ	Dilation of Left Vertebral Artery, Percutaneous Endoscopic Approach
037R046	Dilation of Face Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach

Code	Shortened Description
037R04Z	Dilation of Face Artery with Drug-eluting Intraluminal Device, Open Approach
037R056	Dilation of Face Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037R05Z	Dilation of Face Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037R066	Dilation of Face Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037R06Z	Dilation of Face Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037R076	Dilation of Face Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037R07Z	Dilation of Face Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037R0D6	Dilation of Face Artery, Bifurcation, with Intraluminal Device, Open Approach
037R0DZ	Dilation of Face Artery with Intraluminal Device, Open Approach
037R0E6	Dilation of Face Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037R0EZ	Dilation of Face Artery with Two Intraluminal Devices, Open Approach
037R0F6	Dilation of Face Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037R0FZ	Dilation of Face Artery with Three Intraluminal Devices, Open Approach
037R0G6	Dilation of Face Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037R0GZ	Dilation of Face Artery with Four or More Intraluminal Devices, Open Approach
037R0Z6	Dilation of Face Artery, Bifurcation, Open Approach
037R0ZZ	Dilation of Face Artery, Open Approach
037R346	Dilation of Face Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037R34Z	Dilation of Face Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037R356	Dilation of Face Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037R35Z	Dilation of Face Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037R366	Dilation of Face Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037R36Z	Dilation of Face Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037R376	Dilation of Face Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037R37Z	Dilation of Face Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037R3D6	Dilation of Face Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037R3DZ	Dilation of Face Artery with Intraluminal Device, Percutaneous Approach
037R3E6	Dilation of Face Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037R3EZ	Dilation of Face Artery with Two Intraluminal Devices, Percutaneous Approach
037R3F6	Dilation of Face Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037R3FZ	Dilation of Face Artery with Three Intraluminal Devices, Percutaneous Approach
037R3G6	Dilation of Face Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach

Code	Shortened Description
037R3GZ	Dilation of Face Artery with Four or More Intraluminal Devices, Percutaneous Approach
037R3Z6	Dilation of Face Artery, Bifurcation, Percutaneous Approach
037R3ZZ	Dilation of Face Artery, Percutaneous Approach
037R446	Dilation of Face Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037R44Z	Dilation of Face Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037R456	Dilation of Face Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037R45Z	Dilation of Face Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037R466	Dilation of Face Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037R46Z	Dilation of Face Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037R476	Dilation of Face Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037R47Z	Dilation of Face Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037R4D6	Dilation of Face Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037R4DZ	Dilation of Face Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037R4E6	Dilation of Face Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037R4EZ	Dilation of Face Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037R4F6	Dilation of Face Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037R4FZ	Dilation of Face Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037R4G6	Dilation of Face Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037R4GZ	Dilation of Face Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037R4Z6	Dilation of Face Artery, Bifurcation, Percutaneous Endoscopic Approach
037R4ZZ	Dilation of Face Artery, Percutaneous Endoscopic Approach
037S046	Dilation of Right Temporal Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037S04Z	Dilation of Right Temporal Artery with Drug-eluting Intraluminal Device, Open Approach
037S056	Dilation of Right Temporal Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037S05Z	Dilation of Right Temporal Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037S066	Dilation of Right Temporal Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037S06Z	Dilation of Right Temporal Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037S076	Dilation of Right Temporal Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037S07Z	Dilation of Right Temporal Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037S0D6	Dilation of Right Temporal Artery, Bifurcation, with Intraluminal Device, Open Approach
037S0DZ	Dilation of Right Temporal Artery with Intraluminal Device, Open Approach

Code	Shortened Description
037S0E6	Dilation of Right Temporal Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037S0EZ	Dilation of Right Temporal Artery with Two Intraluminal Devices, Open Approach
037S0F6	Dilation of Right Temporal Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037S0FZ	Dilation of Right Temporal Artery with Three Intraluminal Devices, Open Approach
037S0G6	Dilation of Right Temporal Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037S0GZ	Dilation of Right Temporal Artery with Four or More Intraluminal Devices, Open Approach
037S0Z6	Dilation of Right Temporal Artery, Bifurcation, Open Approach
037S0ZZ	Dilation of Right Temporal Artery, Open Approach
037S346	Dilation of Right Temporal Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037S34Z	Dilation of Right Temporal Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037S356	Dilation of Right Temporal Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037S35Z	Dilation of Right Temporal Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037S366	Dilation of Right Temporal Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037S36Z	Dilation of Right Temporal Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037S376	Dilation of Right Temporal Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037S37Z	Dilation of Right Temporal Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037S3D6	Dilation of Right Temporal Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037S3DZ	Dilation of Right Temporal Artery with Intraluminal Device, Percutaneous Approach
037S3E6	Dilation of Right Temporal Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037S3EZ	Dilation of Right Temporal Artery with Two Intraluminal Devices, Percutaneous Approach
037S3F6	Dilation of Right Temporal Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037S3FZ	Dilation of Right Temporal Artery with Three Intraluminal Devices, Percutaneous Approach
037S3G6	Dilation of Right Temporal Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037S3GZ	Dilation of Right Temporal Artery with Four or More Intraluminal Devices, Percutaneous Approach
037S3Z6	Dilation of Right Temporal Artery, Bifurcation, Percutaneous Approach
037S3ZZ	Dilation of Right Temporal Artery, Percutaneous Approach
037S446	Dilation of Right Temporal Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037S44Z	Dilation of Right Temporal Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037S456	Dilation of Right Temporal Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037S45Z	Dilation of Right Temporal Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach

Code	Shortened Description
037S466	Dilation of Right Temporal Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037S46Z	Dilation of Right Temporal Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037S476	Dilation of Right Temporal Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037S47Z	Dilation of Right Temporal Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037S4D6	Dilation of Right Temporal Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037S4DZ	Dilation of Right Temporal Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037S4E6	Dilation of Right Temporal Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037S4EZ	Dilation of Right Temporal Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037S4F6	Dilation of Right Temporal Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037S4FZ	Dilation of Right Temporal Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037S4G6	Dilation of Right Temporal Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037S4GZ	Dilation of Right Temporal Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037S4Z6	Dilation of Right Temporal Artery, Bifurcation, Percutaneous Endoscopic Approach
037S4ZZ	Dilation of Right Temporal Artery, Percutaneous Endoscopic Approach
037T046	Dilation of Left Temporal Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037T04Z	Dilation of Left Temporal Artery with Drug-eluting Intraluminal Device, Open Approach
037T056	Dilation of Left Temporal Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037T05Z	Dilation of Left Temporal Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037T066	Dilation of Left Temporal Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037T06Z	Dilation of Left Temporal Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037T076	Dilation of Left Temporal Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037T07Z	Dilation of Left Temporal Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037T0D6	Dilation of Left Temporal Artery, Bifurcation, with Intraluminal Device, Open Approach
037T0DZ	Dilation of Left Temporal Artery with Intraluminal Device, Open Approach
037T0E6	Dilation of Left Temporal Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037T0EZ	Dilation of Left Temporal Artery with Two Intraluminal Devices, Open Approach
037T0F6	Dilation of Left Temporal Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037T0FZ	Dilation of Left Temporal Artery with Three Intraluminal Devices, Open Approach
037T0G6	Dilation of Left Temporal Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037T0GZ	Dilation of Left Temporal Artery with Four or More Intraluminal Devices, Open Approach

Code	Shortened Description
037T0Z6	Dilation of Left Temporal Artery, Bifurcation, Open Approach
037T0ZZ	Dilation of Left Temporal Artery, Open Approach
037T346	Dilation of Left Temporal Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037T34Z	Dilation of Left Temporal Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037T356	Dilation of Left Temporal Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037T35Z	Dilation of Left Temporal Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037T366	Dilation of Left Temporal Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037T36Z	Dilation of Left Temporal Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037T376	Dilation of Left Temporal Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037T37Z	Dilation of Left Temporal Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037T3D6	Dilation of Left Temporal Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037T3DZ	Dilation of Left Temporal Artery with Intraluminal Device, Percutaneous Approach
037T3E6	Dilation of Left Temporal Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037T3EZ	Dilation of Left Temporal Artery with Two Intraluminal Devices, Percutaneous Approach
037T3F6	Dilation of Left Temporal Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037T3FZ	Dilation of Left Temporal Artery with Three Intraluminal Devices, Percutaneous Approach
037T3G6	Dilation of Left Temporal Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037T3GZ	Dilation of Left Temporal Artery with Four or More Intraluminal Devices, Percutaneous Approach
037T3Z6	Dilation of Left Temporal Artery, Bifurcation, Percutaneous Approach
037T3ZZ	Dilation of Left Temporal Artery, Percutaneous Approach
037T446	Dilation of Left Temporal Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037T44Z	Dilation of Left Temporal Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037T456	Dilation of Left Temporal Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037T45Z	Dilation of Left Temporal Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037T466	Dilation of Left Temporal Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037T46Z	Dilation of Left Temporal Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037T476	Dilation of Left Temporal Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037T47Z	Dilation of Left Temporal Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037T4D6	Dilation of Left Temporal Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach

Code	Shortened Description
037T4DZ	Dilation of Left Temporal Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037T4E6	Dilation of Left Temporal Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037T4EZ	Dilation of Left Temporal Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037T4F6	Dilation of Left Temporal Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037T4FZ	Dilation of Left Temporal Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037T4G6	Dilation of Left Temporal Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037T4GZ	Dilation of Left Temporal Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037T4Z6	Dilation of Left Temporal Artery, Bifurcation, Percutaneous Endoscopic Approach
037T4ZZ	Dilation of Left Temporal Artery, Percutaneous Endoscopic Approach
037U046	Dilation of Right Thyroid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037U04Z	Dilation of Right Thyroid Artery with Drug-eluting Intraluminal Device, Open Approach
037U056	Dilation of Right Thyroid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037U05Z	Dilation of Right Thyroid Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037U066	Dilation of Right Thyroid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037U06Z	Dilation of Right Thyroid Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037U076	Dilation of Right Thyroid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037U07Z	Dilation of Right Thyroid Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037U0D6	Dilation of Right Thyroid Artery, Bifurcation, with Intraluminal Device, Open Approach
037U0DZ	Dilation of Right Thyroid Artery with Intraluminal Device, Open Approach
037U0E6	Dilation of Right Thyroid Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037U0EZ	Dilation of Right Thyroid Artery with Two Intraluminal Devices, Open Approach
037U0F6	Dilation of Right Thyroid Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037U0FZ	Dilation of Right Thyroid Artery with Three Intraluminal Devices, Open Approach
037U0G6	Dilation of Right Thyroid Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037U0GZ	Dilation of Right Thyroid Artery with Four or More Intraluminal Devices, Open Approach
037U0Z6	Dilation of Right Thyroid Artery, Bifurcation, Open Approach
037U0ZZ	Dilation of Right Thyroid Artery, Open Approach
037U346	Dilation of Right Thyroid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037U34Z	Dilation of Right Thyroid Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037U356	Dilation of Right Thyroid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037U35Z	Dilation of Right Thyroid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037U366	Dilation of Right Thyroid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach

Code	Shortened Description
037U36Z	Dilation of Right Thyroid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037U376	Dilation of Right Thyroid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037U37Z	Dilation of Right Thyroid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037U3D6	Dilation of Right Thyroid Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037U3DZ	Dilation of Right Thyroid Artery with Intraluminal Device, Percutaneous Approach
037U3E6	Dilation of Right Thyroid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037U3EZ	Dilation of Right Thyroid Artery with Two Intraluminal Devices, Percutaneous Approach
037U3F6	Dilation of Right Thyroid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037U3FZ	Dilation of Right Thyroid Artery with Three Intraluminal Devices, Percutaneous Approach
037U3G6	Dilation of Right Thyroid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037U3GZ	Dilation of Right Thyroid Artery with Four or More Intraluminal Devices, Percutaneous Approach
037U3Z6	Dilation of Right Thyroid Artery, Bifurcation, Percutaneous Approach
037U3ZZ	Dilation of Right Thyroid Artery, Percutaneous Approach
037U446	Dilation of Right Thyroid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037U44Z	Dilation of Right Thyroid Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037U456	Dilation of Right Thyroid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037U45Z	Dilation of Right Thyroid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037U466	Dilation of Right Thyroid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037U46Z	Dilation of Right Thyroid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037U476	Dilation of Right Thyroid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037U47Z	Dilation of Right Thyroid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037U4D6	Dilation of Right Thyroid Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037U4DZ	Dilation of Right Thyroid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037U4E6	Dilation of Right Thyroid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037U4EZ	Dilation of Right Thyroid Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037U4F6	Dilation of Right Thyroid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037U4FZ	Dilation of Right Thyroid Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037U4G6	Dilation of Right Thyroid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach

Code	Shortened Description
037U4GZ	Dilation of Right Thyroid Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037U4Z6	Dilation of Right Thyroid Artery, Bifurcation, Percutaneous Endoscopic Approach
037U4ZZ	Dilation of Right Thyroid Artery, Percutaneous Endoscopic Approach
037V046	Dilation of Left Thyroid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037V04Z	Dilation of Left Thyroid Artery with Drug-eluting Intraluminal Device, Open Approach
037V056	Dilation of Left Thyroid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037V05Z	Dilation of Left Thyroid Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037V066	Dilation of Left Thyroid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037V06Z	Dilation of Left Thyroid Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037V076	Dilation of Left Thyroid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037V07Z	Dilation of Left Thyroid Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037V0D6	Dilation of Left Thyroid Artery, Bifurcation, with Intraluminal Device, Open Approach
037V0DZ	Dilation of Left Thyroid Artery with Intraluminal Device, Open Approach
037V0E6	Dilation of Left Thyroid Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037V0EZ	Dilation of Left Thyroid Artery with Two Intraluminal Devices, Open Approach
037V0F6	Dilation of Left Thyroid Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037V0FZ	Dilation of Left Thyroid Artery with Three Intraluminal Devices, Open Approach
037V0G6	Dilation of Left Thyroid Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037V0GZ	Dilation of Left Thyroid Artery with Four or More Intraluminal Devices, Open Approach
037V0Z6	Dilation of Left Thyroid Artery, Bifurcation, Open Approach
037V0ZZ	Dilation of Left Thyroid Artery, Open Approach
037V346	Dilation of Left Thyroid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037V34Z	Dilation of Left Thyroid Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037V356	Dilation of Left Thyroid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037V35Z	Dilation of Left Thyroid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037V366	Dilation of Left Thyroid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037V36Z	Dilation of Left Thyroid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037V376	Dilation of Left Thyroid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037V37Z	Dilation of Left Thyroid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037V3D6	Dilation of Left Thyroid Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037V3DZ	Dilation of Left Thyroid Artery with Intraluminal Device, Percutaneous Approach
037V3E6	Dilation of Left Thyroid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach

Code	Shortened Description
037V3EZ	Dilation of Left Thyroid Artery with Two Intraluminal Devices, Percutaneous Approach
037V3F6	Dilation of Left Thyroid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037V3FZ	Dilation of Left Thyroid Artery with Three Intraluminal Devices, Percutaneous Approach
037V3G6	Dilation of Left Thyroid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037V3GZ	Dilation of Left Thyroid Artery with Four or More Intraluminal Devices, Percutaneous Approach
037V3Z6	Dilation of Left Thyroid Artery, Bifurcation, Percutaneous Approach
037V3ZZ	Dilation of Left Thyroid Artery, Percutaneous Approach
037V446	Dilation of Left Thyroid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037V44Z	Dilation of Left Thyroid Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037V456	Dilation of Left Thyroid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037V45Z	Dilation of Left Thyroid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037V466	Dilation of Left Thyroid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037V46Z	Dilation of Left Thyroid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037V476	Dilation of Left Thyroid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037V47Z	Dilation of Left Thyroid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037V4D6	Dilation of Left Thyroid Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037V4DZ	Dilation of Left Thyroid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037V4E6	Dilation of Left Thyroid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037V4EZ	Dilation of Left Thyroid Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037V4F6	Dilation of Left Thyroid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037V4FZ	Dilation of Left Thyroid Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037V4G6	Dilation of Left Thyroid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037V4GZ	Dilation of Left Thyroid Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037V4Z6	Dilation of Left Thyroid Artery, Bifurcation, Percutaneous Endoscopic Approach
037V4ZZ	Dilation of Left Thyroid Artery, Percutaneous Endoscopic Approach
037Y046	Dilation of Upper Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037Y04Z	Dilation of Upper Artery with Drug-eluting Intraluminal Device, Open Approach
037Y056	Dilation of Upper Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037Y05Z	Dilation of Upper Artery with Two Drug-eluting Intraluminal Devices, Open Approach

Code	Shortened Description
037Y066	Dilation of Upper Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037Y06Z	Dilation of Upper Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037Y076	Dilation of Upper Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037Y07Z	Dilation of Upper Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037Y0D6	Dilation of Upper Artery, Bifurcation, with Intraluminal Device, Open Approach
037Y0DZ	Dilation of Upper Artery with Intraluminal Device, Open Approach
037Y0E6	Dilation of Upper Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037Y0EZ	Dilation of Upper Artery with Two Intraluminal Devices, Open Approach
037Y0F6	Dilation of Upper Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037Y0FZ	Dilation of Upper Artery with Three Intraluminal Devices, Open Approach
037Y0G6	Dilation of Upper Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037Y0GZ	Dilation of Upper Artery with Four or More Intraluminal Devices, Open Approach
037Y0Z6	Dilation of Upper Artery, Bifurcation, Open Approach
037Y0ZZ	Dilation of Upper Artery, Open Approach
037Y346	Dilation of Upper Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037Y34Z	Dilation of Upper Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037Y356	Dilation of Upper Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037Y35Z	Dilation of Upper Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037Y366	Dilation of Upper Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037Y36Z	Dilation of Upper Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037Y376	Dilation of Upper Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037Y37Z	Dilation of Upper Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037Y3D6	Dilation of Upper Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037Y3DZ	Dilation of Upper Artery with Intraluminal Device, Percutaneous Approach
037Y3E6	Dilation of Upper Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037Y3EZ	Dilation of Upper Artery with Two Intraluminal Devices, Percutaneous Approach
037Y3F6	Dilation of Upper Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037Y3FZ	Dilation of Upper Artery with Three Intraluminal Devices, Percutaneous Approach
037Y3G6	Dilation of Upper Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037Y3GZ	Dilation of Upper Artery with Four or More Intraluminal Devices, Percutaneous Approach
037Y3Z6	Dilation of Upper Artery, Bifurcation, Percutaneous Approach
037Y3ZZ	Dilation of Upper Artery, Percutaneous Approach

Code	Shortened Description
037Y446	Dilation of Upper Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037Y44Z	Dilation of Upper Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037Y456	Dilation of Upper Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037Y45Z	Dilation of Upper Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037Y466	Dilation of Upper Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037Y46Z	Dilation of Upper Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037Y476	Dilation of Upper Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037Y47Z	Dilation of Upper Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037Y4D6	Dilation of Upper Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037Y4DZ	Dilation of Upper Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037Y4E6	Dilation of Upper Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037Y4EZ	Dilation of Upper Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037Y4F6	Dilation of Upper Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037Y4FZ	Dilation of Upper Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037Y4G6	Dilation of Upper Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037Y4GZ	Dilation of Upper Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037Y4Z6	Dilation of Upper Artery, Bifurcation, Percutaneous Endoscopic Approach
037Y4ZZ	Dilation of Upper Artery, Percutaneous Endoscopic Approach
03BG0ZZ	Excision of Intracranial Artery, Open Approach
03BG3ZZ	Excision of Intracranial Artery, Percutaneous Approach
03BG4ZZ	Excision of Intracranial Artery, Percutaneous Endoscopic Approach
03BH0ZZ	Excision of Right Common Carotid Artery, Open Approach
03BH3ZZ	Excision of Right Common Carotid Artery, Percutaneous Approach
03BH4ZZ	Excision of Right Common Carotid Artery, Percutaneous Endoscopic Approach
03BJ0ZZ	Excision of Left Common Carotid Artery, Open Approach
03BJ3ZZ	Excision of Left Common Carotid Artery, Percutaneous Approach
03BJ4ZZ	Excision of Left Common Carotid Artery, Percutaneous Endoscopic Approach
03BK0ZZ	Excision of Right Internal Carotid Artery, Open Approach
03BK3ZZ	Excision of Right Internal Carotid Artery, Percutaneous Approach
03BK4ZZ	Excision of Right Internal Carotid Artery, Percutaneous Endoscopic Approach
03BL0ZZ	Excision of Left Internal Carotid Artery, Open Approach

Code	Shortened Description
03BL3ZZ	Excision of Left Internal Carotid Artery, Percutaneous Approach
03BL4ZZ	Excision of Left Internal Carotid Artery, Percutaneous Endoscopic Approach
03BM0ZZ	Excision of Right External Carotid Artery, Open Approach
03BM3ZZ	Excision of Right External Carotid Artery, Percutaneous Approach
03BM4ZZ	Excision of Right External Carotid Artery, Percutaneous Endoscopic Approach
03BN0ZZ	Excision of Left External Carotid Artery, Open Approach
03BN3ZZ	Excision of Left External Carotid Artery, Percutaneous Approach
03BN4ZZ	Excision of Left External Carotid Artery, Percutaneous Endoscopic Approach
03BP0ZZ	Excision of Right Vertebral Artery, Open Approach
03BP3ZZ	Excision of Right Vertebral Artery, Percutaneous Approach
03BP4ZZ	Excision of Right Vertebral Artery, Percutaneous Endoscopic Approach
03BQ0ZZ	Excision of Left Vertebral Artery, Open Approach
03BQ3ZZ	Excision of Left Vertebral Artery, Percutaneous Approach
03BQ4ZZ	Excision of Left Vertebral Artery, Percutaneous Endoscopic Approach
03BS0ZZ	Excision of Right Temporal Artery, Open Approach
03BS3ZZ	Excision of Right Temporal Artery, Percutaneous Approach
03BS4ZZ	Excision of Right Temporal Artery, Percutaneous Endoscopic Approach
03BT0ZZ	Excision of Left Temporal Artery, Open Approach
03BT3ZZ	Excision of Left Temporal Artery, Percutaneous Approach
03BT4ZZ	Excision of Left Temporal Artery, Percutaneous Endoscopic Approach
03BU0ZZ	Excision of Right Thyroid Artery, Open Approach
03BU3ZZ	Excision of Right Thyroid Artery, Percutaneous Approach
03BU4ZZ	Excision of Right Thyroid Artery, Percutaneous Endoscopic Approach
03BV0ZZ	Excision of Left Thyroid Artery, Open Approach
03BV3ZZ	Excision of Left Thyroid Artery, Percutaneous Approach
03BV4ZZ	Excision of Left Thyroid Artery, Percutaneous Endoscopic Approach
03BY0ZZ	Excision of Upper Artery, Open Approach
03BY3ZZ	Excision of Upper Artery, Percutaneous Approach
03BY4ZZ	Excision of Upper Artery, Percutaneous Endoscopic Approach
03CG0Z6	Extirpation of Matter from Intracranial Artery, Bifurcation, Open Approach
03CG0ZZ	Extirpation of Matter from Intracranial Artery, Open Approach
03CG3Z6	Extirpation of Matter from Intracranial Artery, Bifurcation, Percutaneous Approach

Code	Shortened Description
03CG3Z7	Extirpation of Matter from Intracranial Artery using Stent Retriever, Percutaneous Approach
03CG3ZZ	Extirpation of Matter from Intracranial Artery, Percutaneous Approach
03CG4Z6	Extirpation of Matter from Intracranial Artery, Bifurcation, Percutaneous Endoscopic Approach
03CG4ZZ	Extirpation of Matter from Intracranial Artery, Percutaneous Endoscopic Approach
03CH0Z6	Extirpation of Matter from Right Common Carotid Artery, Bifurcation, Open Approach
03CH0ZZ	Extirpation of Matter from Right Common Carotid Artery, Open Approach
03CH3Z6	Extirpation of Matter from Right Common Carotid Artery, Bifurcation, Percutaneous Approach
03CH3Z7	Extirpation of Matter from Right Common Carotid Artery using Stent Retriever, Percutaneous Approach
03CH3ZZ	Extirpation of Matter from Right Common Carotid Artery, Percutaneous Approach
03CH4Z6	Extirpation of Matter from Right Common Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
03CH4ZZ	Extirpation of Matter from Right Common Carotid Artery, Percutaneous Endoscopic Approach
03CJ0Z6	Extirpation of Matter from Left Common Carotid Artery, Bifurcation, Open Approach
03CJ0ZZ	Extirpation of Matter from Left Common Carotid Artery, Open Approach
03CJ3Z6	Extirpation of Matter from Left Common Carotid Artery, Bifurcation, Percutaneous Approach
03CJ3Z7	Extirpation of Matter from Left Common Carotid Artery using Stent Retriever, Percutaneous Approach
03CJ3ZZ	Extirpation of Matter from Left Common Carotid Artery, Percutaneous Approach
03CJ4Z6	Extirpation of Matter from Left Common Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
03CJ4ZZ	Extirpation of Matter from Left Common Carotid Artery, Percutaneous Endoscopic Approach
03CK0Z6	Extirpation of Matter from Right Internal Carotid Artery, Bifurcation, Open Approach
03CK0ZZ	Extirpation of Matter from Right Internal Carotid Artery, Open Approach
03CK3Z6	Extirpation of Matter from Right Internal Carotid Artery, Bifurcation, Percutaneous Approach
03CK3Z7	Extirpation of Matter from Right Internal Carotid Artery using Stent Retriever, Percutaneous Approach
03CK3ZZ	Extirpation of Matter from Right Internal Carotid Artery, Percutaneous Approach
03CK4Z6	Extirpation of Matter from Right Internal Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
03CK4ZZ	Extirpation of Matter from Right Internal Carotid Artery, Percutaneous Endoscopic Approach
03CL0Z6	Extirpation of Matter from Left Internal Carotid Artery, Bifurcation, Open Approach
03CL0ZZ	Extirpation of Matter from Left Internal Carotid Artery, Open Approach
03CL3Z6	Extirpation of Matter from Left Internal Carotid Artery, Bifurcation, Percutaneous Approach
03CL3Z7	Extirpation of Matter from Left Internal Carotid Artery using Stent Retriever, Percutaneous Approach
03CL3ZZ	Extirpation of Matter from Left Internal Carotid Artery, Percutaneous Approach
03CL4Z6	Extirpation of Matter from Left Internal Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
03CL4ZZ	Extirpation of Matter from Left Internal Carotid Artery, Percutaneous Endoscopic Approach

Code	Shortened Description
03CM0Z6	Extirpation of Matter from Right External Carotid Artery, Bifurcation, Open Approach
03CM0ZZ	Extirpation of Matter from Right External Carotid Artery, Open Approach
03CM3Z6	Extirpation of Matter from Right External Carotid Artery, Bifurcation, Percutaneous Approach
03CM3Z7	Extirpation of Matter from Right External Carotid Artery using Stent Retriever, Percutaneous Approach
03CM3ZZ	Extirpation of Matter from Right External Carotid Artery, Percutaneous Approach
03CM4Z6	Extirpation of Matter from Right External Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
03CM4ZZ	Extirpation of Matter from Right External Carotid Artery, Percutaneous Endoscopic Approach
03CN0Z6	Extirpation of Matter from Left External Carotid Artery, Bifurcation, Open Approach
03CN0ZZ	Extirpation of Matter from Left External Carotid Artery, Open Approach
03CN3Z6	Extirpation of Matter from Left External Carotid Artery, Bifurcation, Percutaneous Approach
03CN3Z7	Extirpation of Matter from Left External Carotid Artery using Stent Retriever, Percutaneous Approach
03CN3ZZ	Extirpation of Matter from Left External Carotid Artery, Percutaneous Approach
03CN4Z6	Extirpation of Matter from Left External Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
03CN4ZZ	Extirpation of Matter from Left External Carotid Artery, Percutaneous Endoscopic Approach
03CP0Z6	Extirpation of Matter from Right Vertebral Artery, Bifurcation, Open Approach
03CP0ZZ	Extirpation of Matter from Right Vertebral Artery, Open Approach
03CP3Z6	Extirpation of Matter from Right Vertebral Artery, Bifurcation, Percutaneous Approach
03CP3Z7	Extirpation of Matter from Right Vertebral Artery using Stent Retriever, Percutaneous Approach
03CP3ZZ	Extirpation of Matter from Right Vertebral Artery, Percutaneous Approach
03CP4Z6	Extirpation of Matter from Right Vertebral Artery, Bifurcation, Percutaneous Endoscopic Approach
03CP4ZZ	Extirpation of Matter from Right Vertebral Artery, Percutaneous Endoscopic Approach
03CQ0Z6	Extirpation of Matter from Left Vertebral Artery, Bifurcation, Open Approach
03CQ0ZZ	Extirpation of Matter from Left Vertebral Artery, Open Approach
03CQ3Z6	Extirpation of Matter from Left Vertebral Artery, Bifurcation, Percutaneous Approach
03CQ3Z7	Extirpation of Matter from Left Vertebral Artery using Stent Retriever, Percutaneous Approach
03CQ3ZZ	Extirpation of Matter from Left Vertebral Artery, Percutaneous Approach
03CQ4Z6	Extirpation of Matter from Left Vertebral Artery, Bifurcation, Percutaneous Endoscopic Approach
03CQ4ZZ	Extirpation of Matter from Left Vertebral Artery, Percutaneous Endoscopic Approach
03CR0Z6	Extirpation of Matter from Face Artery, Bifurcation, Open Approach
03CR0ZZ	Extirpation of Matter from Face Artery, Open Approach
03CR3Z6	Extirpation of Matter from Face Artery, Bifurcation, Percutaneous Approach
03CR3ZZ	Extirpation of Matter from Face Artery, Percutaneous Approach

Code	Shortened Description
03CR4Z6	Extirpation of Matter from Face Artery, Bifurcation, Percutaneous Endoscopic Approach
03CR4ZZ	Extirpation of Matter from Face Artery, Percutaneous Endoscopic Approach
03CS0Z6	Extirpation of Matter from Right Temporal Artery, Bifurcation, Open Approach
03CS0ZZ	Extirpation of Matter from Right Temporal Artery, Open Approach
03CS3Z6	Extirpation of Matter from Right Temporal Artery, Bifurcation, Percutaneous Approach
03CS3ZZ	Extirpation of Matter from Right Temporal Artery, Percutaneous Approach
03CS4Z6	Extirpation of Matter from Right Temporal Artery, Bifurcation, Percutaneous Endoscopic Approach
03CS4ZZ	Extirpation of Matter from Right Temporal Artery, Percutaneous Endoscopic Approach
03CT0Z6	Extirpation of Matter from Left Temporal Artery, Bifurcation, Open Approach
03CT0ZZ	Extirpation of Matter from Left Temporal Artery, Open Approach
03CT3Z6	Extirpation of Matter from Left Temporal Artery, Bifurcation, Percutaneous Approach
03CT3ZZ	Extirpation of Matter from Left Temporal Artery, Percutaneous Approach
03CT4Z6	Extirpation of Matter from Left Temporal Artery, Bifurcation, Percutaneous Endoscopic Approach
03CT4ZZ	Extirpation of Matter from Left Temporal Artery, Percutaneous Endoscopic Approach
03CU0Z6	Extirpation of Matter from Right Thyroid Artery, Bifurcation, Open Approach
03CU0ZZ	Extirpation of Matter from Right Thyroid Artery, Open Approach
03CU3Z6	Extirpation of Matter from Right Thyroid Artery, Bifurcation, Percutaneous Approach
03CU3ZZ	Extirpation of Matter from Right Thyroid Artery, Percutaneous Approach
03CU4Z6	Extirpation of Matter from Right Thyroid Artery, Bifurcation, Percutaneous Endoscopic Approach
03CU4ZZ	Extirpation of Matter from Right Thyroid Artery, Percutaneous Endoscopic Approach
03CV0Z6	Extirpation of Matter from Left Thyroid Artery, Bifurcation, Open Approach
03CV0ZZ	Extirpation of Matter from Left Thyroid Artery, Open Approach
03CV3Z6	Extirpation of Matter from Left Thyroid Artery, Bifurcation, Percutaneous Approach
03CV3ZZ	Extirpation of Matter from Left Thyroid Artery, Percutaneous Approach
03CV4Z6	Extirpation of Matter from Left Thyroid Artery, Bifurcation, Percutaneous Endoscopic Approach
03CV4ZZ	Extirpation of Matter from Left Thyroid Artery, Percutaneous Endoscopic Approach
03LG0BZ	Occlusion of Intracranial Artery with Bioactive Intraluminal Device, Open Approach
03LG0CZ	Occlusion of Intracranial Artery with Extraluminal Device, Open Approach
03LG0DZ	Occlusion of Intracranial Artery with Intraluminal Device, Open Approach
03LG0ZZ	Occlusion of Intracranial Artery, Open Approach
03LG3BZ	Occlusion of Intracranial Artery with Bioactive Intraluminal Device, Percutaneous Approach
03LG3CZ	Occlusion of Intracranial Artery with Extraluminal Device, Percutaneous Approach

Code	Shortened Description
03LG3DZ	Occlusion of Intracranial Artery with Intraluminal Device, Percutaneous Approach
03LG3ZZ	Occlusion of Intracranial Artery, Percutaneous Approach
03LG4BZ	Occlusion of Intracranial Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03LG4CZ	Occlusion of Intracranial Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03LG4DZ	Occlusion of Intracranial Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03LG4ZZ	Occlusion of Intracranial Artery, Percutaneous Endoscopic Approach
03LH0BZ	Occlusion of Right Common Carotid Artery with Bioactive Intraluminal Device, Open Approach
03LH0CZ	Occlusion of Right Common Carotid Artery with Extraluminal Device, Open Approach
03LH0DZ	Occlusion of Right Common Carotid Artery with Intraluminal Device, Open Approach
03LH0ZZ	Occlusion of Right Common Carotid Artery, Open Approach
03LH3BZ	Occlusion of Right Common Carotid Artery with Bioactive Intraluminal Device, Percutaneous Approach
03LH3CZ	Occlusion of Right Common Carotid Artery with Extraluminal Device, Percutaneous Approach
03LH3DZ	Occlusion of Right Common Carotid Artery with Intraluminal Device, Percutaneous Approach
03LH3ZZ	Occlusion of Right Common Carotid Artery, Percutaneous Approach
03LH4BZ	Occlusion of Right Common Carotid Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03LH4CZ	Occlusion of Right Common Carotid Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03LH4DZ	Occlusion of Right Common Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03LH4ZZ	Occlusion of Right Common Carotid Artery, Percutaneous Endoscopic Approach
03LJ0BZ	Occlusion of Left Common Carotid Artery with Bioactive Intraluminal Device, Open Approach
03LJ0CZ	Occlusion of Left Common Carotid Artery with Extraluminal Device, Open Approach
03LJ0DZ	Occlusion of Left Common Carotid Artery with Intraluminal Device, Open Approach
03LJ0ZZ	Occlusion of Left Common Carotid Artery, Open Approach
03LJ3BZ	Occlusion of Left Common Carotid Artery with Bioactive Intraluminal Device, Percutaneous Approach
03LJ3CZ	Occlusion of Left Common Carotid Artery with Extraluminal Device, Percutaneous Approach
03LJ3DZ	Occlusion of Left Common Carotid Artery with Intraluminal Device, Percutaneous Approach
03LJ3ZZ	Occlusion of Left Common Carotid Artery, Percutaneous Approach
03LJ4BZ	Occlusion of Left Common Carotid Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03LJ4CZ	Occlusion of Left Common Carotid Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03LJ4DZ	Occlusion of Left Common Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03LJ4ZZ	Occlusion of Left Common Carotid Artery, Percutaneous Endoscopic Approach
03LK0BZ	Occlusion of Right Internal Carotid Artery with Bioactive Intraluminal Device, Open Approach
03LK0CZ	Occlusion of Right Internal Carotid Artery with Extraluminal Device, Open Approach

Code	Shortened Description
03LK0DZ	Occlusion of Right Internal Carotid Artery with Intraluminal Device, Open Approach
03LK0ZZ	Occlusion of Right Internal Carotid Artery, Open Approach
03LK3BZ	Occlusion of Right Internal Carotid Artery with Bioactive Intraluminal Device, Percutaneous Approach
03LK3CZ	Occlusion of Right Internal Carotid Artery with Extraluminal Device, Percutaneous Approach
03LK3DZ	Occlusion of Right Internal Carotid Artery with Intraluminal Device, Percutaneous Approach
03LK3ZZ	Occlusion of Right Internal Carotid Artery, Percutaneous Approach
03LK4BZ	Occlusion of Right Internal Carotid Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03LK4CZ	Occlusion of Right Internal Carotid Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03LK4DZ	Occlusion of Right Internal Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03LK4ZZ	Occlusion of Right Internal Carotid Artery, Percutaneous Endoscopic Approach
03LL0BZ	Occlusion of Left Internal Carotid Artery with Bioactive Intraluminal Device, Open Approach
03LL0CZ	Occlusion of Left Internal Carotid Artery with Extraluminal Device, Open Approach
03LL0DZ	Occlusion of Left Internal Carotid Artery with Intraluminal Device, Open Approach
03LL0ZZ	Occlusion of Left Internal Carotid Artery, Open Approach
03LL3BZ	Occlusion of Left Internal Carotid Artery with Bioactive Intraluminal Device, Percutaneous Approach
03LL3CZ	Occlusion of Left Internal Carotid Artery with Extraluminal Device, Percutaneous Approach
03LL3DZ	Occlusion of Left Internal Carotid Artery with Intraluminal Device, Percutaneous Approach
03LL3ZZ	Occlusion of Left Internal Carotid Artery, Percutaneous Approach
03LL4BZ	Occlusion of Left Internal Carotid Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03LL4CZ	Occlusion of Left Internal Carotid Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03LL4DZ	Occlusion of Left Internal Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03LL4ZZ	Occlusion of Left Internal Carotid Artery, Percutaneous Endoscopic Approach
03LM0BZ	Occlusion of Right External Carotid Artery with Bioactive Intraluminal Device, Open Approach
03LM0CZ	Occlusion of Right External Carotid Artery with Extraluminal Device, Open Approach
03LM0DZ	Occlusion of Right External Carotid Artery with Intraluminal Device, Open Approach
03LM0ZZ	Occlusion of Right External Carotid Artery, Open Approach
03LM3BZ	Occlusion of Right External Carotid Artery with Bioactive Intraluminal Device, Percutaneous Approach
03LM3CZ	Occlusion of Right External Carotid Artery with Extraluminal Device, Percutaneous Approach
03LM3DZ	Occlusion of Right External Carotid Artery with Intraluminal Device, Percutaneous Approach
03LM3ZZ	Occlusion of Right External Carotid Artery, Percutaneous Approach
03LM4BZ	Occlusion of Right External Carotid Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03LM4CZ	Occlusion of Right External Carotid Artery with Extraluminal Device, Percutaneous Endoscopic Approach

Code	Shortened Description
03LM4DZ	Occlusion of Right External Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03LM4ZZ	Occlusion of Right External Carotid Artery, Percutaneous Endoscopic Approach
03LN0BZ	Occlusion of Left External Carotid Artery with Bioactive Intraluminal Device, Open Approach
03LN0CZ	Occlusion of Left External Carotid Artery with Extraluminal Device, Open Approach
03LN0DZ	Occlusion of Left External Carotid Artery with Intraluminal Device, Open Approach
03LN0ZZ	Occlusion of Left External Carotid Artery, Open Approach
03LN3BZ	Occlusion of Left External Carotid Artery with Bioactive Intraluminal Device, Percutaneous Approach
03LN3CZ	Occlusion of Left External Carotid Artery with Extraluminal Device, Percutaneous Approach
03LN3DZ	Occlusion of Left External Carotid Artery with Intraluminal Device, Percutaneous Approach
03LN3ZZ	Occlusion of Left External Carotid Artery, Percutaneous Approach
03LN4BZ	Occlusion of Left External Carotid Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03LN4CZ	Occlusion of Left External Carotid Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03LN4DZ	Occlusion of Left External Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03LN4ZZ	Occlusion of Left External Carotid Artery, Percutaneous Endoscopic Approach
03LP0BZ	Occlusion of Right Vertebral Artery with Bioactive Intraluminal Device, Open Approach
03LP0CZ	Occlusion of Right Vertebral Artery with Extraluminal Device, Open Approach
03LP0DZ	Occlusion of Right Vertebral Artery with Intraluminal Device, Open Approach
03LP0ZZ	Occlusion of Right Vertebral Artery, Open Approach
03LP3BZ	Occlusion of Right Vertebral Artery with Bioactive Intraluminal Device, Percutaneous Approach
03LP3CZ	Occlusion of Right Vertebral Artery with Extraluminal Device, Percutaneous Approach
03LP3DZ	Occlusion of Right Vertebral Artery with Intraluminal Device, Percutaneous Approach
03LP3ZZ	Occlusion of Right Vertebral Artery, Percutaneous Approach
03LP4BZ	Occlusion of Right Vertebral Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03LP4CZ	Occlusion of Right Vertebral Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03LP4DZ	Occlusion of Right Vertebral Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03LP4ZZ	Occlusion of Right Vertebral Artery, Percutaneous Endoscopic Approach
03LQ0BZ	Occlusion of Left Vertebral Artery with Bioactive Intraluminal Device, Open Approach
03LQ0CZ	Occlusion of Left Vertebral Artery with Extraluminal Device, Open Approach
03LQ0DZ	Occlusion of Left Vertebral Artery with Intraluminal Device, Open Approach
03LQ0ZZ	Occlusion of Left Vertebral Artery, Open Approach
03LQ3BZ	Occlusion of Left Vertebral Artery with Bioactive Intraluminal Device, Percutaneous Approach
03LQ3CZ	Occlusion of Left Vertebral Artery with Extraluminal Device, Percutaneous Approach

Code	Shortened Description
03LQ3DZ	Occlusion of Left Vertebral Artery with Intraluminal Device, Percutaneous Approach
03LQ3ZZ	Occlusion of Left Vertebral Artery, Percutaneous Approach
03LQ4BZ	Occlusion of Left Vertebral Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03LQ4CZ	Occlusion of Left Vertebral Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03LQ4DZ	Occlusion of Left Vertebral Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03LQ4ZZ	Occlusion of Left Vertebral Artery, Percutaneous Endoscopic Approach
03LR0CZ	Occlusion of Face Artery with Extraluminal Device, Open Approach
03LR0DZ	Occlusion of Face Artery with Intraluminal Device, Open Approach
03LR0ZZ	Occlusion of Face Artery, Open Approach
03LR3CZ	Occlusion of Face Artery with Extraluminal Device, Percutaneous Approach
03LR3DZ	Occlusion of Face Artery with Intraluminal Device, Percutaneous Approach
03LR3ZZ	Occlusion of Face Artery, Percutaneous Approach
03LR4CZ	Occlusion of Face Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03LR4DZ	Occlusion of Face Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03LR4ZZ	Occlusion of Face Artery, Percutaneous Endoscopic Approach
03LS0CZ	Occlusion of Right Temporal Artery with Extraluminal Device, Open Approach
03LS0DZ	Occlusion of Right Temporal Artery with Intraluminal Device, Open Approach
03LS0ZZ	Occlusion of Right Temporal Artery, Open Approach
03LS3CZ	Occlusion of Right Temporal Artery with Extraluminal Device, Percutaneous Approach
03LS3DZ	Occlusion of Right Temporal Artery with Intraluminal Device, Percutaneous Approach
03LS3ZZ	Occlusion of Right Temporal Artery, Percutaneous Approach
03LS4CZ	Occlusion of Right Temporal Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03LS4DZ	Occlusion of Right Temporal Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03LS4ZZ	Occlusion of Right Temporal Artery, Percutaneous Endoscopic Approach
03LT0CZ	Occlusion of Left Temporal Artery with Extraluminal Device, Open Approach
03LT0DZ	Occlusion of Left Temporal Artery with Intraluminal Device, Open Approach
03LT0ZZ	Occlusion of Left Temporal Artery, Open Approach
03LT3CZ	Occlusion of Left Temporal Artery with Extraluminal Device, Percutaneous Approach
03LT3DZ	Occlusion of Left Temporal Artery with Intraluminal Device, Percutaneous Approach
03LT3ZZ	Occlusion of Left Temporal Artery, Percutaneous Approach
03LT4CZ	Occlusion of Left Temporal Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03LT4DZ	Occlusion of Left Temporal Artery with Intraluminal Device, Percutaneous Endoscopic Approach

Code	Shortened Description
03LT4ZZ	Occlusion of Left Temporal Artery, Percutaneous Endoscopic Approach
03LU0CZ	Occlusion of Right Thyroid Artery with Extraluminal Device, Open Approach
03LU0DZ	Occlusion of Right Thyroid Artery with Intraluminal Device, Open Approach
03LU0ZZ	Occlusion of Right Thyroid Artery, Open Approach
03LU3CZ	Occlusion of Right Thyroid Artery with Extraluminal Device, Percutaneous Approach
03LU3DZ	Occlusion of Right Thyroid Artery with Intraluminal Device, Percutaneous Approach
03LU3ZZ	Occlusion of Right Thyroid Artery, Percutaneous Approach
03LU4CZ	Occlusion of Right Thyroid Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03LU4DZ	Occlusion of Right Thyroid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03LU4ZZ	Occlusion of Right Thyroid Artery, Percutaneous Endoscopic Approach
03LV0CZ	Occlusion of Left Thyroid Artery with Extraluminal Device, Open Approach
03LV0DZ	Occlusion of Left Thyroid Artery with Intraluminal Device, Open Approach
03LV0ZZ	Occlusion of Left Thyroid Artery, Open Approach
03LV3CZ	Occlusion of Left Thyroid Artery with Extraluminal Device, Percutaneous Approach
03LV3DZ	Occlusion of Left Thyroid Artery with Intraluminal Device, Percutaneous Approach
03LV3ZZ	Occlusion of Left Thyroid Artery, Percutaneous Approach
03LV4CZ	Occlusion of Left Thyroid Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03LV4DZ	Occlusion of Left Thyroid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03LV4ZZ	Occlusion of Left Thyroid Artery, Percutaneous Endoscopic Approach
03RG07Z	Replacement of Intracranial Artery with Autologous Tissue Substitute, Open Approach
03RG0JZ	Replacement of Intracranial Artery with Synthetic Substitute, Open Approach
03RG0KZ	Replacement of Intracranial Artery with Nonautologous Tissue Substitute, Open Approach
03RG47Z	Replacement of Intracranial Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RG4JZ	Replacement of Intracranial Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RG4KZ	Replacement of Intracranial Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RH07Z	Replacement of Right Common Carotid Artery with Autologous Tissue Substitute, Open Approach
03RH0JZ	Replacement of Right Common Carotid Artery with Synthetic Substitute, Open Approach
03RH0KZ	Replacement of Right Common Carotid Artery with Nonautologous Tissue Substitute, Open Approach
03RH47Z	Replacement of Right Common Carotid Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RH4JZ	Replacement of Right Common Carotid Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RH4KZ	Replacement of Right Common Carotid Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach

Code	Shortened Description
03RJ07Z	Replacement of Left Common Carotid Artery with Autologous Tissue Substitute, Open Approach
03RJ0JZ	Replacement of Left Common Carotid Artery with Synthetic Substitute, Open Approach
03RJ0KZ	Replacement of Left Common Carotid Artery with Nonautologous Tissue Substitute, Open Approach
03RJ47Z	Replacement of Left Common Carotid Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RJ4JZ	Replacement of Left Common Carotid Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RJ4KZ	Replacement of Left Common Carotid Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RK07Z	Replacement of Right Internal Carotid Artery with Autologous Tissue Substitute, Open Approach
03RK0JZ	Replacement of Right Internal Carotid Artery with Synthetic Substitute, Open Approach
03RK0KZ	Replacement of Right Internal Carotid Artery with Nonautologous Tissue Substitute, Open Approach
03RK47Z	Replacement of Right Internal Carotid Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RK4JZ	Replacement of Right Internal Carotid Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RK4KZ	Replacement of Right Internal Carotid Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RL07Z	Replacement of Left Internal Carotid Artery with Autologous Tissue Substitute, Open Approach
03RL0JZ	Replacement of Left Internal Carotid Artery with Synthetic Substitute, Open Approach
03RL0KZ	Replacement of Left Internal Carotid Artery with Nonautologous Tissue Substitute, Open Approach
03RL47Z	Replacement of Left Internal Carotid Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RL4JZ	Replacement of Left Internal Carotid Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RL4KZ	Replacement of Left Internal Carotid Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RM07Z	Replacement of Right External Carotid Artery with Autologous Tissue Substitute, Open Approach
03RM0JZ	Replacement of Right External Carotid Artery with Synthetic Substitute, Open Approach
03RM0KZ	Replacement of Right External Carotid Artery with Nonautologous Tissue Substitute, Open Approach
03RM47Z	Replacement of Right External Carotid Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RM4JZ	Replacement of Right External Carotid Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RM4KZ	Replacement of Right External Carotid Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RN07Z	Replacement of Left External Carotid Artery with Autologous Tissue Substitute, Open Approach
03RN0JZ	Replacement of Left External Carotid Artery with Synthetic Substitute, Open Approach
03RN0KZ	Replacement of Left External Carotid Artery with Nonautologous Tissue Substitute, Open Approach
03RN47Z	Replacement of Left External Carotid Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach

Code	Shortened Description
03RN4JZ	Replacement of Left External Carotid Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RN4KZ	Replacement of Left External Carotid Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RP07Z	Replacement of Right Vertebral Artery with Autologous Tissue Substitute, Open Approach
03RP0JZ	Replacement of Right Vertebral Artery with Synthetic Substitute, Open Approach
03RP0KZ	Replacement of Right Vertebral Artery with Nonautologous Tissue Substitute, Open Approach
03RP47Z	Replacement of Right Vertebral Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RP4JZ	Replacement of Right Vertebral Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RP4KZ	Replacement of Right Vertebral Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RQ07Z	Replacement of Left Vertebral Artery with Autologous Tissue Substitute, Open Approach
03RQ0JZ	Replacement of Left Vertebral Artery with Synthetic Substitute, Open Approach
03RQ0KZ	Replacement of Left Vertebral Artery with Nonautologous Tissue Substitute, Open Approach
03RQ47Z	Replacement of Left Vertebral Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RQ4JZ	Replacement of Left Vertebral Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RQ4KZ	Replacement of Left Vertebral Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RS07Z	Replacement of Right Temporal Artery with Autologous Tissue Substitute, Open Approach
03RS0JZ	Replacement of Right Temporal Artery with Synthetic Substitute, Open Approach
03RS0KZ	Replacement of Right Temporal Artery with Nonautologous Tissue Substitute, Open Approach
03RS47Z	Replacement of Right Temporal Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RS4JZ	Replacement of Right Temporal Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RS4KZ	Replacement of Right Temporal Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RT07Z	Replacement of Left Temporal Artery with Autologous Tissue Substitute, Open Approach
03RT0JZ	Replacement of Left Temporal Artery with Synthetic Substitute, Open Approach
03RT0KZ	Replacement of Left Temporal Artery with Nonautologous Tissue Substitute, Open Approach
03RT47Z	Replacement of Left Temporal Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RT4JZ	Replacement of Left Temporal Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RT4KZ	Replacement of Left Temporal Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RU07Z	Replacement of Right Thyroid Artery with Autologous Tissue Substitute, Open Approach
03RU0JZ	Replacement of Right Thyroid Artery with Synthetic Substitute, Open Approach
03RU0KZ	Replacement of Right Thyroid Artery with Nonautologous Tissue Substitute, Open Approach
03RU47Z	Replacement of Right Thyroid Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RU4JZ	Replacement of Right Thyroid Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RU4KZ	Replacement of Right Thyroid Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach

Code	Shortened Description
03RV07Z	Replacement of Left Thyroid Artery with Autologous Tissue Substitute, Open Approach
03RV0JZ	Replacement of Left Thyroid Artery with Synthetic Substitute, Open Approach
03RV0KZ	Replacement of Left Thyroid Artery with Nonautologous Tissue Substitute, Open Approach
03RV47Z	Replacement of Left Thyroid Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RV4JZ	Replacement of Left Thyroid Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RV4KZ	Replacement of Left Thyroid Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03VG0BZ	Restriction of Intracranial Artery with Bioactive Intraluminal Device, Open Approach
03VG0CZ	Restriction of Intracranial Artery with Extraluminal Device, Open Approach
03VG0DZ	Restriction of Intracranial Artery with Intraluminal Device, Open Approach
03VG0ZZ	Restriction of Intracranial Artery, Open Approach
03VG3BZ	Restriction of Intracranial Artery with Bioactive Intraluminal Device, Percutaneous Approach
03VG3CZ	Restriction of Intracranial Artery with Extraluminal Device, Percutaneous Approach
03VG3DZ	Restriction of Intracranial Artery with Intraluminal Device, Percutaneous Approach
03VG3ZZ	Restriction of Intracranial Artery, Percutaneous Approach
03VG4BZ	Restriction of Intracranial Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03VG4CZ	Restriction of Intracranial Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03VG4DZ	Restriction of Intracranial Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VG4ZZ	Restriction of Intracranial Artery, Percutaneous Endoscopic Approach
03VH0BZ	Restriction of Right Common Carotid Artery with Bioactive Intraluminal Device, Open Approach
03VH0CZ	Restriction of Right Common Carotid Artery with Extraluminal Device, Open Approach
03VH0DZ	Restriction of Right Common Carotid Artery with Intraluminal Device, Open Approach
03VH0ZZ	Restriction of Right Common Carotid Artery, Open Approach
03VH3BZ	Restriction of Right Common Carotid Artery with Bioactive Intraluminal Device, Percutaneous Approach
03VH3CZ	Restriction of Right Common Carotid Artery with Extraluminal Device, Percutaneous Approach
03VH3DZ	Restriction of Right Common Carotid Artery with Intraluminal Device, Percutaneous Approach
03VH3ZZ	Restriction of Right Common Carotid Artery, Percutaneous Approach
03VH4BZ	Restriction of Right Common Carotid Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03VH4CZ	Restriction of Right Common Carotid Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03VH4DZ	Restriction of Right Common Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VH4ZZ	Restriction of Right Common Carotid Artery, Percutaneous Endoscopic Approach
03VJ0BZ	Restriction of Left Common Carotid Artery with Bioactive Intraluminal Device, Open Approach
03VJ0CZ	Restriction of Left Common Carotid Artery with Extraluminal Device, Open Approach

Code	Shortened Description
03VJ0DZ	Restriction of Left Common Carotid Artery with Intraluminal Device, Open Approach
03VJ0ZZ	Restriction of Left Common Carotid Artery, Open Approach
03VJ3BZ	Restriction of Left Common Carotid Artery with Bioactive Intraluminal Device, Percutaneous Approach
03VJ3CZ	Restriction of Left Common Carotid Artery with Extraluminal Device, Percutaneous Approach
03VJ3DZ	Restriction of Left Common Carotid Artery with Intraluminal Device, Percutaneous Approach
03VJ3ZZ	Restriction of Left Common Carotid Artery, Percutaneous Approach
03VJ4BZ	Restriction of Left Common Carotid Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03VJ4CZ	Restriction of Left Common Carotid Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03VJ4DZ	Restriction of Left Common Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VJ4ZZ	Restriction of Left Common Carotid Artery, Percutaneous Endoscopic Approach
03VK0BZ	Restriction of Right Internal Carotid Artery with Bioactive Intraluminal Device, Open Approach
03VK0CZ	Restriction of Right Internal Carotid Artery with Extraluminal Device, Open Approach
03VK0DZ	Restriction of Right Internal Carotid Artery with Intraluminal Device, Open Approach
03VK0ZZ	Restriction of Right Internal Carotid Artery, Open Approach
03VK3BZ	Restriction of Right Internal Carotid Artery with Bioactive Intraluminal Device, Percutaneous Approach
03VK3CZ	Restriction of Right Internal Carotid Artery with Extraluminal Device, Percutaneous Approach
03VK3DZ	Restriction of Right Internal Carotid Artery with Intraluminal Device, Percutaneous Approach
03VK3ZZ	Restriction of Right Internal Carotid Artery, Percutaneous Approach
03VK4BZ	Restriction of Right Internal Carotid Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03VK4CZ	Restriction of Right Internal Carotid Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03VK4DZ	Restriction of Right Internal Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VK4ZZ	Restriction of Right Internal Carotid Artery, Percutaneous Endoscopic Approach
03VL0BZ	Restriction of Left Internal Carotid Artery with Bioactive Intraluminal Device, Open Approach
03VL0CZ	Restriction of Left Internal Carotid Artery with Extraluminal Device, Open Approach
03VL0DZ	Restriction of Left Internal Carotid Artery with Intraluminal Device, Open Approach
03VL0ZZ	Restriction of Left Internal Carotid Artery, Open Approach
03VL3BZ	Restriction of Left Internal Carotid Artery with Bioactive Intraluminal Device, Percutaneous Approach
03VL3CZ	Restriction of Left Internal Carotid Artery with Extraluminal Device, Percutaneous Approach
03VL3DZ	Restriction of Left Internal Carotid Artery with Intraluminal Device, Percutaneous Approach
03VL3ZZ	Restriction of Left Internal Carotid Artery, Percutaneous Approach
03VL4BZ	Restriction of Left Internal Carotid Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03VL4CZ	Restriction of Left Internal Carotid Artery with Extraluminal Device, Percutaneous Endoscopic Approach

Code	Shortened Description
03VL4DZ	Restriction of Left Internal Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VL4ZZ	Restriction of Left Internal Carotid Artery, Percutaneous Endoscopic Approach
03VM0BZ	Restriction of Right External Carotid Artery with Bioactive Intraluminal Device, Open Approach
03VM0CZ	Restriction of Right External Carotid Artery with Extraluminal Device, Open Approach
03VM0DZ	Restriction of Right External Carotid Artery with Intraluminal Device, Open Approach
03VM0ZZ	Restriction of Right External Carotid Artery, Open Approach
03VM3BZ	Restriction of Right External Carotid Artery with Bioactive Intraluminal Device, Percutaneous Approach
03VM3CZ	Restriction of Right External Carotid Artery with Extraluminal Device, Percutaneous Approach
03VM3DZ	Restriction of Right External Carotid Artery with Intraluminal Device, Percutaneous Approach
03VM3ZZ	Restriction of Right External Carotid Artery, Percutaneous Approach
03VM4BZ	Restriction of Right External Carotid Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03VM4CZ	Restriction of Right External Carotid Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03VM4DZ	Restriction of Right External Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VM4ZZ	Restriction of Right External Carotid Artery, Percutaneous Endoscopic Approach
03VN0BZ	Restriction of Left External Carotid Artery with Bioactive Intraluminal Device, Open Approach
03VN0CZ	Restriction of Left External Carotid Artery with Extraluminal Device, Open Approach
03VN0DZ	Restriction of Left External Carotid Artery with Intraluminal Device, Open Approach
03VN0ZZ	Restriction of Left External Carotid Artery, Open Approach
03VN3BZ	Restriction of Left External Carotid Artery with Bioactive Intraluminal Device, Percutaneous Approach
03VN3CZ	Restriction of Left External Carotid Artery with Extraluminal Device, Percutaneous Approach
03VN3DZ	Restriction of Left External Carotid Artery with Intraluminal Device, Percutaneous Approach
03VN3ZZ	Restriction of Left External Carotid Artery, Percutaneous Approach
03VN4BZ	Restriction of Left External Carotid Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03VN4CZ	Restriction of Left External Carotid Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03VN4DZ	Restriction of Left External Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VN4ZZ	Restriction of Left External Carotid Artery, Percutaneous Endoscopic Approach
03VP0BZ	Restriction of Right Vertebral Artery with Bioactive Intraluminal Device, Open Approach
03VP0CZ	Restriction of Right Vertebral Artery with Extraluminal Device, Open Approach
03VP0DZ	Restriction of Right Vertebral Artery with Intraluminal Device, Open Approach
03VP0ZZ	Restriction of Right Vertebral Artery, Open Approach
03VP3BZ	Restriction of Right Vertebral Artery with Bioactive Intraluminal Device, Percutaneous Approach
03VP3CZ	Restriction of Right Vertebral Artery with Extraluminal Device, Percutaneous Approach

Code	Shortened Description
03VP3DZ	Restriction of Right Vertebral Artery with Intraluminal Device, Percutaneous Approach
03VP3ZZ	Restriction of Right Vertebral Artery, Percutaneous Approach
03VP4BZ	Restriction of Right Vertebral Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03VP4CZ	Restriction of Right Vertebral Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03VP4DZ	Restriction of Right Vertebral Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VP4ZZ	Restriction of Right Vertebral Artery, Percutaneous Endoscopic Approach
03VQ0BZ	Restriction of Left Vertebral Artery with Bioactive Intraluminal Device, Open Approach
03VQ0CZ	Restriction of Left Vertebral Artery with Extraluminal Device, Open Approach
03VQ0DZ	Restriction of Left Vertebral Artery with Intraluminal Device, Open Approach
03VQ0ZZ	Restriction of Left Vertebral Artery, Open Approach
03VQ3BZ	Restriction of Left Vertebral Artery with Bioactive Intraluminal Device, Percutaneous Approach
03VQ3CZ	Restriction of Left Vertebral Artery with Extraluminal Device, Percutaneous Approach
03VQ3DZ	Restriction of Left Vertebral Artery with Intraluminal Device, Percutaneous Approach
03VQ3ZZ	Restriction of Left Vertebral Artery, Percutaneous Approach
03VQ4BZ	Restriction of Left Vertebral Artery with Bioactive Intraluminal Device, Percutaneous Endoscopic Approach
03VQ4CZ	Restriction of Left Vertebral Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03VQ4DZ	Restriction of Left Vertebral Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VQ4ZZ	Restriction of Left Vertebral Artery, Percutaneous Endoscopic Approach
03VS0CZ	Restriction of Right Temporal Artery with Extraluminal Device, Open Approach
03VS0DZ	Restriction of Right Temporal Artery with Intraluminal Device, Open Approach
03VS0ZZ	Restriction of Right Temporal Artery, Open Approach
03VS3CZ	Restriction of Right Temporal Artery with Extraluminal Device, Percutaneous Approach
03VS3DZ	Restriction of Right Temporal Artery with Intraluminal Device, Percutaneous Approach
03VS3ZZ	Restriction of Right Temporal Artery, Percutaneous Approach
03VS4CZ	Restriction of Right Temporal Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03VS4DZ	Restriction of Right Temporal Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VS4ZZ	Restriction of Right Temporal Artery, Percutaneous Endoscopic Approach
03VT0CZ	Restriction of Left Temporal Artery with Extraluminal Device, Open Approach
03VT0DZ	Restriction of Left Temporal Artery with Intraluminal Device, Open Approach
03VT0ZZ	Restriction of Left Temporal Artery, Open Approach
03VT3CZ	Restriction of Left Temporal Artery with Extraluminal Device, Percutaneous Approach
03VT3DZ	Restriction of Left Temporal Artery with Intraluminal Device, Percutaneous Approach

Code	Shortened Description
03VT3ZZ	Restriction of Left Temporal Artery, Percutaneous Approach
03VT4CZ	Restriction of Left Temporal Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03VT4DZ	Restriction of Left Temporal Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VT4ZZ	Restriction of Left Temporal Artery, Percutaneous Endoscopic Approach
03VU0CZ	Restriction of Right Thyroid Artery with Extraluminal Device, Open Approach
03VU0DZ	Restriction of Right Thyroid Artery with Intraluminal Device, Open Approach
03VU0ZZ	Restriction of Right Thyroid Artery, Open Approach
03VU3CZ	Restriction of Right Thyroid Artery with Extraluminal Device, Percutaneous Approach
03VU3DZ	Restriction of Right Thyroid Artery with Intraluminal Device, Percutaneous Approach
03VU3ZZ	Restriction of Right Thyroid Artery, Percutaneous Approach
03VU4CZ	Restriction of Right Thyroid Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03VU4DZ	Restriction of Right Thyroid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VU4ZZ	Restriction of Right Thyroid Artery, Percutaneous Endoscopic Approach
03VV0CZ	Restriction of Left Thyroid Artery with Extraluminal Device, Open Approach
03VV0DZ	Restriction of Left Thyroid Artery with Intraluminal Device, Open Approach
03VV0ZZ	Restriction of Left Thyroid Artery, Open Approach
03VV3CZ	Restriction of Left Thyroid Artery with Extraluminal Device, Percutaneous Approach
03VV3DZ	Restriction of Left Thyroid Artery with Intraluminal Device, Percutaneous Approach
03VV3ZZ	Restriction of Left Thyroid Artery, Percutaneous Approach
03VV4CZ	Restriction of Left Thyroid Artery with Extraluminal Device, Percutaneous Endoscopic Approach
03VV4DZ	Restriction of Left Thyroid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
03VV4ZZ	Restriction of Left Thyroid Artery, Percutaneous Endoscopic Approach
057L0DZ	Dilation of Intracranial Vein with Intraluminal Device, Open Approach
057L0ZZ	Dilation of Intracranial Vein, Open Approach
057L3DZ	Dilation of Intracranial Vein with Intraluminal Device, Percutaneous Approach
057L3ZZ	Dilation of Intracranial Vein, Percutaneous Approach
057L4DZ	Dilation of Intracranial Vein with Intraluminal Device, Percutaneous Endoscopic Approach
057L4ZZ	Dilation of Intracranial Vein, Percutaneous Endoscopic Approach
057M0DZ	Dilation of Right Internal Jugular Vein with Intraluminal Device, Open Approach
057M0ZZ	Dilation of Right Internal Jugular Vein, Open Approach
057M3DZ	Dilation of Right Internal Jugular Vein with Intraluminal Device, Percutaneous Approach
057M3ZZ	Dilation of Right Internal Jugular Vein, Percutaneous Approach

Code	Shortened Description
057M4DZ	Dilation of Right Internal Jugular Vein with Intraluminal Device, Percutaneous Endoscopic Approach
057M4ZZ	Dilation of Right Internal Jugular Vein, Percutaneous Endoscopic Approach
057N0DZ	Dilation of Left Internal Jugular Vein with Intraluminal Device, Open Approach
057N0ZZ	Dilation of Left Internal Jugular Vein, Open Approach
057N3DZ	Dilation of Left Internal Jugular Vein with Intraluminal Device, Percutaneous Approach
057N3ZZ	Dilation of Left Internal Jugular Vein, Percutaneous Approach
057N4DZ	Dilation of Left Internal Jugular Vein with Intraluminal Device, Percutaneous Endoscopic Approach
057N4ZZ	Dilation of Left Internal Jugular Vein, Percutaneous Endoscopic Approach
057P0DZ	Dilation of Right External Jugular Vein with Intraluminal Device, Open Approach
057P0ZZ	Dilation of Right External Jugular Vein, Open Approach
057P3DZ	Dilation of Right External Jugular Vein with Intraluminal Device, Percutaneous Approach
057P3ZZ	Dilation of Right External Jugular Vein, Percutaneous Approach
057P4DZ	Dilation of Right External Jugular Vein with Intraluminal Device, Percutaneous Endoscopic Approach
057P4ZZ	Dilation of Right External Jugular Vein, Percutaneous Endoscopic Approach
057Q0DZ	Dilation of Left External Jugular Vein with Intraluminal Device, Open Approach
057Q0ZZ	Dilation of Left External Jugular Vein, Open Approach
057Q3DZ	Dilation of Left External Jugular Vein with Intraluminal Device, Percutaneous Approach
057Q3ZZ	Dilation of Left External Jugular Vein, Percutaneous Approach
057Q4DZ	Dilation of Left External Jugular Vein with Intraluminal Device, Percutaneous Endoscopic Approach
057Q4ZZ	Dilation of Left External Jugular Vein, Percutaneous Endoscopic Approach
057R0DZ	Dilation of Right Vertebral Vein with Intraluminal Device, Open Approach
057R0ZZ	Dilation of Right Vertebral Vein, Open Approach
057R3DZ	Dilation of Right Vertebral Vein with Intraluminal Device, Percutaneous Approach
057R3ZZ	Dilation of Right Vertebral Vein, Percutaneous Approach
057R4DZ	Dilation of Right Vertebral Vein with Intraluminal Device, Percutaneous Endoscopic Approach
057R4ZZ	Dilation of Right Vertebral Vein, Percutaneous Endoscopic Approach
057S0DZ	Dilation of Left Vertebral Vein with Intraluminal Device, Open Approach
057S0ZZ	Dilation of Left Vertebral Vein, Open Approach
057S3DZ	Dilation of Left Vertebral Vein with Intraluminal Device, Percutaneous Approach
057S3ZZ	Dilation of Left Vertebral Vein, Percutaneous Approach
057S4DZ	Dilation of Left Vertebral Vein with Intraluminal Device, Percutaneous Endoscopic Approach
057S4ZZ	Dilation of Left Vertebral Vein, Percutaneous Endoscopic Approach

Code	Shortened Description
05BL0ZZ	Excision of Intracranial Vein, Open Approach
05BL3ZZ	Excision of Intracranial Vein, Percutaneous Approach
05BL4ZZ	Excision of Intracranial Vein, Percutaneous Endoscopic Approach
05BM0ZZ	Excision of Right Internal Jugular Vein, Open Approach
05BM3ZZ	Excision of Right Internal Jugular Vein, Percutaneous Approach
05BM4ZZ	Excision of Right Internal Jugular Vein, Percutaneous Endoscopic Approach
05BN0ZZ	Excision of Left Internal Jugular Vein, Open Approach
05BN3ZZ	Excision of Left Internal Jugular Vein, Percutaneous Approach
05BN4ZZ	Excision of Left Internal Jugular Vein, Percutaneous Endoscopic Approach
05BP0ZZ	Excision of Right External Jugular Vein, Open Approach
05BP3ZZ	Excision of Right External Jugular Vein, Percutaneous Approach
05BP4ZZ	Excision of Right External Jugular Vein, Percutaneous Endoscopic Approach
05BQ0ZZ	Excision of Left External Jugular Vein, Open Approach
05BQ3ZZ	Excision of Left External Jugular Vein, Percutaneous Approach
05BQ4ZZ	Excision of Left External Jugular Vein, Percutaneous Endoscopic Approach
05BR0ZZ	Excision of Right Vertebral Vein, Open Approach
05BR3ZZ	Excision of Right Vertebral Vein, Percutaneous Approach
05BR4ZZ	Excision of Right Vertebral Vein, Percutaneous Endoscopic Approach
05BS0ZZ	Excision of Left Vertebral Vein, Open Approach
05BS3ZZ	Excision of Left Vertebral Vein, Percutaneous Approach
05BS4ZZ	Excision of Left Vertebral Vein, Percutaneous Endoscopic Approach
05CL0ZZ	Extirpation of Matter from Intracranial Vein, Open Approach
05CL3ZZ	Extirpation of Matter from Intracranial Vein, Percutaneous Approach
05CL4ZZ	Extirpation of Matter from Intracranial Vein, Percutaneous Endoscopic Approach
05CM0ZZ	Extirpation of Matter from Right Internal Jugular Vein, Open Approach
05CM3ZZ	Extirpation of Matter from Right Internal Jugular Vein, Percutaneous Approach
05CM4ZZ	Extirpation of Matter from Right Internal Jugular Vein, Percutaneous Endoscopic Approach
05CN0ZZ	Extirpation of Matter from Left Internal Jugular Vein, Open Approach
05CN3ZZ	Extirpation of Matter from Left Internal Jugular Vein, Percutaneous Approach
05CN4ZZ	Extirpation of Matter from Left Internal Jugular Vein, Percutaneous Endoscopic Approach
05CP0ZZ	Extirpation of Matter from Right External Jugular Vein, Open Approach
05CP3ZZ	Extirpation of Matter from Right External Jugular Vein, Percutaneous Approach

Code	Shortened Description
05CP4ZZ	Extirpation of Matter from Right External Jugular Vein, Percutaneous Endoscopic Approach
05CQ0ZZ	Extirpation of Matter from Left External Jugular Vein, Open Approach
05CQ3ZZ	Extirpation of Matter from Left External Jugular Vein, Percutaneous Approach
05CQ4ZZ	Extirpation of Matter from Left External Jugular Vein, Percutaneous Endoscopic Approach
05CR0ZZ	Extirpation of Matter from Right Vertebral Vein, Open Approach
05CR3ZZ	Extirpation of Matter from Right Vertebral Vein, Percutaneous Approach
05CR4ZZ	Extirpation of Matter from Right Vertebral Vein, Percutaneous Endoscopic Approach
05CS0ZZ	Extirpation of Matter from Left Vertebral Vein, Open Approach
05CS3ZZ	Extirpation of Matter from Left Vertebral Vein, Percutaneous Approach
05CS4ZZ	Extirpation of Matter from Left Vertebral Vein, Percutaneous Endoscopic Approach
05LL0CZ	Occlusion of Intracranial Vein with Extraluminal Device, Open Approach
05LL0DZ	Occlusion of Intracranial Vein with Intraluminal Device, Open Approach
05LL0ZZ	Occlusion of Intracranial Vein, Open Approach
05LL3CZ	Occlusion of Intracranial Vein with Extraluminal Device, Percutaneous Approach
05LL3DZ	Occlusion of Intracranial Vein with Intraluminal Device, Percutaneous Approach
05LL3ZZ	Occlusion of Intracranial Vein, Percutaneous Approach
05LL4CZ	Occlusion of Intracranial Vein with Extraluminal Device, Percutaneous Endoscopic Approach
05LL4DZ	Occlusion of Intracranial Vein with Intraluminal Device, Percutaneous Endoscopic Approach
05LL4ZZ	Occlusion of Intracranial Vein, Percutaneous Endoscopic Approach
05LM0CZ	Occlusion of Right Internal Jugular Vein with Extraluminal Device, Open Approach
05LM0DZ	Occlusion of Right Internal Jugular Vein with Intraluminal Device, Open Approach
05LM0ZZ	Occlusion of Right Internal Jugular Vein, Open Approach
05LM3CZ	Occlusion of Right Internal Jugular Vein with Extraluminal Device, Percutaneous Approach
05LM3DZ	Occlusion of Right Internal Jugular Vein with Intraluminal Device, Percutaneous Approach
05LM3ZZ	Occlusion of Right Internal Jugular Vein, Percutaneous Approach
05LM4CZ	Occlusion of Right Internal Jugular Vein with Extraluminal Device, Percutaneous Endoscopic Approach
05LM4DZ	Occlusion of Right Internal Jugular Vein with Intraluminal Device, Percutaneous Endoscopic Approach
05LM4ZZ	Occlusion of Right Internal Jugular Vein, Percutaneous Endoscopic Approach
05LN0CZ	Occlusion of Left Internal Jugular Vein with Extraluminal Device, Open Approach
05LN0DZ	Occlusion of Left Internal Jugular Vein with Intraluminal Device, Open Approach
05LN0ZZ	Occlusion of Left Internal Jugular Vein, Open Approach
05LN3CZ	Occlusion of Left Internal Jugular Vein with Extraluminal Device, Percutaneous Approach

Code	Shortened Description
05LN3DZ	Occlusion of Left Internal Jugular Vein with Intraluminal Device, Percutaneous Approach
05LN3ZZ	Occlusion of Left Internal Jugular Vein, Percutaneous Approach
05LN4CZ	Occlusion of Left Internal Jugular Vein with Extraluminal Device, Percutaneous Endoscopic Approach
05LN4DZ	Occlusion of Left Internal Jugular Vein with Intraluminal Device, Percutaneous Endoscopic Approach
05LN4ZZ	Occlusion of Left Internal Jugular Vein, Percutaneous Endoscopic Approach
05LP0CZ	Occlusion of Right External Jugular Vein with Extraluminal Device, Open Approach
05LP0DZ	Occlusion of Right External Jugular Vein with Intraluminal Device, Open Approach
05LP0ZZ	Occlusion of Right External Jugular Vein, Open Approach
05LP3CZ	Occlusion of Right External Jugular Vein with Extraluminal Device, Percutaneous Approach
05LP3DZ	Occlusion of Right External Jugular Vein with Intraluminal Device, Percutaneous Approach
05LP3ZZ	Occlusion of Right External Jugular Vein, Percutaneous Approach
05LP4CZ	Occlusion of Right External Jugular Vein with Extraluminal Device, Percutaneous Endoscopic Approach
05LP4DZ	Occlusion of Right External Jugular Vein with Intraluminal Device, Percutaneous Endoscopic Approach
05LP4ZZ	Occlusion of Right External Jugular Vein, Percutaneous Endoscopic Approach
05LQ0CZ	Occlusion of Left External Jugular Vein with Extraluminal Device, Open Approach
05LQ0DZ	Occlusion of Left External Jugular Vein with Intraluminal Device, Open Approach
05LQ0ZZ	Occlusion of Left External Jugular Vein, Open Approach
05LQ3CZ	Occlusion of Left External Jugular Vein with Extraluminal Device, Percutaneous Approach
05LQ3DZ	Occlusion of Left External Jugular Vein with Intraluminal Device, Percutaneous Approach
05LQ3ZZ	Occlusion of Left External Jugular Vein, Percutaneous Approach
05LQ4CZ	Occlusion of Left External Jugular Vein with Extraluminal Device, Percutaneous Endoscopic Approach
05LQ4DZ	Occlusion of Left External Jugular Vein with Intraluminal Device, Percutaneous Endoscopic Approach
05LQ4ZZ	Occlusion of Left External Jugular Vein, Percutaneous Endoscopic Approach
05LR0CZ	Occlusion of Right Vertebral Vein with Extraluminal Device, Open Approach
05LR0DZ	Occlusion of Right Vertebral Vein with Intraluminal Device, Open Approach
05LR0ZZ	Occlusion of Right Vertebral Vein, Open Approach
05LR3CZ	Occlusion of Right Vertebral Vein with Extraluminal Device, Percutaneous Approach
05LR3DZ	Occlusion of Right Vertebral Vein with Intraluminal Device, Percutaneous Approach
05LR3ZZ	Occlusion of Right Vertebral Vein, Percutaneous Approach
05LR4CZ	Occlusion of Right Vertebral Vein with Extraluminal Device, Percutaneous Endoscopic Approach
05LR4DZ	Occlusion of Right Vertebral Vein with Intraluminal Device, Percutaneous Endoscopic Approach
05LR4ZZ	Occlusion of Right Vertebral Vein, Percutaneous Endoscopic Approach

Code	Shortened Description
05LS0CZ	Occlusion of Left Vertebral Vein with Extraluminal Device, Open Approach
05LS0DZ	Occlusion of Left Vertebral Vein with Intraluminal Device, Open Approach
05LS0ZZ	Occlusion of Left Vertebral Vein, Open Approach
05LS3CZ	Occlusion of Left Vertebral Vein with Extraluminal Device, Percutaneous Approach
05LS3DZ	Occlusion of Left Vertebral Vein with Intraluminal Device, Percutaneous Approach
05LS3ZZ	Occlusion of Left Vertebral Vein, Percutaneous Approach
05LS4CZ	Occlusion of Left Vertebral Vein with Extraluminal Device, Percutaneous Endoscopic Approach
05LS4DZ	Occlusion of Left Vertebral Vein with Intraluminal Device, Percutaneous Endoscopic Approach
05LS4ZZ	Occlusion of Left Vertebral Vein, Percutaneous Endoscopic Approach
05RL07Z	Replacement of Intracranial Vein with Autologous Tissue Substitute, Open Approach
05RL0JZ	Replacement of Intracranial Vein with Synthetic Substitute, Open Approach
05RL0KZ	Replacement of Intracranial Vein with Nonautologous Tissue Substitute, Open Approach
05RL47Z	Replacement of Intracranial Vein with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
05RL4JZ	Replacement of Intracranial Vein with Synthetic Substitute, Percutaneous Endoscopic Approach
05RL4KZ	Replacement of Intracranial Vein with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
05RM07Z	Replacement of Right Internal Jugular Vein with Autologous Tissue Substitute, Open Approach
05RM0JZ	Replacement of Right Internal Jugular Vein with Synthetic Substitute, Open Approach
05RM0KZ	Replacement of Right Internal Jugular Vein with Nonautologous Tissue Substitute, Open Approach
05RM47Z	Replacement of Right Internal Jugular Vein with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
05RM4JZ	Replacement of Right Internal Jugular Vein with Synthetic Substitute, Percutaneous Endoscopic Approach
05RM4KZ	Replacement of Right Internal Jugular Vein with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
05RN07Z	Replacement of Left Internal Jugular Vein with Autologous Tissue Substitute, Open Approach
05RN0JZ	Replacement of Left Internal Jugular Vein with Synthetic Substitute, Open Approach
05RN0KZ	Replacement of Left Internal Jugular Vein with Nonautologous Tissue Substitute, Open Approach
05RN47Z	Replacement of Left Internal Jugular Vein with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
05RN4JZ	Replacement of Left Internal Jugular Vein with Synthetic Substitute, Percutaneous Endoscopic Approach
05RN4KZ	Replacement of Left Internal Jugular Vein with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
05RP07Z	Replacement of Right External Jugular Vein with Autologous Tissue Substitute, Open Approach
05RP0JZ	Replacement of Right External Jugular Vein with Synthetic Substitute, Open Approach
05RP0KZ	Replacement of Right External Jugular Vein with Nonautologous Tissue Substitute, Open Approach
05RP47Z	Replacement of Right External Jugular Vein with Autologous Tissue Substitute, Percutaneous Endoscopic Approach

Code	Shortened Description
05RP4JZ	Replacement of Right External Jugular Vein with Synthetic Substitute, Percutaneous Endoscopic Approach
05RP4KZ	Replacement of Right External Jugular Vein with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
05RQ07Z	Replacement of Left External Jugular Vein with Autologous Tissue Substitute, Open Approach
05RQ0JZ	Replacement of Left External Jugular Vein with Synthetic Substitute, Open Approach
05RQ0KZ	Replacement of Left External Jugular Vein with Nonautologous Tissue Substitute, Open Approach
05RQ47Z	Replacement of Left External Jugular Vein with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
05RQ4JZ	Replacement of Left External Jugular Vein with Synthetic Substitute, Percutaneous Endoscopic Approach
05RQ4KZ	Replacement of Left External Jugular Vein with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
05RR07Z	Replacement of Right Vertebral Vein with Autologous Tissue Substitute, Open Approach
05RR0JZ	Replacement of Right Vertebral Vein with Synthetic Substitute, Open Approach
05RR0KZ	Replacement of Right Vertebral Vein with Nonautologous Tissue Substitute, Open Approach
05RR47Z	Replacement of Right Vertebral Vein with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
05RR4JZ	Replacement of Right Vertebral Vein with Synthetic Substitute, Percutaneous Endoscopic Approach
05RR4KZ	Replacement of Right Vertebral Vein with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
05RS07Z	Replacement of Left Vertebral Vein with Autologous Tissue Substitute, Open Approach
05RS0JZ	Replacement of Left Vertebral Vein with Synthetic Substitute, Open Approach
05RS0KZ	Replacement of Left Vertebral Vein with Nonautologous Tissue Substitute, Open Approach
05RS47Z	Replacement of Left Vertebral Vein with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
05RS4JZ	Replacement of Left Vertebral Vein with Synthetic Substitute, Percutaneous Endoscopic Approach
05RS4KZ	Replacement of Left Vertebral Vein with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
0N500ZZ	Destruction of Skull, Open Approach
0N503ZZ	Destruction of Skull, Percutaneous Approach
0N504ZZ	Destruction of Skull, Percutaneous Endoscopic Approach
0N510ZZ	Destruction of Frontal Bone, Open Approach
0N513ZZ	Destruction of Frontal Bone, Percutaneous Approach
0N514ZZ	Destruction of Frontal Bone, Percutaneous Endoscopic Approach
0N530ZZ	Destruction of Right Parietal Bone, Open Approach
0N533ZZ	Destruction of Right Parietal Bone, Percutaneous Approach
0N534ZZ	Destruction of Right Parietal Bone, Percutaneous Endoscopic Approach
0N540ZZ	Destruction of Left Parietal Bone, Open Approach
0N543ZZ	Destruction of Left Parietal Bone, Percutaneous Approach

Code	Shortened Description
0N544ZZ	Destruction of Left Parietal Bone, Percutaneous Endoscopic Approach
0N550ZZ	Destruction of Right Temporal Bone, Open Approach
0N553ZZ	Destruction of Right Temporal Bone, Percutaneous Approach
0N554ZZ	Destruction of Right Temporal Bone, Percutaneous Endoscopic Approach
0N560ZZ	Destruction of Left Temporal Bone, Open Approach
0N563ZZ	Destruction of Left Temporal Bone, Percutaneous Approach
0N564ZZ	Destruction of Left Temporal Bone, Percutaneous Endoscopic Approach
0N570ZZ	Destruction of Occipital Bone, Open Approach
0N573ZZ	Destruction of Occipital Bone, Percutaneous Approach
0N574ZZ	Destruction of Occipital Bone, Percutaneous Endoscopic Approach
0N800ZZ	Division of Skull, Open Approach
0N803ZZ	Division of Skull, Percutaneous Approach
0N804ZZ	Division of Skull, Percutaneous Endoscopic Approach
0N810ZZ	Division of Frontal Bone, Open Approach
0N813ZZ	Division of Frontal Bone, Percutaneous Approach
0N814ZZ	Division of Frontal Bone, Percutaneous Endoscopic Approach
0N830ZZ	Division of Right Parietal Bone, Open Approach
0N833ZZ	Division of Right Parietal Bone, Percutaneous Approach
0N834ZZ	Division of Right Parietal Bone, Percutaneous Endoscopic Approach
0N840ZZ	Division of Left Parietal Bone, Open Approach
0N843ZZ	Division of Left Parietal Bone, Percutaneous Approach
0N844ZZ	Division of Left Parietal Bone, Percutaneous Endoscopic Approach
0N850ZZ	Division of Right Temporal Bone, Open Approach
0N853ZZ	Division of Right Temporal Bone, Percutaneous Approach
0N854ZZ	Division of Right Temporal Bone, Percutaneous Endoscopic Approach
0N860ZZ	Division of Left Temporal Bone, Open Approach
0N863ZZ	Division of Left Temporal Bone, Percutaneous Approach
0N864ZZ	Division of Left Temporal Bone, Percutaneous Endoscopic Approach
0N870ZZ	Division of Occipital Bone, Open Approach
0N873ZZ	Division of Occipital Bone, Percutaneous Approach
0N874ZZ	Division of Occipital Bone, Percutaneous Endoscopic Approach
0NB00ZZ	Excision of Skull, Open Approach

Code	Shortened Description
0NB03ZZ	Excision of Skull, Percutaneous Approach
0NB04ZZ	Excision of Skull, Percutaneous Endoscopic Approach
0NB10ZZ	Excision of Frontal Bone, Open Approach
0NB13ZZ	Excision of Frontal Bone, Percutaneous Approach
0NB14ZZ	Excision of Frontal Bone, Percutaneous Endoscopic Approach
0NB30ZZ	Excision of Right Parietal Bone, Open Approach
0NB33ZZ	Excision of Right Parietal Bone, Percutaneous Approach
0NB34ZZ	Excision of Right Parietal Bone, Percutaneous Endoscopic Approach
0NB40ZZ	Excision of Left Parietal Bone, Open Approach
0NB43ZZ	Excision of Left Parietal Bone, Percutaneous Approach
0NB44ZZ	Excision of Left Parietal Bone, Percutaneous Endoscopic Approach
0NB50ZZ	Excision of Right Temporal Bone, Open Approach
0NB53ZZ	Excision of Right Temporal Bone, Percutaneous Approach
0NB54ZZ	Excision of Right Temporal Bone, Percutaneous Endoscopic Approach
0NB60ZZ	Excision of Left Temporal Bone, Open Approach
0NB63ZZ	Excision of Left Temporal Bone, Percutaneous Approach
0NB64ZZ	Excision of Left Temporal Bone, Percutaneous Endoscopic Approach
0NB70ZZ	Excision of Occipital Bone, Open Approach
0NB73ZZ	Excision of Occipital Bone, Percutaneous Approach
0NB74ZZ	Excision of Occipital Bone, Percutaneous Endoscopic Approach
0NC10ZZ	Extirpation of Matter from Frontal Bone, Open Approach
0NC13ZZ	Extirpation of Matter from Frontal Bone, Percutaneous Approach
0NC14ZZ	Extirpation of Matter from Frontal Bone, Percutaneous Endoscopic Approach
0NC30ZZ	Extirpation of Matter from Right Parietal Bone, Open Approach
0NC33ZZ	Extirpation of Matter from Right Parietal Bone, Percutaneous Approach
0NC34ZZ	Extirpation of Matter from Right Parietal Bone, Percutaneous Endoscopic Approach
0NC40ZZ	Extirpation of Matter from Left Parietal Bone, Open Approach
0NC43ZZ	Extirpation of Matter from Left Parietal Bone, Percutaneous Approach
0NC44ZZ	Extirpation of Matter from Left Parietal Bone, Percutaneous Endoscopic Approach
0NC50ZZ	Extirpation of Matter from Right Temporal Bone, Open Approach
0NC53ZZ	Extirpation of Matter from Right Temporal Bone, Percutaneous Approach
0NC54ZZ	Extirpation of Matter from Right Temporal Bone, Percutaneous Endoscopic Approach

Code	Shortened Description
0NC60ZZ	Extirpation of Matter from Left Temporal Bone, Open Approach
0NC63ZZ	Extirpation of Matter from Left Temporal Bone, Percutaneous Approach
0NC64ZZ	Extirpation of Matter from Left Temporal Bone, Percutaneous Endoscopic Approach
0NC70ZZ	Extirpation of Matter from Occipital Bone, Open Approach
0NC73ZZ	Extirpation of Matter from Occipital Bone, Percutaneous Approach
0NC74ZZ	Extirpation of Matter from Occipital Bone, Percutaneous Endoscopic Approach
0NH004Z	Insertion of Internal Fixation Device into Skull, Open Approach
0NH00MZ	Insertion of Bone Growth Stimulator into Skull, Open Approach
0NH00NZ	Insertion of Neurostimulator Generator into Skull, Open Approach
0NH034Z	Insertion of Internal Fixation Device into Skull, Percutaneous Approach
0NH03MZ	Insertion of Bone Growth Stimulator into Skull, Percutaneous Approach
0NH044Z	Insertion of Internal Fixation Device into Skull, Percutaneous Endoscopic Approach
0NH04MZ	Insertion of Bone Growth Stimulator into Skull, Percutaneous Endoscopic Approach
0NH104Z	Insertion of Internal Fixation Device into Frontal Bone, Open Approach
0NH134Z	Insertion of Internal Fixation Device into Frontal Bone, Percutaneous Approach
0NH144Z	Insertion of Internal Fixation Device into Frontal Bone, Percutaneous Endoscopic Approach
0NH304Z	Insertion of Internal Fixation Device into Right Parietal Bone, Open Approach
0NH334Z	Insertion of Internal Fixation Device into Right Parietal Bone, Percutaneous Approach
0NH344Z	Insertion of Internal Fixation Device into Right Parietal Bone, Percutaneous Endoscopic Approach
0NH404Z	Insertion of Internal Fixation Device into Left Parietal Bone, Open Approach
0NH434Z	Insertion of Internal Fixation Device into Left Parietal Bone, Percutaneous Approach
0NH444Z	Insertion of Internal Fixation Device into Left Parietal Bone, Percutaneous Endoscopic Approach
0NH504Z	Insertion of Internal Fixation Device into Right Temporal Bone, Open Approach
0NH534Z	Insertion of Internal Fixation Device into Right Temporal Bone, Percutaneous Approach
0NH544Z	Insertion of Internal Fixation Device into Right Temporal Bone, Percutaneous Endoscopic Approach
0NH604Z	Insertion of Internal Fixation Device into Left Temporal Bone, Open Approach
0NH634Z	Insertion of Internal Fixation Device into Left Temporal Bone, Percutaneous Approach
0NH644Z	Insertion of Internal Fixation Device into Left Temporal Bone, Percutaneous Endoscopic Approach
0NH704Z	Insertion of Internal Fixation Device into Occipital Bone, Open Approach
0NH734Z	Insertion of Internal Fixation Device into Occipital Bone, Percutaneous Approach
0NH744Z	Insertion of Internal Fixation Device into Occipital Bone, Percutaneous Endoscopic Approach
0NN10ZZ	Release Frontal Bone, Open Approach

Code	Shortened Description
0NN13ZZ	Release Frontal Bone, Percutaneous Approach
0NN14ZZ	Release Frontal Bone, Percutaneous Endoscopic Approach
0NN30ZZ	Release Right Parietal Bone, Open Approach
0NN33ZZ	Release Right Parietal Bone, Percutaneous Approach
0NN34ZZ	Release Right Parietal Bone, Percutaneous Endoscopic Approach
0NN40ZZ	Release Left Parietal Bone, Open Approach
0NN43ZZ	Release Left Parietal Bone, Percutaneous Approach
0NN44ZZ	Release Left Parietal Bone, Percutaneous Endoscopic Approach
0NN50ZZ	Release Right Temporal Bone, Open Approach
0NN53ZZ	Release Right Temporal Bone, Percutaneous Approach
0NN54ZZ	Release Right Temporal Bone, Percutaneous Endoscopic Approach
0NN60ZZ	Release Left Temporal Bone, Open Approach
0NN63ZZ	Release Left Temporal Bone, Percutaneous Approach
0NN64ZZ	Release Left Temporal Bone, Percutaneous Endoscopic Approach
0NN70ZZ	Release Occipital Bone, Open Approach
0NN73ZZ	Release Occipital Bone, Percutaneous Approach
0NN74ZZ	Release Occipital Bone, Percutaneous Endoscopic Approach
0NP000Z	Removal of Drainage Device from Skull, Open Approach
0NP004Z	Removal of Internal Fixation Device from Skull, Open Approach
0NP007Z	Removal of Autologous Tissue Substitute from Skull, Open Approach
0NP00JZ	Removal of Synthetic Substitute from Skull, Open Approach
0NP00KZ	Removal of Nonautologous Tissue Substitute from Skull, Open Approach
0NP00MZ	Removal of Bone Growth Stimulator from Skull, Open Approach
0NP00NZ	Removal of Neurostimulator Generator from Skull, Open Approach
0NP00SZ	Removal of Hearing Device from Skull, Open Approach
0NP030Z	Removal of Drainage Device from Skull, Percutaneous Approach
0NP034Z	Removal of Internal Fixation Device from Skull, Percutaneous Approach
0NP037Z	Removal of Autologous Tissue Substitute from Skull, Percutaneous Approach
0NP03JZ	Removal of Synthetic Substitute from Skull, Percutaneous Approach
0NP03KZ	Removal of Nonautologous Tissue Substitute from Skull, Percutaneous Approach
0NP03MZ	Removal of Bone Growth Stimulator from Skull, Percutaneous Approach
0NP03SZ	Removal of Hearing Device from Skull, Percutaneous Approach

Code	Shortened Description
0NP040Z	Removal of Drainage Device from Skull, Percutaneous Endoscopic Approach
0NP044Z	Removal of Internal Fixation Device from Skull, Percutaneous Endoscopic Approach
0NP047Z	Removal of Autologous Tissue Substitute from Skull, Percutaneous Endoscopic Approach
0NP04JZ	Removal of Synthetic Substitute from Skull, Percutaneous Endoscopic Approach
0NP04KZ	Removal of Nonautologous Tissue Substitute from Skull, Percutaneous Endoscopic Approach
0NP04MZ	Removal of Bone Growth Stimulator from Skull, Percutaneous Endoscopic Approach
0NP04SZ	Removal of Hearing Device from Skull, Percutaneous Endoscopic Approach
0NQ00ZZ	Repair Skull, Open Approach
0NQ03ZZ	Repair Skull, Percutaneous Approach
0NQ04ZZ	Repair Skull, Percutaneous Endoscopic Approach
0NQ10ZZ	Repair Frontal Bone, Open Approach
0NQ13ZZ	Repair Frontal Bone, Percutaneous Approach
0NQ14ZZ	Repair Frontal Bone, Percutaneous Endoscopic Approach
0NQ30ZZ	Repair Right Parietal Bone, Open Approach
0NQ33ZZ	Repair Right Parietal Bone, Percutaneous Approach
0NQ34ZZ	Repair Right Parietal Bone, Percutaneous Endoscopic Approach
0NQ40ZZ	Repair Left Parietal Bone, Open Approach
0NQ43ZZ	Repair Left Parietal Bone, Percutaneous Approach
0NQ44ZZ	Repair Left Parietal Bone, Percutaneous Endoscopic Approach
0NQ50ZZ	Repair Right Temporal Bone, Open Approach
0NQ53ZZ	Repair Right Temporal Bone, Percutaneous Approach
0NQ54ZZ	Repair Right Temporal Bone, Percutaneous Endoscopic Approach
0NQ60ZZ	Repair Left Temporal Bone, Open Approach
0NQ63ZZ	Repair Left Temporal Bone, Percutaneous Approach
0NQ64ZZ	Repair Left Temporal Bone, Percutaneous Endoscopic Approach
0NQ70ZZ	Repair Occipital Bone, Open Approach
0NQ73ZZ	Repair Occipital Bone, Percutaneous Approach
0NQ74ZZ	Repair Occipital Bone, Percutaneous Endoscopic Approach
0NR00JZ	Replacement of Skull with Synthetic Substitute, Open Approach
0NR03JZ	Replacement of Skull with Synthetic Substitute, Percutaneous Approach
0NR04JZ	Replacement of Skull with Synthetic Substitute, Percutaneous Endoscopic Approach
0NR10JZ	Replacement of Frontal Bone with Synthetic Substitute, Open Approach

Code	Shortened Description
0NR13JZ	Replacement of Frontal Bone with Synthetic Substitute, Percutaneous Approach
0NR14JZ	Replacement of Frontal Bone with Synthetic Substitute, Percutaneous Endoscopic Approach
0NR30JZ	Replacement of Right Parietal Bone with Synthetic Substitute, Open Approach
0NR33JZ	Replacement of Right Parietal Bone with Synthetic Substitute, Percutaneous Approach
0NR34JZ	Replacement of Right Parietal Bone with Synthetic Substitute, Percutaneous Endoscopic Approach
0NR40JZ	Replacement of Left Parietal Bone with Synthetic Substitute, Open Approach
0NR43JZ	Replacement of Left Parietal Bone with Synthetic Substitute, Percutaneous Approach
0NR44JZ	Replacement of Left Parietal Bone with Synthetic Substitute, Percutaneous Endoscopic Approach
0NR50JZ	Replacement of Right Temporal Bone with Synthetic Substitute, Open Approach
0NR53JZ	Replacement of Right Temporal Bone with Synthetic Substitute, Percutaneous Approach
0NR54JZ	Replacement of Right Temporal Bone with Synthetic Substitute, Percutaneous Endoscopic Approach
0NR60JZ	Replacement of Left Temporal Bone with Synthetic Substitute, Open Approach
0NR63JZ	Replacement of Left Temporal Bone with Synthetic Substitute, Percutaneous Approach
0NR64JZ	Replacement of Left Temporal Bone with Synthetic Substitute, Percutaneous Endoscopic Approach
0NR70JZ	Replacement of Occipital Bone with Synthetic Substitute, Open Approach
0NR73JZ	Replacement of Occipital Bone with Synthetic Substitute, Percutaneous Approach
0NR74JZ	Replacement of Occipital Bone with Synthetic Substitute, Percutaneous Endoscopic Approach
0NT10ZZ	Resection of Frontal Bone, Open Approach
0NT30ZZ	Resection of Right Parietal Bone, Open Approach
0NT40ZZ	Resection of Left Parietal Bone, Open Approach
0NT50ZZ	Resection of Right Temporal Bone, Open Approach
0NT60ZZ	Resection of Left Temporal Bone, Open Approach
0NT70ZZ	Resection of Occipital Bone, Open Approach
0NU00JZ	Supplement Skull with Synthetic Substitute, Open Approach
0NU03JZ	Supplement Skull with Synthetic Substitute, Percutaneous Approach
0NU04JZ	Supplement Skull with Synthetic Substitute, Percutaneous Endoscopic Approach
0NU10JZ	Supplement Frontal Bone with Synthetic Substitute, Open Approach
0NU13JZ	Supplement Frontal Bone with Synthetic Substitute, Percutaneous Approach
0NU14JZ	Supplement Frontal Bone with Synthetic Substitute, Percutaneous Endoscopic Approach
0NU30JZ	Supplement Right Parietal Bone with Synthetic Substitute, Open Approach
0NU33JZ	Supplement Right Parietal Bone with Synthetic Substitute, Percutaneous Approach
0NU34JZ	Supplement Right Parietal Bone with Synthetic Substitute, Percutaneous Endoscopic Approach

Code	Shortened Description
0NU40JZ	Supplement Left Parietal Bone with Synthetic Substitute, Open Approach
0NU43JZ	Supplement Left Parietal Bone with Synthetic Substitute, Percutaneous Approach
0NU44JZ	Supplement Left Parietal Bone with Synthetic Substitute, Percutaneous Endoscopic Approach
0NU50JZ	Supplement Right Temporal Bone with Synthetic Substitute, Open Approach
0NU53JZ	Supplement Right Temporal Bone with Synthetic Substitute, Percutaneous Approach
0NU54JZ	Supplement Right Temporal Bone with Synthetic Substitute, Percutaneous Endoscopic Approach
0NU60JZ	Supplement Left Temporal Bone with Synthetic Substitute, Open Approach
0NU63JZ	Supplement Left Temporal Bone with Synthetic Substitute, Percutaneous Approach
0NU64JZ	Supplement Left Temporal Bone with Synthetic Substitute, Percutaneous Endoscopic Approach
0NU70JZ	Supplement Occipital Bone with Synthetic Substitute, Open Approach
0NU73JZ	Supplement Occipital Bone with Synthetic Substitute, Percutaneous Approach
0NU74JZ	Supplement Occipital Bone with Synthetic Substitute, Percutaneous Endoscopic Approach
0NW000Z	Revision of Drainage Device in Skull, Open Approach
0NW004Z	Revision of Internal Fixation Device in Skull, Open Approach
0NW005Z	Revision of External Fixation Device in Skull, Open Approach
0NW007Z	Revision of Autologous Tissue Substitute in Skull, Open Approach
0NW00JZ	Revision of Synthetic Substitute in Skull, Open Approach
0NW00KZ	Revision of Nonautologous Tissue Substitute in Skull, Open Approach
0NW00MZ	Revision of Bone Growth Stimulator in Skull, Open Approach
0NW00NZ	Revision of Neurostimulator Generator in Skull, Open Approach
0NW00SZ	Revision of Hearing Device in Skull, Open Approach
0NW030Z	Revision of Drainage Device in Skull, Percutaneous Approach
0NW034Z	Revision of Internal Fixation Device in Skull, Percutaneous Approach
0NW035Z	Revision of External Fixation Device in Skull, Percutaneous Approach
0NW037Z	Revision of Autologous Tissue Substitute in Skull, Percutaneous Approach
0NW03JZ	Revision of Synthetic Substitute in Skull, Percutaneous Approach
0NW03KZ	Revision of Nonautologous Tissue Substitute in Skull, Percutaneous Approach
0NW03MZ	Revision of Bone Growth Stimulator in Skull, Percutaneous Approach
0NW03SZ	Revision of Hearing Device in Skull, Percutaneous Approach
0NW040Z	Revision of Drainage Device in Skull, Percutaneous Endoscopic Approach
0NW044Z	Revision of Internal Fixation Device in Skull, Percutaneous Endoscopic Approach
0NW045Z	Revision of External Fixation Device in Skull, Percutaneous Endoscopic Approach

Code	Shortened Description
0NW047Z	Revision of Autologous Tissue Substitute in Skull, Percutaneous Endoscopic Approach
0NW04JZ	Revision of Synthetic Substitute in Skull, Percutaneous Endoscopic Approach
0NW04KZ	Revision of Nonautologous Tissue Substitute in Skull, Percutaneous Endoscopic Approach
0NW04MZ	Revision of Bone Growth Stimulator in Skull, Percutaneous Endoscopic Approach
0NW04SZ	Revision of Hearing Device in Skull, Percutaneous Endoscopic Approach
0W9100Z	Drainage of Cranial Cavity with Drainage Device, Open Approach
0W910ZZ	Drainage of Cranial Cavity, Open Approach
0W9130Z	Drainage of Cranial Cavity with Drainage Device, Percutaneous Approach
0W913ZZ	Drainage of Cranial Cavity, Percutaneous Approach
0W9140Z	Drainage of Cranial Cavity with Drainage Device, Percutaneous Endoscopic Approach
0W914ZZ	Drainage of Cranial Cavity, Percutaneous Endoscopic Approach
0WC10ZZ	Extirpation of Matter from Cranial Cavity, Open Approach
0WC13ZZ	Extirpation of Matter from Cranial Cavity, Percutaneous Approach
0WC14ZZ	Extirpation of Matter from Cranial Cavity, Percutaneous Endoscopic Approach
0WH10YZ	Insertion of Other Device into Cranial Cavity, Open Approach
0WH13YZ	Insertion of Other Device into Cranial Cavity, Percutaneous Approach
0WH14YZ	Insertion of Other Device into Cranial Cavity, Percutaneous Endoscopic Approach
0WJ10ZZ	Inspection of Cranial Cavity, Open Approach
0WP100Z	Removal of Drainage Device from Cranial Cavity, Open Approach
0WP101Z	Removal of Radioactive Element from Cranial Cavity, Open Approach
0WP10JZ	Removal of Synthetic Substitute from Cranial Cavity, Open Approach
0WP10YZ	Removal of Other Device from Cranial Cavity, Open Approach
0WP130Z	Removal of Drainage Device from Cranial Cavity, Percutaneous Approach
0WP131Z	Removal of Radioactive Element from Cranial Cavity, Percutaneous Approach
0WP13JZ	Removal of Synthetic Substitute from Cranial Cavity, Percutaneous Approach
0WP13YZ	Removal of Other Device from Cranial Cavity, Percutaneous Approach
0WP140Z	Removal of Drainage Device from Cranial Cavity, Percutaneous Endoscopic Approach
0WP141Z	Removal of Radioactive Element from Cranial Cavity, Percutaneous Endoscopic Approach
0WP14JZ	Removal of Synthetic Substitute from Cranial Cavity, Percutaneous Endoscopic Approach
0WP14YZ	Removal of Other Device from Cranial Cavity, Percutaneous Endoscopic Approach
0WW100Z	Revision of Drainage Device in Cranial Cavity, Open Approach
0WW101Z	Revision of Radioactive Element in Cranial Cavity, Open Approach

Code	Shortened Description
0WW103Z	Revision of Infusion Device in Cranial Cavity, Open Approach
0WW10JZ	Revision of Synthetic Substitute in Cranial Cavity, Open Approach
0WW10YZ	Revision of Other Device in Cranial Cavity, Open Approach
0WW130Z	Revision of Drainage Device in Cranial Cavity, Percutaneous Approach
0WW131Z	Revision of Radioactive Element in Cranial Cavity, Percutaneous Approach
0WW133Z	Revision of Infusion Device in Cranial Cavity, Percutaneous Approach
0WW13JZ	Revision of Synthetic Substitute in Cranial Cavity, Percutaneous Approach
0WW13YZ	Revision of Other Device in Cranial Cavity, Percutaneous Approach
0WW140Z	Revision of Drainage Device in Cranial Cavity, Percutaneous Endoscopic Approach
0WW141Z	Revision of Radioactive Element in Cranial Cavity, Percutaneous Endoscopic Approach
0WW143Z	Revision of Infusion Device in Cranial Cavity, Percutaneous Endoscopic Approach
0WW14JZ	Revision of Synthetic Substitute in Cranial Cavity, Percutaneous Endoscopic Approach
0WW14YZ	Revision of Other Device in Cranial Cavity, Percutaneous Endoscopic Approach
3E0Q005	Introduction of Other Antineoplastic into Cranial Cavity and Brain, Open Approach
3E0Q00M	Introduction of Monoclonal Antibody into Cranial Cavity and Brain, Open Approach
3E0Q028	Introduction of Oxazolidinones into Cranial Cavity and Brain, Open Approach
3E0Q029	Introduction of Other Anti-infective into Cranial Cavity and Brain, Open Approach
3E0Q03Z	Introduction of Anti-inflammatory into Cranial Cavity and Brain, Open Approach
3E0Q06Z	Introduction of Nutritional Substance into Cranial Cavity and Brain, Open Approach
3E0Q07Z	Introduction of Electrolytic and Water Balance Substance into Cranial Cavity and Brain, Open Approach
3E0Q0AZ	Introduction of Embryonic Stem Cells into Cranial Cavity and Brain, Open Approach
3E0Q0BZ	Introduction of Anesthetic Agent into Cranial Cavity and Brain, Open Approach
3E0Q0E0	Introduction of Autologous Somatic Stem Cells into Cranial Cavity and Brain, Open Approach
3E0Q0E1	Introduction of Nonautologous Somatic Stem Cells into Cranial Cavity and Brain, Open Approach
3E0Q0GC	Introduction of Other Therapeutic Substance into Cranial Cavity and Brain, Open Approach
3E0Q0HZ	Introduction of Radioactive Substance into Cranial Cavity and Brain, Open Approach
3E0Q0KZ	Introduction of Other Diagnostic Substance into Cranial Cavity and Brain, Open Approach
3E0Q0NZ	Introduction of Analgesics, Hypnotics, Sedatives into Cranial Cavity and Brain, Open Approach
3E0Q0SF	Introduction of Other Gas into Cranial Cavity and Brain, Open Approach
3E0Q0TZ	Introduction of Destructive Agent into Cranial Cavity and Brain, Open Approach
3E0Q305	Introduction of Other Antineoplastic into Cranial Cavity and Brain, Percutaneous Approach
3E0Q30M	Introduction of Monoclonal Antibody into Cranial Cavity and Brain, Percutaneous Approach

Code	Shortened Description
3E0Q328	Introduction of Oxazolidinones into Cranial Cavity and Brain, Percutaneous Approach
3E0Q329	Introduction of Other Anti-infective into Cranial Cavity and Brain, Percutaneous Approach
3E0Q33Z	Introduction of Anti-inflammatory into Cranial Cavity and Brain, Percutaneous Approach
3E0Q36Z	Introduction of Nutritional Substance into Cranial Cavity and Brain, Percutaneous Approach
3E0Q37Z	Introduction of Electrolytic and Water Balance Substance into Cranial Cavity and Brain, Percutaneous Approach
3E0Q3AZ	Introduction of Embryonic Stem Cells into Cranial Cavity and Brain, Percutaneous Approach
3E0Q3BZ	Introduction of Anesthetic Agent into Cranial Cavity and Brain, Percutaneous Approach
3E0Q3E0	Introduction of Autologous Somatic Stem Cells into Cranial Cavity and Brain, Percutaneous Approach
3E0Q3E1	Introduction of Nonautologous Somatic Stem Cells into Cranial Cavity and Brain, Percutaneous Approach
3E0Q3GC	Introduction of Other Therapeutic Substance into Cranial Cavity and Brain, Percutaneous Approach
3E0Q3HZ	Introduction of Radioactive Substance into Cranial Cavity and Brain, Percutaneous Approach
3E0Q3KZ	Introduction of Other Diagnostic Substance into Cranial Cavity and Brain, Percutaneous Approach
3E0Q3NZ	Introduction of Analgesics, Hypnotics, Sedatives into Cranial Cavity and Brain, Percutaneous Approach
3E0Q3SF	Introduction of Other Gas into Cranial Cavity and Brain, Percutaneous Approach
3E0Q3TZ	Introduction of Destructive Agent into Cranial Cavity and Brain, Percutaneous Approach

Table Number 8.2f: Traumatic Brain Injury

Code	Shortened Description
I6200	Nontraumatic subdural hemorrhage, unspecified
I6201	Nontraumatic acute subdural hemorrhage
I6202	Nontraumatic subacute subdural hemorrhage
I6203	Nontraumatic chronic subdural hemorrhage
I621	Nontraumatic extradural hemorrhage
I629	Nontraumatic intracranial hemorrhage, unspecified
I67841	Reversible cerebrovascular vasoconstriction syndrome
I67848	Other cerebrovascular vasospasm and vasoconstriction
I680	Cerebral amyloid angiopathy
Q280	Arteriovenous malformation of precerebral vessels
Q281	Other malformations of precerebral vessels
Q282	Arteriovenous malformation of cerebral vessels
Q283	Other malformations of cerebral vessels
S0190XA	Unspecified open wound of unspecified part of head, initial encounter

Code	Shortened Description
S020XXA	Fracture of vault of skull, initial encounter for closed fracture
S020XXB	Fracture of vault of skull, initial encounter for open fracture
S02101A	Fracture of base of skull, right side, initial encounter for closed fracture
S02101B	Fracture of base of skull, right side, initial encounter for open fracture
S02102A	Fracture of base of skull, left side, initial encounter for closed fracture
S02102B	Fracture of base of skull, left side, initial encounter for open fracture
S02109A	Fracture of base of skull, unspecified side, initial encounter for closed fracture
S02109B	Fracture of base of skull, unspecified side, initial encounter for open fracture
S0291XA	Unspecified fracture of skull, initial encounter for closed fracture
S0291XB	Unspecified fracture of skull, initial encounter for open fracture
S060X0A	Concussion without loss of consciousness, initial encounter
S060X1A	Concussion with loss of consciousness of 30 minutes or less, initial encounter
S060X9A	Concussion with loss of consciousness of unspecified duration, initial encounter
S061X0A	Traumatic cerebral edema without loss of consciousness, initial encounter
S061X1A	Traumatic cerebral edema with loss of consciousness of 30 minutes or less, initial encounter
S061X2A	Traumatic cerebral edema with loss of consciousness of 31 minutes to 59 minutes, initial encounter
S061X3A	Traumatic cerebral edema with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter
S061X4A	Traumatic cerebral edema with loss of consciousness of 6 hours to 24 hours, initial encounter
S061X5A	Traumatic cerebral edema with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter
S061X6A	Traumatic cerebral edema with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter
S061X7A	Traumatic cerebral edema with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter
S061X8A	Traumatic cerebral edema with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter
S061X9A	Traumatic cerebral edema with loss of consciousness of unspecified duration, initial encounter
S062X0A	Diffuse traumatic brain injury without loss of consciousness, initial encounter
S062X1A	Diffuse traumatic brain injury with loss of consciousness of 30 minutes or less, initial encounter
S062X2A	Diffuse traumatic brain injury with loss of consciousness of 31 minutes to 59 minutes, initial encounter
S062X3A	Diffuse traumatic brain injury with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter
S062X4A	Diffuse traumatic brain injury with loss of consciousness of 6 hours to 24 hours, initial encounter
S062X5A	Diffuse traumatic brain injury with loss of consciousness greater than 24 hours with return to pre-existing conscious levels, initial encounter

Code	Shortened Description
S062X6A	Diffuse traumatic brain injury with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter
S062X7A	Diffuse traumatic brain injury with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter
S062X8A	Diffuse traumatic brain injury with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter
S062X9A	Diffuse traumatic brain injury with loss of consciousness of unspecified duration, initial encounter
S06300A	Unspecified focal traumatic brain injury without loss of consciousness, initial encounter
S06301A	Unspecified focal traumatic brain injury with loss of consciousness of 30 minutes or less, initial encounter
S06302A	Unspecified focal traumatic brain injury with loss of consciousness of 31 minutes to 59 minutes, initial encounter
S06303A	Unspecified focal traumatic brain injury with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter
S06304A	Unspecified focal traumatic brain injury with loss of consciousness of 6 hours to 24 hours, initial encounter
S06305A	Unspecified focal traumatic brain injury with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter
S06306A	Unspecified focal traumatic brain injury with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter
S06307A	Unspecified focal traumatic brain injury with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter
S06308A	Unspecified focal traumatic brain injury with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter
S06309A	Unspecified focal traumatic brain injury with loss of consciousness of unspecified duration, initial encounter
S06310A	Contusion and laceration of right cerebrum without loss of consciousness, initial encounter
S06311A	Contusion and laceration of right cerebrum with loss of consciousness of 30 minutes or less, initial encounter
S06312A	Contusion and laceration of right cerebrum with loss of consciousness of 31 minutes to 59 minutes, initial encounter
S06313A	Contusion and laceration of right cerebrum with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter
S06314A	Contusion and laceration of right cerebrum with loss of consciousness of 6 hours to 24 hours, initial encounter
S06315A	Contusion and laceration of right cerebrum with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter
S06316A	Contusion and laceration of right cerebrum with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter
S06317A	Contusion and laceration of right cerebrum with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter
S06318A	Contusion and laceration of right cerebrum with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter
S06319A	Contusion and laceration of right cerebrum with loss of consciousness of unspecified duration, initial encounter
S06320A	Contusion and laceration of left cerebrum without loss of consciousness, initial encounter
S06321A	Contusion and laceration of left cerebrum with loss of consciousness of 30 minutes or less, initial encounter

Code	Shortened Description
S06322A	Contusion and laceration of left cerebrum with loss of consciousness of 31 minutes to 59 minutes, initial encounter
S06323A	Contusion and laceration of left cerebrum with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter
S06324A	Contusion and laceration of left cerebrum with loss of consciousness of 6 hours to 24 hours, initial encounter
S06325A	Contusion and laceration of left cerebrum with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter
S06326A	Contusion and laceration of left cerebrum with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter
S06327A	Contusion and laceration of left cerebrum with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter
S06328A	Contusion and laceration of left cerebrum with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter
S06329A	Contusion and laceration of left cerebrum with loss of consciousness of unspecified duration, initial encounter
S06330A	Contusion and laceration of cerebrum, unspecified, without loss of consciousness, initial encounter
S06331A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness of 30 minutes or less, initial encounter
S06332A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness of 31 minutes to 59 minutes, initial encounter
S06333A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter
S06334A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness of 6 hours to 24 hours, initial encounter
S06335A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter
S06336A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter
S06337A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter
S06338A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter
S06339A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness of unspecified duration, initial encounter
S06340A	Traumatic hemorrhage of right cerebrum without loss of consciousness, initial encounter
S06341A	Traumatic hemorrhage of right cerebrum with loss of consciousness of 30 minutes or less, initial encounter
S06342A	Traumatic hemorrhage of right cerebrum with loss of consciousness of 31 minutes to 59 minutes, initial encounter
S06343A	Traumatic hemorrhage of right cerebrum with loss of consciousness of 1 hours to 5 hours 59 minutes, initial encounter
S06344A	Traumatic hemorrhage of right cerebrum with loss of consciousness of 6 hours to 24 hours, initial encounter

Code	Shortened Description
S06345A	Traumatic hemorrhage of right cerebrum with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter
S06346A	Traumatic hemorrhage of right cerebrum with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter
S06347A	Traumatic hemorrhage of right cerebrum with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter
S06348A	Traumatic hemorrhage of right cerebrum with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter
S06349A	Traumatic hemorrhage of right cerebrum with loss of consciousness of unspecified duration, initial encounter
S06350A	Traumatic hemorrhage of left cerebrum without loss of consciousness, initial encounter
S06351A	Traumatic hemorrhage of left cerebrum with loss of consciousness of 30 minutes or less, initial encounter
S06352A	Traumatic hemorrhage of left cerebrum with loss of consciousness of 31 minutes to 59 minutes, initial encounter
S06353A	Traumatic hemorrhage of left cerebrum with loss of consciousness of 1 hours to 5 hours 59 minutes, initial encounter
S06354A	Traumatic hemorrhage of left cerebrum with loss of consciousness of 6 hours to 24 hours, initial encounter
S06355A	Traumatic hemorrhage of left cerebrum with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter
S06356A	Traumatic hemorrhage of left cerebrum with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter
S06357A	Traumatic hemorrhage of left cerebrum with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter
S06358A	Traumatic hemorrhage of left cerebrum with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter
S06359A	Traumatic hemorrhage of left cerebrum with loss of consciousness of unspecified duration, initial encounter
S06360A	Traumatic hemorrhage of cerebrum, unspecified, without loss of consciousness, initial encounter
S06361A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 30 minutes or less, initial encounter
S06362A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 31 minutes to 59 minutes, initial encounter
S06363A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 1 hours to 5 hours 59 minutes, initial encounter
S06364A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 6 hours to 24 hours, initial encounter
S06365A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter
S06366A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter
S06367A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter
S06368A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter

Code	Shortened Description
S06369A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of unspecified duration, initial encounter
S06370A	Contusion, laceration, and hemorrhage of cerebellum without loss of consciousness, initial encounter
S06371A	Contusion, laceration, and hemorrhage of cerebellum with loss of consciousness of 30 minutes or less, initial encounter
S06372A	Contusion, laceration, and hemorrhage of cerebellum with loss of consciousness of 31 minutes to 59 minutes, initial encounter
S06373A	Contusion, laceration, and hemorrhage of cerebellum with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter
S06374A	Contusion, laceration, and hemorrhage of cerebellum with loss of consciousness of 6 hours to 24 hours, initial encounter
S06375A	Contusion, laceration, and hemorrhage of cerebellum with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter
S06376A	Contusion, laceration, and hemorrhage of cerebellum with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter
S06377A	Contusion, laceration, and hemorrhage of cerebellum with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter
S06378A	Contusion, laceration, and hemorrhage of cerebellum with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter
S06379A	Contusion, laceration, and hemorrhage of cerebellum with loss of consciousness of unspecified duration, initial encounter
S06380A	Contusion, laceration, and hemorrhage of brainstem without loss of consciousness, initial encounter
S06381A	Contusion, laceration, and hemorrhage of brainstem with loss of consciousness of 30 minutes or less, initial encounter
S06382A	Contusion, laceration, and hemorrhage of brainstem with loss of consciousness of 31 minutes to 59 minutes, initial encounter
S06383A	Contusion, laceration, and hemorrhage of brainstem with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter
S06384A	Contusion, laceration, and hemorrhage of brainstem with loss of consciousness of 6 hours to 24 hours, initial encounter
S06385A	Contusion, laceration, and hemorrhage of brainstem with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter
S06386A	Contusion, laceration, and hemorrhage of brainstem with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter
S06387A	Contusion, laceration, and hemorrhage of brainstem with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter
S06388A	Contusion, laceration, and hemorrhage of brainstem with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter
S06389A	Contusion, laceration, and hemorrhage of brainstem with loss of consciousness of unspecified duration, initial encounter
S064X0A	Epidural hemorrhage without loss of consciousness, initial encounter

Code	Shortened Description
S064X1A	Epidural hemorrhage with loss of consciousness of 30 minutes or less, initial encounter
S064X2A	Epidural hemorrhage with loss of consciousness of 31 minutes to 59 minutes, initial encounter
S064X3A	Epidural hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter
S064X4A	Epidural hemorrhage with loss of consciousness of 6 hours to 24 hours, initial encounter
S064X5A	Epidural hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter
S064X6A	Epidural hemorrhage with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter
S064X7A	Epidural hemorrhage with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter
S064X8A	Epidural hemorrhage with loss of consciousness of any duration with death due to other causes prior to regaining consciousness, initial encounter
S064X9A	Epidural hemorrhage with loss of consciousness of unspecified duration, initial encounter
S065X0A	Traumatic subdural hemorrhage without loss of consciousness, initial encounter
S065X1A	Traumatic subdural hemorrhage with loss of consciousness of 30 minutes or less, initial encounter
S065X2A	Traumatic subdural hemorrhage with loss of consciousness of 31 minutes to 59 minutes, initial encounter
S065X3A	Traumatic subdural hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter
S065X4A	Traumatic subdural hemorrhage with loss of consciousness of 6 hours to 24 hours, initial encounter
S065X5A	Traumatic subdural hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter
S065X6A	Traumatic subdural hemorrhage with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter
S065X7A	Traumatic subdural hemorrhage with loss of consciousness of any duration with death due to brain injury before regaining consciousness, initial encounter
S065X8A	Traumatic subdural hemorrhage with loss of consciousness of any duration with death due to other cause before regaining consciousness, initial encounter
S065X9A	Traumatic subdural hemorrhage with loss of consciousness of unspecified duration, initial encounter
S066X0A	Traumatic subarachnoid hemorrhage without loss of consciousness, initial encounter
S066X1A	Traumatic subarachnoid hemorrhage with loss of consciousness of 30 minutes or less, initial encounter
S066X2A	Traumatic subarachnoid hemorrhage with loss of consciousness of 31 minutes to 59 minutes, initial encounter
S066X3A	Traumatic subarachnoid hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter
S066X4A	Traumatic subarachnoid hemorrhage with loss of consciousness of 6 hours to 24 hours, initial encounter
S066X5A	Traumatic subarachnoid hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter
S066X6A	Traumatic subarachnoid hemorrhage with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter

Code	Shortened Description
S066X7A	Traumatic subarachnoid hemorrhage with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter
S066X8A	Traumatic subarachnoid hemorrhage with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter
S066X9A	Traumatic subarachnoid hemorrhage with loss of consciousness of unspecified duration, initial encounter
S06810A	Injury of right internal carotid artery, intracranial portion, not elsewhere classified without loss of consciousness, initial encounter
S06811A	Injury of right internal carotid artery, intracranial portion, not elsewhere classified with loss of consciousness of 30 minutes or less, initial encounter
S06812A	Injury of right internal carotid artery, intracranial portion, not elsewhere classified with loss of consciousness of 31 minutes to 59 minutes, initial encounter
S06813A	Injury of right internal carotid artery, intracranial portion, not elsewhere classified with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter
S06814A	Injury of right internal carotid artery, intracranial portion, not elsewhere classified with loss of consciousness of 6 hours to 24 hours, initial encounter
S06815A	Injury of right internal carotid artery, intracranial portion, not elsewhere classified with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter
S06816A	Injury of right internal carotid artery, intracranial portion, not elsewhere classified with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter
S06817A	Injury of right internal carotid artery, intracranial portion, not elsewhere classified with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter
S06818A	Injury of right internal carotid artery, intracranial portion, not elsewhere classified with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter
S06819A	Injury of right internal carotid artery, intracranial portion, not elsewhere classified with loss of consciousness of unspecified duration, initial encounter
S06820A	Injury of left internal carotid artery, intracranial portion, not elsewhere classified without loss of consciousness, initial encounter
S06821A	Injury of left internal carotid artery, intracranial portion, not elsewhere classified with loss of consciousness of 30 minutes or less, initial encounter
S06822A	Injury of left internal carotid artery, intracranial portion, not elsewhere classified with loss of consciousness of 31 minutes to 59 minutes, initial encounter
S06823A	Injury of left internal carotid artery, intracranial portion, not elsewhere classified with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter
S06824A	Injury of left internal carotid artery, intracranial portion, not elsewhere classified with loss of consciousness of 6 hours to 24 hours, initial encounter
S06825A	Injury of left internal carotid artery, intracranial portion, not elsewhere classified with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter
S06826A	Injury of left internal carotid artery, intracranial portion, not elsewhere classified with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter
S06827A	Injury of left internal carotid artery, intracranial portion, not elsewhere classified with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter

Code	Shortened Description
S06828A	Injury of left internal carotid artery, intracranial portion, not elsewhere classified with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter
S06829A	Injury of left internal carotid artery, intracranial portion, not elsewhere classified with loss of consciousness of unspecified duration, initial encounter
S06890A	Other specified intracranial injury without loss of consciousness, initial encounter
S06891A	Other specified intracranial injury with loss of consciousness of 30 minutes or less, initial encounter
S06892A	Other specified intracranial injury with loss of consciousness of 31 minutes to 59 minutes, initial encounter
S06893A	Other specified intracranial injury with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter
S06894A	Other specified intracranial injury with loss of consciousness of 6 hours to 24 hours, initial encounter
S06895A	Other specified intracranial injury with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter
S06896A	Other specified intracranial injury with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter
S06897A	Other specified intracranial injury with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter
S06898A	Other specified intracranial injury with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter
S06899A	Other specified intracranial injury with loss of consciousness of unspecified duration, initial encounter
S069X0A	Unspecified intracranial injury without loss of consciousness, initial encounter
S069X1A	Unspecified intracranial injury with loss of consciousness of 30 minutes or less, initial encounter
S069X2A	Unspecified intracranial injury with loss of consciousness of 31 minutes to 59 minutes, initial encounter
S069X3A	Unspecified intracranial injury with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter
S069X4A	Unspecified intracranial injury with loss of consciousness of 6 hours to 24 hours, initial encounter
S069X5A	Unspecified intracranial injury with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter
S069X6A	Unspecified intracranial injury with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter
S069X7A	Unspecified intracranial injury with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter
S069X8A	Unspecified intracranial injury with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter
S069X9A	Unspecified intracranial injury with loss of consciousness of unspecified duration, initial encounter

Table Number 8.3: Carotid Intervention Procedures

Code	Shortened Description
021P08D	Bypass Pulmonary Trunk from Carotid with Zooplastic Tissue, Open Approach

Code	Shortened Description
021P09D	Bypass Pulmonary Trunk from Carotid with Autologous Venous Tissue, Open Approach
021P0AD	Bypass Pulmonary Trunk from Carotid with Autologous Arterial Tissue, Open Approach
021P0JD	Bypass Pulmonary Trunk from Carotid with Synthetic Substitute, Open Approach
021P0KD	Bypass Pulmonary Trunk from Carotid with Nonautologous Tissue Substitute, Open Approach
021P0ZD	Bypass Pulmonary Trunk from Carotid with No Device, Open Approach
021P48D	Bypass Pulmonary Trunk from Carotid with Zooplastic Tissue, Percutaneous Endoscopic Approach
021P49D	Bypass Pulmonary Trunk from Carotid with Autologous Venous Tissue, Percutaneous Endoscopic Approach
021P4AD	Bypass Pulmonary Trunk from Carotid with Autologous Arterial Tissue, Percutaneous Endoscopic Approach
021P4JD	Bypass Pulmonary Trunk from Carotid with Synthetic Substitute, Percutaneous Endoscopic Approach
021P4KD	Bypass Pulmonary Trunk from Carotid with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
021P4ZD	Bypass Pulmonary Trunk from Carotid with No Device, Percutaneous Endoscopic Approach
021Q08D	Bypass Right Pulmonary Artery from Carotid with Zooplastic Tissue, Open Approach
021Q09D	Bypass Right Pulmonary Artery from Carotid with Autologous Venous Tissue, Open Approach
021Q0AD	Bypass Right Pulmonary Artery from Carotid with Autologous Arterial Tissue, Open Approach
021Q0JD	Bypass Right Pulmonary Artery from Carotid with Synthetic Substitute, Open Approach
021Q0KD	Bypass Right Pulmonary Artery from Carotid with Nonautologous Tissue Substitute, Open Approach
021Q0ZD	Bypass Right Pulmonary Artery from Carotid with No Device, Open Approach
021Q48D	Bypass Right Pulmonary Artery from Carotid with Zooplastic Tissue, Percutaneous Endoscopic Approach
021Q49D	Bypass Right Pulmonary Artery from Carotid with Autologous Venous Tissue, Percutaneous Endoscopic Approach
021Q4AD	Bypass Right Pulmonary Artery from Carotid with Autologous Arterial Tissue, Percutaneous Endoscopic Approach
021Q4JD	Bypass Right Pulmonary Artery from Carotid with Synthetic Substitute, Percutaneous Endoscopic Approach
021Q4KD	Bypass Right Pulmonary Artery from Carotid with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
021Q4ZD	Bypass Right Pulmonary Artery from Carotid with No Device, Percutaneous Endoscopic Approach
021R08D	Bypass Left Pulmonary Artery from Carotid with Zooplastic Tissue, Open Approach
021R09D	Bypass Left Pulmonary Artery from Carotid with Autologous Venous Tissue, Open Approach
021R0AD	Bypass Left Pulmonary Artery from Carotid with Autologous Arterial Tissue, Open Approach
021R0JD	Bypass Left Pulmonary Artery from Carotid with Synthetic Substitute, Open Approach
021R0KD	Bypass Left Pulmonary Artery from Carotid with Nonautologous Tissue Substitute, Open Approach
021R0ZD	Bypass Left Pulmonary Artery from Carotid with No Device, Open Approach
021R48D	Bypass Left Pulmonary Artery from Carotid with Zooplastic Tissue, Percutaneous Endoscopic Approach
021R49D	Bypass Left Pulmonary Artery from Carotid with Autologous Venous Tissue, Percutaneous Endoscopic Approach
021R4AD	Bypass Left Pulmonary Artery from Carotid with Autologous Arterial Tissue, Percutaneous Endoscopic Approach

Code	Shortened Description
021R4JD	Bypass Left Pulmonary Artery from Carotid with Synthetic Substitute, Percutaneous Endoscopic Approach
021R4KD	Bypass Left Pulmonary Artery from Carotid with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
021R4ZD	Bypass Left Pulmonary Artery from Carotid with No Device, Percutaneous Endoscopic Approach
021W08D	Bypass Thoracic Aorta, Descending to Carotid with Zooplastic Tissue, Open Approach
021W09D	Bypass Thoracic Aorta, Descending to Carotid with Autologous Venous Tissue, Open Approach
021W0AD	Bypass Thoracic Aorta, Descending to Carotid with Autologous Arterial Tissue, Open Approach
021W0JD	Bypass Thoracic Aorta, Descending to Carotid with Synthetic Substitute, Open Approach
021W0KD	Bypass Thoracic Aorta, Descending to Carotid with Nonautologous Tissue Substitute, Open Approach
021W0ZD	Bypass Thoracic Aorta, Descending to Carotid, Open Approach
021W48D	Bypass Thoracic Aorta, Descending to Carotid with Zooplastic Tissue, Percutaneous Endoscopic Approach
021W49D	Bypass Thoracic Aorta, Descending to Carotid with Autologous Venous Tissue, Percutaneous Endoscopic Approach
021W4AD	Bypass Thoracic Aorta, Descending to Carotid with Autologous Arterial Tissue, Percutaneous Endoscopic Approach
021W4JD	Bypass Thoracic Aorta, Descending to Carotid with Synthetic Substitute, Percutaneous Endoscopic Approach
021W4KD	Bypass Thoracic Aorta, Descending to Carotid with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
021W4ZD	Bypass Thoracic Aorta, Descending to Carotid, Percutaneous Endoscopic Approach
021X08D	Bypass Thoracic Aorta, Ascending/Arch to Carotid with Zooplastic Tissue, Open Approach
021X09D	Bypass Thoracic Aorta, Ascending/Arch to Carotid with Autologous Venous Tissue, Open Approach
021X0AD	Bypass Thoracic Aorta, Ascending/Arch to Carotid with Autologous Arterial Tissue, Open Approach
021X0JD	Bypass Thoracic Aorta, Ascending/Arch to Carotid with Synthetic Substitute, Open Approach
021X0KD	Bypass Thoracic Aorta, Ascending/Arch to Carotid with Nonautologous Tissue Substitute, Open Approach
021X0ZD	Bypass Thoracic Aorta, Ascending/Arch to Carotid, Open Approach
021X48D	Bypass Thoracic Aorta, Ascending/Arch to Carotid with Zooplastic Tissue, Percutaneous Endoscopic Approach
021X49D	Bypass Thoracic Aorta, Ascending/Arch to Carotid with Autologous Venous Tissue, Percutaneous Endoscopic Approach
021X4AD	Bypass Thoracic Aorta, Ascending/Arch to Carotid with Autologous Arterial Tissue, Percutaneous Endoscopic Approach
021X4JD	Bypass Thoracic Aorta, Ascending/Arch to Carotid with Synthetic Substitute, Percutaneous Endoscopic Approach
021X4KD	Bypass Thoracic Aorta, Ascending/Arch to Carotid with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
021X4ZD	Bypass Thoracic Aorta, Ascending/Arch to Carotid, Percutaneous Endoscopic Approach
031H09G	Bypass Right Common Carotid Artery to Intracranial Artery with Autologous Venous Tissue, Open Approach
031H09J	Bypass Right Common Carotid Artery to Right Extracranial Artery with Autologous Venous Tissue, Open Approach

Code	Shortened Description
031H09K	Bypass Right Common Carotid Artery to Left Extracranial Artery with Autologous Venous Tissue, Open Approach
031H09Y	Bypass Right Common Carotid Artery to Upper Artery with Autologous Venous Tissue, Open Approach
031H0AG	Bypass Right Common Carotid Artery to Intracranial Artery with Autologous Arterial Tissue, Open Approach
031H0AJ	Bypass Right Common Carotid Artery to Right Extracranial Artery with Autologous Arterial Tissue, Open Approach
031H0AK	Bypass Right Common Carotid Artery to Left Extracranial Artery with Autologous Arterial Tissue, Open Approach
031H0AY	Bypass Right Common Carotid Artery to Upper Artery with Autologous Arterial Tissue, Open Approach
031H0JG	Bypass Right Common Carotid Artery to Intracranial Artery with Synthetic Substitute, Open Approach
031H0JJ	Bypass Right Common Carotid Artery to Right Extracranial Artery with Synthetic Substitute, Open Approach
031H0JK	Bypass Right Common Carotid Artery to Left Extracranial Artery with Synthetic Substitute, Open Approach
031H0JY	Bypass Right Common Carotid Artery to Upper Artery with Synthetic Substitute, Open Approach
031H0KG	Bypass Right Common Carotid Artery to Intracranial Artery with Nonautologous Tissue Substitute, Open Approach
031H0KJ	Bypass Right Common Carotid Artery to Right Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031H0KK	Bypass Right Common Carotid Artery to Left Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031H0KY	Bypass Right Common Carotid Artery to Upper Artery with Nonautologous Tissue Substitute, Open Approach
031H0ZG	Bypass Right Common Carotid Artery to Intracranial Artery, Open Approach
031H0ZJ	Bypass Right Common Carotid Artery to Right Extracranial Artery, Open Approach
031H0ZK	Bypass Right Common Carotid Artery to Left Extracranial Artery, Open Approach
031H0ZY	Bypass Right Common Carotid Artery to Upper Artery, Open Approach
031J09G	Bypass Left Common Carotid Artery to Intracranial Artery with Autologous Venous Tissue, Open Approach
031J09J	Bypass Left Common Carotid Artery to Right Extracranial Artery with Autologous Venous Tissue, Open Approach
031J09K	Bypass Left Common Carotid Artery to Left Extracranial Artery with Autologous Venous Tissue, Open Approach
031J09Y	Bypass Left Common Carotid Artery to Upper Artery with Autologous Venous Tissue, Open Approach
031J0AG	Bypass Left Common Carotid Artery to Intracranial Artery with Autologous Arterial Tissue, Open Approach
031J0AJ	Bypass Left Common Carotid Artery to Right Extracranial Artery with Autologous Arterial Tissue, Open Approach
031J0AK	Bypass Left Common Carotid Artery to Left Extracranial Artery with Autologous Arterial Tissue, Open Approach
031J0AY	Bypass Left Common Carotid Artery to Upper Artery with Autologous Arterial Tissue, Open Approach
031J0JG	Bypass Left Common Carotid Artery to Intracranial Artery with Synthetic Substitute, Open Approach
031J0JJ	Bypass Left Common Carotid Artery to Right Extracranial Artery with Synthetic Substitute, Open Approach
031J0JK	Bypass Left Common Carotid Artery to Left Extracranial Artery with Synthetic Substitute, Open Approach
031J0JY	Bypass Left Common Carotid Artery to Upper Artery with Synthetic Substitute, Open Approach
031J0KG	Bypass Left Common Carotid Artery to Intracranial Artery with Nonautologous Tissue Substitute, Open Approach

Code	Shortened Description
031J0KJ	Bypass Left Common Carotid Artery to Right Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031J0KK	Bypass Left Common Carotid Artery to Left Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031J0KY	Bypass Left Common Carotid Artery to Upper Artery with Nonautologous Tissue Substitute, Open Approach
031J0ZG	Bypass Left Common Carotid Artery to Intracranial Artery, Open Approach
031J0ZJ	Bypass Left Common Carotid Artery to Right Extracranial Artery, Open Approach
031J0ZK	Bypass Left Common Carotid Artery to Left Extracranial Artery, Open Approach
031J0ZY	Bypass Left Common Carotid Artery to Upper Artery, Open Approach
031K09J	Bypass Right Internal Carotid Artery to Right Extracranial Artery with Autologous Venous Tissue, Open Approach
031K09K	Bypass Right Internal Carotid Artery to Left Extracranial Artery with Autologous Venous Tissue, Open Approach
031K0AJ	Bypass Right Internal Carotid Artery to Right Extracranial Artery with Autologous Arterial Tissue, Open Approach
031K0AK	Bypass Right Internal Carotid Artery to Left Extracranial Artery with Autologous Arterial Tissue, Open Approach
031K0JJ	Bypass Right Internal Carotid Artery to Right Extracranial Artery with Synthetic Substitute, Open Approach
031K0JK	Bypass Right Internal Carotid Artery to Left Extracranial Artery with Synthetic Substitute, Open Approach
031K0KJ	Bypass Right Internal Carotid Artery to Right Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031K0KK	Bypass Right Internal Carotid Artery to Left Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031K0ZJ	Bypass Right Internal Carotid Artery to Right Extracranial Artery, Open Approach
031K0ZK	Bypass Right Internal Carotid Artery to Left Extracranial Artery, Open Approach
031L09J	Bypass Left Internal Carotid Artery to Right Extracranial Artery with Autologous Venous Tissue, Open Approach
031L09K	Bypass Left Internal Carotid Artery to Left Extracranial Artery with Autologous Venous Tissue, Open Approach
031L0AJ	Bypass Left Internal Carotid Artery to Right Extracranial Artery with Autologous Arterial Tissue, Open Approach
031L0AK	Bypass Left Internal Carotid Artery to Left Extracranial Artery with Autologous Arterial Tissue, Open Approach
031L0JJ	Bypass Left Internal Carotid Artery to Right Extracranial Artery with Synthetic Substitute, Open Approach
031L0JK	Bypass Left Internal Carotid Artery to Left Extracranial Artery with Synthetic Substitute, Open Approach
031L0KJ	Bypass Left Internal Carotid Artery to Right Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031L0KK	Bypass Left Internal Carotid Artery to Left Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031L0ZJ	Bypass Left Internal Carotid Artery to Right Extracranial Artery, Open Approach
031L0ZK	Bypass Left Internal Carotid Artery to Left Extracranial Artery, Open Approach
031M09J	Bypass Right External Carotid Artery to Right Extracranial Artery with Autologous Venous Tissue, Open Approach
031M09K	Bypass Right External Carotid Artery to Left Extracranial Artery with Autologous Venous Tissue, Open Approach

Code	Shortened Description
031M0AJ	Bypass Right External Carotid Artery to Right Extracranial Artery with Autologous Arterial Tissue, Open Approach
031M0AK	Bypass Right External Carotid Artery to Left Extracranial Artery with Autologous Arterial Tissue, Open Approach
031M0JJ	Bypass Right External Carotid Artery to Right Extracranial Artery with Synthetic Substitute, Open Approach
031M0JK	Bypass Right External Carotid Artery to Left Extracranial Artery with Synthetic Substitute, Open Approach
031M0KJ	Bypass Right External Carotid Artery to Right Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031M0KK	Bypass Right External Carotid Artery to Left Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031M0ZJ	Bypass Right External Carotid Artery to Right Extracranial Artery, Open Approach
031M0ZK	Bypass Right External Carotid Artery to Left Extracranial Artery, Open Approach
031N09J	Bypass Left External Carotid Artery to Right Extracranial Artery with Autologous Venous Tissue, Open Approach
031N09K	Bypass Left External Carotid Artery to Left Extracranial Artery with Autologous Venous Tissue, Open Approach
031N0AJ	Bypass Left External Carotid Artery to Right Extracranial Artery with Autologous Arterial Tissue, Open Approach
031N0AK	Bypass Left External Carotid Artery to Left Extracranial Artery with Autologous Arterial Tissue, Open Approach
031N0JJ	Bypass Left External Carotid Artery to Right Extracranial Artery with Synthetic Substitute, Open Approach
031N0JK	Bypass Left External Carotid Artery to Left Extracranial Artery with Synthetic Substitute, Open Approach
031N0KJ	Bypass Left External Carotid Artery to Right Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031N0KK	Bypass Left External Carotid Artery to Left Extracranial Artery with Nonautologous Tissue Substitute, Open Approach
031N0ZJ	Bypass Left External Carotid Artery to Right Extracranial Artery, Open Approach
031N0ZK	Bypass Left External Carotid Artery to Left Extracranial Artery, Open Approach
031S09G	Bypass Right Temporal Artery to Intracranial Artery with Autologous Venous Tissue, Open Approach
031S0AG	Bypass Right Temporal Artery to Intracranial Artery with Autologous Arterial Tissue, Open Approach
031S0JG	Bypass Right Temporal Artery to Intracranial Artery with Synthetic Substitute, Open Approach
031S0KG	Bypass Right Temporal Artery to Intracranial Artery with Nonautologous Tissue Substitute, Open Approach
031S0ZG	Bypass Right Temporal Artery to Intracranial Artery, Open Approach
031T09G	Bypass Left Temporal Artery to Intracranial Artery with Autologous Venous Tissue, Open Approach
031T0AG	Bypass Left Temporal Artery to Intracranial Artery with Autologous Arterial Tissue, Open Approach
031T0JG	Bypass Left Temporal Artery to Intracranial Artery with Synthetic Substitute, Open Approach
031T0KG	Bypass Left Temporal Artery to Intracranial Artery with Nonautologous Tissue Substitute, Open Approach
031T0ZG	Bypass Left Temporal Artery to Intracranial Artery, Open Approach
037G046	Dilation of Intracranial Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037G04Z	Dilation of Intracranial Artery with Drug-eluting Intraluminal Device, Open Approach

Code	Shortened Description
037G056	Dilation of Intracranial Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037G05Z	Dilation of Intracranial Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037G066	Dilation of Intracranial Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037G06Z	Dilation of Intracranial Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037G076	Dilation of Intracranial Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037G07Z	Dilation of Intracranial Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037G0D6	Dilation of Intracranial Artery, Bifurcation, with Intraluminal Device, Open Approach
037G0DZ	Dilation of Intracranial Artery with Intraluminal Device, Open Approach
037G0E6	Dilation of Intracranial Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037G0EZ	Dilation of Intracranial Artery with Two Intraluminal Devices, Open Approach
037G0F6	Dilation of Intracranial Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037G0FZ	Dilation of Intracranial Artery with Three Intraluminal Devices, Open Approach
037G0G6	Dilation of Intracranial Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037G0GZ	Dilation of Intracranial Artery with Four or More Intraluminal Devices, Open Approach
037G0Z6	Dilation of Intracranial Artery, Bifurcation, Open Approach
037G0ZZ	Dilation of Intracranial Artery, Open Approach
037G346	Dilation of Intracranial Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037G34Z	Dilation of Intracranial Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037G356	Dilation of Intracranial Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037G35Z	Dilation of Intracranial Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037G366	Dilation of Intracranial Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037G36Z	Dilation of Intracranial Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037G376	Dilation of Intracranial Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037G37Z	Dilation of Intracranial Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037G3D6	Dilation of Intracranial Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037G3DZ	Dilation of Intracranial Artery with Intraluminal Device, Percutaneous Approach
037G3E6	Dilation of Intracranial Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037G3EZ	Dilation of Intracranial Artery with Two Intraluminal Devices, Percutaneous Approach
037G3F6	Dilation of Intracranial Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037G3FZ	Dilation of Intracranial Artery with Three Intraluminal Devices, Percutaneous Approach
037G3G6	Dilation of Intracranial Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037G3GZ	Dilation of Intracranial Artery with Four or More Intraluminal Devices, Percutaneous Approach

Code	Shortened Description
037G3Z6	Dilation of Intracranial Artery, Bifurcation, Percutaneous Approach
037G3ZZ	Dilation of Intracranial Artery, Percutaneous Approach
037G446	Dilation of Intracranial Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037G44Z	Dilation of Intracranial Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037G456	Dilation of Intracranial Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037G45Z	Dilation of Intracranial Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037G466	Dilation of Intracranial Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037G46Z	Dilation of Intracranial Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037G476	Dilation of Intracranial Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037G47Z	Dilation of Intracranial Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037G4D6	Dilation of Intracranial Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037G4DZ	Dilation of Intracranial Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037G4E6	Dilation of Intracranial Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037G4EZ	Dilation of Intracranial Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037G4F6	Dilation of Intracranial Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037G4FZ	Dilation of Intracranial Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037G4G6	Dilation of Intracranial Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037G4GZ	Dilation of Intracranial Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037G4Z6	Dilation of Intracranial Artery, Bifurcation, Percutaneous Endoscopic Approach
037G4ZZ	Dilation of Intracranial Artery, Percutaneous Endoscopic Approach
037H046	Dilation of Right Common Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037H04Z	Dilation of Right Common Carotid Artery with Drug-eluting Intraluminal Device, Open Approach
037H056	Dilation of Right Common Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037H05Z	Dilation of Right Common Carotid Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037H066	Dilation of Right Common Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037H06Z	Dilation of Right Common Carotid Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037H076	Dilation of Right Common Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037H07Z	Dilation of Right Common Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037H0D6	Dilation of Right Common Carotid Artery, Bifurcation, with Intraluminal Device, Open Approach

Code	Shortened Description
037H0DZ	Dilation of Right Common Carotid Artery with Intraluminal Device, Open Approach
037H0E6	Dilation of Right Common Carotid Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037H0EZ	Dilation of Right Common Carotid Artery with Two Intraluminal Devices, Open Approach
037H0F6	Dilation of Right Common Carotid Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037H0FZ	Dilation of Right Common Carotid Artery with Three Intraluminal Devices, Open Approach
037H0G6	Dilation of Right Common Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037H0GZ	Dilation of Right Common Carotid Artery with Four or More Intraluminal Devices, Open Approach
037H0Z6	Dilation of Right Common Carotid Artery, Bifurcation, Open Approach
037H0ZZ	Dilation of Right Common Carotid Artery, Open Approach
037H346	Dilation of Right Common Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037H34Z	Dilation of Right Common Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037H356	Dilation of Right Common Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037H35Z	Dilation of Right Common Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037H366	Dilation of Right Common Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037H36Z	Dilation of Right Common Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037H376	Dilation of Right Common Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037H37Z	Dilation of Right Common Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037H3D6	Dilation of Right Common Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037H3DZ	Dilation of Right Common Carotid Artery with Intraluminal Device, Percutaneous Approach
037H3E6	Dilation of Right Common Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037H3EZ	Dilation of Right Common Carotid Artery with Two Intraluminal Devices, Percutaneous Approach
037H3F6	Dilation of Right Common Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037H3FZ	Dilation of Right Common Carotid Artery with Three Intraluminal Devices, Percutaneous Approach
037H3G6	Dilation of Right Common Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037H3GZ	Dilation of Right Common Carotid Artery with Four or More Intraluminal Devices, Percutaneous Approach
037H3Z6	Dilation of Right Common Carotid Artery, Bifurcation, Percutaneous Approach
037H3ZZ	Dilation of Right Common Carotid Artery, Percutaneous Approach
037H446	Dilation of Right Common Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037H44Z	Dilation of Right Common Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach

Code	Shortened Description
037H456	Dilation of Right Common Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037H45Z	Dilation of Right Common Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037H466	Dilation of Right Common Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037H46Z	Dilation of Right Common Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037H476	Dilation of Right Common Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037H47Z	Dilation of Right Common Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037H4D6	Dilation of Right Common Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037H4DZ	Dilation of Right Common Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037H4E6	Dilation of Right Common Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037H4EZ	Dilation of Right Common Carotid Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037H4F6	Dilation of Right Common Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037H4FZ	Dilation of Right Common Carotid Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037H4G6	Dilation of Right Common Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037H4GZ	Dilation of Right Common Carotid Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037H4Z6	Dilation of Right Common Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
037H4ZZ	Dilation of Right Common Carotid Artery, Percutaneous Endoscopic Approach
037J046	Dilation of Left Common Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037J04Z	Dilation of Left Common Carotid Artery with Drug-eluting Intraluminal Device, Open Approach
037J056	Dilation of Left Common Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037J05Z	Dilation of Left Common Carotid Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037J066	Dilation of Left Common Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037J06Z	Dilation of Left Common Carotid Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037J076	Dilation of Left Common Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037J07Z	Dilation of Left Common Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037J0D6	Dilation of Left Common Carotid Artery, Bifurcation, with Intraluminal Device, Open Approach
037J0DZ	Dilation of Left Common Carotid Artery with Intraluminal Device, Open Approach

Code	Shortened Description
037J0E6	Dilation of Left Common Carotid Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037J0EZ	Dilation of Left Common Carotid Artery with Two Intraluminal Devices, Open Approach
037J0F6	Dilation of Left Common Carotid Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037J0FZ	Dilation of Left Common Carotid Artery with Three Intraluminal Devices, Open Approach
037J0G6	Dilation of Left Common Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037J0GZ	Dilation of Left Common Carotid Artery with Four or More Intraluminal Devices, Open Approach
037J0Z6	Dilation of Left Common Carotid Artery, Bifurcation, Open Approach
037J0ZZ	Dilation of Left Common Carotid Artery, Open Approach
037J346	Dilation of Left Common Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037J34Z	Dilation of Left Common Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037J356	Dilation of Left Common Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037J35Z	Dilation of Left Common Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037J366	Dilation of Left Common Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037J36Z	Dilation of Left Common Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037J376	Dilation of Left Common Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037J37Z	Dilation of Left Common Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037J3D6	Dilation of Left Common Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037J3DZ	Dilation of Left Common Carotid Artery with Intraluminal Device, Percutaneous Approach
037J3E6	Dilation of Left Common Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037J3EZ	Dilation of Left Common Carotid Artery with Two Intraluminal Devices, Percutaneous Approach
037J3F6	Dilation of Left Common Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037J3FZ	Dilation of Left Common Carotid Artery with Three Intraluminal Devices, Percutaneous Approach
037J3G6	Dilation of Left Common Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037J3GZ	Dilation of Left Common Carotid Artery with Four or More Intraluminal Devices, Percutaneous Approach
037J3Z6	Dilation of Left Common Carotid Artery, Bifurcation, Percutaneous Approach
037J3ZZ	Dilation of Left Common Carotid Artery, Percutaneous Approach
037J446	Dilation of Left Common Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037J44Z	Dilation of Left Common Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037J456	Dilation of Left Common Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach

Code	Shortened Description
037J45Z	Dilation of Left Common Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037J466	Dilation of Left Common Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037J46Z	Dilation of Left Common Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037J476	Dilation of Left Common Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037J47Z	Dilation of Left Common Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037J4D6	Dilation of Left Common Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037J4DZ	Dilation of Left Common Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037J4E6	Dilation of Left Common Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037J4EZ	Dilation of Left Common Carotid Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037J4F6	Dilation of Left Common Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037J4FZ	Dilation of Left Common Carotid Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037J4G6	Dilation of Left Common Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037J4GZ	Dilation of Left Common Carotid Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037J4Z6	Dilation of Left Common Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
037J4ZZ	Dilation of Left Common Carotid Artery, Percutaneous Endoscopic Approach
037K046	Dilation of Right Internal Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037K04Z	Dilation of Right Internal Carotid Artery with Drug-eluting Intraluminal Device, Open Approach
037K056	Dilation of Right Internal Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037K05Z	Dilation of Right Internal Carotid Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037K066	Dilation of Right Internal Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037K06Z	Dilation of Right Internal Carotid Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037K076	Dilation of Right Internal Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037K07Z	Dilation of Right Internal Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037K0D6	Dilation of Right Internal Carotid Artery, Bifurcation, with Intraluminal Device, Open Approach
037K0DZ	Dilation of Right Internal Carotid Artery with Intraluminal Device, Open Approach
037K0E6	Dilation of Right Internal Carotid Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037K0EZ	Dilation of Right Internal Carotid Artery with Two Intraluminal Devices, Open Approach

Code	Shortened Description
037K0F6	Dilation of Right Internal Carotid Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037K0FZ	Dilation of Right Internal Carotid Artery with Three Intraluminal Devices, Open Approach
037K0G6	Dilation of Right Internal Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037K0GZ	Dilation of Right Internal Carotid Artery with Four or More Intraluminal Devices, Open Approach
037K0Z6	Dilation of Right Internal Carotid Artery, Bifurcation, Open Approach
037K0ZZ	Dilation of Right Internal Carotid Artery, Open Approach
037K346	Dilation of Right Internal Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037K34Z	Dilation of Right Internal Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037K356	Dilation of Right Internal Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037K35Z	Dilation of Right Internal Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037K366	Dilation of Right Internal Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037K36Z	Dilation of Right Internal Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037K376	Dilation of Right Internal Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037K37Z	Dilation of Right Internal Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037K3D6	Dilation of Right Internal Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037K3DZ	Dilation of Right Internal Carotid Artery with Intraluminal Device, Percutaneous Approach
037K3E6	Dilation of Right Internal Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037K3EZ	Dilation of Right Internal Carotid Artery with Two Intraluminal Devices, Percutaneous Approach
037K3F6	Dilation of Right Internal Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037K3FZ	Dilation of Right Internal Carotid Artery with Three Intraluminal Devices, Percutaneous Approach
037K3G6	Dilation of Right Internal Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037K3GZ	Dilation of Right Internal Carotid Artery with Four or More Intraluminal Devices, Percutaneous Approach
037K3Z6	Dilation of Right Internal Carotid Artery, Bifurcation, Percutaneous Approach
037K3ZZ	Dilation of Right Internal Carotid Artery, Percutaneous Approach
037K446	Dilation of Right Internal Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037K44Z	Dilation of Right Internal Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037K456	Dilation of Right Internal Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037K45Z	Dilation of Right Internal Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach

Code	Shortened Description
037K466	Dilation of Right Internal Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037K46Z	Dilation of Right Internal Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037K476	Dilation of Right Internal Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037K47Z	Dilation of Right Internal Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037K4D6	Dilation of Right Internal Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037K4DZ	Dilation of Right Internal Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037K4E6	Dilation of Right Internal Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037K4EZ	Dilation of Right Internal Carotid Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037K4F6	Dilation of Right Internal Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037K4FZ	Dilation of Right Internal Carotid Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037K4G6	Dilation of Right Internal Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037K4GZ	Dilation of Right Internal Carotid Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037K4Z6	Dilation of Right Internal Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
037K4ZZ	Dilation of Right Internal Carotid Artery, Percutaneous Endoscopic Approach
037L046	Dilation of Left Internal Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037L04Z	Dilation of Left Internal Carotid Artery with Drug-eluting Intraluminal Device, Open Approach
037L056	Dilation of Left Internal Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037L05Z	Dilation of Left Internal Carotid Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037L066	Dilation of Left Internal Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037L06Z	Dilation of Left Internal Carotid Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037L076	Dilation of Left Internal Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037L07Z	Dilation of Left Internal Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037L0D6	Dilation of Left Internal Carotid Artery, Bifurcation, with Intraluminal Device, Open Approach
037L0DZ	Dilation of Left Internal Carotid Artery with Intraluminal Device, Open Approach
037L0E6	Dilation of Left Internal Carotid Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037L0EZ	Dilation of Left Internal Carotid Artery with Two Intraluminal Devices, Open Approach
037L0F6	Dilation of Left Internal Carotid Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037L0FZ	Dilation of Left Internal Carotid Artery with Three Intraluminal Devices, Open Approach

Code	Shortened Description
037L0G6	Dilation of Left Internal Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037L0GZ	Dilation of Left Internal Carotid Artery with Four or More Intraluminal Devices, Open Approach
037L0Z6	Dilation of Left Internal Carotid Artery, Bifurcation, Open Approach
037L0ZZ	Dilation of Left Internal Carotid Artery, Open Approach
037L346	Dilation of Left Internal Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037L34Z	Dilation of Left Internal Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037L356	Dilation of Left Internal Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037L35Z	Dilation of Left Internal Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037L366	Dilation of Left Internal Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037L36Z	Dilation of Left Internal Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037L376	Dilation of Left Internal Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037L37Z	Dilation of Left Internal Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037L3D6	Dilation of Left Internal Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037L3DZ	Dilation of Left Internal Carotid Artery with Intraluminal Device, Percutaneous Approach
037L3E6	Dilation of Left Internal Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037L3EZ	Dilation of Left Internal Carotid Artery with Two Intraluminal Devices, Percutaneous Approach
037L3F6	Dilation of Left Internal Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037L3FZ	Dilation of Left Internal Carotid Artery with Three Intraluminal Devices, Percutaneous Approach
037L3G6	Dilation of Left Internal Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037L3GZ	Dilation of Left Internal Carotid Artery with Four or More Intraluminal Devices, Percutaneous Approach
037L3Z6	Dilation of Left Internal Carotid Artery, Bifurcation, Percutaneous Approach
037L3ZZ	Dilation of Left Internal Carotid Artery, Percutaneous Approach
037L446	Dilation of Left Internal Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037L44Z	Dilation of Left Internal Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037L456	Dilation of Left Internal Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037L45Z	Dilation of Left Internal Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037L466	Dilation of Left Internal Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037L46Z	Dilation of Left Internal Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach

Code	Shortened Description
037L476	Dilation of Left Internal Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037L47Z	Dilation of Left Internal Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037L4D6	Dilation of Left Internal Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037L4DZ	Dilation of Left Internal Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037L4E6	Dilation of Left Internal Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037L4EZ	Dilation of Left Internal Carotid Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037L4F6	Dilation of Left Internal Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037L4FZ	Dilation of Left Internal Carotid Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037L4G6	Dilation of Left Internal Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037L4GZ	Dilation of Left Internal Carotid Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037L4Z6	Dilation of Left Internal Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
037L4ZZ	Dilation of Left Internal Carotid Artery, Percutaneous Endoscopic Approach
037M046	Dilation of Right External Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037M04Z	Dilation of Right External Carotid Artery with Drug-eluting Intraluminal Device, Open Approach
037M056	Dilation of Right External Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037M05Z	Dilation of Right External Carotid Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037M066	Dilation of Right External Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037M06Z	Dilation of Right External Carotid Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037M076	Dilation of Right External Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037M07Z	Dilation of Right External Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037M0D6	Dilation of Right External Carotid Artery, Bifurcation, with Intraluminal Device, Open Approach
037M0DZ	Dilation of Right External Carotid Artery with Intraluminal Device, Open Approach
037M0E6	Dilation of Right External Carotid Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037M0EZ	Dilation of Right External Carotid Artery with Two Intraluminal Devices, Open Approach
037M0F6	Dilation of Right External Carotid Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037M0FZ	Dilation of Right External Carotid Artery with Three Intraluminal Devices, Open Approach
037M0G6	Dilation of Right External Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037M0GZ	Dilation of Right External Carotid Artery with Four or More Intraluminal Devices, Open Approach
037M0Z6	Dilation of Right External Carotid Artery, Bifurcation, Open Approach

Code	Shortened Description
037M0ZZ	Dilation of Right External Carotid Artery, Open Approach
037M346	Dilation of Right External Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037M34Z	Dilation of Right External Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037M356	Dilation of Right External Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037M35Z	Dilation of Right External Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037M366	Dilation of Right External Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037M36Z	Dilation of Right External Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037M376	Dilation of Right External Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037M37Z	Dilation of Right External Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037M3D6	Dilation of Right External Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037M3DZ	Dilation of Right External Carotid Artery with Intraluminal Device, Percutaneous Approach
037M3E6	Dilation of Right External Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037M3EZ	Dilation of Right External Carotid Artery with Two Intraluminal Devices, Percutaneous Approach
037M3F6	Dilation of Right External Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037M3FZ	Dilation of Right External Carotid Artery with Three Intraluminal Devices, Percutaneous Approach
037M3G6	Dilation of Right External Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037M3GZ	Dilation of Right External Carotid Artery with Four or More Intraluminal Devices, Percutaneous Approach
037M3Z6	Dilation of Right External Carotid Artery, Bifurcation, Percutaneous Approach
037M3ZZ	Dilation of Right External Carotid Artery, Percutaneous Approach
037M446	Dilation of Right External Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037M44Z	Dilation of Right External Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037M456	Dilation of Right External Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037M45Z	Dilation of Right External Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037M466	Dilation of Right External Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037M46Z	Dilation of Right External Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037M476	Dilation of Right External Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037M47Z	Dilation of Right External Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach

Code	Shortened Description
037M4D6	Dilation of Right External Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037M4DZ	Dilation of Right External Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037M4E6	Dilation of Right External Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037M4EZ	Dilation of Right External Carotid Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037M4F6	Dilation of Right External Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037M4FZ	Dilation of Right External Carotid Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037M4G6	Dilation of Right External Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037M4GZ	Dilation of Right External Carotid Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037M4Z6	Dilation of Right External Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
037M4ZZ	Dilation of Right External Carotid Artery, Percutaneous Endoscopic Approach
037N046	Dilation of Left External Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037N04Z	Dilation of Left External Carotid Artery with Drug-eluting Intraluminal Device, Open Approach
037N056	Dilation of Left External Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037N05Z	Dilation of Left External Carotid Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037N066	Dilation of Left External Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037N06Z	Dilation of Left External Carotid Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037N076	Dilation of Left External Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037N07Z	Dilation of Left External Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037N0D6	Dilation of Left External Carotid Artery, Bifurcation, with Intraluminal Device, Open Approach
037N0DZ	Dilation of Left External Carotid Artery with Intraluminal Device, Open Approach
037N0E6	Dilation of Left External Carotid Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037N0EZ	Dilation of Left External Carotid Artery with Two Intraluminal Devices, Open Approach
037N0F6	Dilation of Left External Carotid Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037N0FZ	Dilation of Left External Carotid Artery with Three Intraluminal Devices, Open Approach
037N0G6	Dilation of Left External Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037N0GZ	Dilation of Left External Carotid Artery with Four or More Intraluminal Devices, Open Approach
037N0Z6	Dilation of Left External Carotid Artery, Bifurcation, Open Approach
037N0ZZ	Dilation of Left External Carotid Artery, Open Approach
037N346	Dilation of Left External Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037N34Z	Dilation of Left External Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Approach

Code	Shortened Description
037N356	Dilation of Left External Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037N35Z	Dilation of Left External Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037N366	Dilation of Left External Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037N36Z	Dilation of Left External Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037N376	Dilation of Left External Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037N37Z	Dilation of Left External Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037N3D6	Dilation of Left External Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037N3DZ	Dilation of Left External Carotid Artery with Intraluminal Device, Percutaneous Approach
037N3E6	Dilation of Left External Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037N3EZ	Dilation of Left External Carotid Artery with Two Intraluminal Devices, Percutaneous Approach
037N3F6	Dilation of Left External Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037N3FZ	Dilation of Left External Carotid Artery with Three Intraluminal Devices, Percutaneous Approach
037N3G6	Dilation of Left External Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037N3GZ	Dilation of Left External Carotid Artery with Four or More Intraluminal Devices, Percutaneous Approach
037N3Z6	Dilation of Left External Carotid Artery, Bifurcation, Percutaneous Approach
037N3ZZ	Dilation of Left External Carotid Artery, Percutaneous Approach
037N446	Dilation of Left External Carotid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037N44Z	Dilation of Left External Carotid Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037N456	Dilation of Left External Carotid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037N45Z	Dilation of Left External Carotid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037N466	Dilation of Left External Carotid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037N46Z	Dilation of Left External Carotid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037N476	Dilation of Left External Carotid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037N47Z	Dilation of Left External Carotid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037N4D6	Dilation of Left External Carotid Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037N4DZ	Dilation of Left External Carotid Artery with Intraluminal Device, Percutaneous Endoscopic Approach

Code	Shortened Description
037N4E6	Dilation of Left External Carotid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037N4EZ	Dilation of Left External Carotid Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037N4F6	Dilation of Left External Carotid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037N4FZ	Dilation of Left External Carotid Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037N4G6	Dilation of Left External Carotid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037N4GZ	Dilation of Left External Carotid Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037N4Z6	Dilation of Left External Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
037N4ZZ	Dilation of Left External Carotid Artery, Percutaneous Endoscopic Approach
037P046	Dilation of Right Vertebral Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037P04Z	Dilation of Right Vertebral Artery with Drug-eluting Intraluminal Device, Open Approach
037P056	Dilation of Right Vertebral Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037P05Z	Dilation of Right Vertebral Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037P066	Dilation of Right Vertebral Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037P06Z	Dilation of Right Vertebral Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037P076	Dilation of Right Vertebral Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037P07Z	Dilation of Right Vertebral Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037P0D6	Dilation of Right Vertebral Artery, Bifurcation, with Intraluminal Device, Open Approach
037P0DZ	Dilation of Right Vertebral Artery with Intraluminal Device, Open Approach
037P0E6	Dilation of Right Vertebral Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037P0EZ	Dilation of Right Vertebral Artery with Two Intraluminal Devices, Open Approach
037P0F6	Dilation of Right Vertebral Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037P0FZ	Dilation of Right Vertebral Artery with Three Intraluminal Devices, Open Approach
037P0G6	Dilation of Right Vertebral Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037P0GZ	Dilation of Right Vertebral Artery with Four or More Intraluminal Devices, Open Approach
037P0Z6	Dilation of Right Vertebral Artery, Bifurcation, Open Approach
037P0ZZ	Dilation of Right Vertebral Artery, Open Approach
037P346	Dilation of Right Vertebral Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037P34Z	Dilation of Right Vertebral Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037P356	Dilation of Right Vertebral Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037P35Z	Dilation of Right Vertebral Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach

Code	Shortened Description
037P366	Dilation of Right Vertebral Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037P36Z	Dilation of Right Vertebral Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037P376	Dilation of Right Vertebral Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037P37Z	Dilation of Right Vertebral Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037P3D6	Dilation of Right Vertebral Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037P3DZ	Dilation of Right Vertebral Artery with Intraluminal Device, Percutaneous Approach
037P3E6	Dilation of Right Vertebral Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037P3EZ	Dilation of Right Vertebral Artery with Two Intraluminal Devices, Percutaneous Approach
037P3F6	Dilation of Right Vertebral Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037P3FZ	Dilation of Right Vertebral Artery with Three Intraluminal Devices, Percutaneous Approach
037P3G6	Dilation of Right Vertebral Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037P3GZ	Dilation of Right Vertebral Artery with Four or More Intraluminal Devices, Percutaneous Approach
037P3Z6	Dilation of Right Vertebral Artery, Bifurcation, Percutaneous Approach
037P3ZZ	Dilation of Right Vertebral Artery, Percutaneous Approach
037P446	Dilation of Right Vertebral Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037P44Z	Dilation of Right Vertebral Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037P456	Dilation of Right Vertebral Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037P45Z	Dilation of Right Vertebral Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037P466	Dilation of Right Vertebral Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037P46Z	Dilation of Right Vertebral Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037P476	Dilation of Right Vertebral Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037P47Z	Dilation of Right Vertebral Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037P4D6	Dilation of Right Vertebral Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037P4DZ	Dilation of Right Vertebral Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037P4E6	Dilation of Right Vertebral Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037P4EZ	Dilation of Right Vertebral Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037P4F6	Dilation of Right Vertebral Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037P4FZ	Dilation of Right Vertebral Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach

Code	Shortened Description
037P4G6	Dilation of Right Vertebral Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037P4GZ	Dilation of Right Vertebral Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037P4Z6	Dilation of Right Vertebral Artery, Bifurcation, Percutaneous Endoscopic Approach
037P4ZZ	Dilation of Right Vertebral Artery, Percutaneous Endoscopic Approach
037Q046	Dilation of Left Vertebral Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037Q04Z	Dilation of Left Vertebral Artery with Drug-eluting Intraluminal Device, Open Approach
037Q056	Dilation of Left Vertebral Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037Q05Z	Dilation of Left Vertebral Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037Q066	Dilation of Left Vertebral Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037Q06Z	Dilation of Left Vertebral Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037Q076	Dilation of Left Vertebral Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037Q07Z	Dilation of Left Vertebral Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037Q0D6	Dilation of Left Vertebral Artery, Bifurcation, with Intraluminal Device, Open Approach
037Q0DZ	Dilation of Left Vertebral Artery with Intraluminal Device, Open Approach
037Q0E6	Dilation of Left Vertebral Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037Q0EZ	Dilation of Left Vertebral Artery with Two Intraluminal Devices, Open Approach
037Q0F6	Dilation of Left Vertebral Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037Q0FZ	Dilation of Left Vertebral Artery with Three Intraluminal Devices, Open Approach
037Q0G6	Dilation of Left Vertebral Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037Q0GZ	Dilation of Left Vertebral Artery with Four or More Intraluminal Devices, Open Approach
037Q0Z6	Dilation of Left Vertebral Artery, Bifurcation, Open Approach
037Q0ZZ	Dilation of Left Vertebral Artery, Open Approach
037Q346	Dilation of Left Vertebral Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037Q34Z	Dilation of Left Vertebral Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037Q356	Dilation of Left Vertebral Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037Q35Z	Dilation of Left Vertebral Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037Q366	Dilation of Left Vertebral Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037Q36Z	Dilation of Left Vertebral Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037Q376	Dilation of Left Vertebral Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037Q37Z	Dilation of Left Vertebral Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037Q3D6	Dilation of Left Vertebral Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach

Code	Shortened Description
037Q3DZ	Dilation of Left Vertebral Artery with Intraluminal Device, Percutaneous Approach
037Q3E6	Dilation of Left Vertebral Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037Q3EZ	Dilation of Left Vertebral Artery with Two Intraluminal Devices, Percutaneous Approach
037Q3F6	Dilation of Left Vertebral Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037Q3FZ	Dilation of Left Vertebral Artery with Three Intraluminal Devices, Percutaneous Approach
037Q3G6	Dilation of Left Vertebral Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037Q3GZ	Dilation of Left Vertebral Artery with Four or More Intraluminal Devices, Percutaneous Approach
037Q3Z6	Dilation of Left Vertebral Artery, Bifurcation, Percutaneous Approach
037Q3ZZ	Dilation of Left Vertebral Artery, Percutaneous Approach
037Q446	Dilation of Left Vertebral Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037Q44Z	Dilation of Left Vertebral Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037Q456	Dilation of Left Vertebral Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037Q45Z	Dilation of Left Vertebral Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037Q466	Dilation of Left Vertebral Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037Q46Z	Dilation of Left Vertebral Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037Q476	Dilation of Left Vertebral Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037Q47Z	Dilation of Left Vertebral Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037Q4D6	Dilation of Left Vertebral Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037Q4DZ	Dilation of Left Vertebral Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037Q4E6	Dilation of Left Vertebral Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037Q4EZ	Dilation of Left Vertebral Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037Q4F6	Dilation of Left Vertebral Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037Q4FZ	Dilation of Left Vertebral Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037Q4G6	Dilation of Left Vertebral Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037Q4GZ	Dilation of Left Vertebral Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037Q4Z6	Dilation of Left Vertebral Artery, Bifurcation, Percutaneous Endoscopic Approach
037Q4ZZ	Dilation of Left Vertebral Artery, Percutaneous Endoscopic Approach
037S046	Dilation of Right Temporal Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037S04Z	Dilation of Right Temporal Artery with Drug-eluting Intraluminal Device, Open Approach

Code	Shortened Description
037S056	Dilation of Right Temporal Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037S05Z	Dilation of Right Temporal Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037S066	Dilation of Right Temporal Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037S06Z	Dilation of Right Temporal Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037S076	Dilation of Right Temporal Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037S07Z	Dilation of Right Temporal Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037S0D6	Dilation of Right Temporal Artery, Bifurcation, with Intraluminal Device, Open Approach
037S0DZ	Dilation of Right Temporal Artery with Intraluminal Device, Open Approach
037S0E6	Dilation of Right Temporal Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037S0EZ	Dilation of Right Temporal Artery with Two Intraluminal Devices, Open Approach
037S0F6	Dilation of Right Temporal Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037S0FZ	Dilation of Right Temporal Artery with Three Intraluminal Devices, Open Approach
037S0G6	Dilation of Right Temporal Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037S0GZ	Dilation of Right Temporal Artery with Four or More Intraluminal Devices, Open Approach
037S0Z6	Dilation of Right Temporal Artery, Bifurcation, Open Approach
037S0ZZ	Dilation of Right Temporal Artery, Open Approach
037S346	Dilation of Right Temporal Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037S34Z	Dilation of Right Temporal Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037S356	Dilation of Right Temporal Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037S35Z	Dilation of Right Temporal Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037S366	Dilation of Right Temporal Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037S36Z	Dilation of Right Temporal Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037S376	Dilation of Right Temporal Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037S37Z	Dilation of Right Temporal Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037S3D6	Dilation of Right Temporal Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037S3DZ	Dilation of Right Temporal Artery with Intraluminal Device, Percutaneous Approach
037S3E6	Dilation of Right Temporal Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037S3EZ	Dilation of Right Temporal Artery with Two Intraluminal Devices, Percutaneous Approach
037S3F6	Dilation of Right Temporal Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037S3FZ	Dilation of Right Temporal Artery with Three Intraluminal Devices, Percutaneous Approach
037S3G6	Dilation of Right Temporal Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037S3GZ	Dilation of Right Temporal Artery with Four or More Intraluminal Devices, Percutaneous Approach

Code	Shortened Description
037S3Z6	Dilation of Right Temporal Artery, Bifurcation, Percutaneous Approach
037S3ZZ	Dilation of Right Temporal Artery, Percutaneous Approach
037S446	Dilation of Right Temporal Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037S44Z	Dilation of Right Temporal Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037S456	Dilation of Right Temporal Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037S45Z	Dilation of Right Temporal Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037S466	Dilation of Right Temporal Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037S46Z	Dilation of Right Temporal Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037S476	Dilation of Right Temporal Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037S47Z	Dilation of Right Temporal Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037S4D6	Dilation of Right Temporal Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037S4DZ	Dilation of Right Temporal Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037S4E6	Dilation of Right Temporal Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037S4EZ	Dilation of Right Temporal Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037S4F6	Dilation of Right Temporal Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037S4FZ	Dilation of Right Temporal Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037S4G6	Dilation of Right Temporal Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037S4GZ	Dilation of Right Temporal Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037S4Z6	Dilation of Right Temporal Artery, Bifurcation, Percutaneous Endoscopic Approach
037S4ZZ	Dilation of Right Temporal Artery, Percutaneous Endoscopic Approach
037T046	Dilation of Left Temporal Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037T04Z	Dilation of Left Temporal Artery with Drug-eluting Intraluminal Device, Open Approach
037T056	Dilation of Left Temporal Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037T05Z	Dilation of Left Temporal Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037T066	Dilation of Left Temporal Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037T06Z	Dilation of Left Temporal Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037T076	Dilation of Left Temporal Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037T07Z	Dilation of Left Temporal Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037T0D6	Dilation of Left Temporal Artery, Bifurcation, with Intraluminal Device, Open Approach

Code	Shortened Description
037T0DZ	Dilation of Left Temporal Artery with Intraluminal Device, Open Approach
037T0E6	Dilation of Left Temporal Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037T0EZ	Dilation of Left Temporal Artery with Two Intraluminal Devices, Open Approach
037T0F6	Dilation of Left Temporal Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037T0FZ	Dilation of Left Temporal Artery with Three Intraluminal Devices, Open Approach
037T0G6	Dilation of Left Temporal Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037T0GZ	Dilation of Left Temporal Artery with Four or More Intraluminal Devices, Open Approach
037T0Z6	Dilation of Left Temporal Artery, Bifurcation, Open Approach
037T0ZZ	Dilation of Left Temporal Artery, Open Approach
037T346	Dilation of Left Temporal Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037T34Z	Dilation of Left Temporal Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037T356	Dilation of Left Temporal Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037T35Z	Dilation of Left Temporal Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037T366	Dilation of Left Temporal Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037T36Z	Dilation of Left Temporal Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037T376	Dilation of Left Temporal Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037T37Z	Dilation of Left Temporal Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037T3D6	Dilation of Left Temporal Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037T3DZ	Dilation of Left Temporal Artery with Intraluminal Device, Percutaneous Approach
037T3E6	Dilation of Left Temporal Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037T3EZ	Dilation of Left Temporal Artery with Two Intraluminal Devices, Percutaneous Approach
037T3F6	Dilation of Left Temporal Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037T3FZ	Dilation of Left Temporal Artery with Three Intraluminal Devices, Percutaneous Approach
037T3G6	Dilation of Left Temporal Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037T3GZ	Dilation of Left Temporal Artery with Four or More Intraluminal Devices, Percutaneous Approach
037T3Z6	Dilation of Left Temporal Artery, Bifurcation, Percutaneous Approach
037T3ZZ	Dilation of Left Temporal Artery, Percutaneous Approach
037T446	Dilation of Left Temporal Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037T44Z	Dilation of Left Temporal Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037T456	Dilation of Left Temporal Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach

Code	Shortened Description
037T45Z	Dilation of Left Temporal Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037T466	Dilation of Left Temporal Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037T46Z	Dilation of Left Temporal Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037T476	Dilation of Left Temporal Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037T47Z	Dilation of Left Temporal Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037T4D6	Dilation of Left Temporal Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037T4DZ	Dilation of Left Temporal Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037T4E6	Dilation of Left Temporal Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037T4EZ	Dilation of Left Temporal Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037T4F6	Dilation of Left Temporal Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037T4FZ	Dilation of Left Temporal Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037T4G6	Dilation of Left Temporal Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037T4GZ	Dilation of Left Temporal Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037T4Z6	Dilation of Left Temporal Artery, Bifurcation, Percutaneous Endoscopic Approach
037T4ZZ	Dilation of Left Temporal Artery, Percutaneous Endoscopic Approach
037U046	Dilation of Right Thyroid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037U04Z	Dilation of Right Thyroid Artery with Drug-eluting Intraluminal Device, Open Approach
037U056	Dilation of Right Thyroid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037U05Z	Dilation of Right Thyroid Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037U066	Dilation of Right Thyroid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037U06Z	Dilation of Right Thyroid Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037U076	Dilation of Right Thyroid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037U07Z	Dilation of Right Thyroid Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037U0D6	Dilation of Right Thyroid Artery, Bifurcation, with Intraluminal Device, Open Approach
037U0DZ	Dilation of Right Thyroid Artery with Intraluminal Device, Open Approach
037U0E6	Dilation of Right Thyroid Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037U0EZ	Dilation of Right Thyroid Artery with Two Intraluminal Devices, Open Approach
037U0F6	Dilation of Right Thyroid Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037U0FZ	Dilation of Right Thyroid Artery with Three Intraluminal Devices, Open Approach
037U0G6	Dilation of Right Thyroid Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach

Code	Shortened Description
037U0GZ	Dilation of Right Thyroid Artery with Four or More Intraluminal Devices, Open Approach
037U0Z6	Dilation of Right Thyroid Artery, Bifurcation, Open Approach
037U0ZZ	Dilation of Right Thyroid Artery, Open Approach
037U346	Dilation of Right Thyroid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037U34Z	Dilation of Right Thyroid Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037U356	Dilation of Right Thyroid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037U35Z	Dilation of Right Thyroid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037U366	Dilation of Right Thyroid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037U36Z	Dilation of Right Thyroid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037U376	Dilation of Right Thyroid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037U37Z	Dilation of Right Thyroid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037U3D6	Dilation of Right Thyroid Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037U3DZ	Dilation of Right Thyroid Artery with Intraluminal Device, Percutaneous Approach
037U3E6	Dilation of Right Thyroid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037U3EZ	Dilation of Right Thyroid Artery with Two Intraluminal Devices, Percutaneous Approach
037U3F6	Dilation of Right Thyroid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037U3FZ	Dilation of Right Thyroid Artery with Three Intraluminal Devices, Percutaneous Approach
037U3G6	Dilation of Right Thyroid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037U3GZ	Dilation of Right Thyroid Artery with Four or More Intraluminal Devices, Percutaneous Approach
037U3Z6	Dilation of Right Thyroid Artery, Bifurcation, Percutaneous Approach
037U3ZZ	Dilation of Right Thyroid Artery, Percutaneous Approach
037U446	Dilation of Right Thyroid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037U44Z	Dilation of Right Thyroid Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037U456	Dilation of Right Thyroid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037U45Z	Dilation of Right Thyroid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037U466	Dilation of Right Thyroid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037U46Z	Dilation of Right Thyroid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037U476	Dilation of Right Thyroid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037U47Z	Dilation of Right Thyroid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach

Code	Shortened Description
037U4D6	Dilation of Right Thyroid Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037U4DZ	Dilation of Right Thyroid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037U4E6	Dilation of Right Thyroid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037U4EZ	Dilation of Right Thyroid Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037U4F6	Dilation of Right Thyroid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037U4FZ	Dilation of Right Thyroid Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037U4G6	Dilation of Right Thyroid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037U4GZ	Dilation of Right Thyroid Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037U4Z6	Dilation of Right Thyroid Artery, Bifurcation, Percutaneous Endoscopic Approach
037U4ZZ	Dilation of Right Thyroid Artery, Percutaneous Endoscopic Approach
037V046	Dilation of Left Thyroid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach
037V04Z	Dilation of Left Thyroid Artery with Drug-eluting Intraluminal Device, Open Approach
037V056	Dilation of Left Thyroid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach
037V05Z	Dilation of Left Thyroid Artery with Two Drug-eluting Intraluminal Devices, Open Approach
037V066	Dilation of Left Thyroid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach
037V06Z	Dilation of Left Thyroid Artery with Three Drug-eluting Intraluminal Devices, Open Approach
037V076	Dilation of Left Thyroid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach
037V07Z	Dilation of Left Thyroid Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach
037V0D6	Dilation of Left Thyroid Artery, Bifurcation, with Intraluminal Device, Open Approach
037V0DZ	Dilation of Left Thyroid Artery with Intraluminal Device, Open Approach
037V0E6	Dilation of Left Thyroid Artery, Bifurcation, with Two Intraluminal Devices, Open Approach
037V0EZ	Dilation of Left Thyroid Artery with Two Intraluminal Devices, Open Approach
037V0F6	Dilation of Left Thyroid Artery, Bifurcation, with Three Intraluminal Devices, Open Approach
037V0FZ	Dilation of Left Thyroid Artery with Three Intraluminal Devices, Open Approach
037V0G6	Dilation of Left Thyroid Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach
037V0GZ	Dilation of Left Thyroid Artery with Four or More Intraluminal Devices, Open Approach
037V0Z6	Dilation of Left Thyroid Artery, Bifurcation, Open Approach
037V0ZZ	Dilation of Left Thyroid Artery, Open Approach
037V346	Dilation of Left Thyroid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach
037V34Z	Dilation of Left Thyroid Artery with Drug-eluting Intraluminal Device, Percutaneous Approach
037V356	Dilation of Left Thyroid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach
037V35Z	Dilation of Left Thyroid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach

Code	Shortened Description
037V366	Dilation of Left Thyroid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037V36Z	Dilation of Left Thyroid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach
037V376	Dilation of Left Thyroid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037V37Z	Dilation of Left Thyroid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach
037V3D6	Dilation of Left Thyroid Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach
037V3DZ	Dilation of Left Thyroid Artery with Intraluminal Device, Percutaneous Approach
037V3E6	Dilation of Left Thyroid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach
037V3EZ	Dilation of Left Thyroid Artery with Two Intraluminal Devices, Percutaneous Approach
037V3F6	Dilation of Left Thyroid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach
037V3FZ	Dilation of Left Thyroid Artery with Three Intraluminal Devices, Percutaneous Approach
037V3G6	Dilation of Left Thyroid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach
037V3GZ	Dilation of Left Thyroid Artery with Four or More Intraluminal Devices, Percutaneous Approach
037V3Z6	Dilation of Left Thyroid Artery, Bifurcation, Percutaneous Approach
037V3ZZ	Dilation of Left Thyroid Artery, Percutaneous Approach
037V446	Dilation of Left Thyroid Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037V44Z	Dilation of Left Thyroid Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach
037V456	Dilation of Left Thyroid Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037V45Z	Dilation of Left Thyroid Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037V466	Dilation of Left Thyroid Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037V46Z	Dilation of Left Thyroid Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037V476	Dilation of Left Thyroid Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037V47Z	Dilation of Left Thyroid Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach
037V4D6	Dilation of Left Thyroid Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach
037V4DZ	Dilation of Left Thyroid Artery with Intraluminal Device, Percutaneous Endoscopic Approach
037V4E6	Dilation of Left Thyroid Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037V4EZ	Dilation of Left Thyroid Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach
037V4F6	Dilation of Left Thyroid Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037V4FZ	Dilation of Left Thyroid Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach
037V4G6	Dilation of Left Thyroid Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach

Code	Shortened Description
037V4GZ	Dilation of Left Thyroid Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach
037V4Z6	Dilation of Left Thyroid Artery, Bifurcation, Percutaneous Endoscopic Approach
037V4ZZ	Dilation of Left Thyroid Artery, Percutaneous Endoscopic Approach
03BG0ZZ	Excision of Intracranial Artery, Open Approach
03BG3ZZ	Excision of Intracranial Artery, Percutaneous Approach
03BG4ZZ	Excision of Intracranial Artery, Percutaneous Endoscopic Approach
03BH0ZZ	Excision of Right Common Carotid Artery, Open Approach
03BH3ZZ	Excision of Right Common Carotid Artery, Percutaneous Approach
03BH4ZZ	Excision of Right Common Carotid Artery, Percutaneous Endoscopic Approach
03BJ0ZZ	Excision of Left Common Carotid Artery, Open Approach
03BJ3ZZ	Excision of Left Common Carotid Artery, Percutaneous Approach
03BJ4ZZ	Excision of Left Common Carotid Artery, Percutaneous Endoscopic Approach
03BK0ZZ	Excision of Right Internal Carotid Artery, Open Approach
03BK3ZZ	Excision of Right Internal Carotid Artery, Percutaneous Approach
03BK4ZZ	Excision of Right Internal Carotid Artery, Percutaneous Endoscopic Approach
03BL0ZZ	Excision of Left Internal Carotid Artery, Open Approach
03BL3ZZ	Excision of Left Internal Carotid Artery, Percutaneous Approach
03BL4ZZ	Excision of Left Internal Carotid Artery, Percutaneous Endoscopic Approach
03BM0ZZ	Excision of Right External Carotid Artery, Open Approach
03BM3ZZ	Excision of Right External Carotid Artery, Percutaneous Approach
03BM4ZZ	Excision of Right External Carotid Artery, Percutaneous Endoscopic Approach
03BN0ZZ	Excision of Left External Carotid Artery, Open Approach
03BN3ZZ	Excision of Left External Carotid Artery, Percutaneous Approach
03BN4ZZ	Excision of Left External Carotid Artery, Percutaneous Endoscopic Approach
03BP0ZZ	Excision of Right Vertebral Artery, Open Approach
03BP3ZZ	Excision of Right Vertebral Artery, Percutaneous Approach
03BP4ZZ	Excision of Right Vertebral Artery, Percutaneous Endoscopic Approach
03BQ0ZZ	Excision of Left Vertebral Artery, Open Approach
03BQ3ZZ	Excision of Left Vertebral Artery, Percutaneous Approach
03BQ4ZZ	Excision of Left Vertebral Artery, Percutaneous Endoscopic Approach
03BS0ZZ	Excision of Right Temporal Artery, Open Approach
03BS3ZZ	Excision of Right Temporal Artery, Percutaneous Approach

Code	Shortened Description
03BS4ZZ	Excision of Right Temporal Artery, Percutaneous Endoscopic Approach
03BT0ZZ	Excision of Left Temporal Artery, Open Approach
03BT3ZZ	Excision of Left Temporal Artery, Percutaneous Approach
03BT4ZZ	Excision of Left Temporal Artery, Percutaneous Endoscopic Approach
03BU0ZZ	Excision of Right Thyroid Artery, Open Approach
03BU3ZZ	Excision of Right Thyroid Artery, Percutaneous Approach
03BU4ZZ	Excision of Right Thyroid Artery, Percutaneous Endoscopic Approach
03BV0ZZ	Excision of Left Thyroid Artery, Open Approach
03BV3ZZ	Excision of Left Thyroid Artery, Percutaneous Approach
03BV4ZZ	Excision of Left Thyroid Artery, Percutaneous Endoscopic Approach
03CG0Z6	Extirpation of Matter from Intracranial Artery, Bifurcation, Open Approach
03CG0ZZ	Extirpation of Matter from Intracranial Artery, Open Approach
03CG3Z6	Extirpation of Matter from Intracranial Artery, Bifurcation, Percutaneous Approach
03CG3Z7	Extirpation of Matter from Intracranial Artery using Stent Retriever, Percutaneous Approach
03CG3ZZ	Extirpation of Matter from Intracranial Artery, Percutaneous Approach
03CG4Z6	Extirpation of Matter from Intracranial Artery, Bifurcation, Percutaneous Endoscopic Approach
03CG4ZZ	Extirpation of Matter from Intracranial Artery, Percutaneous Endoscopic Approach
03CH0Z6	Extirpation of Matter from Right Common Carotid Artery, Bifurcation, Open Approach
03CH0ZZ	Extirpation of Matter from Right Common Carotid Artery, Open Approach
03CH3Z6	Extirpation of Matter from Right Common Carotid Artery, Bifurcation, Percutaneous Approach
03CH3Z7	Extirpation of Matter from Right Common Carotid Artery using Stent Retriever, Percutaneous Approach
03CH3ZZ	Extirpation of Matter from Right Common Carotid Artery, Percutaneous Approach
03CH4Z6	Extirpation of Matter from Right Common Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
03CH4ZZ	Extirpation of Matter from Right Common Carotid Artery, Percutaneous Endoscopic Approach
03CJ0Z6	Extirpation of Matter from Left Common Carotid Artery, Bifurcation, Open Approach
03CJ0ZZ	Extirpation of Matter from Left Common Carotid Artery, Open Approach
03CJ3Z6	Extirpation of Matter from Left Common Carotid Artery, Bifurcation, Percutaneous Approach
03CJ3Z7	Extirpation of Matter from Left Common Carotid Artery using Stent Retriever, Percutaneous Approach
03CJ3ZZ	Extirpation of Matter from Left Common Carotid Artery, Percutaneous Approach
03CJ4Z6	Extirpation of Matter from Left Common Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
03CJ4ZZ	Extirpation of Matter from Left Common Carotid Artery, Percutaneous Endoscopic Approach
03CK0Z6	Extirpation of Matter from Right Internal Carotid Artery, Bifurcation, Open Approach

Code	Shortened Description
03CK0ZZ	Extirpation of Matter from Right Internal Carotid Artery, Open Approach
03CK3Z6	Extirpation of Matter from Right Internal Carotid Artery, Bifurcation, Percutaneous Approach
03CK3Z7	Extirpation of Matter from Right Internal Carotid Artery using Stent Retriever, Percutaneous Approach
03CK3ZZ	Extirpation of Matter from Right Internal Carotid Artery, Percutaneous Approach
03CK4Z6	Extirpation of Matter from Right Internal Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
03CK4ZZ	Extirpation of Matter from Right Internal Carotid Artery, Percutaneous Endoscopic Approach
03CL0Z6	Extirpation of Matter from Left Internal Carotid Artery, Bifurcation, Open Approach
03CL0ZZ	Extirpation of Matter from Left Internal Carotid Artery, Open Approach
03CL3Z6	Extirpation of Matter from Left Internal Carotid Artery, Bifurcation, Percutaneous Approach
03CL3Z7	Extirpation of Matter from Left Internal Carotid Artery using Stent Retriever, Percutaneous Approach
03CL3ZZ	Extirpation of Matter from Left Internal Carotid Artery, Percutaneous Approach
03CL4Z6	Extirpation of Matter from Left Internal Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
03CL4ZZ	Extirpation of Matter from Left Internal Carotid Artery, Percutaneous Endoscopic Approach
03CM0Z6	Extirpation of Matter from Right External Carotid Artery, Bifurcation, Open Approach
03CM0ZZ	Extirpation of Matter from Right External Carotid Artery, Open Approach
03CM3Z6	Extirpation of Matter from Right External Carotid Artery, Bifurcation, Percutaneous Approach
03CM3Z7	Extirpation of Matter from Right External Carotid Artery using Stent Retriever, Percutaneous Approach
03CM3ZZ	Extirpation of Matter from Right External Carotid Artery, Percutaneous Approach
03CM4Z6	Extirpation of Matter from Right External Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
03CM4ZZ	Extirpation of Matter from Right External Carotid Artery, Percutaneous Endoscopic Approach
03CN0Z6	Extirpation of Matter from Left External Carotid Artery, Bifurcation, Open Approach
03CN0ZZ	Extirpation of Matter from Left External Carotid Artery, Open Approach
03CN3Z6	Extirpation of Matter from Left External Carotid Artery, Bifurcation, Percutaneous Approach
03CN3Z7	Extirpation of Matter from Left External Carotid Artery using Stent Retriever, Percutaneous Approach
03CN3ZZ	Extirpation of Matter from Left External Carotid Artery, Percutaneous Approach
03CN4Z6	Extirpation of Matter from Left External Carotid Artery, Bifurcation, Percutaneous Endoscopic Approach
03CN4ZZ	Extirpation of Matter from Left External Carotid Artery, Percutaneous Endoscopic Approach
03CP0Z6	Extirpation of Matter from Right Vertebral Artery, Bifurcation, Open Approach
03CP0ZZ	Extirpation of Matter from Right Vertebral Artery, Open Approach
03CP3Z6	Extirpation of Matter from Right Vertebral Artery, Bifurcation, Percutaneous Approach
03CP3Z7	Extirpation of Matter from Right Vertebral Artery using Stent Retriever, Percutaneous Approach
03CP3ZZ	Extirpation of Matter from Right Vertebral Artery, Percutaneous Approach

Code	Shortened Description
03CP4Z6	Extirpation of Matter from Right Vertebral Artery, Bifurcation, Percutaneous Endoscopic Approach
03CP4ZZ	Extirpation of Matter from Right Vertebral Artery, Percutaneous Endoscopic Approach
03CQ0Z6	Extirpation of Matter from Left Vertebral Artery, Bifurcation, Open Approach
03CQ0ZZ	Extirpation of Matter from Left Vertebral Artery, Open Approach
03CQ3Z6	Extirpation of Matter from Left Vertebral Artery, Bifurcation, Percutaneous Approach
03CQ3Z7	Extirpation of Matter from Left Vertebral Artery using Stent Retriever, Percutaneous Approach
03CQ3ZZ	Extirpation of Matter from Left Vertebral Artery, Percutaneous Approach
03CQ4Z6	Extirpation of Matter from Left Vertebral Artery, Bifurcation, Percutaneous Endoscopic Approach
03CQ4ZZ	Extirpation of Matter from Left Vertebral Artery, Percutaneous Endoscopic Approach
03CS0Z6	Extirpation of Matter from Right Temporal Artery, Bifurcation, Open Approach
03CS0ZZ	Extirpation of Matter from Right Temporal Artery, Open Approach
03CS3Z6	Extirpation of Matter from Right Temporal Artery, Bifurcation, Percutaneous Approach
03CS3ZZ	Extirpation of Matter from Right Temporal Artery, Percutaneous Approach
03CS4Z6	Extirpation of Matter from Right Temporal Artery, Bifurcation, Percutaneous Endoscopic Approach
03CS4ZZ	Extirpation of Matter from Right Temporal Artery, Percutaneous Endoscopic Approach
03CT0Z6	Extirpation of Matter from Left Temporal Artery, Bifurcation, Open Approach
03CT0ZZ	Extirpation of Matter from Left Temporal Artery, Open Approach
03CT3Z6	Extirpation of Matter from Left Temporal Artery, Bifurcation, Percutaneous Approach
03CT3ZZ	Extirpation of Matter from Left Temporal Artery, Percutaneous Approach
03CT4Z6	Extirpation of Matter from Left Temporal Artery, Bifurcation, Percutaneous Endoscopic Approach
03CT4ZZ	Extirpation of Matter from Left Temporal Artery, Percutaneous Endoscopic Approach
03CU0Z6	Extirpation of Matter from Right Thyroid Artery, Bifurcation, Open Approach
03CU0ZZ	Extirpation of Matter from Right Thyroid Artery, Open Approach
03CU3Z6	Extirpation of Matter from Right Thyroid Artery, Bifurcation, Percutaneous Approach
03CU3ZZ	Extirpation of Matter from Right Thyroid Artery, Percutaneous Approach
03CU4Z6	Extirpation of Matter from Right Thyroid Artery, Bifurcation, Percutaneous Endoscopic Approach
03CU4ZZ	Extirpation of Matter from Right Thyroid Artery, Percutaneous Endoscopic Approach
03CV0Z6	Extirpation of Matter from Left Thyroid Artery, Bifurcation, Open Approach
03CV0ZZ	Extirpation of Matter from Left Thyroid Artery, Open Approach
03CV3Z6	Extirpation of Matter from Left Thyroid Artery, Bifurcation, Percutaneous Approach
03CV3ZZ	Extirpation of Matter from Left Thyroid Artery, Percutaneous Approach
03CV4Z6	Extirpation of Matter from Left Thyroid Artery, Bifurcation, Percutaneous Endoscopic Approach

Code	Shortened Description
03CV4ZZ	Extirpation of Matter from Left Thyroid Artery, Percutaneous Endoscopic Approach
03RG07Z	Replacement of Intracranial Artery with Autologous Tissue Substitute, Open Approach
03RG0JZ	Replacement of Intracranial Artery with Synthetic Substitute, Open Approach
03RG0KZ	Replacement of Intracranial Artery with Nonautologous Tissue Substitute, Open Approach
03RG47Z	Replacement of Intracranial Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RG4JZ	Replacement of Intracranial Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RG4KZ	Replacement of Intracranial Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RH07Z	Replacement of Right Common Carotid Artery with Autologous Tissue Substitute, Open Approach
03RH0JZ	Replacement of Right Common Carotid Artery with Synthetic Substitute, Open Approach
03RH0KZ	Replacement of Right Common Carotid Artery with Nonautologous Tissue Substitute, Open Approach
03RH47Z	Replacement of Right Common Carotid Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RH4JZ	Replacement of Right Common Carotid Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RH4KZ	Replacement of Right Common Carotid Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RJ07Z	Replacement of Left Common Carotid Artery with Autologous Tissue Substitute, Open Approach
03RJ0JZ	Replacement of Left Common Carotid Artery with Synthetic Substitute, Open Approach
03RJ0KZ	Replacement of Left Common Carotid Artery with Nonautologous Tissue Substitute, Open Approach
03RJ47Z	Replacement of Left Common Carotid Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RJ4JZ	Replacement of Left Common Carotid Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RJ4KZ	Replacement of Left Common Carotid Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RK07Z	Replacement of Right Internal Carotid Artery with Autologous Tissue Substitute, Open Approach
03RK0JZ	Replacement of Right Internal Carotid Artery with Synthetic Substitute, Open Approach
03RK0KZ	Replacement of Right Internal Carotid Artery with Nonautologous Tissue Substitute, Open Approach
03RK47Z	Replacement of Right Internal Carotid Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RK4JZ	Replacement of Right Internal Carotid Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RK4KZ	Replacement of Right Internal Carotid Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RL07Z	Replacement of Left Internal Carotid Artery with Autologous Tissue Substitute, Open Approach
03RL0JZ	Replacement of Left Internal Carotid Artery with Synthetic Substitute, Open Approach
03RL0KZ	Replacement of Left Internal Carotid Artery with Nonautologous Tissue Substitute, Open Approach
03RL47Z	Replacement of Left Internal Carotid Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RL4JZ	Replacement of Left Internal Carotid Artery with Synthetic Substitute, Percutaneous Endoscopic Approach

Code	Shortened Description
03RL4KZ	Replacement of Left Internal Carotid Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RM07Z	Replacement of Right External Carotid Artery with Autologous Tissue Substitute, Open Approach
03RM0JZ	Replacement of Right External Carotid Artery with Synthetic Substitute, Open Approach
03RM0KZ	Replacement of Right External Carotid Artery with Nonautologous Tissue Substitute, Open Approach
03RM47Z	Replacement of Right External Carotid Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RM4JZ	Replacement of Right External Carotid Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RM4KZ	Replacement of Right External Carotid Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RN07Z	Replacement of Left External Carotid Artery with Autologous Tissue Substitute, Open Approach
03RN0JZ	Replacement of Left External Carotid Artery with Synthetic Substitute, Open Approach
03RN0KZ	Replacement of Left External Carotid Artery with Nonautologous Tissue Substitute, Open Approach
03RN47Z	Replacement of Left External Carotid Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RN4JZ	Replacement of Left External Carotid Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RN4KZ	Replacement of Left External Carotid Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RP07Z	Replacement of Right Vertebral Artery with Autologous Tissue Substitute, Open Approach
03RP0JZ	Replacement of Right Vertebral Artery with Synthetic Substitute, Open Approach
03RP0KZ	Replacement of Right Vertebral Artery with Nonautologous Tissue Substitute, Open Approach
03RP47Z	Replacement of Right Vertebral Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RP4JZ	Replacement of Right Vertebral Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RP4KZ	Replacement of Right Vertebral Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RQ07Z	Replacement of Left Vertebral Artery with Autologous Tissue Substitute, Open Approach
03RQ0JZ	Replacement of Left Vertebral Artery with Synthetic Substitute, Open Approach
03RQ0KZ	Replacement of Left Vertebral Artery with Nonautologous Tissue Substitute, Open Approach
03RQ47Z	Replacement of Left Vertebral Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RQ4JZ	Replacement of Left Vertebral Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RQ4KZ	Replacement of Left Vertebral Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RS07Z	Replacement of Right Temporal Artery with Autologous Tissue Substitute, Open Approach
03RS0JZ	Replacement of Right Temporal Artery with Synthetic Substitute, Open Approach
03RS0KZ	Replacement of Right Temporal Artery with Nonautologous Tissue Substitute, Open Approach
03RS47Z	Replacement of Right Temporal Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RS4JZ	Replacement of Right Temporal Artery with Synthetic Substitute, Percutaneous Endoscopic Approach

Code	Shortened Description
03RS4KZ	Replacement of Right Temporal Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RT07Z	Replacement of Left Temporal Artery with Autologous Tissue Substitute, Open Approach
03RT0JZ	Replacement of Left Temporal Artery with Synthetic Substitute, Open Approach
03RT0KZ	Replacement of Left Temporal Artery with Nonautologous Tissue Substitute, Open Approach
03RT47Z	Replacement of Left Temporal Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RT4JZ	Replacement of Left Temporal Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RT4KZ	Replacement of Left Temporal Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RU07Z	Replacement of Right Thyroid Artery with Autologous Tissue Substitute, Open Approach
03RU0JZ	Replacement of Right Thyroid Artery with Synthetic Substitute, Open Approach
03RU0KZ	Replacement of Right Thyroid Artery with Nonautologous Tissue Substitute, Open Approach
03RU47Z	Replacement of Right Thyroid Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RU4JZ	Replacement of Right Thyroid Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RU4KZ	Replacement of Right Thyroid Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
03RV07Z	Replacement of Left Thyroid Artery with Autologous Tissue Substitute, Open Approach
03RV0JZ	Replacement of Left Thyroid Artery with Synthetic Substitute, Open Approach
03RV0KZ	Replacement of Left Thyroid Artery with Nonautologous Tissue Substitute, Open Approach
03RV47Z	Replacement of Left Thyroid Artery with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
03RV4JZ	Replacement of Left Thyroid Artery with Synthetic Substitute, Percutaneous Endoscopic Approach
03RV4KZ	Replacement of Left Thyroid Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
057L3DZ	Dilation of Intracranial Vein with Intraluminal Device, Percutaneous Approach
057L4DZ	Dilation of Intracranial Vein with Intraluminal Device, Percutaneous Endoscopic Approach
057M3DZ	Dilation of Right Internal Jugular Vein with Intraluminal Device, Percutaneous Approach
057M4DZ	Dilation of Right Internal Jugular Vein with Intraluminal Device, Percutaneous Endoscopic Approach
057N3DZ	Dilation of Left Internal Jugular Vein with Intraluminal Device, Percutaneous Approach
057N4DZ	Dilation of Left Internal Jugular Vein with Intraluminal Device, Percutaneous Endoscopic Approach
057P3DZ	Dilation of Right External Jugular Vein with Intraluminal Device, Percutaneous Approach
057P4DZ	Dilation of Right External Jugular Vein with Intraluminal Device, Percutaneous Endoscopic Approach
057Q3DZ	Dilation of Left External Jugular Vein with Intraluminal Device, Percutaneous Approach
057Q4DZ	Dilation of Left External Jugular Vein with Intraluminal Device, Percutaneous Endoscopic Approach
057R3DZ	Dilation of Right Vertebral Vein with Intraluminal Device, Percutaneous Approach
057R4DZ	Dilation of Right Vertebral Vein with Intraluminal Device, Percutaneous Endoscopic Approach
057S3DZ	Dilation of Left Vertebral Vein with Intraluminal Device, Percutaneous Approach

Code	Shortened Description
057S4DZ	Dilation of Left Vertebral Vein with Intraluminal Device, Percutaneous Endoscopic Approach
05BL0ZZ	Excision of Intracranial Vein, Open Approach
05BL4ZZ	Excision of Intracranial Vein, Percutaneous Endoscopic Approach
05BM0ZZ	Excision of Right Internal Jugular Vein, Open Approach
05BM4ZZ	Excision of Right Internal Jugular Vein, Percutaneous Endoscopic Approach
05BN0ZZ	Excision of Left Internal Jugular Vein, Open Approach
05BN4ZZ	Excision of Left Internal Jugular Vein, Percutaneous Endoscopic Approach
05BP0ZZ	Excision of Right External Jugular Vein, Open Approach
05BP4ZZ	Excision of Right External Jugular Vein, Percutaneous Endoscopic Approach
05BQ0ZZ	Excision of Left External Jugular Vein, Open Approach
05BQ4ZZ	Excision of Left External Jugular Vein, Percutaneous Endoscopic Approach
05BR0ZZ	Excision of Right Vertebral Vein, Open Approach
05BR4ZZ	Excision of Right Vertebral Vein, Percutaneous Endoscopic Approach
05BS0ZZ	Excision of Left Vertebral Vein, Open Approach
05BS4ZZ	Excision of Left Vertebral Vein, Percutaneous Endoscopic Approach
05CL0ZZ	Extirpation of Matter from Intracranial Vein, Open Approach
05CL3ZZ	Extirpation of Matter from Intracranial Vein, Percutaneous Approach
05CL4ZZ	Extirpation of Matter from Intracranial Vein, Percutaneous Endoscopic Approach
05CM0ZZ	Extirpation of Matter from Right Internal Jugular Vein, Open Approach
05CM3ZZ	Extirpation of Matter from Right Internal Jugular Vein, Percutaneous Approach
05CM4ZZ	Extirpation of Matter from Right Internal Jugular Vein, Percutaneous Endoscopic Approach
05CN0ZZ	Extirpation of Matter from Left Internal Jugular Vein, Open Approach
05CN3ZZ	Extirpation of Matter from Left Internal Jugular Vein, Percutaneous Approach
05CN4ZZ	Extirpation of Matter from Left Internal Jugular Vein, Percutaneous Endoscopic Approach
05CP0ZZ	Extirpation of Matter from Right External Jugular Vein, Open Approach
05CP3ZZ	Extirpation of Matter from Right External Jugular Vein, Percutaneous Approach
05CP4ZZ	Extirpation of Matter from Right External Jugular Vein, Percutaneous Endoscopic Approach
05CQ0ZZ	Extirpation of Matter from Left External Jugular Vein, Open Approach
05CQ3ZZ	Extirpation of Matter from Left External Jugular Vein, Percutaneous Approach
05CQ4ZZ	Extirpation of Matter from Left External Jugular Vein, Percutaneous Endoscopic Approach
05CR0ZZ	Extirpation of Matter from Right Vertebral Vein, Open Approach
05CR3ZZ	Extirpation of Matter from Right Vertebral Vein, Percutaneous Approach

Code	Shortened Description
05CR4ZZ	Extirpation of Matter from Right Vertebral Vein, Percutaneous Endoscopic Approach
05CS0ZZ	Extirpation of Matter from Left Vertebral Vein, Open Approach
05CS3ZZ	Extirpation of Matter from Left Vertebral Vein, Percutaneous Approach
05CS4ZZ	Extirpation of Matter from Left Vertebral Vein, Percutaneous Endoscopic Approach
05RL07Z	Replacement of Intracranial Vein with Autologous Tissue Substitute, Open Approach
05RL0JZ	Replacement of Intracranial Vein with Synthetic Substitute, Open Approach
05RL0KZ	Replacement of Intracranial Vein with Nonautologous Tissue Substitute, Open Approach
05RL47Z	Replacement of Intracranial Vein with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
05RL4JZ	Replacement of Intracranial Vein with Synthetic Substitute, Percutaneous Endoscopic Approach
05RL4KZ	Replacement of Intracranial Vein with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
05RM07Z	Replacement of Right Internal Jugular Vein with Autologous Tissue Substitute, Open Approach
05RM0JZ	Replacement of Right Internal Jugular Vein with Synthetic Substitute, Open Approach
05RM0KZ	Replacement of Right Internal Jugular Vein with Nonautologous Tissue Substitute, Open Approach
05RM47Z	Replacement of Right Internal Jugular Vein with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
05RM4JZ	Replacement of Right Internal Jugular Vein with Synthetic Substitute, Percutaneous Endoscopic Approach
05RM4KZ	Replacement of Right Internal Jugular Vein with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
05RN07Z	Replacement of Left Internal Jugular Vein with Autologous Tissue Substitute, Open Approach
05RN0JZ	Replacement of Left Internal Jugular Vein with Synthetic Substitute, Open Approach
05RN0KZ	Replacement of Left Internal Jugular Vein with Nonautologous Tissue Substitute, Open Approach
05RN47Z	Replacement of Left Internal Jugular Vein with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
05RN4JZ	Replacement of Left Internal Jugular Vein with Synthetic Substitute, Percutaneous Endoscopic Approach
05RN4KZ	Replacement of Left Internal Jugular Vein with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
05RP07Z	Replacement of Right External Jugular Vein with Autologous Tissue Substitute, Open Approach
05RP0JZ	Replacement of Right External Jugular Vein with Synthetic Substitute, Open Approach
05RP0KZ	Replacement of Right External Jugular Vein with Nonautologous Tissue Substitute, Open Approach
05RP47Z	Replacement of Right External Jugular Vein with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
05RP4JZ	Replacement of Right External Jugular Vein with Synthetic Substitute, Percutaneous Endoscopic Approach
05RP4KZ	Replacement of Right External Jugular Vein with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
05RQ07Z	Replacement of Left External Jugular Vein with Autologous Tissue Substitute, Open Approach
05RQ0JZ	Replacement of Left External Jugular Vein with Synthetic Substitute, Open Approach

Code	Shortened Description
05RQ0KZ	Replacement of Left External Jugular Vein with Nonautologous Tissue Substitute, Open Approach
05RQ47Z	Replacement of Left External Jugular Vein with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
05RQ4JZ	Replacement of Left External Jugular Vein with Synthetic Substitute, Percutaneous Endoscopic Approach
05RQ4KZ	Replacement of Left External Jugular Vein with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
05RR07Z	Replacement of Right Vertebral Vein with Autologous Tissue Substitute, Open Approach
05RR0JZ	Replacement of Right Vertebral Vein with Synthetic Substitute, Open Approach
05RR0KZ	Replacement of Right Vertebral Vein with Nonautologous Tissue Substitute, Open Approach
05RR47Z	Replacement of Right Vertebral Vein with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
05RR4JZ	Replacement of Right Vertebral Vein with Synthetic Substitute, Percutaneous Endoscopic Approach
05RR4KZ	Replacement of Right Vertebral Vein with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
05RS07Z	Replacement of Left Vertebral Vein with Autologous Tissue Substitute, Open Approach
05RS0JZ	Replacement of Left Vertebral Vein with Synthetic Substitute, Open Approach
05RS0KZ	Replacement of Left Vertebral Vein with Nonautologous Tissue Substitute, Open Approach
05RS47Z	Replacement of Left Vertebral Vein with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
05RS4JZ	Replacement of Left Vertebral Vein with Synthetic Substitute, Percutaneous Endoscopic Approach
05RS4KZ	Replacement of Left Vertebral Vein with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach
B3030ZZ	Plain Radiography of Right Common Carotid Artery using High Osmolar Contrast
B3031ZZ	Plain Radiography of Right Common Carotid Artery using Low Osmolar Contrast
B303YZZ	Plain Radiography of Right Common Carotid Artery using Other Contrast
B3040ZZ	Plain Radiography of Left Common Carotid Artery using High Osmolar Contrast
B3041ZZ	Plain Radiography of Left Common Carotid Artery using Low Osmolar Contrast
B304YZZ	Plain Radiography of Left Common Carotid Artery using Other Contrast
B3050ZZ	Plain Radiography of Bilateral Common Carotid Arteries using High Osmolar Contrast
B3051ZZ	Plain Radiography of Bilateral Common Carotid Arteries using Low Osmolar Contrast
B305YZZ	Plain Radiography of Bilateral Common Carotid Arteries using Other Contrast
B3060ZZ	Plain Radiography of Right Internal Carotid Artery using High Osmolar Contrast
B3061ZZ	Plain Radiography of Right Internal Carotid Artery using Low Osmolar Contrast
B306YZZ	Plain Radiography of Right Internal Carotid Artery using Other Contrast
B3070ZZ	Plain Radiography of Left Internal Carotid Artery using High Osmolar Contrast
B3071ZZ	Plain Radiography of Left Internal Carotid Artery using Low Osmolar Contrast
B307YZZ	Plain Radiography of Left Internal Carotid Artery using Other Contrast
B3080ZZ	Plain Radiography of Bilateral Internal Carotid Arteries using High Osmolar Contrast

Code	Shortened Description
B3081ZZ	Plain Radiography of Bilateral Internal Carotid Arteries using Low Osmolar Contrast
B308YZZ	Plain Radiography of Bilateral Internal Carotid Arteries using Other Contrast
B3090ZZ	Plain Radiography of Right External Carotid Artery using High Osmolar Contrast
B3091ZZ	Plain Radiography of Right External Carotid Artery using Low Osmolar Contrast
B309YZZ	Plain Radiography of Right External Carotid Artery using Other Contrast
B30B0ZZ	Plain Radiography of Left External Carotid Artery using High Osmolar Contrast
B30B1ZZ	Plain Radiography of Left External Carotid Artery using Low Osmolar Contrast
B30BYZZ	Plain Radiography of Left External Carotid Artery using Other Contrast
B30C0ZZ	Plain Radiography of Bilateral External Carotid Arteries using High Osmolar Contrast
B30C1ZZ	Plain Radiography of Bilateral External Carotid Arteries using Low Osmolar Contrast
B30CYZZ	Plain Radiography of Bilateral External Carotid Arteries using Other Contrast
B30D0ZZ	Plain Radiography of Right Vertebral Artery using High Osmolar Contrast
B30D1ZZ	Plain Radiography of Right Vertebral Artery using Low Osmolar Contrast
B30DYZZ	Plain Radiography of Right Vertebral Artery using Other Contrast
B30F0ZZ	Plain Radiography of Left Vertebral Artery using High Osmolar Contrast
B30F1ZZ	Plain Radiography of Left Vertebral Artery using Low Osmolar Contrast
B30FYZZ	Plain Radiography of Left Vertebral Artery using Other Contrast
B30G0ZZ	Plain Radiography of Bilateral Vertebral Arteries using High Osmolar Contrast
B30G1ZZ	Plain Radiography of Bilateral Vertebral Arteries using Low Osmolar Contrast
B30GYZZ	Plain Radiography of Bilateral Vertebral Arteries using Other Contrast
B30R0ZZ	Plain Radiography of Intracranial Arteries using High Osmolar Contrast
B30R1ZZ	Plain Radiography of Intracranial Arteries using Low Osmolar Contrast
B30RYZZ	Plain Radiography of Intracranial Arteries using Other Contrast
B30RZZZ	Plain Radiography of Intracranial Arteries
B3130ZZ	Fluoroscopy of Right Common Carotid Artery using High Osmolar Contrast
B3131ZZ	Fluoroscopy of Right Common Carotid Artery using Low Osmolar Contrast
B313YZZ	Fluoroscopy of Right Common Carotid Artery using Other Contrast
B3140ZZ	Fluoroscopy of Left Common Carotid Artery using High Osmolar Contrast
B3141ZZ	Fluoroscopy of Left Common Carotid Artery using Low Osmolar Contrast
B314YZZ	Fluoroscopy of Left Common Carotid Artery using Other Contrast
B3150ZZ	Fluoroscopy of Bilateral Common Carotid Arteries using High Osmolar Contrast
B3151ZZ	Fluoroscopy of Bilateral Common Carotid Arteries using Low Osmolar Contrast

Code	Shortened Description
B315YZZ	Fluoroscopy of Bilateral Common Carotid Arteries using Other Contrast
B3160ZZ	Fluoroscopy of Right Internal Carotid Artery using High Osmolar Contrast
B3161ZZ	Fluoroscopy of Right Internal Carotid Artery using Low Osmolar Contrast
B316YZZ	Fluoroscopy of Right Internal Carotid Artery using Other Contrast
B3170ZZ	Fluoroscopy of Left Internal Carotid Artery using High Osmolar Contrast
B3171ZZ	Fluoroscopy of Left Internal Carotid Artery using Low Osmolar Contrast
B317YZZ	Fluoroscopy of Left Internal Carotid Artery using Other Contrast
B3180ZZ	Fluoroscopy of Bilateral Internal Carotid Arteries using High Osmolar Contrast
B3181ZZ	Fluoroscopy of Bilateral Internal Carotid Arteries using Low Osmolar Contrast
B318YZZ	Fluoroscopy of Bilateral Internal Carotid Arteries using Other Contrast
B3190ZZ	Fluoroscopy of Right External Carotid Artery using High Osmolar Contrast
B3191ZZ	Fluoroscopy of Right External Carotid Artery using Low Osmolar Contrast
B319YZZ	Fluoroscopy of Right External Carotid Artery using Other Contrast
B31B0ZZ	Fluoroscopy of Left External Carotid Artery using High Osmolar Contrast
B31B1ZZ	Fluoroscopy of Left External Carotid Artery using Low Osmolar Contrast
B31BYZZ	Fluoroscopy of Left External Carotid Artery using Other Contrast
B31C0ZZ	Fluoroscopy of Bilateral External Carotid Arteries using High Osmolar Contrast
B31C1ZZ	Fluoroscopy of Bilateral External Carotid Arteries using Low Osmolar Contrast
B31CYZZ	Fluoroscopy of Bilateral External Carotid Arteries using Other Contrast
B31D0ZZ	Fluoroscopy of Right Vertebral Artery using High Osmolar Contrast
B31D1ZZ	Fluoroscopy of Right Vertebral Artery using Low Osmolar Contrast
B31DYZZ	Fluoroscopy of Right Vertebral Artery using Other Contrast
B31F0ZZ	Fluoroscopy of Left Vertebral Artery using High Osmolar Contrast
B31F1ZZ	Fluoroscopy of Left Vertebral Artery using Low Osmolar Contrast
B31FYZZ	Fluoroscopy of Left Vertebral Artery using Other Contrast
B31G0ZZ	Fluoroscopy of Bilateral Vertebral Arteries using High Osmolar Contrast
B31G1ZZ	Fluoroscopy of Bilateral Vertebral Arteries using Low Osmolar Contrast
B31GYZZ	Fluoroscopy of Bilateral Vertebral Arteries using Other Contrast
B31R0ZZ	Fluoroscopy of Intracranial Arteries using High Osmolar Contrast
B31R1ZZ	Fluoroscopy of Intracranial Arteries using Low Osmolar Contrast
B31RYZZ	Fluoroscopy of Intracranial Arteries using Other Contrast
B31RZZZ	Fluoroscopy of Intracranial Arteries

Table Number 10.01: Mental Disorders

Code	Shortened Description
F0150	Vascular dementia without behavioral disturbance
F0151	Vascular dementia with behavioral disturbance
F0280	Dementia in other diseases classified elsewhere without behavioral disturbance
F0281	Dementia in other diseases classified elsewhere with behavioral disturbance
F0390	Unspecified dementia without behavioral disturbance
F0391	Unspecified dementia with behavioral disturbance
F04	Amnestic disorder due to known physiological condition
F05	Delirium due to known physiological condition
F060	Psychotic disorder with hallucinations due to known physiological condition
F061	Catatonic disorder due to known physiological condition
F062	Psychotic disorder with delusions due to known physiological condition
F0630	Mood disorder due to known physiological condition, unspecified
F0631	Mood disorder due to known physiological condition with depressive features
F0632	Mood disorder due to known physiological condition with major depressive-like episode
F0633	Mood disorder due to known physiological condition with manic features
F0634	Mood disorder due to known physiological condition with mixed features
F064	Anxiety disorder due to known physiological condition
F068	Other specified mental disorders due to known physiological condition
F070	Personality change due to known physiological condition
F0781	Postconcussional syndrome
F0789	Other personality and behavioral disorders due to known physiological condition
F079	Unspecified personality and behavioral disorder due to known physiological condition
F09	Unspecified mental disorder due to known physiological condition
F1010	Alcohol abuse, uncomplicated
F10120	Alcohol abuse with intoxication, uncomplicated
F10121	Alcohol abuse with intoxication delirium
F10129	Alcohol abuse with intoxication, unspecified
F1014	Alcohol abuse with alcohol-induced mood disorder
F10150	Alcohol abuse with alcohol-induced psychotic disorder with delusions
F10151	Alcohol abuse with alcohol-induced psychotic disorder with hallucinations
F10159	Alcohol abuse with alcohol-induced psychotic disorder, unspecified

Code	Shortened Description
F10180	Alcohol abuse with alcohol-induced anxiety disorder
F10181	Alcohol abuse with alcohol-induced sexual dysfunction
F10182	Alcohol abuse with alcohol-induced sleep disorder
F10188	Alcohol abuse with other alcohol-induced disorder
F1019	Alcohol abuse with unspecified alcohol-induced disorder
F1020	Alcohol dependence, uncomplicated
F10220	Alcohol dependence with intoxication, uncomplicated
F10221	Alcohol dependence with intoxication delirium
F10229	Alcohol dependence with intoxication, unspecified
F10230	Alcohol dependence with withdrawal, uncomplicated
F10231	Alcohol dependence with withdrawal delirium
F10232	Alcohol dependence with withdrawal with perceptual disturbance
F10239	Alcohol dependence with withdrawal, unspecified
F1024	Alcohol dependence with alcohol-induced mood disorder
F10250	Alcohol dependence with alcohol-induced psychotic disorder with delusions
F10251	Alcohol dependence with alcohol-induced psychotic disorder with hallucinations
F10259	Alcohol dependence with alcohol-induced psychotic disorder, unspecified
F1026	Alcohol dependence with alcohol-induced persisting amnestic disorder
F1027	Alcohol dependence with alcohol-induced persisting dementia
F10280	Alcohol dependence with alcohol-induced anxiety disorder
F10281	Alcohol dependence with alcohol-induced sexual dysfunction
F10282	Alcohol dependence with alcohol-induced sleep disorder
F10288	Alcohol dependence with other alcohol-induced disorder
F1029	Alcohol dependence with unspecified alcohol-induced disorder
F10920	Alcohol use, unspecified with intoxication, uncomplicated
F10921	Alcohol use, unspecified with intoxication delirium
F10929	Alcohol use, unspecified with intoxication, unspecified
F1094	Alcohol use, unspecified with alcohol-induced mood disorder
F10950	Alcohol use, unspecified with alcohol-induced psychotic disorder with delusions
F10951	Alcohol use, unspecified with alcohol-induced psychotic disorder with hallucinations
F10959	Alcohol use, unspecified with alcohol-induced psychotic disorder, unspecified
F1096	Alcohol use, unspecified with alcohol-induced persisting amnestic disorder

Code	Shortened Description
F1097	Alcohol use, unspecified with alcohol-induced persisting dementia
F10980	Alcohol use, unspecified with alcohol-induced anxiety disorder
F10981	Alcohol use, unspecified with alcohol-induced sexual dysfunction
F10982	Alcohol use, unspecified with alcohol-induced sleep disorder
F10988	Alcohol use, unspecified with other alcohol-induced disorder
F1099	Alcohol use, unspecified with unspecified alcohol-induced disorder
F1110	Opioid abuse, uncomplicated
F11120	Opioid abuse with intoxication, uncomplicated
F11121	Opioid abuse with intoxication delirium
F11122	Opioid abuse with intoxication with perceptual disturbance
F11129	Opioid abuse with intoxication, unspecified
F1114	Opioid abuse with opioid-induced mood disorder
F11150	Opioid abuse with opioid-induced psychotic disorder with delusions
F11151	Opioid abuse with opioid-induced psychotic disorder with hallucinations
F11159	Opioid abuse with opioid-induced psychotic disorder, unspecified
F11181	Opioid abuse with opioid-induced sexual dysfunction
F11182	Opioid abuse with opioid-induced sleep disorder
F11188	Opioid abuse with other opioid-induced disorder
F1119	Opioid abuse with unspecified opioid-induced disorder
F1120	Opioid dependence, uncomplicated
F11220	Opioid dependence with intoxication, uncomplicated
F11221	Opioid dependence with intoxication delirium
F11222	Opioid dependence with intoxication with perceptual disturbance
F11229	Opioid dependence with intoxication, unspecified
F1123	Opioid dependence with withdrawal
F1124	Opioid dependence with opioid-induced mood disorder
F11250	Opioid dependence with opioid-induced psychotic disorder with delusions
F11251	Opioid dependence with opioid-induced psychotic disorder with hallucinations
F11259	Opioid dependence with opioid-induced psychotic disorder, unspecified
F11281	Opioid dependence with opioid-induced sexual dysfunction
F11282	Opioid dependence with opioid-induced sleep disorder
F11288	Opioid dependence with other opioid-induced disorder

Code	Shortened Description
F1129	Opioid dependence with unspecified opioid-induced disorder
F11920	Opioid use, unspecified with intoxication, uncomplicated
F11921	Opioid use, unspecified with intoxication delirium
F11922	Opioid use, unspecified with intoxication with perceptual disturbance
F11929	Opioid use, unspecified with intoxication, unspecified
F1193	Opioid use, unspecified with withdrawal
F1194	Opioid use, unspecified with opioid-induced mood disorder
F11950	Opioid use, unspecified with opioid-induced psychotic disorder with delusions
F11951	Opioid use, unspecified with opioid-induced psychotic disorder with hallucinations
F11959	Opioid use, unspecified with opioid-induced psychotic disorder, unspecified
F11981	Opioid use, unspecified with opioid-induced sexual dysfunction
F11982	Opioid use, unspecified with opioid-induced sleep disorder
F11988	Opioid use, unspecified with other opioid-induced disorder
F1199	Opioid use, unspecified with unspecified opioid-induced disorder
F1210	Cannabis abuse, uncomplicated
F12120	Cannabis abuse with intoxication, uncomplicated
F12121	Cannabis abuse with intoxication delirium
F12122	Cannabis abuse with intoxication with perceptual disturbance
F12129	Cannabis abuse with intoxication, unspecified
F12150	Cannabis abuse with psychotic disorder with delusions
F12151	Cannabis abuse with psychotic disorder with hallucinations
F12159	Cannabis abuse with psychotic disorder, unspecified
F12180	Cannabis abuse with cannabis-induced anxiety disorder
F12188	Cannabis abuse with other cannabis-induced disorder
F1219	Cannabis abuse with unspecified cannabis-induced disorder
F1220	Cannabis dependence, uncomplicated
F12220	Cannabis dependence with intoxication, uncomplicated
F12221	Cannabis dependence with intoxication delirium
F12222	Cannabis dependence with intoxication with perceptual disturbance
F12229	Cannabis dependence with intoxication, unspecified
F1223	Cannabis dependence with withdrawal
F12250	Cannabis dependence with psychotic disorder with delusions

Code	Shortened Description
F12251	Cannabis dependence with psychotic disorder with hallucinations
F12259	Cannabis dependence with psychotic disorder, unspecified
F12280	Cannabis dependence with cannabis-induced anxiety disorder
F12288	Cannabis dependence with other cannabis-induced disorder
F1229	Cannabis dependence with unspecified cannabis-induced disorder
F12920	Cannabis use, unspecified with intoxication, uncomplicated
F12921	Cannabis use, unspecified with intoxication delirium
F12922	Cannabis use, unspecified with intoxication with perceptual disturbance
F12929	Cannabis use, unspecified with intoxication, unspecified
F1293	Cannabis use, unspecified with withdrawal
F12950	Cannabis use, unspecified with psychotic disorder with delusions
F12951	Cannabis use, unspecified with psychotic disorder with hallucinations
F12959	Cannabis use, unspecified with psychotic disorder, unspecified
F12980	Cannabis use, unspecified with anxiety disorder
F12988	Cannabis use, unspecified with other cannabis-induced disorder
F1299	Cannabis use, unspecified with unspecified cannabis-induced disorder
F1310	Sedative, hypnotic or anxiolytic abuse, uncomplicated
F13120	Sedative, hypnotic or anxiolytic abuse with intoxication, uncomplicated
F13121	Sedative, hypnotic or anxiolytic abuse with intoxication delirium
F13129	Sedative, hypnotic or anxiolytic abuse with intoxication, unspecified
F1314	Sedative, hypnotic or anxiolytic abuse with sedative, hypnotic or anxiolytic-induced mood disorder
F13150	Sedative, hypnotic or anxiolytic abuse with sedative, hypnotic or anxiolytic-induced psychotic disorder with delusions
F13151	Sedative, hypnotic or anxiolytic abuse with sedative, hypnotic or anxiolytic-induced psychotic disorder with hallucinations
F13159	Sedative, hypnotic or anxiolytic abuse with sedative, hypnotic or anxiolytic-induced psychotic disorder, unspecified
F13180	Sedative, hypnotic or anxiolytic abuse with sedative, hypnotic or anxiolytic-induced anxiety disorder
F13181	Sedative, hypnotic or anxiolytic abuse with sedative, hypnotic or anxiolytic-induced sexual dysfunction
F13182	Sedative, hypnotic or anxiolytic abuse with sedative, hypnotic or anxiolytic-induced sleep disorder
F13188	Sedative, hypnotic or anxiolytic abuse with other sedative, hypnotic or anxiolytic-induced disorder
F1319	Sedative, hypnotic or anxiolytic abuse with unspecified sedative, hypnotic or anxiolytic-induced disorder
F1320	Sedative, hypnotic or anxiolytic dependence, uncomplicated
F13220	Sedative, hypnotic or anxiolytic dependence with intoxication, uncomplicated
F13221	Sedative, hypnotic or anxiolytic dependence with intoxication delirium

Code	Shortened Description
F13229	Sedative, hypnotic or anxiolytic dependence with intoxication, unspecified
F13230	Sedative, hypnotic or anxiolytic dependence with withdrawal, uncomplicated
F13231	Sedative, hypnotic or anxiolytic dependence with withdrawal delirium
F13232	Sedative, hypnotic or anxiolytic dependence with withdrawal with perceptual disturbance
F13239	Sedative, hypnotic or anxiolytic dependence with withdrawal, unspecified
F1324	Sedative, hypnotic or anxiolytic dependence with sedative, hypnotic or anxiolytic-induced mood disorder
F13250	Sedative, hypnotic or anxiolytic dependence with sedative, hypnotic or anxiolytic-induced psychotic disorder with delusions
F13251	Sedative, hypnotic or anxiolytic dependence with sedative, hypnotic or anxiolytic-induced psychotic disorder with hallucinations
F13259	Sedative, hypnotic or anxiolytic dependence with sedative, hypnotic or anxiolytic-induced psychotic disorder, unspecified
F1326	Sedative, hypnotic or anxiolytic dependence with sedative, hypnotic or anxiolytic-induced persisting amnestic disorder
F1327	Sedative, hypnotic or anxiolytic dependence with sedative, hypnotic or anxiolytic-induced persisting dementia
F13280	Sedative, hypnotic or anxiolytic dependence with sedative, hypnotic or anxiolytic-induced anxiety disorder
F13281	Sedative, hypnotic or anxiolytic dependence with sedative, hypnotic or anxiolytic-induced sexual dysfunction
F13282	Sedative, hypnotic or anxiolytic dependence with sedative, hypnotic or anxiolytic-induced sleep disorder
F13288	Sedative, hypnotic or anxiolytic dependence with other sedative, hypnotic or anxiolytic-induced disorder
F1329	Sedative, hypnotic or anxiolytic dependence with unspecified sedative, hypnotic or anxiolytic-induced disorder
F13920	Sedative, hypnotic or anxiolytic use, unspecified with intoxication, uncomplicated
F13921	Sedative, hypnotic or anxiolytic use, unspecified with intoxication delirium
F13929	Sedative, hypnotic or anxiolytic use, unspecified with intoxication, unspecified
F13930	Sedative, hypnotic or anxiolytic use, unspecified with withdrawal, uncomplicated
F13931	Sedative, hypnotic or anxiolytic use, unspecified with withdrawal delirium
F13932	Sedative, hypnotic or anxiolytic use, unspecified with withdrawal with perceptual disturbances
F13939	Sedative, hypnotic or anxiolytic use, unspecified with withdrawal, unspecified
F1394	Sedative, hypnotic or anxiolytic use, unspecified with sedative, hypnotic or anxiolytic-induced mood disorder
F13950	Sedative, hypnotic or anxiolytic use, unspecified with sedative, hypnotic or anxiolytic-induced psychotic disorder with delusions
F13951	Sedative, hypnotic or anxiolytic use, unspecified with sedative, hypnotic or anxiolytic-induced psychotic disorder with hallucinations
F13959	Sedative, hypnotic or anxiolytic use, unspecified with sedative, hypnotic or anxiolytic-induced psychotic disorder, unspecified
F1396	Sedative, hypnotic or anxiolytic use, unspecified with sedative, hypnotic or anxiolytic-induced persisting amnestic disorder

Code	Shortened Description
F1397	Sedative, hypnotic or anxiolytic use, unspecified with sedative, hypnotic or anxiolytic-induced persisting dementia
F13980	Sedative, hypnotic or anxiolytic use, unspecified with sedative, hypnotic or anxiolytic-induced anxiety disorder
F13981	Sedative, hypnotic or anxiolytic use, unspecified with sedative, hypnotic or anxiolytic-induced sexual dysfunction
F13982	Sedative, hypnotic or anxiolytic use, unspecified with sedative, hypnotic or anxiolytic-induced sleep disorder
F13988	Sedative, hypnotic or anxiolytic use, unspecified with other sedative, hypnotic or anxiolytic-induced disorder
F1399	Sedative, hypnotic or anxiolytic use, unspecified with unspecified sedative, hypnotic or anxiolytic-induced disorder
F1410	Cocaine abuse, uncomplicated
F14120	Cocaine abuse with intoxication, uncomplicated
F14121	Cocaine abuse with intoxication with delirium
F14122	Cocaine abuse with intoxication with perceptual disturbance
F14129	Cocaine abuse with intoxication, unspecified
F1414	Cocaine abuse with cocaine-induced mood disorder
F14150	Cocaine abuse with cocaine-induced psychotic disorder with delusions
F14151	Cocaine abuse with cocaine-induced psychotic disorder with hallucinations
F14159	Cocaine abuse with cocaine-induced psychotic disorder, unspecified
F14180	Cocaine abuse with cocaine-induced anxiety disorder
F14181	Cocaine abuse with cocaine-induced sexual dysfunction
F14182	Cocaine abuse with cocaine-induced sleep disorder
F14188	Cocaine abuse with other cocaine-induced disorder
F1419	Cocaine abuse with unspecified cocaine-induced disorder
F1420	Cocaine dependence, uncomplicated
F14220	Cocaine dependence with intoxication, uncomplicated
F14221	Cocaine dependence with intoxication delirium
F14222	Cocaine dependence with intoxication with perceptual disturbance
F14229	Cocaine dependence with intoxication, unspecified
F1423	Cocaine dependence with withdrawal
F1424	Cocaine dependence with cocaine-induced mood disorder
F14250	Cocaine dependence with cocaine-induced psychotic disorder with delusions
F14251	Cocaine dependence with cocaine-induced psychotic disorder with hallucinations
F14259	Cocaine dependence with cocaine-induced psychotic disorder, unspecified
F14280	Cocaine dependence with cocaine-induced anxiety disorder
F14281	Cocaine dependence with cocaine-induced sexual dysfunction

Code	Shortened Description
F14282	Cocaine dependence with cocaine-induced sleep disorder
F14288	Cocaine dependence with other cocaine-induced disorder
F1429	Cocaine dependence with unspecified cocaine-induced disorder
F14920	Cocaine use, unspecified with intoxication, uncomplicated
F14921	Cocaine use, unspecified with intoxication delirium
F14922	Cocaine use, unspecified with intoxication with perceptual disturbance
F14929	Cocaine use, unspecified with intoxication, unspecified
F1494	Cocaine use, unspecified with cocaine-induced mood disorder
F14950	Cocaine use, unspecified with cocaine-induced psychotic disorder with delusions
F14951	Cocaine use, unspecified with cocaine-induced psychotic disorder with hallucinations
F14959	Cocaine use, unspecified with cocaine-induced psychotic disorder, unspecified
F14980	Cocaine use, unspecified with cocaine-induced anxiety disorder
F14981	Cocaine use, unspecified with cocaine-induced sexual dysfunction
F14982	Cocaine use, unspecified with cocaine-induced sleep disorder
F14988	Cocaine use, unspecified with other cocaine-induced disorder
F1499	Cocaine use, unspecified with unspecified cocaine-induced disorder
F1510	Other stimulant abuse, uncomplicated
F15120	Other stimulant abuse with intoxication, uncomplicated
F15121	Other stimulant abuse with intoxication delirium
F15122	Other stimulant abuse with intoxication with perceptual disturbance
F15129	Other stimulant abuse with intoxication, unspecified
F1514	Other stimulant abuse with stimulant-induced mood disorder
F15150	Other stimulant abuse with stimulant-induced psychotic disorder with delusions
F15151	Other stimulant abuse with stimulant-induced psychotic disorder with hallucinations
F15159	Other stimulant abuse with stimulant-induced psychotic disorder, unspecified
F15180	Other stimulant abuse with stimulant-induced anxiety disorder
F15181	Other stimulant abuse with stimulant-induced sexual dysfunction
F15182	Other stimulant abuse with stimulant-induced sleep disorder
F15188	Other stimulant abuse with other stimulant-induced disorder
F1519	Other stimulant abuse with unspecified stimulant-induced disorder
F1520	Other stimulant dependence, uncomplicated
F15220	Other stimulant dependence with intoxication, uncomplicated

Code	Shortened Description
F15221	Other stimulant dependence with intoxication delirium
F15222	Other stimulant dependence with intoxication with perceptual disturbance
F15229	Other stimulant dependence with intoxication, unspecified
F1523	Other stimulant dependence with withdrawal
F1524	Other stimulant dependence with stimulant-induced mood disorder
F15250	Other stimulant dependence with stimulant-induced psychotic disorder with delusions
F15251	Other stimulant dependence with stimulant-induced psychotic disorder with hallucinations
F15259	Other stimulant dependence with stimulant-induced psychotic disorder, unspecified
F15280	Other stimulant dependence with stimulant-induced anxiety disorder
F15281	Other stimulant dependence with stimulant-induced sexual dysfunction
F15282	Other stimulant dependence with stimulant-induced sleep disorder
F15288	Other stimulant dependence with other stimulant-induced disorder
F1529	Other stimulant dependence with unspecified stimulant-induced disorder
F15920	Other stimulant use, unspecified with intoxication, uncomplicated
F15921	Other stimulant use, unspecified with intoxication delirium
F15922	Other stimulant use, unspecified with intoxication with perceptual disturbance
F15929	Other stimulant use, unspecified with intoxication, unspecified
F1593	Other stimulant use, unspecified with withdrawal
F1594	Other stimulant use, unspecified with stimulant-induced mood disorder
F15950	Other stimulant use, unspecified with stimulant-induced psychotic disorder with delusions
F15951	Other stimulant use, unspecified with stimulant-induced psychotic disorder with hallucinations
F15959	Other stimulant use, unspecified with stimulant-induced psychotic disorder, unspecified
F15980	Other stimulant use, unspecified with stimulant-induced anxiety disorder
F15981	Other stimulant use, unspecified with stimulant-induced sexual dysfunction
F15982	Other stimulant use, unspecified with stimulant-induced sleep disorder
F15988	Other stimulant use, unspecified with other stimulant-induced disorder
F1599	Other stimulant use, unspecified with unspecified stimulant-induced disorder
F1610	Hallucinogen abuse, uncomplicated
F16120	Hallucinogen abuse with intoxication, uncomplicated
F16121	Hallucinogen abuse with intoxication with delirium
F16122	Hallucinogen abuse with intoxication with perceptual disturbance
F16129	Hallucinogen abuse with intoxication, unspecified

Code	Shortened Description
F1614	Hallucinogen abuse with hallucinogen-induced mood disorder
F16150	Hallucinogen abuse with hallucinogen-induced psychotic disorder with delusions
F16151	Hallucinogen abuse with hallucinogen-induced psychotic disorder with hallucinations
F16159	Hallucinogen abuse with hallucinogen-induced psychotic disorder, unspecified
F16180	Hallucinogen abuse with hallucinogen-induced anxiety disorder
F16183	Hallucinogen abuse with hallucinogen persisting perception disorder (flashbacks)
F16188	Hallucinogen abuse with other hallucinogen-induced disorder
F1619	Hallucinogen abuse with unspecified hallucinogen-induced disorder
F1620	Hallucinogen dependence, uncomplicated
F16220	Hallucinogen dependence with intoxication, uncomplicated
F16221	Hallucinogen dependence with intoxication with delirium
F16229	Hallucinogen dependence with intoxication, unspecified
F1624	Hallucinogen dependence with hallucinogen-induced mood disorder
F16250	Hallucinogen dependence with hallucinogen-induced psychotic disorder with delusions
F16251	Hallucinogen dependence with hallucinogen-induced psychotic disorder with hallucinations
F16259	Hallucinogen dependence with hallucinogen-induced psychotic disorder, unspecified
F16280	Hallucinogen dependence with hallucinogen-induced anxiety disorder
F16283	Hallucinogen dependence with hallucinogen persisting perception disorder (flashbacks)
F16288	Hallucinogen dependence with other hallucinogen-induced disorder
F1629	Hallucinogen dependence with unspecified hallucinogen-induced disorder
F16920	Hallucinogen use, unspecified with intoxication, uncomplicated
F16921	Hallucinogen use, unspecified with intoxication with delirium
F16929	Hallucinogen use, unspecified with intoxication, unspecified
F1694	Hallucinogen use, unspecified with hallucinogen-induced mood disorder
F16950	Hallucinogen use, unspecified with hallucinogen-induced psychotic disorder with delusions
F16951	Hallucinogen use, unspecified with hallucinogen-induced psychotic disorder with hallucinations
F16959	Hallucinogen use, unspecified with hallucinogen-induced psychotic disorder, unspecified
F16980	Hallucinogen use, unspecified with hallucinogen-induced anxiety disorder
F16983	Hallucinogen use, unspecified with hallucinogen persisting perception disorder (flashbacks)
F16988	Hallucinogen use, unspecified with other hallucinogen-induced disorder
F1699	Hallucinogen use, unspecified with unspecified hallucinogen-induced disorder
F1810	Inhalant abuse, uncomplicated

Code	Shortened Description
F18120	Inhalant abuse with intoxication, uncomplicated
F18121	Inhalant abuse with intoxication delirium
F18129	Inhalant abuse with intoxication, unspecified
F1814	Inhalant abuse with inhalant-induced mood disorder
F18150	Inhalant abuse with inhalant-induced psychotic disorder with delusions
F18151	Inhalant abuse with inhalant-induced psychotic disorder with hallucinations
F18159	Inhalant abuse with inhalant-induced psychotic disorder, unspecified
F1817	Inhalant abuse with inhalant-induced dementia
F18180	Inhalant abuse with inhalant-induced anxiety disorder
F18188	Inhalant abuse with other inhalant-induced disorder
F1819	Inhalant abuse with unspecified inhalant-induced disorder
F1820	Inhalant dependence, uncomplicated
F18220	Inhalant dependence with intoxication, uncomplicated
F18221	Inhalant dependence with intoxication delirium
F18229	Inhalant dependence with intoxication, unspecified
F1824	Inhalant dependence with inhalant-induced mood disorder
F18250	Inhalant dependence with inhalant-induced psychotic disorder with delusions
F18251	Inhalant dependence with inhalant-induced psychotic disorder with hallucinations
F18259	Inhalant dependence with inhalant-induced psychotic disorder, unspecified
F1827	Inhalant dependence with inhalant-induced dementia
F18280	Inhalant dependence with inhalant-induced anxiety disorder
F18288	Inhalant dependence with other inhalant-induced disorder
F1829	Inhalant dependence with unspecified inhalant-induced disorder
F18920	Inhalant use, unspecified with intoxication, uncomplicated
F18921	Inhalant use, unspecified with intoxication with delirium
F18929	Inhalant use, unspecified with intoxication, unspecified
F1894	Inhalant use, unspecified with inhalant-induced mood disorder
F18950	Inhalant use, unspecified with inhalant-induced psychotic disorder with delusions
F18951	Inhalant use, unspecified with inhalant-induced psychotic disorder with hallucinations
F18959	Inhalant use, unspecified with inhalant-induced psychotic disorder, unspecified
F1897	Inhalant use, unspecified with inhalant-induced persisting dementia
F18980	Inhalant use, unspecified with inhalant-induced anxiety disorder

Code	Shortened Description
F18988	Inhalant use, unspecified with other inhalant-induced disorder
F1899	Inhalant use, unspecified with unspecified inhalant-induced disorder
F1910	Other psychoactive substance abuse, uncomplicated
F19120	Other psychoactive substance abuse with intoxication, uncomplicated
F19121	Other psychoactive substance abuse with intoxication delirium
F19122	Other psychoactive substance abuse with intoxication with perceptual disturbances
F19129	Other psychoactive substance abuse with intoxication, unspecified
F1914	Other psychoactive substance abuse with psychoactive substance-induced mood disorder
F19150	Other psychoactive substance abuse with psychoactive substance-induced psychotic disorder with delusions
F19151	Other psychoactive substance abuse with psychoactive substance-induced psychotic disorder with hallucinations
F19159	Other psychoactive substance abuse with psychoactive substance-induced psychotic disorder, unspecified
F1916	Other psychoactive substance abuse with psychoactive substance-induced persisting amnestic disorder
F1917	Other psychoactive substance abuse with psychoactive substance-induced persisting dementia
F19180	Other psychoactive substance abuse with psychoactive substance-induced anxiety disorder
F19181	Other psychoactive substance abuse with psychoactive substance-induced sexual dysfunction
F19182	Other psychoactive substance abuse with psychoactive substance-induced sleep disorder
F19188	Other psychoactive substance abuse with other psychoactive substance-induced disorder
F1919	Other psychoactive substance abuse with unspecified psychoactive substance-induced disorder
F1920	Other psychoactive substance dependence, uncomplicated
F19220	Other psychoactive substance dependence with intoxication, uncomplicated
F19221	Other psychoactive substance dependence with intoxication delirium
F19222	Other psychoactive substance dependence with intoxication with perceptual disturbance
F19229	Other psychoactive substance dependence with intoxication, unspecified
F19230	Other psychoactive substance dependence with withdrawal, uncomplicated
F19231	Other psychoactive substance dependence with withdrawal delirium
F19232	Other psychoactive substance dependence with withdrawal with perceptual disturbance
F19239	Other psychoactive substance dependence with withdrawal, unspecified
F1924	Other psychoactive substance dependence with psychoactive substance-induced mood disorder
F19250	Other psychoactive substance dependence with psychoactive substance-induced psychotic disorder with delusions
F19251	Other psychoactive substance dependence with psychoactive substance-induced psychotic disorder with hallucinations
F19259	Other psychoactive substance dependence with psychoactive substance-induced psychotic disorder, unspecified
F1926	Other psychoactive substance dependence with psychoactive substance-induced persisting amnestic disorder

Code	Shortened Description
F1927	Other psychoactive substance dependence with psychoactive substance-induced persisting dementia
F19280	Other psychoactive substance dependence with psychoactive substance-induced anxiety disorder
F19281	Other psychoactive substance dependence with psychoactive substance-induced sexual dysfunction
F19282	Other psychoactive substance dependence with psychoactive substance-induced sleep disorder
F19288	Other psychoactive substance dependence with other psychoactive substance-induced disorder
F1929	Other psychoactive substance dependence with unspecified psychoactive substance-induced disorder
F19920	Other psychoactive substance use, unspecified with intoxication, uncomplicated
F19921	Other psychoactive substance use, unspecified with intoxication with delirium
F19922	Other psychoactive substance use, unspecified with intoxication with perceptual disturbance
F19929	Other psychoactive substance use, unspecified with intoxication, unspecified
F19930	Other psychoactive substance use, unspecified with withdrawal, uncomplicated
F19931	Other psychoactive substance use, unspecified with withdrawal delirium
F19932	Other psychoactive substance use, unspecified with withdrawal with perceptual disturbance
F19939	Other psychoactive substance use, unspecified with withdrawal, unspecified
F1994	Other psychoactive substance use, unspecified with psychoactive substance-induced mood disorder
F19950	Other psychoactive substance use, unspecified with psychoactive substance-induced psychotic disorder with delusions
F19951	Other psychoactive substance use, unspecified with psychoactive substance-induced psychotic disorder with hallucinations
F19959	Other psychoactive substance use, unspecified with psychoactive substance-induced psychotic disorder, unspecified
F1996	Other psychoactive substance use, unspecified with psychoactive substance-induced persisting amnestic disorder
F1997	Other psychoactive substance use, unspecified with psychoactive substance-induced persisting dementia
F19980	Other psychoactive substance use, unspecified with psychoactive substance-induced anxiety disorder
F19981	Other psychoactive substance use, unspecified with psychoactive substance-induced sexual dysfunction
F19982	Other psychoactive substance use, unspecified with psychoactive substance-induced sleep disorder
F19988	Other psychoactive substance use, unspecified with other psychoactive substance-induced disorder
F1999	Other psychoactive substance use, unspecified with unspecified psychoactive substance-induced disorder
F200	Paranoid schizophrenia
F201	Disorganized schizophrenia
F202	Catatonic schizophrenia
F203	Undifferentiated schizophrenia
F205	Residual schizophrenia

Code	Shortened Description
F2081	Schizophreniform disorder
F2089	Other schizophrenia
F209	Schizophrenia, unspecified
F21	Schizotypal disorder
F22	Delusional disorders
F23	Brief psychotic disorder
F24	Shared psychotic disorder
F250	Schizoaffective disorder, bipolar type
F251	Schizoaffective disorder, depressive type
F258	Other schizoaffective disorders
F259	Schizoaffective disorder, unspecified
F28	Other psychotic disorder not due to a substance or known physiological condition
F29	Unspecified psychosis not due to a substance or known physiological condition
F3010	Manic episode without psychotic symptoms, unspecified
F3011	Manic episode without psychotic symptoms, mild
F3012	Manic episode without psychotic symptoms, moderate
F3013	Manic episode, severe, without psychotic symptoms
F302	Manic episode, severe with psychotic symptoms
F303	Manic episode in partial remission
F304	Manic episode in full remission
F308	Other manic episodes
F309	Manic episode, unspecified
F310	Bipolar disorder, current episode hypomanic
F3110	Bipolar disorder, current episode manic without psychotic features, unspecified
F3111	Bipolar disorder, current episode manic without psychotic features, mild
F3112	Bipolar disorder, current episode manic without psychotic features, moderate
F3113	Bipolar disorder, current episode manic without psychotic features, severe
F312	Bipolar disorder, current episode manic severe with psychotic features
F3130	Bipolar disorder, current episode depressed, mild or moderate severity, unspecified
F3131	Bipolar disorder, current episode depressed, mild
F3132	Bipolar disorder, current episode depressed, moderate
F314	Bipolar disorder, current episode depressed, severe, without psychotic features

Code	Shortened Description
F315	Bipolar disorder, current episode depressed, severe, with psychotic features
F3160	Bipolar disorder, current episode mixed, unspecified
F3161	Bipolar disorder, current episode mixed, mild
F3162	Bipolar disorder, current episode mixed, moderate
F3163	Bipolar disorder, current episode mixed, severe, without psychotic features
F3164	Bipolar disorder, current episode mixed, severe, with psychotic features
F3170	Bipolar disorder, currently in remission, most recent episode unspecified
F3171	Bipolar disorder, in partial remission, most recent episode hypomanic
F3172	Bipolar disorder, in full remission, most recent episode hypomanic
F3173	Bipolar disorder, in partial remission, most recent episode manic
F3174	Bipolar disorder, in full remission, most recent episode manic
F3175	Bipolar disorder, in partial remission, most recent episode depressed
F3176	Bipolar disorder, in full remission, most recent episode depressed
F3177	Bipolar disorder, in partial remission, most recent episode mixed
F3178	Bipolar disorder, in full remission, most recent episode mixed
F3181	Bipolar II disorder
F3189	Other bipolar disorder
F319	Bipolar disorder, unspecified
F320	Major depressive disorder, single episode, mild
F321	Major depressive disorder, single episode, moderate
F322	Major depressive disorder, single episode, severe without psychotic features
F323	Major depressive disorder, single episode, severe with psychotic features
F324	Major depressive disorder, single episode, in partial remission
F325	Major depressive disorder, single episode, in full remission
F3281	Premenstrual dysphoric disorder
F3289	Other specified depressive episodes
F329	Major depressive disorder, single episode, unspecified
F330	Major depressive disorder, recurrent, mild
F331	Major depressive disorder, recurrent, moderate
F332	Major depressive disorder, recurrent severe without psychotic features
F333	Major depressive disorder, recurrent, severe with psychotic symptoms
F3340	Major depressive disorder, recurrent, in remission, unspecified

Code	Shortened Description
F3341	Major depressive disorder, recurrent, in partial remission
F3342	Major depressive disorder, recurrent, in full remission
F338	Other recurrent depressive disorders
F339	Major depressive disorder, recurrent, unspecified
F340	Cyclothymic disorder
F341	Dysthymic disorder
F3481	Disruptive mood dysregulation disorder
F3489	Other specified persistent mood disorders
F349	Persistent mood [affective] disorder, unspecified
F39	Unspecified mood [affective] disorder
F4000	Agoraphobia, unspecified
F4001	Agoraphobia with panic disorder
F4002	Agoraphobia without panic disorder
F4010	Social phobia, unspecified
F4011	Social phobia, generalized
F40210	Arachnophobia
F40218	Other animal type phobia
F40220	Fear of thunderstorms
F40228	Other natural environment type phobia
F40230	Fear of blood
F40231	Fear of injections and transfusions
F40232	Fear of other medical care
F40233	Fear of injury
F40240	Claustrophobia
F40241	Acrophobia
F40242	Fear of bridges
F40243	Fear of flying
F40248	Other situational type phobia
F40290	Androphobia
F40291	Gynephobia
F40298	Other specified phobia
F408	Other phobic anxiety disorders

Code	Shortened Description
F409	Phobic anxiety disorder, unspecified
F410	Panic disorder [episodic paroxysmal anxiety]
F411	Generalized anxiety disorder
F413	Other mixed anxiety disorders
F418	Other specified anxiety disorders
F419	Anxiety disorder, unspecified
F422	Mixed obsessional thoughts and acts
F423	Hoarding disorder
F424	Excoriation (skin-picking) disorder
F428	Other obsessive-compulsive disorder
F429	Obsessive-compulsive disorder, unspecified
F430	Acute stress reaction
F4310	Post-traumatic stress disorder, unspecified
F4311	Post-traumatic stress disorder, acute
F4312	Post-traumatic stress disorder, chronic
F4320	Adjustment disorder, unspecified
F4321	Adjustment disorder with depressed mood
F4322	Adjustment disorder with anxiety
F4323	Adjustment disorder with mixed anxiety and depressed mood
F4324	Adjustment disorder with disturbance of conduct
F4325	Adjustment disorder with mixed disturbance of emotions and conduct
F4329	Adjustment disorder with other symptoms
F438	Other reactions to severe stress
F439	Reaction to severe stress, unspecified
F440	Dissociative amnesia
F441	Dissociative fugue
F442	Dissociative stupor
F444	Conversion disorder with motor symptom or deficit
F445	Conversion disorder with seizures or convulsions
F446	Conversion disorder with sensory symptom or deficit
F447	Conversion disorder with mixed symptom presentation
F4481	Dissociative identity disorder

Code	Shortened Description
F4489	Other dissociative and conversion disorders
F449	Dissociative and conversion disorder, unspecified
F450	Somatization disorder
F451	Undifferentiated somatoform disorder
F4520	Hypochondriacal disorder, unspecified
F4521	Hypochondriasis
F4522	Body dysmorphic disorder
F4529	Other hypochondriacal disorders
F4541	Pain disorder exclusively related to psychological factors
F4542	Pain disorder with related psychological factors
F458	Other somatoform disorders
F459	Somatoform disorder, unspecified
F481	Depersonalization-derealization syndrome
F482	Pseudobulbar affect
F488	Other specified nonpsychotic mental disorders
F489	Nonpsychotic mental disorder, unspecified
F5000	Anorexia nervosa, unspecified
F5001	Anorexia nervosa, restricting type
F5002	Anorexia nervosa, binge eating/purging type
F502	Bulimia nervosa
F5081	Binge eating disorder
F5082	Avoidant/restrictive food intake disorder
F5089	Other specified eating disorder
F509	Eating disorder, unspecified
F5101	Primary insomnia
F5102	Adjustment insomnia
F5103	Paradoxical insomnia
F5104	Psychophysiologic insomnia
F5105	Insomnia due to other mental disorder
F5109	Other insomnia not due to a substance or known physiological condition
F5111	Primary hypersomnia
F5112	Insufficient sleep syndrome

Code	Shortened Description
F5113	Hypersomnia due to other mental disorder
F5119	Other hypersomnia not due to a substance or known physiological condition
F513	Sleepwalking [somnambulism]
F514	Sleep terrors [night terrors]
F515	Nightmare disorder
F518	Other sleep disorders not due to a substance or known physiological condition
F519	Sleep disorder not due to a substance or known physiological condition, unspecified
F520	Hypoactive sexual desire disorder
F521	Sexual aversion disorder
F5221	Male erectile disorder
F5222	Female sexual arousal disorder
F5231	Female orgasmic disorder
F5232	Male orgasmic disorder
F524	Premature ejaculation
F525	Vaginismus not due to a substance or known physiological condition
F526	Dyspareunia not due to a substance or known physiological condition
F528	Other sexual dysfunction not due to a substance or known physiological condition
F529	Unspecified sexual dysfunction not due to a substance or known physiological condition
F530	Postpartum depression
F531	Puerperal psychosis
F54	Psychological and behavioral factors associated with disorders or diseases classified elsewhere
F59	Unspecified behavioral syndromes associated with physiological disturbances and physical factors
F600	Paranoid personality disorder
F601	Schizoid personality disorder
F602	Antisocial personality disorder
F603	Borderline personality disorder
F604	Histrionic personality disorder
F605	Obsessive-compulsive personality disorder
F606	Avoidant personality disorder
F607	Dependent personality disorder
F6081	Narcissistic personality disorder
F6089	Other specific personality disorders

Code	Shortened Description
F609	Personality disorder, unspecified
F630	Pathological gambling
F631	Pyromania
F632	Kleptomania
F633	Trichotillomania
F6381	Intermittent explosive disorder
F6389	Other impulse disorders
F639	Impulse disorder, unspecified
F640	Transsexualism
F641	Dual role transvestism
F642	Gender identity disorder of childhood
F648	Other gender identity disorders
F649	Gender identity disorder, unspecified
F650	Fetishism
F651	Transvestic fetishism
F652	Exhibitionism
F653	Voyeurism
F654	Pedophilia
F6550	Sadomasochism, unspecified
F6551	Sexual masochism
F6552	Sexual sadism
F6581	Frotteurism
F6589	Other paraphilias
F659	Paraphilia, unspecified
F66	Other sexual disorders
F6810	Factitious disorder imposed on self, unspecified
F6811	Factitious disorder imposed on self, with predominantly psychological signs and symptoms
F6812	Factitious disorder imposed on self, with predominantly physical signs and symptoms
F6813	Factitious disorder imposed on self, with combined psychological and physical signs and symptoms
F688	Other specified disorders of adult personality and behavior
F68A	Factitious disorder imposed on another
F69	Unspecified disorder of adult personality and behavior

Code	Shortened Description
F70	Mild intellectual disabilities
F71	Moderate intellectual disabilities
F72	Severe intellectual disabilities
F73	Profound intellectual disabilities
F78	Other intellectual disabilities
F79	Unspecified intellectual disabilities
F800	Phonological disorder
F801	Expressive language disorder
F802	Mixed receptive-expressive language disorder
F804	Speech and language development delay due to hearing loss
F8081	Childhood onset fluency disorder
F8082	Social pragmatic communication disorder
F8089	Other developmental disorders of speech and language
F809	Developmental disorder of speech and language, unspecified
F810	Specific reading disorder
F812	Mathematics disorder
F8181	Disorder of written expression
F8189	Other developmental disorders of scholastic skills
F819	Developmental disorder of scholastic skills, unspecified
F82	Specific developmental disorder of motor function
F840	Autistic disorder
F842	Rett's syndrome
F843	Other childhood disintegrative disorder
F845	Asperger's syndrome
F848	Other pervasive developmental disorders
F849	Pervasive developmental disorder, unspecified
F88	Other disorders of psychological development
F89	Unspecified disorder of psychological development
F900	Attention-deficit hyperactivity disorder, predominantly inattentive type
F901	Attention-deficit hyperactivity disorder, predominantly hyperactive type
F902	Attention-deficit hyperactivity disorder, combined type
F908	Attention-deficit hyperactivity disorder, other type

Code	Shortened Description
F909	Attention-deficit hyperactivity disorder, unspecified type
F910	Conduct disorder confined to family context
F911	Conduct disorder, childhood-onset type
F912	Conduct disorder, adolescent-onset type
F913	Oppositional defiant disorder
F918	Other conduct disorders
F919	Conduct disorder, unspecified
F930	Separation anxiety disorder of childhood
F938	Other childhood emotional disorders
F939	Childhood emotional disorder, unspecified
F940	Selective mutism
F941	Reactive attachment disorder of childhood
F942	Disinhibited attachment disorder of childhood
F948	Other childhood disorders of social functioning
F949	Childhood disorder of social functioning, unspecified
F950	Transient tic disorder
F951	Chronic motor or vocal tic disorder
F952	Tourette's disorder
F958	Other tic disorders
F959	Tic disorder, unspecified
F980	Enuresis not due to a substance or known physiological condition
F981	Encopresis not due to a substance or known physiological condition
F9821	Rumination disorder of infancy
F9829	Other feeding disorders of infancy and early childhood
F983	Pica of infancy and childhood
F984	Stereotyped movement disorders
F985	Adult onset fluency disorder
F988	Other specified behavioral and emotional disorders with onset usually occurring in childhood and adolescence
F989	Unspecified behavioral and emotional disorders with onset usually occurring in childhood and adolescence
F99	Mental disorder, not otherwise specified
R451	Restlessness and agitation
R452	Unhappiness

Code	Shortened Description
R455	Hostility
R456	Violent behavior
R457	State of emotional shock and stress, unspecified
R4581	Low self-esteem
R4582	Worries
R480	Dyslexia and alexia
Z87890	Personal history of sex reassignment

Table Number 11.01.1: Delivery

Code	Shortened Description
10D00Z0	Extraction of Products of Conception, High, Open Approach
10D00Z1	Extraction of Products of Conception, Low, Open Approach
10D00Z2	Extraction of Products of Conception, Extraperitoneal, Open Approach
10D07Z3	Extraction of Products of Conception, Low Forceps, Via Natural or Artificial Opening
10D07Z4	Extraction of Products of Conception, Mid Forceps, Via Natural or Artificial Opening
10D07Z5	Extraction of Products of Conception, High Forceps, Via Natural or Artificial Opening
10D07Z6	Extraction of Products of Conception, Vacuum, Via Natural or Artificial Opening
10D07Z7	Extraction of Products of Conception, Internal Version, Via Natural or Artificial Opening
10D07Z8	Extraction of Products of Conception, Other, Via Natural or Artificial Opening
10E0XZZ	Delivery of Products of Conception, External Approach

Table Number 11.05: Medical Induction of Labor

Code	Shortened Description
0U7C7DZ	Dilation of Cervix with Intraluminal Device, Via Natural or Artificial Opening
0U7C7ZZ	Dilation of Cervix, Via Natural or Artificial Opening
10907ZC	Drainage of Amniotic Fluid, Therapeutic from Products of Conception, Via Natural or Artificial Opening
3E033VJ	Introduction of Other Hormone into Peripheral Vein, Percutaneous Approach
3E0DXGC	Introduction of Other Therapeutic Substance into Mouth and Pharynx, External Approach
3E0P3VZ	Introduction of Hormone into Female Reproductive, Percutaneous Approach
3E0P7GC	Introduction of Other Therapeutic Substance into Female Reproductive, Via Natural or Artificial Opening
3E0P7VZ	Introduction of Hormone into Female Reproductive, Via Natural or Artificial Opening

Table Number 11.06: Cesarean Birth

Code	Shortened Description
10D00Z0	Extraction of Products of Conception, Classical, Open Approach
10D00Z1	Extraction of Products of Conception, Low Cervical, Open Approach
10D00Z2	Extraction of Products of Conception, Extraperitoneal, Open Approach

Table Number 11.06.1: Planned Cesarean Birth in Labor

Code	Shortened Description
O7582	Onset (spontaneous) of labor after 37 completed weeks of gestation but before 39 completed weeks gestation, with delivery by (planned) cesarean section

Table Number 11.07: Conditions Possibly Justifying Elective Delivery Prior to 39 Weeks Gestation

Code	Shortened Description
B20	Human immunodeficiency virus [HIV] disease
K8000	Calculus of gallbladder with acute cholecystitis without obstruction
K8001	Calculus of gallbladder with acute cholecystitis with obstruction
K8012	Calculus of gallbladder with acute and chronic cholecystitis without obstruction
K8013	Calculus of gallbladder with acute and chronic cholecystitis with obstruction
K8042	Calculus of bile duct with acute cholecystitis without obstruction
K8043	Calculus of bile duct with acute cholecystitis with obstruction
K8046	Calculus of bile duct with acute and chronic cholecystitis without obstruction
K8047	Calculus of bile duct with acute and chronic cholecystitis with obstruction
K8062	Calculus of gallbladder and bile duct with acute cholecystitis without obstruction
K8063	Calculus of gallbladder and bile duct with acute cholecystitis with obstruction
K8066	Calculus of gallbladder and bile duct with acute and chronic cholecystitis without obstruction
K8067	Calculus of gallbladder and bile duct with acute and chronic cholecystitis with obstruction
K810	Acute cholecystitis
K812	Acute cholecystitis with chronic cholecystitis
K835	Biliary cyst
K838	Other specified diseases of biliary tract
K87	Disorders of gallbladder, biliary tract and pancreas in diseases classified elsewhere
O10011	Pre-existing essential hypertension complicating pregnancy, first trimester

Code	Shortened Description
O10012	Pre-existing essential hypertension complicating pregnancy, second trimester
O10013	Pre-existing essential hypertension complicating pregnancy, third trimester
O1002	Pre-existing essential hypertension complicating childbirth
O1003	Pre-existing essential hypertension complicating the puerperium
O10111	Pre-existing hypertensive heart disease complicating pregnancy, first trimester
O10112	Pre-existing hypertensive heart disease complicating pregnancy, second trimester
O10113	Pre-existing hypertensive heart disease complicating pregnancy, third trimester
O1012	Pre-existing hypertensive heart disease complicating childbirth
O1013	Pre-existing hypertensive heart disease complicating the puerperium
O10211	Pre-existing hypertensive chronic kidney disease complicating pregnancy, first trimester
O10212	Pre-existing hypertensive chronic kidney disease complicating pregnancy, second trimester
O10213	Pre-existing hypertensive chronic kidney disease complicating pregnancy, third trimester
O1022	Pre-existing hypertensive chronic kidney disease complicating childbirth
O10311	Pre-existing hypertensive heart and chronic kidney disease complicating pregnancy, first trimester
O10312	Pre-existing hypertensive heart and chronic kidney disease complicating pregnancy, second trimester
O10313	Pre-existing hypertensive heart and chronic kidney disease complicating pregnancy, third trimester
O1032	Pre-existing hypertensive heart and chronic kidney disease complicating childbirth
O10411	Pre-existing secondary hypertension complicating pregnancy, first trimester
O10412	Pre-existing secondary hypertension complicating pregnancy, second trimester
O10413	Pre-existing secondary hypertension complicating pregnancy, third trimester
O1042	Pre-existing secondary hypertension complicating childbirth
O1043	Pre-existing secondary hypertension complicating the puerperium
O10911	Unspecified pre-existing hypertension complicating pregnancy, first trimester
O10912	Unspecified pre-existing hypertension complicating pregnancy, second trimester
O10913	Unspecified pre-existing hypertension complicating pregnancy, third trimester
O1092	Unspecified pre-existing hypertension complicating childbirth
O111	Pre-existing hypertension with pre-eclampsia, first trimester
O112	Pre-existing hypertension with pre-eclampsia, second trimester
O113	Pre-existing hypertension with pre-eclampsia, third trimester
O114	Pre-existing hypertension with pre-eclampsia, complicating childbirth
O131	Gestational [pregnancy-induced] hypertension without significant proteinuria, first trimester
O132	Gestational [pregnancy-induced] hypertension without significant proteinuria, second trimester

Code	Shortened Description
O133	Gestational [pregnancy-induced] hypertension without significant proteinuria, third trimester
O134	Gestational [pregnancy-induced] hypertension without significant proteinuria, complicating childbirth
O1402	Mild to moderate pre-eclampsia, second trimester
O1403	Mild to moderate pre-eclampsia, third trimester
O1404	Mild to moderate pre-eclampsia, complicating childbirth
O1412	Severe pre-eclampsia, second trimester
O1413	Severe pre-eclampsia, third trimester
O1414	Severe pre-eclampsia complicating childbirth
O1422	HELLP syndrome (HELLP), second trimester
O1423	HELLP syndrome (HELLP), third trimester
O1424	HELLP syndrome, complicating childbirth
O1492	Unspecified pre-eclampsia, second trimester
O1493	Unspecified pre-eclampsia, third trimester
O1494	Unspecified pre-eclampsia, complicating childbirth
O1502	Eclampsia complicating pregnancy, second trimester
O1503	Eclampsia complicating pregnancy, third trimester
O151	Eclampsia complicating labor
O152	Eclampsia complicating the puerperium
O161	Unspecified maternal hypertension, first trimester
O162	Unspecified maternal hypertension, second trimester
O163	Unspecified maternal hypertension, third trimester
O164	Unspecified maternal hypertension, complicating childbirth
O24011	Pre-existing type 1 diabetes mellitus, in pregnancy, first trimester
O24012	Pre-existing type 1 diabetes mellitus, in pregnancy, second trimester
O24013	Pre-existing type 1 diabetes mellitus, in pregnancy, third trimester
O2402	Pre-existing type 1 diabetes mellitus, in childbirth
O24111	Pre-existing type 2 diabetes mellitus, in pregnancy, first trimester
O24112	Pre-existing type 2 diabetes mellitus, in pregnancy, second trimester
O24113	Pre-existing type 2 diabetes mellitus, in pregnancy, third trimester
O2412	Pre-existing type 2 diabetes mellitus, in childbirth
O24311	Unspecified pre-existing diabetes mellitus in pregnancy, first trimester
O24312	Unspecified pre-existing diabetes mellitus in pregnancy, second trimester

Code	Shortened Description
O24313	Unspecified pre-existing diabetes mellitus in pregnancy, third trimester
O2432	Unspecified pre-existing diabetes mellitus in childbirth
O24410	Gestational diabetes mellitus in pregnancy, diet controlled
O24414	Gestational diabetes mellitus in pregnancy, insulin controlled
O24415	Gestational diabetes mellitus in pregnancy, controlled by oral hypoglycemic drugs
O24419	Gestational diabetes mellitus in pregnancy, unspecified control
O24420	Gestational diabetes mellitus in childbirth, diet controlled
O24424	Gestational diabetes mellitus in childbirth, insulin controlled
O24425	Gestational diabetes mellitus in childbirth, controlled by oral hypoglycemic drugs
O24429	Gestational diabetes mellitus in childbirth, unspecified control
O24811	Other pre-existing diabetes mellitus in pregnancy, first trimester
O24812	Other pre-existing diabetes mellitus in pregnancy, second trimester
O24813	Other pre-existing diabetes mellitus in pregnancy, third trimester
O2482	Other pre-existing diabetes mellitus in childbirth
O24911	Unspecified diabetes mellitus in pregnancy, first trimester
O24912	Unspecified diabetes mellitus in pregnancy, second trimester
O24913	Unspecified diabetes mellitus in pregnancy, third trimester
O2492	Unspecified diabetes mellitus in childbirth
O2662	Liver and biliary tract disorders in childbirth
O26831	Pregnancy related renal disease, first trimester
O26832	Pregnancy related renal disease, second trimester
O26833	Pregnancy related renal disease, third trimester
O30001	Twin pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, first trimester
O30002	Twin pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, second trimester
O30003	Twin pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, third trimester
O30011	Twin pregnancy, monochorionic/monoamniotic, first trimester
O30012	Twin pregnancy, monochorionic/monoamniotic, second trimester
O30013	Twin pregnancy, monochorionic/monoamniotic, third trimester
O30031	Twin pregnancy, monochorionic/diamniotic, first trimester
O30032	Twin pregnancy, monochorionic/diamniotic, second trimester
O30033	Twin pregnancy, monochorionic/diamniotic, third trimester
O30041	Twin pregnancy, dichorionic/diamniotic, first trimester

Code	Shortened Description
O30042	Twin pregnancy, dichorionic/diamniotic, second trimester
O30043	Twin pregnancy, dichorionic/diamniotic, third trimester
O30091	Twin pregnancy, unable to determine number of placenta and number of amniotic sacs, first trimester
O30092	Twin pregnancy, unable to determine number of placenta and number of amniotic sacs, second trimester
O30093	Twin pregnancy, unable to determine number of placenta and number of amniotic sacs, third trimester
O30101	Triplet pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, first trimester
O30102	Triplet pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, second trimester
O30103	Triplet pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, third trimester
O30111	Triplet pregnancy with two or more monochorionic fetuses, first trimester
O30112	Triplet pregnancy with two or more monochorionic fetuses, second trimester
O30113	Triplet pregnancy with two or more monochorionic fetuses, third trimester
O30121	Triplet pregnancy with two or more monoamniotic fetuses, first trimester
O30122	Triplet pregnancy with two or more monoamniotic fetuses, second trimester
O30123	Triplet pregnancy with two or more monoamniotic fetuses, third trimester
O30131	Triplet pregnancy, trichorionic/triamniotic, first trimester
O30132	Triplet pregnancy, trichorionic/triamniotic, second trimester
O30133	Triplet pregnancy, trichorionic/triamniotic, third trimester
O30191	Triplet pregnancy, unable to determine number of placenta and number of amniotic sacs, first trimester
O30192	Triplet pregnancy, unable to determine number of placenta and number of amniotic sacs, second trimester
O30193	Triplet pregnancy, unable to determine number of placenta and number of amniotic sacs, third trimester
O30201	Quadruplet pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, first trimester
O30202	Quadruplet pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, second trimester
O30203	Quadruplet pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, third trimester
O30211	Quadruplet pregnancy with two or more monochorionic fetuses, first trimester
O30212	Quadruplet pregnancy with two or more monochorionic fetuses, second trimester
O30213	Quadruplet pregnancy with two or more monochorionic fetuses, third trimester
O30221	Quadruplet pregnancy with two or more monoamniotic fetuses, first trimester
O30222	Quadruplet pregnancy with two or more monoamniotic fetuses, second trimester
O30223	Quadruplet pregnancy with two or more monoamniotic fetuses, third trimester
O30231	Quadruplet pregnancy, quadrachorionic/quadra-amniotic, first trimester
O30232	Quadruplet pregnancy, quadrachorionic/quadra-amniotic, second trimester
O30233	Quadruplet pregnancy, quadrachorionic/quadra-amniotic, third trimester

Code	Shortened Description
O30291	Quadruplet pregnancy, unable to determine number of placenta and number of amniotic sacs, first trimester
O30292	Quadruplet pregnancy, unable to determine number of placenta and number of amniotic sacs, second trimester
O30293	Quadruplet pregnancy, unable to determine number of placenta and number of amniotic sacs, third trimester
O30801	Other specified multiple gestation, unspecified number of placenta and unspecified number of amniotic sacs, first trimester
O30802	Other specified multiple gestation, unspecified number of placenta and unspecified number of amniotic sacs, second trimester
O30803	Other specified multiple gestation, unspecified number of placenta and unspecified number of amniotic sacs, third trimester
O30811	Other specified multiple gestation with two or more monochorionic fetuses, first trimester
O30812	Other specified multiple gestation with two or more monochorionic fetuses, second trimester
O30813	Other specified multiple gestation with two or more monochorionic fetuses, third trimester
O30821	Other specified multiple gestation with two or more monoamniotic fetuses, first trimester
O30822	Other specified multiple gestation with two or more monoamniotic fetuses, second trimester
O30823	Other specified multiple gestation with two or more monoamniotic fetuses, third trimester
O30831	Other specified multiple gestation, number of chorions and amnions are both equal to the number of fetuses, first trimester
O30832	Other specified multiple gestation, number of chorions and amnions are both equal to the number of fetuses, second trimester
O30833	Other specified multiple gestation, number of chorions and amnions are both equal to the number of fetuses, third trimester
O30891	Other specified multiple gestation, unable to determine number of placenta and number of amniotic sacs, first trimester
O30892	Other specified multiple gestation, unable to determine number of placenta and number of amniotic sacs, second trimester
O30893	Other specified multiple gestation, unable to determine number of placenta and number of amniotic sacs, third trimester
O3091	Multiple gestation, unspecified, first trimester
O3092	Multiple gestation, unspecified, second trimester
O3093	Multiple gestation, unspecified, third trimester
O3111X0	Continuing pregnancy after spontaneous abortion of one fetus or more, first trimester, not applicable or unspecified
O3111X1	Continuing pregnancy after spontaneous abortion of one fetus or more, first trimester, fetus 1
O3111X2	Continuing pregnancy after spontaneous abortion of one fetus or more, first trimester, fetus 2
O3111X3	Continuing pregnancy after spontaneous abortion of one fetus or more, first trimester, fetus 3
O3111X4	Continuing pregnancy after spontaneous abortion of one fetus or more, first trimester, fetus 4
O3111X5	Continuing pregnancy after spontaneous abortion of one fetus or more, first trimester, fetus 5

Code	Shortened Description
O3111X9	Continuing pregnancy after spontaneous abortion of one fetus or more, first trimester, other fetus
O3112X0	Continuing pregnancy after spontaneous abortion of one fetus or more, second trimester, not applicable or unspecified
O3112X1	Continuing pregnancy after spontaneous abortion of one fetus or more, second trimester, fetus 1
O3112X2	Continuing pregnancy after spontaneous abortion of one fetus or more, second trimester, fetus 2
O3112X3	Continuing pregnancy after spontaneous abortion of one fetus or more, second trimester, fetus 3
O3112X4	Continuing pregnancy after spontaneous abortion of one fetus or more, second trimester, fetus 4
O3112X5	Continuing pregnancy after spontaneous abortion of one fetus or more, second trimester, fetus 5
O3112X9	Continuing pregnancy after spontaneous abortion of one fetus or more, second trimester, other fetus
O3113X0	Continuing pregnancy after spontaneous abortion of one fetus or more, third trimester, not applicable or unspecified
O3113X1	Continuing pregnancy after spontaneous abortion of one fetus or more, third trimester, fetus 1
O3113X2	Continuing pregnancy after spontaneous abortion of one fetus or more, third trimester, fetus 2
O3113X3	Continuing pregnancy after spontaneous abortion of one fetus or more, third trimester, fetus 3
O3113X4	Continuing pregnancy after spontaneous abortion of one fetus or more, third trimester, fetus 4
O3113X5	Continuing pregnancy after spontaneous abortion of one fetus or more, third trimester, fetus 5
O3113X9	Continuing pregnancy after spontaneous abortion of one fetus or more, third trimester, other fetus
O3121X0	Continuing pregnancy after intrauterine death of one fetus or more, first trimester, not applicable or unspecified
O3121X1	Continuing pregnancy after intrauterine death of one fetus or more, first trimester, fetus 1
O3121X2	Continuing pregnancy after intrauterine death of one fetus or more, first trimester, fetus 2
O3121X3	Continuing pregnancy after intrauterine death of one fetus or more, first trimester, fetus 3
O3121X4	Continuing pregnancy after intrauterine death of one fetus or more, first trimester, fetus 4
O3121X5	Continuing pregnancy after intrauterine death of one fetus or more, first trimester, fetus 5
O3121X9	Continuing pregnancy after intrauterine death of one fetus or more, first trimester, other fetus
O3122X0	Continuing pregnancy after intrauterine death of one fetus or more, second trimester, not applicable or unspecified
O3122X1	Continuing pregnancy after intrauterine death of one fetus or more, second trimester, fetus 1
O3122X2	Continuing pregnancy after intrauterine death of one fetus or more, second trimester, fetus 2
O3122X3	Continuing pregnancy after intrauterine death of one fetus or more, second trimester, fetus 3
O3122X4	Continuing pregnancy after intrauterine death of one fetus or more, second trimester, fetus 4
O3122X5	Continuing pregnancy after intrauterine death of one fetus or more, second trimester, fetus 5
O3122X9	Continuing pregnancy after intrauterine death of one fetus or more, second trimester, other fetus
O3123X0	Continuing pregnancy after intrauterine death of one fetus or more, third trimester, not applicable or unspecified
O3123X1	Continuing pregnancy after intrauterine death of one fetus or more, third trimester, fetus 1
O3123X2	Continuing pregnancy after intrauterine death of one fetus or more, third trimester, fetus 2

Code	Shortened Description
O3123X3	Continuing pregnancy after intrauterine death of one fetus or more, third trimester, fetus 3
O3123X4	Continuing pregnancy after intrauterine death of one fetus or more, third trimester, fetus 4
O3123X5	Continuing pregnancy after intrauterine death of one fetus or more, third trimester, fetus 5
O3123X9	Continuing pregnancy after intrauterine death of one fetus or more, third trimester, other fetus
O3131X0	Continuing pregnancy after elective fetal reduction of one fetus or more, first trimester, not applicable or unspecified
O3131X1	Continuing pregnancy after elective fetal reduction of one fetus or more, first trimester, fetus 1
O3131X2	Continuing pregnancy after elective fetal reduction of one fetus or more, first trimester, fetus 2
O3131X3	Continuing pregnancy after elective fetal reduction of one fetus or more, first trimester, fetus 3
O3131X4	Continuing pregnancy after elective fetal reduction of one fetus or more, first trimester, fetus 4
O3131X5	Continuing pregnancy after elective fetal reduction of one fetus or more, first trimester, fetus 5
O3131X9	Continuing pregnancy after elective fetal reduction of one fetus or more, first trimester, other fetus
O3132X0	Continuing pregnancy after elective fetal reduction of one fetus or more, second trimester, not applicable or unspecified
O3132X1	Continuing pregnancy after elective fetal reduction of one fetus or more, second trimester, fetus 1
O3132X2	Continuing pregnancy after elective fetal reduction of one fetus or more, second trimester, fetus 2
O3132X3	Continuing pregnancy after elective fetal reduction of one fetus or more, second trimester, fetus 3
O3132X4	Continuing pregnancy after elective fetal reduction of one fetus or more, second trimester, fetus 4
O3132X5	Continuing pregnancy after elective fetal reduction of one fetus or more, second trimester, fetus 5
O3132X9	Continuing pregnancy after elective fetal reduction of one fetus or more, second trimester, other fetus
O3133X0	Continuing pregnancy after elective fetal reduction of one fetus or more, third trimester, not applicable or unspecified
O3133X1	Continuing pregnancy after elective fetal reduction of one fetus or more, third trimester, fetus 1
O3133X2	Continuing pregnancy after elective fetal reduction of one fetus or more, third trimester, fetus 2
O3133X3	Continuing pregnancy after elective fetal reduction of one fetus or more, third trimester, fetus 3
O3133X4	Continuing pregnancy after elective fetal reduction of one fetus or more, third trimester, fetus 4
O3133X5	Continuing pregnancy after elective fetal reduction of one fetus or more, third trimester, fetus 5
O3133X9	Continuing pregnancy after elective fetal reduction of one fetus or more, third trimester, other fetus
O318X10	Other complications specific to multiple gestation, first trimester, not applicable or unspecified
O318X11	Other complications specific to multiple gestation, first trimester, fetus 1
O318X12	Other complications specific to multiple gestation, first trimester, fetus 2
O318X13	Other complications specific to multiple gestation, first trimester, fetus 3
O318X14	Other complications specific to multiple gestation, first trimester, fetus 4
O318X15	Other complications specific to multiple gestation, first trimester, fetus 5
O318X19	Other complications specific to multiple gestation, first trimester, other fetus

Code	Shortened Description
O318X20	Other complications specific to multiple gestation, second trimester, not applicable or unspecified
O318X21	Other complications specific to multiple gestation, second trimester, fetus 1
O318X22	Other complications specific to multiple gestation, second trimester, fetus 2
O318X23	Other complications specific to multiple gestation, second trimester, fetus 3
O318X24	Other complications specific to multiple gestation, second trimester, fetus 4
O318X25	Other complications specific to multiple gestation, second trimester, fetus 5
O318X29	Other complications specific to multiple gestation, second trimester, other fetus
O318X30	Other complications specific to multiple gestation, third trimester, not applicable or unspecified
O318X31	Other complications specific to multiple gestation, third trimester, fetus 1
O318X32	Other complications specific to multiple gestation, third trimester, fetus 2
O318X33	Other complications specific to multiple gestation, third trimester, fetus 3
O318X34	Other complications specific to multiple gestation, third trimester, fetus 4
O318X35	Other complications specific to multiple gestation, third trimester, fetus 5
O318X39	Other complications specific to multiple gestation, third trimester, other fetus
O34212	Maternal care for vertical scar from previous cesarean delivery
O350XX0	Maternal care for (suspected) central nervous system malformation in fetus, not applicable or unspecified
O350XX1	Maternal care for (suspected) central nervous system malformation in fetus, fetus 1
O350XX2	Maternal care for (suspected) central nervous system malformation in fetus, fetus 2
O350XX3	Maternal care for (suspected) central nervous system malformation in fetus, fetus 3
O350XX4	Maternal care for (suspected) central nervous system malformation in fetus, fetus 4
O350XX5	Maternal care for (suspected) central nervous system malformation in fetus, fetus 5
O350XX9	Maternal care for (suspected) central nervous system malformation in fetus, other fetus
O351XX0	Maternal care for (suspected) chromosomal abnormality in fetus, not applicable or unspecified
O351XX1	Maternal care for (suspected) chromosomal abnormality in fetus, fetus 1
O351XX2	Maternal care for (suspected) chromosomal abnormality in fetus, fetus 2
O351XX3	Maternal care for (suspected) chromosomal abnormality in fetus, fetus 3
O351XX4	Maternal care for (suspected) chromosomal abnormality in fetus, fetus 4
O351XX5	Maternal care for (suspected) chromosomal abnormality in fetus, fetus 5
O351XX9	Maternal care for (suspected) chromosomal abnormality in fetus, other fetus
O353XX0	Maternal care for (suspected) damage to fetus from viral disease in mother, not applicable or unspecified
O353XX1	Maternal care for (suspected) damage to fetus from viral disease in mother, fetus 1
O353XX2	Maternal care for (suspected) damage to fetus from viral disease in mother, fetus 2

Code	Shortened Description
O353XX3	Maternal care for (suspected) damage to fetus from viral disease in mother, fetus 3
O353XX4	Maternal care for (suspected) damage to fetus from viral disease in mother, fetus 4
O353XX5	Maternal care for (suspected) damage to fetus from viral disease in mother, fetus 5
O353XX9	Maternal care for (suspected) damage to fetus from viral disease in mother, other fetus
O354XX0	Maternal care for (suspected) damage to fetus from alcohol, not applicable or unspecified
O354XX1	Maternal care for (suspected) damage to fetus from alcohol, fetus 1
O354XX2	Maternal care for (suspected) damage to fetus from alcohol, fetus 2
O354XX3	Maternal care for (suspected) damage to fetus from alcohol, fetus 3
O354XX4	Maternal care for (suspected) damage to fetus from alcohol, fetus 4
O354XX5	Maternal care for (suspected) damage to fetus from alcohol, fetus 5
O354XX9	Maternal care for (suspected) damage to fetus from alcohol, other fetus
O355XX0	Maternal care for (suspected) damage to fetus by drugs, not applicable or unspecified
O355XX1	Maternal care for (suspected) damage to fetus by drugs, fetus 1
O355XX2	Maternal care for (suspected) damage to fetus by drugs, fetus 2
O355XX3	Maternal care for (suspected) damage to fetus by drugs, fetus 3
O355XX4	Maternal care for (suspected) damage to fetus by drugs, fetus 4
O355XX5	Maternal care for (suspected) damage to fetus by drugs, fetus 5
O355XX9	Maternal care for (suspected) damage to fetus by drugs, other fetus
O356XX0	Maternal care for (suspected) damage to fetus by radiation, not applicable or unspecified
O356XX1	Maternal care for (suspected) damage to fetus by radiation, fetus 1
O356XX2	Maternal care for (suspected) damage to fetus by radiation, fetus 2
O356XX3	Maternal care for (suspected) damage to fetus by radiation, fetus 3
O356XX4	Maternal care for (suspected) damage to fetus by radiation, fetus 4
O356XX5	Maternal care for (suspected) damage to fetus by radiation, fetus 5
O356XX9	Maternal care for (suspected) damage to fetus by radiation, other fetus
O358XX0	Maternal care for other (suspected) fetal abnormality and damage, not applicable or unspecified
O358XX1	Maternal care for other (suspected) fetal abnormality and damage, fetus 1
O358XX2	Maternal care for other (suspected) fetal abnormality and damage, fetus 2
O358XX3	Maternal care for other (suspected) fetal abnormality and damage, fetus 3
O358XX4	Maternal care for other (suspected) fetal abnormality and damage, fetus 4
O358XX5	Maternal care for other (suspected) fetal abnormality and damage, fetus 5
O358XX9	Maternal care for other (suspected) fetal abnormality and damage, other fetus

Code	Shortened Description
O360110	Maternal care for anti-D [Rh] antibodies, first trimester, not applicable or unspecified
O360111	Maternal care for anti-D [Rh] antibodies, first trimester, fetus 1
O360112	Maternal care for anti-D [Rh] antibodies, first trimester, fetus 2
O360113	Maternal care for anti-D [Rh] antibodies, first trimester, fetus 3
O360114	Maternal care for anti-D [Rh] antibodies, first trimester, fetus 4
O360115	Maternal care for anti-D [Rh] antibodies, first trimester, fetus 5
O360119	Maternal care for anti-D [Rh] antibodies, first trimester, other fetus
O360120	Maternal care for anti-D [Rh] antibodies, second trimester, not applicable or unspecified
O360121	Maternal care for anti-D [Rh] antibodies, second trimester, fetus 1
O360122	Maternal care for anti-D [Rh] antibodies, second trimester, fetus 2
O360123	Maternal care for anti-D [Rh] antibodies, second trimester, fetus 3
O360124	Maternal care for anti-D [Rh] antibodies, second trimester, fetus 4
O360125	Maternal care for anti-D [Rh] antibodies, second trimester, fetus 5
O360129	Maternal care for anti-D [Rh] antibodies, second trimester, other fetus
O360130	Maternal care for anti-D [Rh] antibodies, third trimester, not applicable or unspecified
O360131	Maternal care for anti-D [Rh] antibodies, third trimester, fetus 1
O360132	Maternal care for anti-D [Rh] antibodies, third trimester, fetus 2
O360133	Maternal care for anti-D [Rh] antibodies, third trimester, fetus 3
O360134	Maternal care for anti-D [Rh] antibodies, third trimester, fetus 4
O360135	Maternal care for anti-D [Rh] antibodies, third trimester, fetus 5
O360139	Maternal care for anti-D [Rh] antibodies, third trimester, other fetus
O360910	Maternal care for other rhesus isoimmunization, first trimester, not applicable or unspecified
O360911	Maternal care for other rhesus isoimmunization, first trimester, fetus 1
O360912	Maternal care for other rhesus isoimmunization, first trimester, fetus 2
O360913	Maternal care for other rhesus isoimmunization, first trimester, fetus 3
O360914	Maternal care for other rhesus isoimmunization, first trimester, fetus 4
O360915	Maternal care for other rhesus isoimmunization, first trimester, fetus 5
O360919	Maternal care for other rhesus isoimmunization, first trimester, other fetus
O360920	Maternal care for other rhesus isoimmunization, second trimester, not applicable or unspecified
O360921	Maternal care for other rhesus isoimmunization, second trimester, fetus 1
O360922	Maternal care for other rhesus isoimmunization, second trimester, fetus 2
O360923	Maternal care for other rhesus isoimmunization, second trimester, fetus 3

Code	Shortened Description
O360924	Maternal care for other rhesus isoimmunization, second trimester, fetus 4
O360925	Maternal care for other rhesus isoimmunization, second trimester, fetus 5
O360929	Maternal care for other rhesus isoimmunization, second trimester, other fetus
O360930	Maternal care for other rhesus isoimmunization, third trimester, not applicable or unspecified
O360931	Maternal care for other rhesus isoimmunization, third trimester, fetus 1
O360932	Maternal care for other rhesus isoimmunization, third trimester, fetus 2
O360933	Maternal care for other rhesus isoimmunization, third trimester, fetus 3
O360934	Maternal care for other rhesus isoimmunization, third trimester, fetus 4
O360935	Maternal care for other rhesus isoimmunization, third trimester, fetus 5
O360939	Maternal care for other rhesus isoimmunization, third trimester, other fetus
O361110	Maternal care for Anti-A sensitization, first trimester, not applicable or unspecified
O361111	Maternal care for Anti-A sensitization, first trimester, fetus 1
O361112	Maternal care for Anti-A sensitization, first trimester, fetus 2
O361113	Maternal care for Anti-A sensitization, first trimester, fetus 3
O361114	Maternal care for Anti-A sensitization, first trimester, fetus 4
O361115	Maternal care for Anti-A sensitization, first trimester, fetus 5
O361119	Maternal care for Anti-A sensitization, first trimester, other fetus
O361120	Maternal care for Anti-A sensitization, second trimester, not applicable or unspecified
O361121	Maternal care for Anti-A sensitization, second trimester, fetus 1
O361122	Maternal care for Anti-A sensitization, second trimester, fetus 2
O361123	Maternal care for Anti-A sensitization, second trimester, fetus 3
O361124	Maternal care for Anti-A sensitization, second trimester, fetus 4
O361125	Maternal care for Anti-A sensitization, second trimester, fetus 5
O361129	Maternal care for Anti-A sensitization, second trimester, other fetus
O361130	Maternal care for Anti-A sensitization, third trimester, not applicable or unspecified
O361131	Maternal care for Anti-A sensitization, third trimester, fetus 1
O361132	Maternal care for Anti-A sensitization, third trimester, fetus 2
O361133	Maternal care for Anti-A sensitization, third trimester, fetus 3
O361134	Maternal care for Anti-A sensitization, third trimester, fetus 4
O361135	Maternal care for Anti-A sensitization, third trimester, fetus 5
O361139	Maternal care for Anti-A sensitization, third trimester, other fetus
O361910	Maternal care for other isoimmunization, first trimester, not applicable or unspecified

Code	Shortened Description
O361911	Maternal care for other isoimmunization, first trimester, fetus 1
O361912	Maternal care for other isoimmunization, first trimester, fetus 2
O361913	Maternal care for other isoimmunization, first trimester, fetus 3
O361914	Maternal care for other isoimmunization, first trimester, fetus 4
O361915	Maternal care for other isoimmunization, first trimester, fetus 5
O361919	Maternal care for other isoimmunization, first trimester, other fetus
O361920	Maternal care for other isoimmunization, second trimester, not applicable or unspecified
O361921	Maternal care for other isoimmunization, second trimester, fetus 1
O361922	Maternal care for other isoimmunization, second trimester, fetus 2
O361923	Maternal care for other isoimmunization, second trimester, fetus 3
O361924	Maternal care for other isoimmunization, second trimester, fetus 4
O361925	Maternal care for other isoimmunization, second trimester, fetus 5
O361929	Maternal care for other isoimmunization, second trimester, other fetus
O361930	Maternal care for other isoimmunization, third trimester, not applicable or unspecified
O361931	Maternal care for other isoimmunization, third trimester, fetus 1
O361932	Maternal care for other isoimmunization, third trimester, fetus 2
O361933	Maternal care for other isoimmunization, third trimester, fetus 3
O361934	Maternal care for other isoimmunization, third trimester, fetus 4
O361935	Maternal care for other isoimmunization, third trimester, fetus 5
O361939	Maternal care for other isoimmunization, third trimester, other fetus
O364XX0	Maternal care for intrauterine death, not applicable or unspecified
O364XX1	Maternal care for intrauterine death, fetus 1
O364XX2	Maternal care for intrauterine death, fetus 2
O364XX3	Maternal care for intrauterine death, fetus 3
O364XX4	Maternal care for intrauterine death, fetus 4
O364XX5	Maternal care for intrauterine death, fetus 5
O364XX9	Maternal care for intrauterine death, other fetus
O365110	Maternal care for known or suspected placental insufficiency, first trimester, not applicable or unspecified
O365111	Maternal care for known or suspected placental insufficiency, first trimester, fetus 1
O365112	Maternal care for known or suspected placental insufficiency, first trimester, fetus 2
O365113	Maternal care for known or suspected placental insufficiency, first trimester, fetus 3
O365114	Maternal care for known or suspected placental insufficiency, first trimester, fetus 4

Code	Shortened Description
O365115	Maternal care for known or suspected placental insufficiency, first trimester, fetus 5
O365119	Maternal care for known or suspected placental insufficiency, first trimester, other fetus
O365120	Maternal care for known or suspected placental insufficiency, second trimester, not applicable or unspecified
O365121	Maternal care for known or suspected placental insufficiency, second trimester, fetus 1
O365122	Maternal care for known or suspected placental insufficiency, second trimester, fetus 2
O365123	Maternal care for known or suspected placental insufficiency, second trimester, fetus 3
O365124	Maternal care for known or suspected placental insufficiency, second trimester, fetus 4
O365125	Maternal care for known or suspected placental insufficiency, second trimester, fetus 5
O365129	Maternal care for known or suspected placental insufficiency, second trimester, other fetus
O365130	Maternal care for known or suspected placental insufficiency, third trimester, not applicable or unspecified
O365131	Maternal care for known or suspected placental insufficiency, third trimester, fetus 1
O365132	Maternal care for known or suspected placental insufficiency, third trimester, fetus 2
O365133	Maternal care for known or suspected placental insufficiency, third trimester, fetus 3
O365134	Maternal care for known or suspected placental insufficiency, third trimester, fetus 4
O365135	Maternal care for known or suspected placental insufficiency, third trimester, fetus 5
O365139	Maternal care for known or suspected placental insufficiency, third trimester, other fetus
O365910	Maternal care for other known or suspected poor fetal growth, first trimester, not applicable or unspecified
O365911	Maternal care for other known or suspected poor fetal growth, first trimester, fetus 1
O365912	Maternal care for other known or suspected poor fetal growth, first trimester, fetus 2
O365913	Maternal care for other known or suspected poor fetal growth, first trimester, fetus 3
O365914	Maternal care for other known or suspected poor fetal growth, first trimester, fetus 4
O365915	Maternal care for other known or suspected poor fetal growth, first trimester, fetus 5
O365919	Maternal care for other known or suspected poor fetal growth, first trimester, other fetus
O365920	Maternal care for other known or suspected poor fetal growth, second trimester, not applicable or unspecified
O365921	Maternal care for other known or suspected poor fetal growth, second trimester, fetus 1
O365922	Maternal care for other known or suspected poor fetal growth, second trimester, fetus 2
O365923	Maternal care for other known or suspected poor fetal growth, second trimester, fetus 3
O365924	Maternal care for other known or suspected poor fetal growth, second trimester, fetus 4
O365925	Maternal care for other known or suspected poor fetal growth, second trimester, fetus 5
O365929	Maternal care for other known or suspected poor fetal growth, second trimester, other fetus
O365930	Maternal care for other known or suspected poor fetal growth, third trimester, not applicable or unspecified
O365931	Maternal care for other known or suspected poor fetal growth, third trimester, fetus 1

Code	Shortened Description
O365932	Maternal care for other known or suspected poor fetal growth, third trimester, fetus 2
O365933	Maternal care for other known or suspected poor fetal growth, third trimester, fetus 3
O365934	Maternal care for other known or suspected poor fetal growth, third trimester, fetus 4
O365935	Maternal care for other known or suspected poor fetal growth, third trimester, fetus 5
O365939	Maternal care for other known or suspected poor fetal growth, third trimester, other fetus
O368120	Decreased fetal movements, second trimester, not applicable or unspecified
O368121	Decreased fetal movements, second trimester, fetus 1
O368122	Decreased fetal movements, second trimester, fetus 2
O368123	Decreased fetal movements, second trimester, fetus 3
O368124	Decreased fetal movements, second trimester, fetus 4
O368125	Decreased fetal movements, second trimester, fetus 5
O368129	Decreased fetal movements, second trimester, other fetus
O368130	Decreased fetal movements, third trimester, not applicable or unspecified
O368131	Decreased fetal movements, third trimester, fetus 1
O368132	Decreased fetal movements, third trimester, fetus 2
O368133	Decreased fetal movements, third trimester, fetus 3
O368134	Decreased fetal movements, third trimester, fetus 4
O368135	Decreased fetal movements, third trimester, fetus 5
O368139	Decreased fetal movements, third trimester, other fetus
O401XX0	Polyhydramnios, first trimester, not applicable or unspecified
O401XX1	Polyhydramnios, first trimester, fetus 1
O401XX2	Polyhydramnios, first trimester, fetus 2
O401XX3	Polyhydramnios, first trimester, fetus 3
O401XX4	Polyhydramnios, first trimester, fetus 4
O401XX5	Polyhydramnios, first trimester, fetus 5
O401XX9	Polyhydramnios, first trimester, other fetus
O402XX0	Polyhydramnios, second trimester, not applicable or unspecified
O402XX1	Polyhydramnios, second trimester, fetus 1
O402XX2	Polyhydramnios, second trimester, fetus 2
O402XX3	Polyhydramnios, second trimester, fetus 3
O402XX4	Polyhydramnios, second trimester, fetus 4
O402XX5	Polyhydramnios, second trimester, fetus 5

Code	Shortened Description
O402XX9	Polyhydramnios, second trimester, other fetus
O403XX0	Polyhydramnios, third trimester, not applicable or unspecified
O403XX1	Polyhydramnios, third trimester, fetus 1
O403XX2	Polyhydramnios, third trimester, fetus 2
O403XX3	Polyhydramnios, third trimester, fetus 3
O403XX4	Polyhydramnios, third trimester, fetus 4
O403XX5	Polyhydramnios, third trimester, fetus 5
O403XX9	Polyhydramnios, third trimester, other fetus
O4101X0	Oligohydramnios, first trimester, not applicable or unspecified
O4101X1	Oligohydramnios, first trimester, fetus 1
O4101X2	Oligohydramnios, first trimester, fetus 2
O4101X3	Oligohydramnios, first trimester, fetus 3
O4101X4	Oligohydramnios, first trimester, fetus 4
O4101X5	Oligohydramnios, first trimester, fetus 5
O4101X9	Oligohydramnios, first trimester, other fetus
O4102X0	Oligohydramnios, second trimester, not applicable or unspecified
O4102X1	Oligohydramnios, second trimester, fetus 1
O4102X2	Oligohydramnios, second trimester, fetus 2
O4102X3	Oligohydramnios, second trimester, fetus 3
O4102X4	Oligohydramnios, second trimester, fetus 4
O4102X5	Oligohydramnios, second trimester, fetus 5
O4102X9	Oligohydramnios, second trimester, other fetus
O4103X0	Oligohydramnios, third trimester, not applicable or unspecified
O4103X1	Oligohydramnios, third trimester, fetus 1
O4103X2	Oligohydramnios, third trimester, fetus 2
O4103X3	Oligohydramnios, third trimester, fetus 3
O4103X4	Oligohydramnios, third trimester, fetus 4
O4103X5	Oligohydramnios, third trimester, fetus 5
O4103X9	Oligohydramnios, third trimester, other fetus
O411010	Infection of amniotic sac and membranes, unspecified, first trimester, not applicable or unspecified
O411011	Infection of amniotic sac and membranes, unspecified, first trimester, fetus 1
O411012	Infection of amniotic sac and membranes, unspecified, first trimester, fetus 2

Code	Shortened Description
O411013	Infection of amniotic sac and membranes, unspecified, first trimester, fetus 3
O411014	Infection of amniotic sac and membranes, unspecified, first trimester, fetus 4
O411015	Infection of amniotic sac and membranes, unspecified, first trimester, fetus 5
O411019	Infection of amniotic sac and membranes, unspecified, first trimester, other fetus
O411020	Infection of amniotic sac and membranes, unspecified, second trimester, not applicable or unspecified
O411021	Infection of amniotic sac and membranes, unspecified, second trimester, fetus 1
O411022	Infection of amniotic sac and membranes, unspecified, second trimester, fetus 2
O411023	Infection of amniotic sac and membranes, unspecified, second trimester, fetus 3
O411024	Infection of amniotic sac and membranes, unspecified, second trimester, fetus 4
O411025	Infection of amniotic sac and membranes, unspecified, second trimester, fetus 5
O411029	Infection of amniotic sac and membranes, unspecified, second trimester, other fetus
O411030	Infection of amniotic sac and membranes, unspecified, third trimester, not applicable or unspecified
O411031	Infection of amniotic sac and membranes, unspecified, third trimester, fetus 1
O411032	Infection of amniotic sac and membranes, unspecified, third trimester, fetus 2
O411033	Infection of amniotic sac and membranes, unspecified, third trimester, fetus 3
O411034	Infection of amniotic sac and membranes, unspecified, third trimester, fetus 4
O411035	Infection of amniotic sac and membranes, unspecified, third trimester, fetus 5
O411039	Infection of amniotic sac and membranes, unspecified, third trimester, other fetus
O411210	Chorioamnionitis, first trimester, not applicable or unspecified
O411211	Chorioamnionitis, first trimester, fetus 1
O411212	Chorioamnionitis, first trimester, fetus 2
O411213	Chorioamnionitis, first trimester, fetus 3
O411214	Chorioamnionitis, first trimester, fetus 4
O411215	Chorioamnionitis, first trimester, fetus 5
O411219	Chorioamnionitis, first trimester, other fetus
O411220	Chorioamnionitis, second trimester, not applicable or unspecified
O411221	Chorioamnionitis, second trimester, fetus 1
O411222	Chorioamnionitis, second trimester, fetus 2
O411223	Chorioamnionitis, second trimester, fetus 3
O411224	Chorioamnionitis, second trimester, fetus 4
O411225	Chorioamnionitis, second trimester, fetus 5
O411229	Chorioamnionitis, second trimester, other fetus

Code	Shortened Description
O411230	Chorioamnionitis, third trimester, not applicable or unspecified
O411231	Chorioamnionitis, third trimester, fetus 1
O411232	Chorioamnionitis, third trimester, fetus 2
O411233	Chorioamnionitis, third trimester, fetus 3
O411234	Chorioamnionitis, third trimester, fetus 4
O411235	Chorioamnionitis, third trimester, fetus 5
O411239	Chorioamnionitis, third trimester, other fetus
O411410	Placentitis, first trimester, not applicable or unspecified
O411411	Placentitis, first trimester, fetus 1
O411412	Placentitis, first trimester, fetus 2
O411413	Placentitis, first trimester, fetus 3
O411414	Placentitis, first trimester, fetus 4
O411415	Placentitis, first trimester, fetus 5
O411419	Placentitis, first trimester, other fetus
O411420	Placentitis, second trimester, not applicable or unspecified
O411421	Placentitis, second trimester, fetus 1
O411422	Placentitis, second trimester, fetus 2
O411423	Placentitis, second trimester, fetus 3
O411424	Placentitis, second trimester, fetus 4
O411425	Placentitis, second trimester, fetus 5
O411429	Placentitis, second trimester, other fetus
O411430	Placentitis, third trimester, not applicable or unspecified
O411431	Placentitis, third trimester, fetus 1
O411432	Placentitis, third trimester, fetus 2
O411433	Placentitis, third trimester, fetus 3
O411434	Placentitis, third trimester, fetus 4
O411435	Placentitis, third trimester, fetus 5
O411439	Placentitis, third trimester, other fetus
O42011	Preterm premature rupture of membranes, onset of labor within 24 hours of rupture, first trimester
O42012	Preterm premature rupture of membranes, onset of labor within 24 hours of rupture, second trimester
O42013	Preterm premature rupture of membranes, onset of labor within 24 hours of rupture, third trimester
O4202	Full-term premature rupture of membranes, onset of labor within 24 hours of rupture

Code	Shortened Description
O42111	Preterm premature rupture of membranes, onset of labor more than 24 hours following rupture, first trimester
O42112	Preterm premature rupture of membranes, onset of labor more than 24 hours following rupture, second trimester
O42113	Preterm premature rupture of membranes, onset of labor more than 24 hours following rupture, third trimester
O4212	Full-term premature rupture of membranes, onset of labor more than 24 hours following rupture
O42911	Preterm premature rupture of membranes, unspecified as to length of time between rupture and onset of labor, first trimester
O42912	Preterm premature rupture of membranes, unspecified as to length of time between rupture and onset of labor, second trimester
O42913	Preterm premature rupture of membranes, unspecified as to length of time between rupture and onset of labor, third trimester
O4292	Full-term premature rupture of membranes, unspecified as to length of time between rupture and onset of labor
O43011	Fetomaternal placental transfusion syndrome, first trimester
O43012	Fetomaternal placental transfusion syndrome, second trimester
O43013	Fetomaternal placental transfusion syndrome, third trimester
O43212	Placenta accreta, second trimester
O43213	Placenta accreta, third trimester
O43222	Placenta increta, second trimester
O43223	Placenta increta, third trimester
O43232	Placenta percreta, second trimester
O43233	Placenta percreta, third trimester
O4401	Complete placenta previa NOS or without hemorrhage, first trimester
O4402	Complete placenta previa NOS or without hemorrhage, second trimester
O4403	Complete placenta previa NOS or without hemorrhage, third trimester
O4411	Complete placenta previa with hemorrhage, first trimester
O4412	Complete placenta previa with hemorrhage, second trimester
O4413	Complete placenta previa with hemorrhage, third trimester
O4423	Partial placenta previa NOS or without hemorrhage, third trimester
O4433	Partial placenta previa with hemorrhage, third trimester
O4443	Low lying placenta NOS or without hemorrhage, third trimester
O4453	Low lying placenta with hemorrhage, third trimester
O45001	Premature separation of placenta with coagulation defect, unspecified, first trimester
O45002	Premature separation of placenta with coagulation defect, unspecified, second trimester
O45003	Premature separation of placenta with coagulation defect, unspecified, third trimester

Code	Shortened Description
O45011	Premature separation of placenta with afibrinogenemia, first trimester
O45012	Premature separation of placenta with afibrinogenemia, second trimester
O45013	Premature separation of placenta with afibrinogenemia, third trimester
O45021	Premature separation of placenta with disseminated intravascular coagulation, first trimester
O45022	Premature separation of placenta with disseminated intravascular coagulation, second trimester
O45023	Premature separation of placenta with disseminated intravascular coagulation, third trimester
O45091	Premature separation of placenta with other coagulation defect, first trimester
O45092	Premature separation of placenta with other coagulation defect, second trimester
O45093	Premature separation of placenta with other coagulation defect, third trimester
O458X1	Other premature separation of placenta, first trimester
O458X2	Other premature separation of placenta, second trimester
O458X3	Other premature separation of placenta, third trimester
O4591	Premature separation of placenta, unspecified, first trimester
O4592	Premature separation of placenta, unspecified, second trimester
O4593	Premature separation of placenta, unspecified, third trimester
O46001	Antepartum hemorrhage with coagulation defect, unspecified, first trimester
O46002	Antepartum hemorrhage with coagulation defect, unspecified, second trimester
O46003	Antepartum hemorrhage with coagulation defect, unspecified, third trimester
O46011	Antepartum hemorrhage with afibrinogenemia, first trimester
O46012	Antepartum hemorrhage with afibrinogenemia, second trimester
O46013	Antepartum hemorrhage with afibrinogenemia, third trimester
O46021	Antepartum hemorrhage with disseminated intravascular coagulation, first trimester
O46022	Antepartum hemorrhage with disseminated intravascular coagulation, second trimester
O46023	Antepartum hemorrhage with disseminated intravascular coagulation, third trimester
O46091	Antepartum hemorrhage with other coagulation defect, first trimester
O46092	Antepartum hemorrhage with other coagulation defect, second trimester
O46093	Antepartum hemorrhage with other coagulation defect, third trimester
O468X1	Other antepartum hemorrhage, first trimester
O468X2	Other antepartum hemorrhage, second trimester
O468X3	Other antepartum hemorrhage, third trimester
O4691	Antepartum hemorrhage, unspecified, first trimester
O4692	Antepartum hemorrhage, unspecified, second trimester

Code	Shortened Description
O4693	Antepartum hemorrhage, unspecified, third trimester
O480	Post-term pregnancy
O666	Obstructed labor due to other multiple fetuses
O670	Intrapartum hemorrhage with coagulation defect
O678	Other intrapartum hemorrhage
O679	Intrapartum hemorrhage, unspecified
O68	Labor and delivery complicated by abnormality of fetal acid-base balance
O690XX0	Labor and delivery complicated by prolapse of cord, not applicable or unspecified
O690XX1	Labor and delivery complicated by prolapse of cord, fetus 1
O690XX2	Labor and delivery complicated by prolapse of cord, fetus 2
O690XX3	Labor and delivery complicated by prolapse of cord, fetus 3
O690XX4	Labor and delivery complicated by prolapse of cord, fetus 4
O690XX5	Labor and delivery complicated by prolapse of cord, fetus 5
O690XX9	Labor and delivery complicated by prolapse of cord, other fetus
O694XX0	Labor and delivery complicated by vasa previa, not applicable or unspecified
O694XX1	Labor and delivery complicated by vasa previa, fetus 1
O694XX1	Labor and delivery complicated by vasa previa, fetus 1
O694XX2	Labor and delivery complicated by vasa previa, fetus 2
O694XX2	Labor and delivery complicated by vasa previa, fetus 2
O694XX3	Labor and delivery complicated by vasa previa, fetus 3
O694XX3	Labor and delivery complicated by vasa previa, fetus 3
O694XX4	Labor and delivery complicated by vasa previa, fetus 4
O694XX4	Labor and delivery complicated by vasa previa, fetus 4
O694XX5	Labor and delivery complicated by vasa previa, fetus 5
O694XX5	Labor and delivery complicated by vasa previa, fetus 5
O694XX9	Labor and delivery complicated by vasa previa, other fetus
O694XX9	Labor and delivery complicated by vasa previa, other fetus
O7102	Rupture of uterus before onset of labor, second trimester
O7102	Rupture of uterus before onset of labor, second trimester
O7103	Rupture of uterus before onset of labor, third trimester
O7103	Rupture of uterus before onset of labor, third trimester
O76	Abnormality in fetal heart rate and rhythm complicating labor and delivery

Code	Shortened Description
O76	Abnormality in fetal heart rate and rhythm complicating labor and delivery
O9872	Human immunodeficiency virus [HIV] disease complicating childbirth
O9872	Human immunodeficiency virus [HIV] disease complicating childbirth
O99111	Other diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism complicating pregnancy, first trimester
O99111	Other diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism complicating pregnancy, first trimester
O99112	Other diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism complicating pregnancy, second trimester
O99112	Other diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism complicating pregnancy, second trimester
O99113	Other diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism complicating pregnancy, third trimester
O99113	Other diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism complicating pregnancy, third trimester
O9912	Other diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism complicating childbirth
O9912	Other diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism complicating childbirth
O9913	Other diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism complicating the puerperium
O9913	Other diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism complicating the puerperium
O99411	Diseases of the circulatory system complicating pregnancy, first trimester
O99411	Diseases of the circulatory system complicating pregnancy, first trimester
O99412	Diseases of the circulatory system complicating pregnancy, second trimester
O99412	Diseases of the circulatory system complicating pregnancy, second trimester
O99413	Diseases of the circulatory system complicating pregnancy, third trimester
O99413	Diseases of the circulatory system complicating pregnancy, third trimester
O9942	Diseases of the circulatory system complicating childbirth
O9942	Diseases of the circulatory system complicating childbirth
O9943	Diseases of the circulatory system complicating the puerperium
O9943	Diseases of the circulatory system complicating the puerperium
O99810	Abnormal glucose complicating pregnancy
O99810	Abnormal glucose complicating pregnancy
O99814	Abnormal glucose complicating childbirth
O99814	Abnormal glucose complicating childbirth

Code	Shortened Description
O99815	Abnormal glucose complicating the puerperium
O99815	Abnormal glucose complicating the puerperium
Z21	Asymptomatic human immunodeficiency virus [HIV] infection status
Z21	Asymptomatic human immunodeficiency virus [HIV] infection status
Z371	Single stillbirth
Z371	Single stillbirth
Z7901	Long term (current) use of anticoagulants
Z7901	Long term (current) use of anticoagulants

Table Number 11.08: Outcome of Delivery

Code	Shortened Description
Z370	Single live birth

Table Number 11.09: Multiple Gestations and Other Presentations

Code	Shortened Description
O30001	Twin pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, first trimester
O30002	Twin pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, second trimester
O30003	Twin pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, third trimester
O30011	Twin pregnancy, monochorionic/monoamniotic, first trimester
O30012	Twin pregnancy, monochorionic/monoamniotic, second trimester
O30013	Twin pregnancy, monochorionic/monoamniotic, third trimester
O30031	Twin pregnancy, monochorionic/diamniotic, first trimester
O30032	Twin pregnancy, monochorionic/diamniotic, second trimester
O30033	Twin pregnancy, monochorionic/diamniotic, third trimester
O30041	Twin pregnancy, dichorionic/diamniotic, first trimester
O30042	Twin pregnancy, dichorionic/diamniotic, second trimester
O30043	Twin pregnancy, dichorionic/diamniotic, third trimester
O30091	Twin pregnancy, unable to determine number of placenta and number of amniotic sacs, first trimester
O30092	Twin pregnancy, unable to determine number of placenta and number of amniotic sacs, second trimester
O30093	Twin pregnancy, unable to determine number of placenta and number of amniotic sacs, third trimester
O30101	Triplet pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, first trimester

Code	Shortened Description
O30102	Triplet pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, second trimester
O30103	Triplet pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, third trimester
O30111	Triplet pregnancy with two or more monochorionic fetuses, first trimester
O30112	Triplet pregnancy with two or more monochorionic fetuses, second trimester
O30113	Triplet pregnancy with two or more monochorionic fetuses, third trimester
O30121	Triplet pregnancy with two or more monoamniotic fetuses, first trimester
O30122	Triplet pregnancy with two or more monoamniotic fetuses, second trimester
O30123	Triplet pregnancy with two or more monoamniotic fetuses, third trimester
O30131	Triplet pregnancy, trichorionic/triamniotic, first trimester
O30132	Triplet pregnancy, trichorionic/triamniotic, second trimester
O30133	Triplet pregnancy, trichorionic/triamniotic, third trimester
O30191	Triplet pregnancy, unable to determine number of placenta and number of amniotic sacs, first trimester
O30192	Triplet pregnancy, unable to determine number of placenta and number of amniotic sacs, second trimester
O30193	Triplet pregnancy, unable to determine number of placenta and number of amniotic sacs, third trimester
O30201	Quadruplet pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, first trimester
O30202	Quadruplet pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, second trimester
O30203	Quadruplet pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, third trimester
O30211	Quadruplet pregnancy with two or more monochorionic fetuses, first trimester
O30212	Quadruplet pregnancy with two or more monochorionic fetuses, second trimester
O30213	Quadruplet pregnancy with two or more monochorionic fetuses, third trimester
O30221	Quadruplet pregnancy with two or more monoamniotic fetuses, first trimester
O30222	Quadruplet pregnancy with two or more monoamniotic fetuses, second trimester
O30223	Quadruplet pregnancy with two or more monoamniotic fetuses, third trimester
O30231	Quadruplet pregnancy, quadrachorionic/quadra-amniotic, first trimester
O30232	Quadruplet pregnancy, quadrachorionic/quadra-amniotic, second trimester
O30233	Quadruplet pregnancy, quadrachorionic/quadra-amniotic, third trimester
O30291	Quadruplet pregnancy, unable to determine number of placenta and number of amniotic sacs, first trimester
O30292	Quadruplet pregnancy, unable to determine number of placenta and number of amniotic sacs, second trimester
O30293	Quadruplet pregnancy, unable to determine number of placenta and number of amniotic sacs, third trimester
O30801	Other specified multiple gestation, unspecified number of placenta and unspecified number of amniotic sacs, first trimester
O30802	Other specified multiple gestation, unspecified number of placenta and unspecified number of amniotic sacs, second trimester

Code	Shortened Description
O30803	Other specified multiple gestation, unspecified number of placenta and unspecified number of amniotic sacs, third trimester
O30811	Other specified multiple gestation with two or more monochorionic fetuses, first trimester
O30812	Other specified multiple gestation with two or more monochorionic fetuses, second trimester
O30813	Other specified multiple gestation with two or more monochorionic fetuses, third trimester
O30821	Other specified multiple gestation with two or more monoamniotic fetuses, first trimester
O30822	Other specified multiple gestation with two or more monoamniotic fetuses, second trimester
O30823	Other specified multiple gestation with two or more monoamniotic fetuses, third trimester
O30831	Other specified multiple gestation, number of chorions and amnions are both equal to the number of fetuses, first trimester
O30832	Other specified multiple gestation, number of chorions and amnions are both equal to the number of fetuses, second trimester
O30833	Other specified multiple gestation, number of chorions and amnions are both equal to the number of fetuses, third trimester
O30891	Other specified multiple gestation, unable to determine number of placenta and number of amniotic sacs, first trimester
O30892	Other specified multiple gestation, unable to determine number of placenta and number of amniotic sacs, second trimester
O30893	Other specified multiple gestation, unable to determine number of placenta and number of amniotic sacs, third trimester
O3091	Multiple gestation, unspecified, first trimester
O3092	Multiple gestation, unspecified, second trimester
O3093	Multiple gestation, unspecified, third trimester
O3111X0	Continuing pregnancy after spontaneous abortion of one fetus or more, first trimester, not applicable or unspecified
O3111X1	Continuing pregnancy after spontaneous abortion of one fetus or more, first trimester, fetus 1
O3111X2	Continuing pregnancy after spontaneous abortion of one fetus or more, first trimester, fetus 2
O3111X3	Continuing pregnancy after spontaneous abortion of one fetus or more, first trimester, fetus 3
O3111X4	Continuing pregnancy after spontaneous abortion of one fetus or more, first trimester, fetus 4
O3111X5	Continuing pregnancy after spontaneous abortion of one fetus or more, first trimester, fetus 5
O3111X9	Continuing pregnancy after spontaneous abortion of one fetus or more, first trimester, other fetus
O3112X0	Continuing pregnancy after spontaneous abortion of one fetus or more, second trimester, not applicable or unspecified
O3112X1	Continuing pregnancy after spontaneous abortion of one fetus or more, second trimester, fetus 1
O3112X2	Continuing pregnancy after spontaneous abortion of one fetus or more, second trimester, fetus 2
O3112X3	Continuing pregnancy after spontaneous abortion of one fetus or more, second trimester, fetus 3
O3112X4	Continuing pregnancy after spontaneous abortion of one fetus or more, second trimester, fetus 4

Code	Shortened Description
O3112X5	Continuing pregnancy after spontaneous abortion of one fetus or more, second trimester, fetus 5
O3112X9	Continuing pregnancy after spontaneous abortion of one fetus or more, second trimester, other fetus
O3113X0	Continuing pregnancy after spontaneous abortion of one fetus or more, third trimester, not applicable or unspecified
O3113X1	Continuing pregnancy after spontaneous abortion of one fetus or more, third trimester, fetus 1
O3113X2	Continuing pregnancy after spontaneous abortion of one fetus or more, third trimester, fetus 2
O3113X3	Continuing pregnancy after spontaneous abortion of one fetus or more, third trimester, fetus 3
O3113X4	Continuing pregnancy after spontaneous abortion of one fetus or more, third trimester, fetus 4
O3113X5	Continuing pregnancy after spontaneous abortion of one fetus or more, third trimester, fetus 5
O3113X9	Continuing pregnancy after spontaneous abortion of one fetus or more, third trimester, other fetus
O3121X0	Continuing pregnancy after intrauterine death of one fetus or more, first trimester, not applicable or unspecified
O3121X1	Continuing pregnancy after intrauterine death of one fetus or more, first trimester, fetus 1
O3121X2	Continuing pregnancy after intrauterine death of one fetus or more, first trimester, fetus 2
O3121X3	Continuing pregnancy after intrauterine death of one fetus or more, first trimester, fetus 3
O3121X4	Continuing pregnancy after intrauterine death of one fetus or more, first trimester, fetus 4
O3121X5	Continuing pregnancy after intrauterine death of one fetus or more, first trimester, fetus 5
O3121X9	Continuing pregnancy after intrauterine death of one fetus or more, first trimester, other fetus
O3122X0	Continuing pregnancy after intrauterine death of one fetus or more, second trimester, not applicable or unspecified
O3122X1	Continuing pregnancy after intrauterine death of one fetus or more, second trimester, fetus 1
O3122X2	Continuing pregnancy after intrauterine death of one fetus or more, second trimester, fetus 2
O3122X3	Continuing pregnancy after intrauterine death of one fetus or more, second trimester, fetus 3
O3122X4	Continuing pregnancy after intrauterine death of one fetus or more, second trimester, fetus 4
O3122X5	Continuing pregnancy after intrauterine death of one fetus or more, second trimester, fetus 5
O3122X9	Continuing pregnancy after intrauterine death of one fetus or more, second trimester, other fetus
O3123X0	Continuing pregnancy after intrauterine death of one fetus or more, third trimester, not applicable or unspecified
O3123X1	Continuing pregnancy after intrauterine death of one fetus or more, third trimester, fetus 1
O3123X2	Continuing pregnancy after intrauterine death of one fetus or more, third trimester, fetus 2
O3123X3	Continuing pregnancy after intrauterine death of one fetus or more, third trimester, fetus 3
O3123X4	Continuing pregnancy after intrauterine death of one fetus or more, third trimester, fetus 4
O3123X5	Continuing pregnancy after intrauterine death of one fetus or more, third trimester, fetus 5
O3123X9	Continuing pregnancy after intrauterine death of one fetus or more, third trimester, other fetus
O318X10	Other complications specific to multiple gestation, first trimester, not applicable or unspecified
O318X11	Other complications specific to multiple gestation, first trimester, fetus 1

Code	Shortened Description
O318X12	Other complications specific to multiple gestation, first trimester, fetus 2
O318X13	Other complications specific to multiple gestation, first trimester, fetus 3
O318X14	Other complications specific to multiple gestation, first trimester, fetus 4
O318X15	Other complications specific to multiple gestation, first trimester, fetus 5
O318X19	Other complications specific to multiple gestation, first trimester, other fetus
O318X20	Other complications specific to multiple gestation, second trimester, not applicable or unspecified
O318X21	Other complications specific to multiple gestation, second trimester, fetus 1
O318X22	Other complications specific to multiple gestation, second trimester, fetus 2
O318X23	Other complications specific to multiple gestation, second trimester, fetus 3
O318X24	Other complications specific to multiple gestation, second trimester, fetus 4
O318X25	Other complications specific to multiple gestation, second trimester, fetus 5
O318X29	Other complications specific to multiple gestation, second trimester, other fetus
O318X30	Other complications specific to multiple gestation, third trimester, not applicable or unspecified
O318X31	Other complications specific to multiple gestation, third trimester, fetus 1
O318X32	Other complications specific to multiple gestation, third trimester, fetus 2
O318X33	Other complications specific to multiple gestation, third trimester, fetus 3
O318X34	Other complications specific to multiple gestation, third trimester, fetus 4
O318X35	Other complications specific to multiple gestation, third trimester, fetus 5
O318X39	Other complications specific to multiple gestation, third trimester, other fetus
O321XX0	Maternal care for breech presentation, not applicable or unspecified
O321XX1	Maternal care for breech presentation, fetus 1
O321XX2	Maternal care for breech presentation, fetus 2
O321XX3	Maternal care for breech presentation, fetus 3
O321XX4	Maternal care for breech presentation, fetus 4
O321XX5	Maternal care for breech presentation, fetus 5
O321XX9	Maternal care for breech presentation, other fetus
O322XX0	Maternal care for transverse and oblique lie, not applicable or unspecified
O322XX1	Maternal care for transverse and oblique lie, fetus 1
O322XX2	Maternal care for transverse and oblique lie, fetus 2
O322XX3	Maternal care for transverse and oblique lie, fetus 3
O322XX4	Maternal care for transverse and oblique lie, fetus 4
O322XX5	Maternal care for transverse and oblique lie, fetus 5

Code	Shortened Description
O322XX9	Maternal care for transverse and oblique lie, other fetus
O323XX0	Maternal care for face, brow and chin presentation, not applicable or unspecified
O323XX1	Maternal care for face, brow and chin presentation, fetus 1
O323XX2	Maternal care for face, brow and chin presentation, fetus 2
O323XX3	Maternal care for face, brow and chin presentation, fetus 3
O323XX4	Maternal care for face, brow and chin presentation, fetus 4
O323XX5	Maternal care for face, brow and chin presentation, fetus 5
O323XX9	Maternal care for face, brow and chin presentation, other fetus
O328XX0	Maternal care for other malpresentation of fetus, not applicable or unspecified
O328XX1	Maternal care for other malpresentation of fetus, fetus 1
O328XX2	Maternal care for other malpresentation of fetus, fetus 2
O328XX3	Maternal care for other malpresentation of fetus, fetus 3
O328XX4	Maternal care for other malpresentation of fetus, fetus 4
O328XX5	Maternal care for other malpresentation of fetus, fetus 5
O328XX9	Maternal care for other malpresentation of fetus, other fetus
O329XX0	Maternal care for malpresentation of fetus, unspecified, not applicable or unspecified
O329XX1	Maternal care for malpresentation of fetus, unspecified, fetus 1
O329XX2	Maternal care for malpresentation of fetus, unspecified, fetus 2
O329XX3	Maternal care for malpresentation of fetus, unspecified, fetus 3
O329XX4	Maternal care for malpresentation of fetus, unspecified, fetus 4
O329XX5	Maternal care for malpresentation of fetus, unspecified, fetus 5
O329XX9	Maternal care for malpresentation of fetus, unspecified, other fetus
O34211	Maternal care for low transverse scar from previous cesarean delivery
O34212	Maternal care for vertical scar from previous cesarean delivery
O34219	Maternal care for unspecified type scar from previous cesarean delivery
O364XX0	Maternal care for intrauterine death, not applicable or unspecified
O364XX1	Maternal care for intrauterine death, fetus 1
O364XX2	Maternal care for intrauterine death, fetus 2
O364XX3	Maternal care for intrauterine death, fetus 3
O364XX4	Maternal care for intrauterine death, fetus 4
O364XX5	Maternal care for intrauterine death, fetus 5
O364XX9	Maternal care for intrauterine death, other fetus

Code	Shortened Description
O4403	Complete placenta previa NOS or without hemorrhage, third trimester
O4413	Complete placenta previa with hemorrhage, third trimester
O4423	Partial placenta previa NOS or without hemorrhage, third trimester
O4433	Partial placenta previa with hemorrhage, third trimester
O6012X0	Preterm labor second trimester with preterm delivery second trimester, not applicable or unspecified
O6012X1	Preterm labor second trimester with preterm delivery second trimester, fetus 1
O6012X2	Preterm labor second trimester with preterm delivery second trimester, fetus 2
O6012X3	Preterm labor second trimester with preterm delivery second trimester, fetus 3
O6012X4	Preterm labor second trimester with preterm delivery second trimester, fetus 4
O6012X5	Preterm labor second trimester with preterm delivery second trimester, fetus 5
O6012X9	Preterm labor second trimester with preterm delivery second trimester, other fetus
O6013X0	Preterm labor second trimester with preterm delivery third trimester, not applicable or unspecified
O6013X1	Preterm labor second trimester with preterm delivery third trimester, fetus 1
O6013X2	Preterm labor second trimester with preterm delivery third trimester, fetus 2
O6013X3	Preterm labor second trimester with preterm delivery third trimester, fetus 3
O6013X4	Preterm labor second trimester with preterm delivery third trimester, fetus 4
O6013X5	Preterm labor second trimester with preterm delivery third trimester, fetus 5
O6013X9	Preterm labor second trimester with preterm delivery third trimester, other fetus
O6014X0	Preterm labor third trimester with preterm delivery third trimester, not applicable or unspecified
O6014X1	Preterm labor third trimester with preterm delivery third trimester, fetus 1
O6014X2	Preterm labor third trimester with preterm delivery third trimester, fetus 2
O6014X3	Preterm labor third trimester with preterm delivery third trimester, fetus 3
O6014X4	Preterm labor third trimester with preterm delivery third trimester, fetus 4
O6014X5	Preterm labor third trimester with preterm delivery third trimester, fetus 5
O6014X9	Preterm labor third trimester with preterm delivery third trimester, other fetus
O6022X0	Term delivery with preterm labor, second trimester, not applicable or unspecified
O6022X1	Term delivery with preterm labor, second trimester, fetus 1
O6022X2	Term delivery with preterm labor, second trimester, fetus 2
O6022X3	Term delivery with preterm labor, second trimester, fetus 3
O6022X4	Term delivery with preterm labor, second trimester, fetus 4
O6022X5	Term delivery with preterm labor, second trimester, fetus 5
O6022X9	Term delivery with preterm labor, second trimester, other fetus

Code	Shortened Description
O6023X0	Term delivery with preterm labor, third trimester, not applicable or unspecified
O6023X1	Term delivery with preterm labor, third trimester, fetus 1
O6023X2	Term delivery with preterm labor, third trimester, fetus 2
O6023X3	Term delivery with preterm labor, third trimester, fetus 3
O6023X4	Term delivery with preterm labor, third trimester, fetus 4
O6023X5	Term delivery with preterm labor, third trimester, fetus 5
O6023X9	Term delivery with preterm labor, third trimester, other fetus
O632	Delayed delivery of second twin, triplet, etc.
O641XX0	Obstructed labor due to breech presentation, not applicable or unspecified
O641XX1	Obstructed labor due to breech presentation, fetus 1
O641XX2	Obstructed labor due to breech presentation, fetus 2
O641XX3	Obstructed labor due to breech presentation, fetus 3
O641XX4	Obstructed labor due to breech presentation, fetus 4
O641XX5	Obstructed labor due to breech presentation, fetus 5
O641XX9	Obstructed labor due to breech presentation, other fetus
O642XX0	Obstructed labor due to face presentation, not applicable or unspecified
O642XX1	Obstructed labor due to face presentation, fetus 1
O642XX2	Obstructed labor due to face presentation, fetus 2
O642XX3	Obstructed labor due to face presentation, fetus 3
O642XX4	Obstructed labor due to face presentation, fetus 4
O642XX5	Obstructed labor due to face presentation, fetus 5
O642XX9	Obstructed labor due to face presentation, other fetus
O643XX0	Obstructed labor due to brow presentation, not applicable or unspecified
O643XX1	Obstructed labor due to brow presentation, fetus 1
O643XX2	Obstructed labor due to brow presentation, fetus 2
O643XX3	Obstructed labor due to brow presentation, fetus 3
O643XX4	Obstructed labor due to brow presentation, fetus 4
O643XX5	Obstructed labor due to brow presentation, fetus 5
O643XX9	Obstructed labor due to brow presentation, other fetus
O661	Obstructed labor due to locked twins
O666	Obstructed labor due to other multiple fetuses
Z371	Single stillbirth

Code	Shortened Description
Z372	Twins, both liveborn
Z373	Twins, one liveborn and one stillborn
Z374	Twins, both stillborn
Z3750	Multiple births, unspecified, all liveborn
Z3751	Triplets, all liveborn
Z3752	Quadruplets, all liveborn
Z3753	Quintuplets, all liveborn
Z3754	Sextuplets, all liveborn
Z3759	Other multiple births, all liveborn
Z3760	Multiple births, unspecified, some liveborn
Z3761	Triplets, some liveborn
Z3762	Quadruplets, some liveborn
Z3763	Quintuplets, some liveborn
Z3764	Sextuplets, some liveborn
Z3769	Other multiple births, some liveborn
Z377	Other multiple births, all stillborn

Table Number 11.09.1: Fetal Demise

Code	Shortened Description
O364XX0	Maternal care for intrauterine death, not applicable or unspecified

Table Number 11.10: Newborn Septicemia or Bacteremia

Code	Shortened Description
P360	Sepsis of newborn due to streptococcus, group B
P3610	Sepsis of newborn due to unspecified streptococci
P3619	Sepsis of newborn due to other streptococci
P362	Sepsis of newborn due to Staphylococcus aureus
P3630	Sepsis of newborn due to unspecified staphylococci
P3639	Sepsis of newborn due to other staphylococci
P364	Sepsis of newborn due to Escherichia coli
P365	Sepsis of newborn due to anaerobes

Code	Shortened Description
P368	Other bacterial sepsis of newborn
P369	Bacterial sepsis of newborn, unspecified
R7881	Bacteremia

Table Number 11.10.1: Sepsis

Code	Shortened Description
A021	Salmonella sepsis
A227	Anthrax sepsis
A267	Erysipelothrix sepsis
A327	Listerial sepsis
A400	Sepsis due to streptococcus, group A
A401	Sepsis due to streptococcus, group B
A403	Sepsis due to Streptococcus pneumoniae
A408	Other streptococcal sepsis
A409	Streptococcal sepsis, unspecified
A4101	Sepsis due to Methicillin susceptible Staphylococcus aureus
A4102	Sepsis due to Methicillin resistant Staphylococcus aureus
A411	Sepsis due to other specified staphylococcus
A412	Sepsis due to unspecified staphylococcus
A413	Sepsis due to Hemophilus influenzae
A414	Sepsis due to anaerobes
A4150	Gram-negative sepsis, unspecified
A4151	Sepsis due to Escherichia coli [E. coli]
A4152	Sepsis due to Pseudomonas
A4153	Sepsis due to Serratia
A4159	Other Gram-negative sepsis
A4181	Sepsis due to Enterococcus
A4189	Other specified sepsis
A419	Sepsis, unspecified organism
A427	Actinomycotic sepsis
A5486	Gonococcal sepsis
B377	Candidal sepsis

Code	Shortened Description
R6520	Severe sepsis without septic shock
R6521	Severe sepsis with septic shock
T8112XA	Postprocedural septic shock, initial encounter

Table Number 11.10.2: Septicemias or Bacteremias

Code	Shortened Description
A021	Salmonella sepsis
A227	Anthrax sepsis
A267	Erysipelothrix sepsis
A327	Listerial sepsis
A400	Sepsis due to streptococcus, group A
A401	Sepsis due to streptococcus, group B
A403	Sepsis due to Streptococcus pneumoniae
A408	Other streptococcal sepsis
A409	Streptococcal sepsis, unspecified
A4101	Sepsis due to Methicillin susceptible Staphylococcus aureus
A4102	Sepsis due to Methicillin resistant Staphylococcus aureus
A411	Sepsis due to other specified staphylococcus
A412	Sepsis due to unspecified staphylococcus
A413	Sepsis due to Hemophilus influenzae
A414	Sepsis due to anaerobes
A4150	Gram-negative sepsis, unspecified
A4151	Sepsis due to Escherichia coli [E. coli]
A4152	Sepsis due to Pseudomonas
A4153	Sepsis due to Serratia
A4159	Other Gram-negative sepsis
A4181	Sepsis due to Enterococcus
A4189	Other specified sepsis
A419	Sepsis, unspecified organism
A427	Actinomycotic sepsis
A4901	Methicillin susceptible Staphylococcus aureus infection, unspecified site
A5486	Gonococcal sepsis

Code	Shortened Description
B377	Candidal sepsis
B952	Enterococcus as the cause of diseases classified elsewhere
B9561	Methicillin susceptible Staphylococcus aureus infection as the cause of diseases classified elsewhere
B957	Other staphylococcus as the cause of diseases classified elsewhere
B958	Unspecified staphylococcus as the cause of diseases classified elsewhere
B961	Klebsiella pneumoniae [K. pneumoniae] as the cause of diseases classified elsewhere
B9620	Unspecified Escherichia coli [E. coli] as the cause of diseases classified elsewhere
B9621	Shiga toxin-producing Escherichia coli [E. coli] (STEC) O157 as the cause of diseases classified elsewhere
B9622	Other specified Shiga toxin-producing Escherichia coli [E. coli] (STEC) as the cause of diseases classified elsewhere
B9623	Unspecified Shiga toxin-producing Escherichia coli [E. coli] (STEC) as the cause of diseases classified elsewhere
B9629	Other Escherichia coli [E. coli] as the cause of diseases classified elsewhere
B965	Pseudomonas (aeruginosa) (mallei) (pseudomallei) as the cause of diseases classified elsewhere
B9689	Other specified bacterial agents as the cause of diseases classified elsewhere
R6520	Severe sepsis without septic shock
R6521	Severe sepsis with septic shock
R7881	Bacteremia
T8110XA	Postprocedural shock unspecified, initial encounter

Table Number 11.10.3: Liveborn Newborn

Code	Shortened Description
Z3800	Single liveborn infant, delivered vaginally
Z3801	Single liveborn infant, delivered by cesarean
Z381	Single liveborn infant, born outside hospital
Z382	Single liveborn infant, unspecified as to place of birth
Z3830	Twin liveborn infant, delivered vaginally
Z3831	Twin liveborn infant, delivered by cesarean
Z384	Twin liveborn infant, born outside hospital
Z385	Twin liveborn infant, unspecified as to place of birth
Z3861	Triplet liveborn infant, delivered vaginally
Z3862	Triplet liveborn infant, delivered by cesarean
Z3863	Quadruplet liveborn infant, delivered vaginally
Z3864	Quadruplet liveborn infant, delivered by cesarean

Code	Shortened Description
Z3865	Quintuplet liveborn infant, delivered vaginally
Z3866	Quintuplet liveborn infant, delivered by cesarean
Z3868	Other multiple liveborn infant, delivered vaginally
Z3869	Other multiple liveborn infant, delivered by cesarean
Z387	Other multiple liveborn infant, born outside hospital
Z388	Other multiple liveborn infant, unspecified as to place of birth

Table Number 11.12: Birth Weight 500-749 Grams

Code	Shortened Description
P0502	Newborn light for gestational age, 500-749 grams
P0512	Newborn small for gestational age, 500-749 grams
P0702	Extremely low birth weight newborn, 500-749 grams

Table Number 11.13: Birth Weight 750-999 Grams

Code	Shortened Description
P0503	Newborn light for gestational age, 750-999 grams
P0513	Newborn small for gestational age, 750-999 grams
P0703	Extremely low birth weight newborn, 750-999 grams

Table Number 11.14: Birth Weight 1000-1499 Grams

Code	Shortened Description
P0504	Newborn light for gestational age, 1000-1249 grams
P0505	Newborn light for gestational age, 1250-1499 grams
P0514	Newborn small for gestational age, 1000-1249 grams
P0515	Newborn small for gestational age, 1250-1499 grams
P0714	Other low birth weight newborn, 1000-1249 grams
P0715	Other low birth weight newborn, 1250-1499 grams

Table Number 11.15: Birth Weight 1500-1999 Grams

Code	Shortened Description

Code	Shortened Description
P0506	Newborn light for gestational age, 1500-1749 grams
P0507	Newborn light for gestational age, 1750-1999 grams
P0516	Newborn small for gestational age, 1500-1749 grams
P0517	Newborn small for gestational age, 1750-1999 grams
P0716	Other low birth weight newborn, 1500-1749 grams
P0717	Other low birth weight newborn, 1750-1999 grams

Table Number 11.16: Birth Weight 2000-2499

Code	Shortened Description
P0508	Newborn light for gestational age, 2000-2499 grams
P0518	Newborn small for gestational age, 2000-2499 grams
P0718	Other low birth weight newborn, 2000-2499 grams

Table Number 11.18: Major Surgery

Please download Excel file at top which includes 11.18 codes

Table Number 11.19: Mechanical Ventilation

Code	Shortened Description
5A1935Z	Respiratory Ventilation, Less than 24 Consecutive Hours
5A1945Z	Respiratory Ventilation, 24-96 Consecutive Hours
5A1955Z	Respiratory Ventilation, Greater than 96 Consecutive Hours

Table Number 11.20: Birth weight less than 500 g

Code	Shortened Description
P0501	Newborn light for gestational age, less than 500 grams
P0511	Newborn small for gestational age, less than 500 grams
P0701	Extremely low birth weight newborn, less than 500 grams

Table Number 11.20.1: Single Liveborn Newborn

Code	Shortened Description

Code	Shortened Description
Z3800	Single liveborn infant, delivered vaginally
Z3801	Single liveborn infant, delivered by cesarean

Table Number 11.20.2: Single Liveborn Newborn-Vaginal

Code	Shortened Description
Z3800	Single liveborn infant, delivered vaginally

Table Number 11.20.3: Single Liveborn Newborn-Cesarean

Code	Shortened Description
Z3801	Single liveborn infant, delivered by cesarean

Table Number 11.21: Galactosemia

Code	Shortened Description
E7420	Disorders of galactose metabolism, unspecified
E7421	Galactosemia
E7429	Other disorders of galactose metabolism

Table Number 11.22: Parenteral Nutrition

Code	Shortened Description
3E0336Z	Introduction of Nutritional Substance into Peripheral Vein, Percutaneous Approach
3E0436Z	Introduction of Nutritional Substance into Central Vein, Percutaneous Approach
3E0536Z	Introduction of Nutritional Substance into Peripheral Artery, Percutaneous Approach
3E0636Z	Introduction of Nutritional Substance into Central Artery, Percutaneous Approach

Table Number 11.30: Congenital malformations

Code	Shortened Description
E250	Congenital adrenogenital disorders associated with enzyme deficiency
E258	Other adrenogenital disorders
E259	Adrenogenital disorder, unspecified

Code	Shortened Description
E343	Short stature due to endocrine disorder
E3450	Androgen insensitivity syndrome, unspecified
E3451	Complete androgen insensitivity syndrome
E3452	Partial androgen insensitivity syndrome
E700	Classical phenylketonuria
E701	Other hyperphenylalaninemias
E7020	Disorder of tyrosine metabolism, unspecified
E7021	Tyrosinemia
E7029	Other disorders of tyrosine metabolism
E7030	Albinism, unspecified
E70310	X-linked ocular albinism
E70311	Autosomal recessive ocular albinism
E70318	Other ocular albinism
E70319	Ocular albinism, unspecified
E70320	Tyrosinase negative oculocutaneous albinism
E70321	Tyrosinase positive oculocutaneous albinism
E70328	Other oculocutaneous albinism
E70329	Oculocutaneous albinism, unspecified
E70330	Chediak-Higashi syndrome
E70331	Hermansky-Pudlak syndrome
E70338	Other albinism with hematologic abnormality
E70339	Albinism with hematologic abnormality, unspecified
E7039	Other specified albinism
E7040	Disorders of histidine metabolism, unspecified
E7041	Histidinemia
E7049	Other disorders of histidine metabolism
E705	Disorders of tryptophan metabolism
E708	Other disorders of aromatic amino-acid metabolism
E709	Disorder of aromatic amino-acid metabolism, unspecified
E710	Maple-syrup-urine disease
E71110	Isovaleric acidemia
E71111	3-methylglutaconic aciduria

Code	Shortened Description
E71118	Other branched-chain organic acidurias
E71120	Methylmalonic acidemia
E71121	Propionic acidemia
E71128	Other disorders of propionate metabolism
E7119	Other disorders of branched-chain amino-acid metabolism
E712	Disorder of branched-chain amino-acid metabolism, unspecified
E7130	Disorder of fatty-acid metabolism, unspecified
E71310	Long chain/very long chain acyl CoA dehydrogenase deficiency
E71311	Medium chain acyl CoA dehydrogenase deficiency
E71312	Short chain acyl CoA dehydrogenase deficiency
E71313	Glutaric aciduria type II
E71314	Muscle carnitine palmitoyltransferase deficiency
E71318	Other disorders of fatty-acid oxidation
E7132	Disorders of ketone metabolism
E7139	Other disorders of fatty-acid metabolism
E7140	Disorder of carnitine metabolism, unspecified
E7141	Primary carnitine deficiency
E7142	Carnitine deficiency due to inborn errors of metabolism
E7143	Iatrogenic carnitine deficiency
E71440	Ruvalcaba-Myhre-Smith syndrome
E71448	Other secondary carnitine deficiency
E7150	Peroxisomal disorder, unspecified
E71510	Zellweger syndrome
E71511	Neonatal adrenoleukodystrophy
E71518	Other disorders of peroxisome biogenesis
E71520	Childhood cerebral X-linked adrenoleukodystrophy
E71521	Adolescent X-linked adrenoleukodystrophy
E71522	Adrenomyeloneuropathy
E71528	Other X-linked adrenoleukodystrophy
E71529	X-linked adrenoleukodystrophy, unspecified type
E7153	Other group 2 peroxisomal disorders
E71540	Rhizomelic chondrodysplasia punctata

Code	Shortened Description
E71541	Zellweger-like syndrome
E71542	Other group 3 peroxisomal disorders
E71548	Other peroxisomal disorders
E7200	Disorders of amino-acid transport, unspecified
E7201	Cystinuria
E7202	Hartnup's disease
E7203	Lowe's syndrome
E7204	Cystinosis
E7209	Other disorders of amino-acid transport
E7210	Disorders of sulfur-bearing amino-acid metabolism, unspecified
E7211	Homocystinuria
E7212	Methylenetetrahydrofolate reductase deficiency
E7219	Other disorders of sulfur-bearing amino-acid metabolism
E7220	Disorder of urea cycle metabolism, unspecified
E7221	Argininemia
E7222	Arginosuccinic aciduria
E7223	Citrullinemia
E7229	Other disorders of urea cycle metabolism
E723	Disorders of lysine and hydroxylysine metabolism
E724	Disorders of ornithine metabolism
E7250	Disorder of glycine metabolism, unspecified
E7251	Non-ketotic hyperglycinemia
E7252	Trimethylaminuria
E7253	Primary hyperoxaluria
E7259	Other disorders of glycine metabolism
E7281	Disorders of gamma aminobutyric acid metabolism
E7289	Other specified disorders of amino-acid metabolism
E729	Disorder of amino-acid metabolism, unspecified
E7400	Glycogen storage disease, unspecified
E7401	von Gierke disease
E7402	Pompe disease
E7403	Cori disease

Code	Shortened Description
E7404	McArdle disease
E7409	Other glycogen storage disease
E7410	Disorder of fructose metabolism, unspecified
E7411	Essential fructosuria
E7412	Hereditary fructose intolerance
E7419	Other disorders of fructose metabolism
E7420	Disorders of galactose metabolism, unspecified
E7421	Galactosemia
E7429	Other disorders of galactose metabolism
E7431	Sucrase-isomaltase deficiency
E7439	Other disorders of intestinal carbohydrate absorption
E744	Disorders of pyruvate metabolism and gluconeogenesis
E748	Other specified disorders of carbohydrate metabolism
E749	Disorder of carbohydrate metabolism, unspecified
E7500	GM2 gangliosidosis, unspecified
E7501	Sandhoff disease
E7502	Tay-Sachs disease
E7509	Other GM2 gangliosidosis
E7510	Unspecified gangliosidosis
E7511	Mucolipidosis IV
E7519	Other gangliosidosis
E7521	Fabry (-Anderson) disease
E7522	Gaucher disease
E7523	Krabbe disease
E75240	Niemann-Pick disease type A
E75241	Niemann-Pick disease type B
E75242	Niemann-Pick disease type C
E75243	Niemann-Pick disease type D
E75248	Other Niemann-Pick disease
E75249	Niemann-Pick disease, unspecified
E7525	Metachromatic leukodystrophy
E7526	Sulfatase deficiency

Code	Shortened Description
E7529	Other sphingolipidosis
E753	Sphingolipidosis, unspecified
E754	Neuronal ceroid lipofuscinosis
E755	Other lipid storage disorders
E756	Lipid storage disorder, unspecified
E7601	Hurler's syndrome
E7602	Hurler-Scheie syndrome
E7603	Scheie's syndrome
E761	Mucopolysaccharidosis, type II
E76210	Morquio A mucopolysaccharidoses
E76211	Morquio B mucopolysaccharidoses
E76219	Morquio mucopolysaccharidoses, unspecified
E7622	Sanfilippo mucopolysaccharidoses
E7629	Other mucopolysaccharidoses
E763	Mucopolysaccharidosis, unspecified
E768	Other disorders of glucosaminoglycan metabolism
E769	Glucosaminoglycan metabolism disorder, unspecified
E770	Defects in post-translational modification of lysosomal enzymes
E771	Defects in glycoprotein degradation
E778	Other disorders of glycoprotein metabolism
E779	Disorder of glycoprotein metabolism, unspecified
E7800	Pure hypercholesterolemia, unspecified
E7801	Familial hypercholesterolemia
E781	Pure hyperglyceridemia
E782	Mixed hyperlipidemia
E783	Hyperchylomicronemia
E7841	Elevated Lipoprotein(a)
E7849	Other hyperlipidemia
E785	Hyperlipidemia, unspecified
E786	Lipoprotein deficiency
E7870	Disorder of bile acid and cholesterol metabolism, unspecified
E7871	Barth syndrome

Code	Shortened Description
E7872	Smith-Lemli-Opitz syndrome
E7879	Other disorders of bile acid and cholesterol metabolism
E7881	Lipoid dermatoarthritis
E7889	Other lipoprotein metabolism disorders
E789	Disorder of lipoprotein metabolism, unspecified
E790	Hyperuricemia without signs of inflammatory arthritis and tophaceous disease
E791	Lesch-Nyhan syndrome
E792	Myoadenylate deaminase deficiency
E798	Other disorders of purine and pyrimidine metabolism
E799	Disorder of purine and pyrimidine metabolism, unspecified
E800	Hereditary erythropoietic porphyria
E801	Porphyria cutanea tarda
E8020	Unspecified porphyria
E8021	Acute intermittent (hepatic) porphyria
E8029	Other porphyria
E803	Defects of catalase and peroxidase
E804	Gilbert syndrome
E805	Crigler-Najjar syndrome
E807	Disorder of bilirubin metabolism, unspecified
G120	Infantile spinal muscular atrophy, type I [Werdnig-Hoffman]
G121	Other inherited spinal muscular atrophy
G128	Other spinal muscular atrophies and related syndromes
G129	Spinal muscular atrophy, unspecified
G7100	Muscular dystrophy, unspecified
G7101	Duchenne or Becker muscular dystrophy
G7102	Facioscapulohumeral muscular dystrophy
G7109	Other specified muscular dystrophies
G7111	Myotonic muscular dystrophy
G7112	Myotonia congenita
G7113	Myotonic chondrodystrophy
G712	Congenital myopathies
G713	Mitochondrial myopathy, not elsewhere classified

Code	Shortened Description
G718	Other primary disorders of muscles
G719	Primary disorder of muscle, unspecified
G901	Familial dysautonomia [Riley-Day]
Q000	Anencephaly
Q001	Craniorachischisis
Q002	Iniencephaly
Q010	Frontal encephalocele
Q011	Nasofrontal encephalocele
Q012	Occipital encephalocele
Q018	Encephalocele of other sites
Q019	Encephalocele, unspecified
Q02	Microcephaly
Q030	Malformations of aqueduct of Sylvius
Q031	Atresia of foramina of Magendie and Luschka
Q038	Other congenital hydrocephalus
Q039	Congenital hydrocephalus, unspecified
Q040	Congenital malformations of corpus callosum
Q041	Arhinencephaly
Q042	Holoprosencephaly
Q043	Other reduction deformities of brain
Q044	Septo-optic dysplasia of brain
Q045	Megalencephaly
Q046	Congenital cerebral cysts
Q048	Other specified congenital malformations of brain
Q049	Congenital malformation of brain, unspecified
Q050	Cervical spina bifida with hydrocephalus
Q051	Thoracic spina bifida with hydrocephalus
Q052	Lumbar spina bifida with hydrocephalus
Q053	Sacral spina bifida with hydrocephalus
Q054	Unspecified spina bifida with hydrocephalus
Q055	Cervical spina bifida without hydrocephalus
Q056	Thoracic spina bifida without hydrocephalus

Code	Shortened Description
Q057	Lumbar spina bifida without hydrocephalus
Q058	Sacral spina bifida without hydrocephalus
Q059	Spina bifida, unspecified
Q060	Amyelia
Q061	Hypoplasia and dysplasia of spinal cord
Q062	Diastematomyelia
Q063	Other congenital cauda equina malformations
Q064	Hydromyelia
Q068	Other specified congenital malformations of spinal cord
Q069	Congenital malformation of spinal cord, unspecified
Q0700	Arnold-Chiari syndrome without spina bifida or hydrocephalus
Q0701	Arnold-Chiari syndrome with spina bifida
Q0702	Arnold-Chiari syndrome with hydrocephalus
Q0703	Arnold-Chiari syndrome with spina bifida and hydrocephalus
Q078	Other specified congenital malformations of nervous system
Q079	Congenital malformation of nervous system, unspecified
Q100	Congenital ptosis
Q101	Congenital ectropion
Q102	Congenital entropion
Q103	Other congenital malformations of eyelid
Q104	Absence and agenesis of lacrimal apparatus
Q106	Other congenital malformations of lacrimal apparatus
Q107	Congenital malformation of orbit
Q110	Cystic eyeball
Q111	Other anophthalmos
Q112	Microphthalmos
Q113	Macrophthalmos
Q120	Congenital cataract
Q121	Congenital displaced lens
Q122	Coloboma of lens
Q123	Congenital aphakia
Q124	Spherophakia

Code	Shortened Description
Q128	Other congenital lens malformations
Q129	Congenital lens malformation, unspecified
Q130	Coloboma of iris
Q131	Absence of iris
Q132	Other congenital malformations of iris
Q133	Congenital corneal opacity
Q134	Other congenital corneal malformations
Q135	Blue sclera
Q1381	Rieger's anomaly
Q1389	Other congenital malformations of anterior segment of eye
Q139	Congenital malformation of anterior segment of eye, unspecified
Q140	Congenital malformation of vitreous humor
Q141	Congenital malformation of retina
Q142	Congenital malformation of optic disc
Q143	Congenital malformation of choroid
Q148	Other congenital malformations of posterior segment of eye
Q149	Congenital malformation of posterior segment of eye, unspecified
Q150	Congenital glaucoma
Q158	Other specified congenital malformations of eye
Q159	Congenital malformation of eye, unspecified
Q172	Microtia
Q180	Sinus, fistula and cyst of branchial cleft
Q181	Preauricular sinus and cyst
Q182	Other branchial cleft malformations
Q183	Webbing of neck
Q184	Macrostomia
Q185	Microstomia
Q186	Macrocheilia
Q187	Microcheilia
Q188	Other specified congenital malformations of face and neck
Q189	Congenital malformation of face and neck, unspecified
Q200	Common arterial trunk

Code	Shortened Description
Q201	Double outlet right ventricle
Q202	Double outlet left ventricle
Q203	Discordant ventriculoarterial connection
Q204	Double inlet ventricle
Q205	Discordant atrioventricular connection
Q206	Isomerism of atrial appendages
Q208	Other congenital malformations of cardiac chambers and connections
Q209	Congenital malformation of cardiac chambers and connections, unspecified
Q210	Ventricular septal defect
Q211	Atrial septal defect
Q212	Atrioventricular septal defect
Q213	Tetralogy of Fallot
Q214	Aortopulmonary septal defect
Q218	Other congenital malformations of cardiac septa
Q219	Congenital malformation of cardiac septum, unspecified
Q220	Pulmonary valve atresia
Q221	Congenital pulmonary valve stenosis
Q222	Congenital pulmonary valve insufficiency
Q223	Other congenital malformations of pulmonary valve
Q224	Congenital tricuspid stenosis
Q225	Ebstein's anomaly
Q226	Hypoplastic right heart syndrome
Q228	Other congenital malformations of tricuspid valve
Q229	Congenital malformation of tricuspid valve, unspecified
Q230	Congenital stenosis of aortic valve
Q231	Congenital insufficiency of aortic valve
Q232	Congenital mitral stenosis
Q233	Congenital mitral insufficiency
Q234	Hypoplastic left heart syndrome
Q238	Other congenital malformations of aortic and mitral valves
Q239	Congenital malformation of aortic and mitral valves, unspecified
Q240	Dextrocardia

Code	Shortened Description
Q241	Levocardia
Q242	Cor triatriatum
Q243	Pulmonary infundibular stenosis
Q244	Congenital subaortic stenosis
Q245	Malformation of coronary vessels
Q246	Congenital heart block
Q248	Other specified congenital malformations of heart
Q249	Congenital malformation of heart, unspecified
Q250	Patent ductus arteriosus
Q251	Coarctation of aorta
Q2521	Interruption of aortic arch
Q2529	Other atresia of aorta
Q253	Supravalvular aortic stenosis
Q2540	Congenital malformation of aorta unspecified
Q2541	Absence and aplasia of aorta
Q2542	Hypoplasia of aorta
Q2543	Congenital aneurysm of aorta
Q2544	Congenital dilation of aorta
Q2545	Double aortic arch
Q2546	Tortuous aortic arch
Q2547	Right aortic arch
Q2548	Anomalous origin of subclavian artery
Q2549	Other congenital malformations of aorta
Q255	Atresia of pulmonary artery
Q256	Stenosis of pulmonary artery
Q2571	Coarctation of pulmonary artery
Q2572	Congenital pulmonary arteriovenous malformation
Q2579	Other congenital malformations of pulmonary artery
Q258	Other congenital malformations of other great arteries
Q259	Congenital malformation of great arteries, unspecified
Q260	Congenital stenosis of vena cava
Q261	Persistent left superior vena cava

Code	Shortened Description
Q262	Total anomalous pulmonary venous connection
Q263	Partial anomalous pulmonary venous connection
Q264	Anomalous pulmonary venous connection, unspecified
Q265	Anomalous portal venous connection
Q266	Portal vein-hepatic artery fistula
Q268	Other congenital malformations of great veins
Q269	Congenital malformation of great vein, unspecified
Q271	Congenital renal artery stenosis
Q272	Other congenital malformations of renal artery
Q2730	Arteriovenous malformation, site unspecified
Q2731	Arteriovenous malformation of vessel of upper limb
Q2732	Arteriovenous malformation of vessel of lower limb
Q2733	Arteriovenous malformation of digestive system vessel
Q2734	Arteriovenous malformation of renal vessel
Q2739	Arteriovenous malformation, other site
Q274	Congenital phlebectasia
Q278	Other specified congenital malformations of peripheral vascular system
Q279	Congenital malformation of peripheral vascular system, unspecified
Q280	Arteriovenous malformation of precerebral vessels
Q281	Other malformations of precerebral vessels
Q282	Arteriovenous malformation of cerebral vessels
Q283	Other malformations of cerebral vessels
Q288	Other specified congenital malformations of circulatory system
Q289	Congenital malformation of circulatory system, unspecified
Q300	Choanal atresia
Q301	Agenesis and underdevelopment of nose
Q302	Fissured, notched and cleft nose
Q303	Congenital perforated nasal septum
Q308	Other congenital malformations of nose
Q309	Congenital malformation of nose, unspecified
Q310	Web of larynx
Q311	Congenital subglottic stenosis

Code	Shortened Description
Q312	Laryngeal hypoplasia
Q313	Laryngocele
Q315	Congenital laryngomalacia
Q318	Other congenital malformations of larynx
Q319	Congenital malformation of larynx, unspecified
Q320	Congenital tracheomalacia
Q321	Other congenital malformations of trachea
Q322	Congenital bronchomalacia
Q323	Congenital stenosis of bronchus
Q324	Other congenital malformations of bronchus
Q330	Congenital cystic lung
Q331	Accessory lobe of lung
Q332	Sequestration of lung
Q333	Agenesis of lung
Q334	Congenital bronchiectasis
Q335	Ectopic tissue in lung
Q336	Congenital hypoplasia and dysplasia of lung
Q338	Other congenital malformations of lung
Q339	Congenital malformation of lung, unspecified
Q340	Anomaly of pleura
Q341	Congenital cyst of mediastinum
Q348	Other specified congenital malformations of respiratory system
Q349	Congenital malformation of respiratory system, unspecified
Q351	Cleft hard palate
Q353	Cleft soft palate
Q355	Cleft hard palate with cleft soft palate
Q357	Cleft uvula
Q359	Cleft palate, unspecified
Q360	Cleft lip, bilateral
Q361	Cleft lip, median
Q369	Cleft lip, unilateral
Q370	Cleft hard palate with bilateral cleft lip

Code	Shortened Description
Q371	Cleft hard palate with unilateral cleft lip
Q372	Cleft soft palate with bilateral cleft lip
Q373	Cleft soft palate with unilateral cleft lip
Q374	Cleft hard and soft palate with bilateral cleft lip
Q375	Cleft hard and soft palate with unilateral cleft lip
Q378	Unspecified cleft palate with bilateral cleft lip
Q379	Unspecified cleft palate with unilateral cleft lip
Q382	Macroglossia
Q385	Congenital malformations of palate, not elsewhere classified
Q386	Other congenital malformations of mouth
Q387	Congenital pharyngeal pouch
Q388	Other congenital malformations of pharynx
Q390	Atresia of esophagus without fistula
Q391	Atresia of esophagus with tracheo-esophageal fistula
Q392	Congenital tracheo-esophageal fistula without atresia
Q393	Congenital stenosis and stricture of esophagus
Q394	Esophageal web
Q395	Congenital dilatation of esophagus
Q396	Congenital diverticulum of esophagus
Q398	Other congenital malformations of esophagus
Q399	Congenital malformation of esophagus, unspecified
Q400	Congenital hypertrophic pyloric stenosis
Q401	Congenital hiatus hernia
Q402	Other specified congenital malformations of stomach
Q403	Congenital malformation of stomach, unspecified
Q408	Other specified congenital malformations of upper alimentary tract
Q409	Congenital malformation of upper alimentary tract, unspecified
Q410	Congenital absence, atresia and stenosis of duodenum
Q411	Congenital absence, atresia and stenosis of jejunum
Q412	Congenital absence, atresia and stenosis of ileum
Q418	Congenital absence, atresia and stenosis of other specified parts of small intestine
Q419	Congenital absence, atresia and stenosis of small intestine, part unspecified

Code	Shortened Description
Q420	Congenital absence, atresia and stenosis of rectum with fistula
Q421	Congenital absence, atresia and stenosis of rectum without fistula
Q422	Congenital absence, atresia and stenosis of anus with fistula
Q423	Congenital absence, atresia and stenosis of anus without fistula
Q428	Congenital absence, atresia and stenosis of other parts of large intestine
Q429	Congenital absence, atresia and stenosis of large intestine, part unspecified
Q430	Meckel's diverticulum (displaced) (hypertrophic)
Q431	Hirschsprung's disease
Q432	Other congenital functional disorders of colon
Q433	Congenital malformations of intestinal fixation
Q434	Duplication of intestine
Q435	Ectopic anus
Q436	Congenital fistula of rectum and anus
Q437	Persistent cloaca
Q438	Other specified congenital malformations of intestine
Q439	Congenital malformation of intestine, unspecified
Q440	Agenesis, aplasia and hypoplasia of gallbladder
Q441	Other congenital malformations of gallbladder
Q442	Atresia of bile ducts
Q443	Congenital stenosis and stricture of bile ducts
Q444	Choledochal cyst
Q445	Other congenital malformations of bile ducts
Q446	Cystic disease of liver
Q447	Other congenital malformations of liver
Q450	Agenesis, aplasia and hypoplasia of pancreas
Q451	Annular pancreas
Q452	Congenital pancreatic cyst
Q453	Other congenital malformations of pancreas and pancreatic duct
Q458	Other specified congenital malformations of digestive system
Q459	Congenital malformation of digestive system, unspecified
Q5001	Congenital absence of ovary, unilateral
Q5002	Congenital absence of ovary, bilateral

Code	Shortened Description
Q501	Developmental ovarian cyst
Q502	Congenital torsion of ovary
Q5031	Accessory ovary
Q5032	Ovarian streak
Q5039	Other congenital malformation of ovary
Q504	Embryonic cyst of fallopian tube
Q505	Embryonic cyst of broad ligament
Q506	Other congenital malformations of fallopian tube and broad ligament
Q510	Agenesis and aplasia of uterus
Q5110	Doubling of uterus with doubling of cervix and vagina without obstruction
Q5111	Doubling of uterus with doubling of cervix and vagina with obstruction
Q5120	Other doubling of uterus, unspecified
Q5121	Other complete doubling of uterus
Q5122	Other partial doubling of uterus
Q5128	Other doubling of uterus, other specified
Q513	Bicornate uterus
Q514	Unicornate uterus
Q515	Agenesis and aplasia of cervix
Q516	Embryonic cyst of cervix
Q517	Congenital fistulae between uterus and digestive and urinary tracts
Q51810	Arcuate uterus
Q51811	Hypoplasia of uterus
Q51818	Other congenital malformations of uterus
Q51820	Cervical duplication
Q51821	Hypoplasia of cervix
Q51828	Other congenital malformations of cervix
Q519	Congenital malformation of uterus and cervix, unspecified
Q520	Congenital absence of vagina
Q522	Congenital rectovaginal fistula
Q523	Imperforate hymen
Q524	Other congenital malformations of vagina
Q525	Fusion of labia

Code	Shortened Description
Q526	Congenital malformation of clitoris
Q5270	Unspecified congenital malformations of vulva
Q5271	Congenital absence of vulva
Q5279	Other congenital malformations of vulva
Q528	Other specified congenital malformations of female genitalia
Q529	Congenital malformation of female genitalia, unspecified
Q560	Hermaphroditism, not elsewhere classified
Q561	Male pseudohermaphroditism, not elsewhere classified
Q562	Female pseudohermaphroditism, not elsewhere classified
Q563	Pseudohermaphroditism, unspecified
Q564	Indeterminate sex, unspecified
Q600	Renal agenesis, unilateral
Q601	Renal agenesis, bilateral
Q602	Renal agenesis, unspecified
Q603	Renal hypoplasia, unilateral
Q604	Renal hypoplasia, bilateral
Q605	Renal hypoplasia, unspecified
Q606	Potter's syndrome
Q6100	Congenital renal cyst, unspecified
Q6101	Congenital single renal cyst
Q6102	Congenital multiple renal cysts
Q6111	Cystic dilatation of collecting ducts
Q6119	Other polycystic kidney, infantile type
Q612	Polycystic kidney, adult type
Q613	Polycystic kidney, unspecified
Q614	Renal dysplasia
Q615	Medullary cystic kidney
Q618	Other cystic kidney diseases
Q619	Cystic kidney disease, unspecified
Q620	Congenital hydronephrosis
Q6210	Congenital occlusion of ureter, unspecified
Q6211	Congenital occlusion of ureteropelvic junction

Code	Shortened Description
Q6212	Congenital occlusion of ureterovesical orifice
Q622	Congenital megaureter
Q6231	Congenital ureterocele, orthotopic
Q6232	Cecoureterocele
Q6239	Other obstructive defects of renal pelvis and ureter
Q624	Agenesis of ureter
Q625	Duplication of ureter
Q6260	Malposition of ureter, unspecified
Q6261	Deviation of ureter
Q6262	Displacement of ureter
Q6263	Anomalous implantation of ureter
Q6269	Other malposition of ureter
Q627	Congenital vesico-uretero-renal reflux
Q628	Other congenital malformations of ureter
Q630	Accessory kidney
Q631	Lobulated, fused and horseshoe kidney
Q632	Ectopic kidney
Q633	Hyperplastic and giant kidney
Q638	Other specified congenital malformations of kidney
Q639	Congenital malformation of kidney, unspecified
Q640	Epispadias
Q6410	Exstrophy of urinary bladder, unspecified
Q6411	Supravesical fissure of urinary bladder
Q6412	Cloacal exstrophy of urinary bladder
Q6419	Other exstrophy of urinary bladder
Q642	Congenital posterior urethral valves
Q6431	Congenital bladder neck obstruction
Q6432	Congenital stricture of urethra
Q6433	Congenital stricture of urinary meatus
Q6439	Other atresia and stenosis of urethra and bladder neck
Q644	Malformation of urachus
Q645	Congenital absence of bladder and urethra

Code	Shortened Description
Q646	Congenital diverticulum of bladder
Q6470	Unspecified congenital malformation of bladder and urethra
Q6471	Congenital prolapse of urethra
Q6472	Congenital prolapse of urinary meatus
Q6473	Congenital urethrorectal fistula
Q6474	Double urethra
Q6475	Double urinary meatus
Q6479	Other congenital malformations of bladder and urethra
Q648	Other specified congenital malformations of urinary system
Q649	Congenital malformation of urinary system, unspecified
Q6500	Congenital dislocation of unspecified hip, unilateral
Q6501	Congenital dislocation of right hip, unilateral
Q6502	Congenital dislocation of left hip, unilateral
Q651	Congenital dislocation of hip, bilateral
Q652	Congenital dislocation of hip, unspecified
Q6530	Congenital partial dislocation of unspecified hip, unilateral
Q6531	Congenital partial dislocation of right hip, unilateral
Q6532	Congenital partial dislocation of left hip, unilateral
Q654	Congenital partial dislocation of hip, bilateral
Q655	Congenital partial dislocation of hip, unspecified
Q656	Congenital unstable hip
Q6581	Congenital coxa valga
Q6582	Congenital coxa vara
Q6589	Other specified congenital deformities of hip
Q659	Congenital deformity of hip, unspecified
Q660	Congenital talipes equinovarus
Q661	Congenital talipes calcaneovarus
Q6621	Congenital metatarsus primus varus
Q6622	Congenital metatarsus adductus
Q663	Other congenital varus deformities of feet
Q664	Congenital talipes calcaneovalgus
Q6650	Congenital pes planus, unspecified foot

Code	Shortened Description
Q6651	Congenital pes planus, right foot
Q6652	Congenital pes planus, left foot
Q666	Other congenital valgus deformities of feet
Q667	Congenital pes cavus
Q6680	Congenital vertical talus deformity, unspecified foot
Q6681	Congenital vertical talus deformity, right foot
Q6682	Congenital vertical talus deformity, left foot
Q6689	Other specified congenital deformities of feet
Q669	Congenital deformity of feet, unspecified
Q670	Congenital facial asymmetry
Q671	Congenital compression facies
Q672	Dolichocephaly
Q673	Plagiocephaly
Q674	Other congenital deformities of skull, face and jaw
Q675	Congenital deformity of spine
Q676	Pectus excavatum
Q677	Pectus carinatum
Q678	Other congenital deformities of chest
Q680	Congenital deformity of sternocleidomastoid muscle
Q681	Congenital deformity of finger(s) and hand
Q682	Congenital deformity of knee
Q683	Congenital bowing of femur
Q684	Congenital bowing of tibia and fibula
Q685	Congenital bowing of long bones of leg, unspecified
Q686	Discoid meniscus
Q688	Other specified congenital musculoskeletal deformities
Q7100	Congenital complete absence of unspecified upper limb
Q7101	Congenital complete absence of right upper limb
Q7102	Congenital complete absence of left upper limb
Q7103	Congenital complete absence of upper limb, bilateral
Q7110	Congenital absence of unspecified upper arm and forearm with hand present
Q7111	Congenital absence of right upper arm and forearm with hand present

Code	Shortened Description
Q7112	Congenital absence of left upper arm and forearm with hand present
Q7113	Congenital absence of upper arm and forearm with hand present, bilateral
Q7120	Congenital absence of both forearm and hand, unspecified upper limb
Q7121	Congenital absence of both forearm and hand, right upper limb
Q7122	Congenital absence of both forearm and hand, left upper limb
Q7123	Congenital absence of both forearm and hand, bilateral
Q7130	Congenital absence of unspecified hand and finger
Q7131	Congenital absence of right hand and finger
Q7132	Congenital absence of left hand and finger
Q7133	Congenital absence of hand and finger, bilateral
Q7140	Longitudinal reduction defect of unspecified radius
Q7141	Longitudinal reduction defect of right radius
Q7142	Longitudinal reduction defect of left radius
Q7143	Longitudinal reduction defect of radius, bilateral
Q7150	Longitudinal reduction defect of unspecified ulna
Q7151	Longitudinal reduction defect of right ulna
Q7152	Longitudinal reduction defect of left ulna
Q7153	Longitudinal reduction defect of ulna, bilateral
Q7160	Lobster-claw hand, unspecified hand
Q7161	Lobster-claw right hand
Q7162	Lobster-claw left hand
Q7163	Lobster-claw hand, bilateral
Q71811	Congenital shortening of right upper limb
Q71812	Congenital shortening of left upper limb
Q71813	Congenital shortening of upper limb, bilateral
Q71819	Congenital shortening of unspecified upper limb
Q71891	Other reduction defects of right upper limb
Q71892	Other reduction defects of left upper limb
Q71893	Other reduction defects of upper limb, bilateral
Q71899	Other reduction defects of unspecified upper limb
Q7190	Unspecified reduction defect of unspecified upper limb
Q7191	Unspecified reduction defect of right upper limb

Code	Shortened Description
Q7192	Unspecified reduction defect of left upper limb
Q7193	Unspecified reduction defect of upper limb, bilateral
Q7200	Congenital complete absence of unspecified lower limb
Q7201	Congenital complete absence of right lower limb
Q7202	Congenital complete absence of left lower limb
Q7203	Congenital complete absence of lower limb, bilateral
Q7210	Congenital absence of unspecified thigh and lower leg with foot present
Q7211	Congenital absence of right thigh and lower leg with foot present
Q7212	Congenital absence of left thigh and lower leg with foot present
Q7213	Congenital absence of thigh and lower leg with foot present, bilateral
Q7220	Congenital absence of both lower leg and foot, unspecified lower limb
Q7221	Congenital absence of both lower leg and foot, right lower limb
Q7222	Congenital absence of both lower leg and foot, left lower limb
Q7223	Congenital absence of both lower leg and foot, bilateral
Q7230	Congenital absence of unspecified foot and toe(s)
Q7231	Congenital absence of right foot and toe(s)
Q7232	Congenital absence of left foot and toe(s)
Q7233	Congenital absence of foot and toe(s), bilateral
Q7240	Longitudinal reduction defect of unspecified femur
Q7241	Longitudinal reduction defect of right femur
Q7242	Longitudinal reduction defect of left femur
Q7243	Longitudinal reduction defect of femur, bilateral
Q7250	Longitudinal reduction defect of unspecified tibia
Q7251	Longitudinal reduction defect of right tibia
Q7252	Longitudinal reduction defect of left tibia
Q7253	Longitudinal reduction defect of tibia, bilateral
Q7260	Longitudinal reduction defect of unspecified fibula
Q7261	Longitudinal reduction defect of right fibula
Q7262	Longitudinal reduction defect of left fibula
Q7263	Longitudinal reduction defect of fibula, bilateral
Q7270	Split foot, unspecified lower limb
Q7271	Split foot, right lower limb

Code	Shortened Description
Q7272	Split foot, left lower limb
Q7273	Split foot, bilateral
Q72811	Congenital shortening of right lower limb
Q72812	Congenital shortening of left lower limb
Q72813	Congenital shortening of lower limb, bilateral
Q72819	Congenital shortening of unspecified lower limb
Q72891	Other reduction defects of right lower limb
Q72892	Other reduction defects of left lower limb
Q72893	Other reduction defects of lower limb, bilateral
Q72899	Other reduction defects of unspecified lower limb
Q7290	Unspecified reduction defect of unspecified lower limb
Q7291	Unspecified reduction defect of right lower limb
Q7292	Unspecified reduction defect of left lower limb
Q7293	Unspecified reduction defect of lower limb, bilateral
Q730	Congenital absence of unspecified limb(s)
Q731	Phocomelia, unspecified limb(s)
Q738	Other reduction defects of unspecified limb(s)
Q740	Other congenital malformations of upper limb(s), including shoulder girdle
Q741	Congenital malformation of knee
Q742	Other congenital malformations of lower limb(s), including pelvic girdle
Q743	Arthrogryposis multiplex congenita
Q748	Other specified congenital malformations of limb(s)
Q749	Unspecified congenital malformation of limb(s)
Q750	Craniosynostosis
Q751	Craniofacial dysostosis
Q752	Hypertelorism
Q753	Macrocephaly
Q754	Mandibulofacial dysostosis
Q755	Oculomandibular dysostosis
Q758	Other specified congenital malformations of skull and face bones
Q759	Congenital malformation of skull and face bones, unspecified
Q760	Spina bifida occulta

Code	Shortened Description
Q761	Klippel-Feil syndrome
Q762	Congenital spondylolisthesis
Q763	Congenital scoliosis due to congenital bony malformation
Q76411	Congenital kyphosis, occipito-atlanto-axial region
Q76412	Congenital kyphosis, cervical region
Q76413	Congenital kyphosis, cervicothoracic region
Q76414	Congenital kyphosis, thoracic region
Q76415	Congenital kyphosis, thoracolumbar region
Q76419	Congenital kyphosis, unspecified region
Q76425	Congenital lordosis, thoracolumbar region
Q76426	Congenital lordosis, lumbar region
Q76427	Congenital lordosis, lumbosacral region
Q76428	Congenital lordosis, sacral and sacrococcygeal region
Q76429	Congenital lordosis, unspecified region
Q7649	Other congenital malformations of spine, not associated with scoliosis
Q765	Cervical rib
Q766	Other congenital malformations of ribs
Q767	Congenital malformation of sternum
Q768	Other congenital malformations of bony thorax
Q769	Congenital malformation of bony thorax, unspecified
Q770	Achondrogenesis
Q771	Thanatophoric short stature
Q772	Short rib syndrome
Q773	Chondrodysplasia punctata
Q774	Achondroplasia
Q775	Diastrophic dysplasia
Q776	Chondroectodermal dysplasia
Q777	Spondyloepiphyseal dysplasia
Q778	Other osteochondrodysplasia with defects of growth of tubular bones and spine
Q779	Osteochondrodysplasia with defects of growth of tubular bones and spine, unspecified
Q780	Osteogenesis imperfecta
Q781	Polyostotic fibrous dysplasia

Code	Shortened Description
Q782	Osteopetrosis
Q783	Progressive diaphyseal dysplasia
Q784	Enchondromatosis
Q785	Metaphyseal dysplasia
Q786	Multiple congenital exostoses
Q788	Other specified osteochondrodysplasias
Q789	Osteochondrodysplasia, unspecified
Q790	Congenital diaphragmatic hernia
Q791	Other congenital malformations of diaphragm
Q792	Exomphalos
Q793	Gastroschisis
Q794	Prune belly syndrome
Q7951	Congenital hernia of bladder
Q7959	Other congenital malformations of abdominal wall
Q796	Ehlers-Danlos syndrome
Q798	Other congenital malformations of musculoskeletal system
Q799	Congenital malformation of musculoskeletal system, unspecified
Q800	Ichthyosis vulgaris
Q801	X-linked ichthyosis
Q802	Lamellar ichthyosis
Q803	Congenital bullous ichthyosiform erythroderma
Q804	Harlequin fetus
Q808	Other congenital ichthyosis
Q809	Congenital ichthyosis, unspecified
Q810	Epidermolysis bullosa simplex
Q811	Epidermolysis bullosa letalis
Q812	Epidermolysis bullosa dystrophica
Q818	Other epidermolysis bullosa
Q819	Epidermolysis bullosa, unspecified
Q820	Hereditary lymphedema
Q8500	Neurofibromatosis, unspecified
Q8501	Neurofibromatosis, type 1

Code	Shortened Description
Q8502	Neurofibromatosis, type 2
Q8503	Schwannomatosis
Q8509	Other neurofibromatosis
Q851	Tuberous sclerosis
Q858	Other phakomatoses, not elsewhere classified
Q859	Phakomatosis, unspecified
Q860	Fetal alcohol syndrome (dysmorphic)
Q861	Fetal hydantoin syndrome
Q862	Dysmorphism due to warfarin
Q868	Other congenital malformation syndromes due to known exogenous causes
Q870	Congenital malformation syndromes predominantly affecting facial appearance
Q871	Congenital malformation syndromes predominantly associated with short stature
Q872	Congenital malformation syndromes predominantly involving limbs
Q873	Congenital malformation syndromes involving early overgrowth
Q8740	Marfan's syndrome, unspecified
Q87410	Marfan's syndrome with aortic dilation
Q87418	Marfan's syndrome with other cardiovascular manifestations
Q8742	Marfan's syndrome with ocular manifestations
Q8743	Marfan's syndrome with skeletal manifestation
Q875	Other congenital malformation syndromes with other skeletal changes
Q8781	Alport syndrome
Q8782	Arterial tortuosity syndrome
Q8789	Other specified congenital malformation syndromes, not elsewhere classified
Q8901	Asplenia (congenital)
Q8909	Congenital malformations of spleen
Q891	Congenital malformations of adrenal gland
Q892	Congenital malformations of other endocrine glands
Q893	Situs inversus
Q894	Conjoined twins
Q897	Multiple congenital malformations, not elsewhere classified
Q898	Other specified congenital malformations
Q899	Congenital malformation, unspecified

Code	Shortened Description
Q900	Trisomy 21, nonmosaicism (meiotic nondisjunction)
Q901	Trisomy 21, mosaicism (mitotic nondisjunction)
Q902	Trisomy 21, translocation
Q909	Down syndrome, unspecified
Q910	Trisomy 18, nonmosaicism (meiotic nondisjunction)
Q911	Trisomy 18, mosaicism (mitotic nondisjunction)
Q912	Trisomy 18, translocation
Q913	Trisomy 18, unspecified
Q914	Trisomy 13, nonmosaicism (meiotic nondisjunction)
Q915	Trisomy 13, mosaicism (mitotic nondisjunction)
Q916	Trisomy 13, translocation
Q917	Trisomy 13, unspecified
Q920	Whole chromosome trisomy, nonmosaicism (meiotic nondisjunction)
Q921	Whole chromosome trisomy, mosaicism (mitotic nondisjunction)
Q922	Partial trisomy
Q925	Duplications with other complex rearrangements
Q9261	Marker chromosomes in normal individual
Q9262	Marker chromosomes in abnormal individual
Q927	Triploidy and polyploidy
Q928	Other specified trisomies and partial trisomies of autosomes
Q929	Trisomy and partial trisomy of autosomes, unspecified
Q930	Whole chromosome monosomy, nonmosaicism (meiotic nondisjunction)
Q931	Whole chromosome monosomy, mosaicism (mitotic nondisjunction)
Q932	Chromosome replaced with ring, dicentric or isochromosome
Q933	Deletion of short arm of chromosome 4
Q934	Deletion of short arm of chromosome 5
Q9351	Angelman syndrome
Q9359	Other deletions of part of a chromosome
Q937	Deletions with other complex rearrangements
Q9381	Velo-cardio-facial syndrome
Q9382	Williams syndrome
Q9388	Other microdeletions

Code	Shortened Description
Q9389	Other deletions from the autosomes
Q939	Deletion from autosomes, unspecified
Q950	Balanced translocation and insertion in normal individual
Q951	Chromosome inversion in normal individual
Q952	Balanced autosomal rearrangement in abnormal individual
Q953	Balanced sex/autosomal rearrangement in abnormal individual
Q955	Individual with autosomal fragile site
Q958	Other balanced rearrangements and structural markers
Q959	Balanced rearrangement and structural marker, unspecified
Q960	Karyotype 45, X
Q961	Karyotype 46, X iso (Xq)
Q962	Karyotype 46, X with abnormal sex chromosome, except iso (Xq)
Q963	Mosaicism, 45, X/46, XX or XY
Q964	Mosaicism, 45, X/other cell line(s) with abnormal sex chromosome
Q968	Other variants of Turner's syndrome
Q969	Turner's syndrome, unspecified
Q970	Karyotype 47, XXX
Q971	Female with more than three X chromosomes
Q972	Mosaicism, lines with various numbers of X chromosomes
Q973	Female with 46, XY karyotype
Q978	Other specified sex chromosome abnormalities, female phenotype
Q979	Sex chromosome abnormality, female phenotype, unspecified
Q980	Klinefelter syndrome karyotype 47, XXY
Q981	Klinefelter syndrome, male with more than two X chromosomes
Q983	Other male with 46, XX karyotype
Q984	Klinefelter syndrome, unspecified
Q985	Karyotype 47, XYY
Q986	Male with structurally abnormal sex chromosome
Q987	Male with sex chromosome mosaicism
Q988	Other specified sex chromosome abnormalities, male phenotype
Q989	Sex chromosome abnormality, male phenotype, unspecified
Q990	Chimera 46, XX/46, XY

Code	Shortened Description
Q991	46, XX true hermaphrodite
Q992	Fragile X chromosome
Q998	Other specified chromosome abnormalities
Q999	Chromosomal abnormality, unspecified

Table Number 11.31: Fetal conditions

Code	Shortened Description
A5001	Early congenital syphilitic oculopathy
A5002	Early congenital syphilitic osteochondropathy
A5003	Early congenital syphilitic pharyngitis
A5004	Early congenital syphilitic pneumonia
A5005	Early congenital syphilitic rhinitis
A5006	Early cutaneous congenital syphilis
A5007	Early mucocutaneous congenital syphilis
A5008	Early visceral congenital syphilis
A5009	Other early congenital syphilis, symptomatic
A501	Early congenital syphilis, latent
A502	Early congenital syphilis, unspecified
A5030	Late congenital syphilitic oculopathy, unspecified
A5031	Late congenital syphilitic interstitial keratitis
A5032	Late congenital syphilitic chorioretinitis
A5039	Other late congenital syphilitic oculopathy
A509	Congenital syphilis, unspecified
P020	Newborn affected by placenta previa
P021	Newborn affected by other forms of placental separation and hemorrhage
P023	Newborn affected by placental transfusion syndromes
P0260	Newborn affected by unspecified conditions of umbilical cord
P0269	Newborn affected by other conditions of umbilical cord
P0270	Newborn affected by fetal inflammatory response syndrome
P0278	Newborn affected by other conditions from chorioamnionitis
P0500	Newborn light for gestational age, unspecified weight
P0501	Newborn light for gestational age, less than 500 grams

Code	Shortened Description
P0502	Newborn light for gestational age, 500-749 grams
P0503	Newborn light for gestational age, 750-999 grams
P0504	Newborn light for gestational age, 1000-1249 grams
P0505	Newborn light for gestational age, 1250-1499 grams
P0506	Newborn light for gestational age, 1500-1749 grams
P0507	Newborn light for gestational age, 1750-1999 grams
P0508	Newborn light for gestational age, 2000-2499 grams
P0510	Newborn small for gestational age, unspecified weight
P0511	Newborn small for gestational age, less than 500 grams
P0512	Newborn small for gestational age, 500-749 grams
P0513	Newborn small for gestational age, 750-999 grams
P0514	Newborn small for gestational age, 1000-1249 grams
P0515	Newborn small for gestational age, 1250-1499 grams
P0516	Newborn small for gestational age, 1500-1749 grams
P0517	Newborn small for gestational age, 1750-1999 grams
P0518	Newborn small for gestational age, 2000-2499 grams
P052	Newborn affected by fetal (intrauterine) malnutrition not light or small for gestational age
P059	Newborn affected by slow intrauterine growth, unspecified
P0700	Extremely low birth weight newborn, unspecified weight
P0701	Extremely low birth weight newborn, less than 500 grams
P0702	Extremely low birth weight newborn, 500-749 grams
P0703	Extremely low birth weight newborn, 750-999 grams
P0710	Other low birth weight newborn, unspecified weight
P0714	Other low birth weight newborn, 1000-1249 grams
P0715	Other low birth weight newborn, 1250-1499 grams
P0716	Other low birth weight newborn, 1500-1749 grams
P0717	Other low birth weight newborn, 1750-1999 grams
P0718	Other low birth weight newborn, 2000-2499 grams
P0720	Extreme immaturity of newborn, unspecified weeks of gestation
P0721	Extreme immaturity of newborn, gestational age less than 23 completed weeks
P0722	Extreme immaturity of newborn, gestational age 23 completed weeks
P0723	Extreme immaturity of newborn, gestational age 24 completed weeks

Code	Shortened Description
P0724	Extreme immaturity of newborn, gestational age 25 completed weeks
P0725	Extreme immaturity of newborn, gestational age 26 completed weeks
P0726	Extreme immaturity of newborn, gestational age 27 completed weeks
P0730	Preterm newborn, unspecified weeks of gestation
P0731	Preterm newborn, gestational age 28 completed weeks
P0732	Preterm newborn, gestational age 29 completed weeks
P0733	Preterm newborn, gestational age 30 completed weeks
P0734	Preterm newborn, gestational age 31 completed weeks
P0735	Preterm newborn, gestational age 32 completed weeks
P0736	Preterm newborn, gestational age 33 completed weeks
P0737	Preterm newborn, gestational age 34 completed weeks
P0738	Preterm newborn, gestational age 35 completed weeks
P0739	Preterm newborn, gestational age 36 completed weeks
P2930	Pulmonary hypertension of newborn
P2938	Other persistent fetal circulation
P350	Congenital rubella syndrome
P351	Congenital cytomegalovirus infection
P352	Congenital herpesviral [herpes simplex] infection
P353	Congenital viral hepatitis
P354	Congenital Zika virus disease
P358	Other congenital viral diseases
P359	Congenital viral disease, unspecified
P370	Congenital tuberculosis
P371	Congenital toxoplasmosis
P372	Neonatal (disseminated) listeriosis
P373	Congenital falciparum malaria
P374	Other congenital malaria
P500	Newborn affected by intrauterine (fetal) blood loss from vasa previa
P502	Newborn affected by intrauterine (fetal) blood loss from placenta
P503	Newborn affected by hemorrhage into co-twin
P504	Newborn affected by hemorrhage into maternal circulation
P505	Newborn affected by intrauterine (fetal) blood loss from cut end of co-twin's cord

Code	Shortened Description
P550	Rh isoimmunization of newborn
P558	Other hemolytic diseases of newborn
P559	Hemolytic disease of newborn, unspecified
P560	Hydrops fetalis due to isoimmunization
P5690	Hydrops fetalis due to unspecified hemolytic disease
P5699	Hydrops fetalis due to other hemolytic disease
P832	Hydrops fetalis not due to hemolytic disease

Table Number 11.32: Maternal Drug Use

Code	Shortened Description
P0411	Newborn affected by maternal antineoplastic chemotherapy
P0412	Newborn affected by maternal cytotoxic drugs
P0413	Newborn affected by maternal use of anticonvulsants
P0414	Newborn affected by maternal use of opiates
P0415	Newborn affected by maternal use of antidepressants
P0416	Newborn affected by maternal use of amphetamines
P0417	Newborn affected by maternal use of sedative-hypnotics
P0418	Newborn affected by other maternal medication
P0419	Newborn affected by maternal use of unspecified medication
P041A	Newborn affected by maternal use of anxiolytics
P043	Newborn affected by maternal use of alcohol
P0440	Newborn affected by maternal use of unspecified drugs of addiction
P0441	Newborn affected by maternal use of cocaine
P0442	Newborn affected by maternal use of hallucinogens
P0449	Newborn affected by maternal use of other drugs of addiction
P0481	Newborn affected by maternal use of cannabis
P0489	Newborn affected by other maternal noxious substances
P961	Neonatal withdrawal symptoms from maternal use of drugs of addiction
P962	Withdrawal symptoms from therapeutic use of drugs in newborn

Table Number 11.33: Neonatal Jaundice

Code	Shortened Description
P551	ABO isoimmunization of newborn
P580	Neonatal jaundice due to bruising
P581	Neonatal jaundice due to bleeding
P582	Neonatal jaundice due to infection
P583	Neonatal jaundice due to polycythemia
P5841	Neonatal jaundice due to drugs or toxins transmitted from mother
P5842	Neonatal jaundice due to drugs or toxins given to newborn
P585	Neonatal jaundice due to swallowed maternal blood
P588	Neonatal jaundice due to other specified excessive hemolysis
P589	Neonatal jaundice due to excessive hemolysis, unspecified
P590	Neonatal jaundice associated with preterm delivery
P591	Inspissated bile syndrome
P5920	Neonatal jaundice from unspecified hepatocellular damage
P5929	Neonatal jaundice from other hepatocellular damage
P593	Neonatal jaundice from breast milk inhibitor
P598	Neonatal jaundice from other specified causes
P599	Neonatal jaundice, unspecified

Table Number 11.34: Phototherapy

Code	Shortened Description
6A600ZZ	Phototherapy of Skin, Single
6A601ZZ	Phototherapy of Skin, Multiple

Table Number 11.35: Social Indications

Code	Shortened Description
Z590	Homelessness
Z591	Inadequate housing
Z593	Problems related to living in residential institution
Z595	Extreme poverty
Z598	Other problems related to housing and economic circumstances
Z599	Problem related to housing and economic circumstances, unspecified

Code	Shortened Description
Z608	Other problems related to social environment
Z609	Problem related to social environment, unspecified
Z6221	Child in welfare custody

Table Number 11.36: Severe Birth Trauma

Code	Shortened Description
P100	Subdural hemorrhage due to birth injury
P101	Cerebral hemorrhage due to birth injury
P102	Intraventricular hemorrhage due to birth injury
P103	Subarachnoid hemorrhage due to birth injury
P104	Tentorial tear due to birth injury
P108	Other intracranial lacerations and hemorrhages due to birth injury
P109	Unspecified intracranial laceration and hemorrhage due to birth injury
P110	Cerebral edema due to birth injury
P111	Other specified brain damage due to birth injury
P112	Unspecified brain damage due to birth injury
P113	Birth injury to facial nerve
P114	Birth injury to other cranial nerves
P115	Birth injury to spine and spinal cord
P119	Birth injury to central nervous system, unspecified
P122	Epicranial subaponeurotic hemorrhage due to birth injury
P130	Fracture of skull due to birth injury
P131	Other birth injuries to skull
P132	Birth injury to femur
P133	Birth injury to other long bones
P140	Erb's paralysis due to birth injury
P141	Klumpke's paralysis due to birth injury
P142	Phrenic nerve paralysis due to birth injury
P143	Other brachial plexus birth injuries
P148	Birth injuries to other parts of peripheral nervous system
P149	Birth injury to peripheral nervous system, unspecified
P150	Birth injury to liver

Code	Shortened Description
P151	Birth injury to spleen
P153	Birth injury to eye
P510	Massive umbilical hemorrhage of newborn

Table Number 11.37: Severe Hypoxia/Asphyxia

Code	Shortened Description
G8110	Spastic hemiplegia affecting unspecified side
G8111	Spastic hemiplegia affecting right dominant side
G8112	Spastic hemiplegia affecting left dominant side
G8113	Spastic hemiplegia affecting right nondominant side
G8114	Spastic hemiplegia affecting left nondominant side
G931	Anoxic brain damage, not elsewhere classified
P910	Neonatal cerebral ischemia
P912	Neonatal cerebral leukomalacia
P914	Neonatal cerebral depression
P915	Neonatal coma
P9160	Hypoxic ischemic encephalopathy [HIE], unspecified
P9161	Mild hypoxic ischemic encephalopathy [HIE]
P9162	Moderate hypoxic ischemic encephalopathy [HIE]
P9163	Severe hypoxic ischemic encephalopathy [HIE]
R0901	Asphyxia
R0902	Hypoxemia

Table Number 11.38: Severe Shock and Resuscitation

Code	Shortened Description
I469	Cardiac arrest, cause unspecified
N170	Acute kidney failure with tubular necrosis
N178	Other acute kidney failure
N179	Acute kidney failure, unspecified
P290	Neonatal cardiac failure
P294	Transient myocardial ischemia in newborn

Code	Shortened Description
P2981	Cardiac arrest of newborn
P60	Disseminated intravascular coagulation of newborn
P771	Stage 1 necrotizing enterocolitis in newborn
P772	Stage 2 necrotizing enterocolitis in newborn
P773	Stage 3 necrotizing enterocolitis in newborn
P779	Necrotizing enterocolitis in newborn, unspecified
R570	Cardiogenic shock
R571	Hypovolemic shock
R578	Other shock
R579	Shock, unspecified

Table Number 11.39: Neonatal Severe Respiratory Complications

Code	Shortened Description
P2401	Meconium aspiration with respiratory symptoms
P260	Tracheobronchial hemorrhage originating in the perinatal period
P261	Massive pulmonary hemorrhage originating in the perinatal period
P268	Other pulmonary hemorrhages originating in the perinatal period
P269	Unspecified pulmonary hemorrhage originating in the perinatal period

Table Number 11.40: Neonatal Severe Infection

Code	Shortened Description
P230	Congenital pneumonia due to viral agent
P231	Congenital pneumonia due to Chlamydia
P232	Congenital pneumonia due to staphylococcus
P233	Congenital pneumonia due to streptococcus, group B
P234	Congenital pneumonia due to Escherichia coli
P235	Congenital pneumonia due to Pseudomonas
P236	Congenital pneumonia due to other bacterial agents
P238	Congenital pneumonia due to other organisms
P239	Congenital pneumonia, unspecified
R6520	Severe sepsis without septic shock

Code	Shortened Description
R6521	Severe sepsis with septic shock

Table Number 11.41: Neonatal Severe Neurological Complications

Code	Shortened Description
G913	Post-traumatic hydrocephalus, unspecified
G9340	Encephalopathy, unspecified
G9341	Metabolic encephalopathy
G9349	Other encephalopathy
G9382	Brain death
P520	Intraventricular (nontraumatic) hemorrhage, grade 1, of newborn
P521	Intraventricular (nontraumatic) hemorrhage, grade 2, of newborn
P5221	Intraventricular (nontraumatic) hemorrhage, grade 3, of newborn
P5222	Intraventricular (nontraumatic) hemorrhage, grade 4, of newborn
P523	Unspecified intraventricular (nontraumatic) hemorrhage of newborn
P524	Intracerebral (nontraumatic) hemorrhage of newborn
P525	Subarachnoid (nontraumatic) hemorrhage of newborn
P526	Cerebellar (nontraumatic) and posterior fossa hemorrhage of newborn
P528	Other intracranial (nontraumatic) hemorrhages of newborn
P529	Intracranial (nontraumatic) hemorrhage of newborn, unspecified
P90	Convulsions of newborn

Table Number 11.42: Severe Shock and Resuscitation Procedures

Code	Shortened Description
03HY02Z	Insertion of Monitoring Device into Upper Artery, Open Approach
03HY03Z	Insertion of Infusion Device into Upper Artery, Open Approach
03HY0DZ	Insertion of Intraluminal Device into Upper Artery, Open Approach
03HY0YZ	Insertion of Other Device into Upper Artery, Open Approach
03HY32Z	Insertion of Monitoring Device into Upper Artery, Percutaneous Approach
03HY33Z	Insertion of Infusion Device into Upper Artery, Percutaneous Approach
03HY3DZ	Insertion of Intraluminal Device into Upper Artery, Percutaneous Approach
03HY3YZ	Insertion of Other Device into Upper Artery, Percutaneous Approach

Code	Shortened Description
03HY42Z	Insertion of Monitoring Device into Upper Artery, Percutaneous Endoscopic Approach
03HY43Z	Insertion of Infusion Device into Upper Artery, Percutaneous Endoscopic Approach
03HY4DZ	Insertion of Intraluminal Device into Upper Artery, Percutaneous Endoscopic Approach
03HY4YZ	Insertion of Other Device into Upper Artery, Percutaneous Endoscopic Approach
04HY02Z	Insertion of Monitoring Device into Lower Artery, Open Approach
04HY03Z	Insertion of Infusion Device into Lower Artery, Open Approach
04HY0DZ	Insertion of Intraluminal Device into Lower Artery, Open Approach
04HY32Z	Insertion of Monitoring Device into Lower Artery, Percutaneous Approach
04HY33Z	Insertion of Infusion Device into Lower Artery, Percutaneous Approach
04HY3DZ	Insertion of Intraluminal Device into Lower Artery, Percutaneous Approach
04HY42Z	Insertion of Monitoring Device into Lower Artery, Percutaneous Endoscopic Approach
04HY43Z	Insertion of Infusion Device into Lower Artery, Percutaneous Endoscopic Approach
04HY4DZ	Insertion of Intraluminal Device into Lower Artery, Percutaneous Endoscopic Approach
5A12012	Performance of Cardiac Output, Single, Manual
5A2204Z	Restoration of Cardiac Rhythm, Single

Table Number 11.43: Neonatal Severe Respiratory Procedures

Code	Shortened Description
0W9930Z	Drainage of Right Pleural Cavity with Drainage Device, Percutaneous Approach
0W993ZZ	Drainage of Right Pleural Cavity, Percutaneous Approach
0W9940Z	Drainage of Right Pleural Cavity with Drainage Device, Percutaneous Endoscopic Approach
0W994ZZ	Drainage of Right Pleural Cavity, Percutaneous Endoscopic Approach
0W9B30Z	Drainage of Left Pleural Cavity with Drainage Device, Percutaneous Approach
0W9B3ZZ	Drainage of Left Pleural Cavity, Percutaneous Approach
0W9B40Z	Drainage of Left Pleural Cavity with Drainage Device, Percutaneous Endoscopic Approach
0W9B4ZZ	Drainage of Left Pleural Cavity, Percutaneous Endoscopic Approach
3E0F3SD	Introduction of Nitric Oxide Gas into Respiratory Tract, Percutaneous Approach
3E0F7SD	Introduction of Nitric Oxide Gas into Respiratory Tract, Via Natural or Artificial Opening
3E0F8SD	Introduction of Nitric Oxide Gas into Respiratory Tract, Via Natural or Artificial Opening Endoscopic
5A1522F	Extracorporeal Oxygenation, Membrane, Central
5A1522G	Extracorporeal Oxygenation, Membrane, Peripheral Veno-arterial
5A1522H	Extracorporeal Oxygenation, Membrane, Peripheral Veno-venous

Code	Shortened Description
5A1935Z	Respiratory Ventilation, Less than 24 Consecutive Hours
5A1945Z	Respiratory Ventilation, 24-96 Consecutive Hours
5A1955Z	Respiratory Ventilation, Greater than 96 Consecutive Hours

Table Number 11.44: Neonatal Severe Neurological Procedures

Code	Shortened Description
0DH63UZ	Insertion of Feeding Device into Stomach, Percutaneous Approach
0DH64UZ	Insertion of Feeding Device into Stomach, Percutaneous Endoscopic Approach
4A0004Z	Measurement of Central Nervous Electrical Activity, Open Approach
4A0034Z	Measurement of Central Nervous Electrical Activity, Percutaneous Approach
4A00X4Z	Measurement of Central Nervous Electrical Activity, External Approach
4A1004Z	Monitoring of Central Nervous Electrical Activity, Open Approach
4A1034Z	Monitoring of Central Nervous Electrical Activity, Percutaneous Approach
4A10X4Z	Monitoring of Central Nervous Electrical Activity, External Approach
6A4Z0ZZ	Hypothermia, Single
6A4Z1ZZ	Hypothermia, Multiple

Table Number 11.45: Neonatal Severe Infection

Code	Shortened Description
P0270	Newborn affected by fetal inflammatory response syndrome
P0278	Newborn affected by other conditions from chorioamnionitis
P360	Sepsis of newborn due to streptococcus, group B
P3610	Sepsis of newborn due to unspecified streptococci
P3619	Sepsis of newborn due to other streptococci
P362	Sepsis of newborn due to Staphylococcus aureus
P3630	Sepsis of newborn due to unspecified staphylococci
P3639	Sepsis of newborn due to other staphylococci
P364	Sepsis of newborn due to Escherichia coli
P365	Sepsis of newborn due to anaerobes
P368	Other bacterial sepsis of newborn
P369	Bacterial sepsis of newborn, unspecified

Code	Shortened Description
R7881	Bacteremia

Table Number 11.46: Moderate Birth Trauma

Code	Shortened Description
P113	Birth injury to facial nerve
P138	Birth injuries to other parts of skeleton
P139	Birth injury to skeleton, unspecified
P152	Sternomastoid injury due to birth injury
P155	Birth injury to external genitalia
P156	Subcutaneous fat necrosis due to birth injury

Table Number 11.47: Moderate Respiratory Complications

Code	Shortened Description
P220	Respiratory distress syndrome of newborn
P250	Interstitial emphysema originating in the perinatal period
P251	Pneumothorax originating in the perinatal period
P252	Pneumomediastinum originating in the perinatal period
P253	Pneumopericardium originating in the perinatal period
P258	Other conditions related to interstitial emphysema originating in the perinatal period

Table Number 11.48: Moderate Respiratory Complications Procedures

Code	Shortened Description
5A09457	Assistance with Respiratory Ventilation, 24-96 Consecutive Hours, Continuous Positive Airway Pressure
5A09557	Assistance with Respiratory Ventilation, Greater than 96 Consecutive Hours, Continuous Positive Airway Pressure

Table Number 11.49: Moderate Birth Trauma with LOS

Code	Shortened Description
P030	Newborn affected by breech delivery and extraction
P031	Newborn affected by other malpresentation, malposition and disproportion during labor and delivery
P032	Newborn affected by forceps delivery

Code	Shortened Description
P033	Newborn affected by delivery by vacuum extractor [ventouse]
P034	Newborn affected by Cesarean delivery
P035	Newborn affected by precipitate delivery
P036	Newborn affected by abnormal uterine contractions
P03810	Newborn affected by abnormality in fetal (intrauterine) heart rate or rhythm before the onset of labor
P03811	Newborn affected by abnormality in fetal (intrauterine) heart rate or rhythm during labor
P03819	Newborn affected by abnormality in fetal (intrauterine) heart rate or rhythm, unspecified as to time of onset
P0389	Newborn affected by other specified complications of labor and delivery
P039	Newborn affected by complication of labor and delivery, unspecified
P040	Newborn affected by maternal anesthesia and analgesia in pregnancy, labor and delivery
P158	Other specified birth injuries
P159	Birth injury, unspecified

Table Number 11.50: Moderate Respiratory Complications with LOS

Code	Shortened Description
P221	Transient tachypnea of newborn
P228	Other respiratory distress of newborn
P229	Respiratory distress of newborn, unspecified
P2410	Neonatal aspiration of (clear) amniotic fluid and mucus without respiratory symptoms
P2411	Neonatal aspiration of (clear) amniotic fluid and mucus with respiratory symptoms
P2420	Neonatal aspiration of blood without respiratory symptoms
P2421	Neonatal aspiration of blood with respiratory symptoms
P280	Primary atelectasis of newborn
P2810	Unspecified atelectasis of newborn
P2811	Resorption atelectasis without respiratory distress syndrome
P2819	Other atelectasis of newborn
P282	Cyanotic attacks of newborn
P283	Primary sleep apnea of newborn
P284	Other apnea of newborn
P285	Respiratory failure of newborn
P2881	Respiratory arrest of newborn
P2889	Other specified respiratory conditions of newborn

Code	Shortened Description
P289	Respiratory condition of newborn, unspecified

Table Number 11.51: Moderate Neurological Complications with LOS Procedures

Code	Shortened Description
B02000Z	Computerized Tomography (CT Scan) of Brain using High Osmolar Contrast, Unenhanced and Enhanced
B0200ZZ	Computerized Tomography (CT Scan) of Brain using High Osmolar Contrast
B02010Z	Computerized Tomography (CT Scan) of Brain using Low Osmolar Contrast, Unenhanced and Enhanced
B0201ZZ	Computerized Tomography (CT Scan) of Brain using Low Osmolar Contrast
B020Y0Z	Computerized Tomography (CT Scan) of Brain using Other Contrast, Unenhanced and Enhanced
B020YZZ	Computerized Tomography (CT Scan) of Brain using Other Contrast
B020ZZZ	Computerized Tomography (CT Scan) of Brain
B030Y0Z	Magnetic Resonance Imaging (MRI) of Brain using Other Contrast, Unenhanced and Enhanced
B030YZZ	Magnetic Resonance Imaging (MRI) of Brain using Other Contrast
B030ZZZ	Magnetic Resonance Imaging (MRI) of Brain
B03BY0Z	Magnetic Resonance Imaging (MRI) of Spinal Cord using Other Contrast, Unenhanced and Enhanced
B03BYZZ	Magnetic Resonance Imaging (MRI) of Spinal Cord using Other Contrast
B03BZZZ	Magnetic Resonance Imaging (MRI) of Spinal Cord
BW2800Z	Computerized Tomography (CT Scan) of Head using High Osmolar Contrast, Unenhanced and Enhanced
BW280ZZ	Computerized Tomography (CT Scan) of Head using High Osmolar Contrast
BW2810Z	Computerized Tomography (CT Scan) of Head using Low Osmolar Contrast, Unenhanced and Enhanced
BW281ZZ	Computerized Tomography (CT Scan) of Head using Low Osmolar Contrast
BW28Y0Z	Computerized Tomography (CT Scan) of Head using Other Contrast, Unenhanced and Enhanced
BW28YZZ	Computerized Tomography (CT Scan) of Head using Other Contrast
BW28ZZZ	Computerized Tomography (CT Scan) of Head
BW2900Z	Computerized Tomography (CT Scan) of Head and Neck using High Osmolar Contrast, Unenhanced and Enhanced
BW290ZZ	Computerized Tomography (CT Scan) of Head and Neck using High Osmolar Contrast
BW2910Z	Computerized Tomography (CT Scan) of Head and Neck using Low Osmolar Contrast, Unenhanced and Enhanced
BW291ZZ	Computerized Tomography (CT Scan) of Head and Neck using Low Osmolar Contrast
BW29Y0Z	Computerized Tomography (CT Scan) of Head and Neck using Other Contrast, Unenhanced and Enhanced
BW29YZZ	Computerized Tomography (CT Scan) of Head and Neck using Other Contrast
BW29ZZZ	Computerized Tomography (CT Scan) of Head and Neck

Table Number 11.52: Moderate Respiratory Complications with LOS Procedures

Code	Shortened Description
5A05121	Extracorporeal Hyperbaric Oxygenation, Intermittent
5A05221	Extracorporeal Hyperbaric Oxygenation, Continuous
5A09357	Assistance with Respiratory Ventilation, Less than 24 Consecutive Hours, Continuous Positive Airway Pressure
5A09358	Assistance with Respiratory Ventilation, Less than 24 Consecutive Hours, Intermittent Positive Airway Pressure
5A09359	Assistance with Respiratory Ventilation, Less than 24 Consecutive Hours, Continuous Negative Airway Pressure
5A0935B	Assistance with Respiratory Ventilation, Less than 24 Consecutive Hours, Intermittent Negative Airway Pressure
5A0935Z	Assistance with Respiratory Ventilation, Less than 24 Consecutive Hours
5A09458	Assistance with Respiratory Ventilation, 24-96 Consecutive Hours, Intermittent Positive Airway Pressure
5A09459	Assistance with Respiratory Ventilation, 24-96 Consecutive Hours, Continuous Negative Airway Pressure
5A0945B	Assistance with Respiratory Ventilation, 24-96 Consecutive Hours, Intermittent Negative Airway Pressure
5A0945Z	Assistance with Respiratory Ventilation, 24-96 Consecutive Hours
5A09558	Assistance with Respiratory Ventilation, Greater than 96 Consecutive Hours, Intermittent Positive Airway Pressure
5A09559	Assistance with Respiratory Ventilation, Greater than 96 Consecutive Hours, Continuous Negative Airway Pressure
5A0955B	Assistance with Respiratory Ventilation, Greater than 96 Consecutive Hours, Intermittent Negative Airway Pressure
5A0955Z	Assistance with Respiratory Ventilation, Greater than 96 Consecutive Hours

Table Number 11.53: Moderate Infection with LOS

Code	Shortened Description
P360	Sepsis of newborn due to streptococcus, group B
P3610	Sepsis of newborn due to unspecified streptococci
P3619	Sepsis of newborn due to other streptococci
P362	Sepsis of newborn due to Staphylococcus aureus
P3630	Sepsis of newborn due to unspecified staphylococci
P3639	Sepsis of newborn due to other staphylococci
P364	Sepsis of newborn due to Escherichia coli
P365	Sepsis of newborn due to anaerobes
P368	Other bacterial sepsis of newborn
P369	Bacterial sepsis of newborn, unspecified
R7881	Bacteremia

Appendix C

Medication Tables

- Download Medication Tables (MS Excel)

Table Number 1.2: ACEIs

Medication
ACCUPRIL
ACCURETIC
ACEON
ALTACE
BENAZEPRIL
BENAZEPRIL HYDROCHLORIDE
BENAZEPRIL/AMLODIPINE
BENAZEPRIL/HYDROCHLOROTHIAZIDE
CAPOTEN
CAPOZIDE
CAPOZIDE 25/15
CAPOZIDE 25/25
CAPOZIDE 50/15
CAPOZIDE 50/25
CAPTOPRIL
CAPTOPRIL HCT
CAPTOPRIL/HYDROCHLOROTHIAZIDE
ENALAPRIL
ENALAPRIL MALEATE/HYDROCHLOROTHIAZIDE
ENALAPRIL/HYDROCHLOROTHIAZIDE
ENALAPRILAT
FOSINOPRIL

Medication
FOSINOPRIL SODIUM/HYDROCHLOROTHIAZIDE
LISINOPRIL
LISINOPRIL/HYDROCHLOROTHIAZIDE
LOTENSIN
LOTENSIN HCT
LOTREL
MAVIK
MOEXIPRIL
MOEXIPRIL HYDROCHLORIDE
MOEXIPRIL HYDROCHLORIDE/HYDROCHLOROTHIAZIDE
MOEXIPRIL/HYDROCHLOROTHIAZIDE
MONOPRIL
PERINDOPRIL
PERINDOPRIL ERBUMINE
PRINIVIL
PRINZIDE
QUINAPRIL
QUINAPRIL HCL
QUINAPRIL HCL/HCT
QUINAPRIL HYDROCHLORIDE/HYDROCHLOROTHIAZIDE
QUINAPRIL/HYDROCHLOROTHIAZIDE
QUINARETIC
RAMIPRIL
TARKA
TRANDOLAPRIL
TRANDOLAPRIL/VERAPAMIL
TRANDOLAPRIL/VERAPAMIL HYDROCHLORIDE
UNIRETIC

Medication
UNIVASC
VASERETIC
VASOTEC
ZESTORETIC
ZESTRIL

Table Number 1.7: ARBs

Medication
ATACAND
ATACAND HCT
AVALIDE
AVAPRO
AZILSARTAN
AZILSARTAN/CHLORTHALIDONE
AZOR
BENICAR
BENICAR HCT
CANDESARTAN
CANDESARTAN/HYDROCHLOROTHIAZIDE
COZAAR
DIOVAN
DIOVAN HCT
EDARBI
EDARBYCLOR
EPROSARTAN
EPROSARTAN/HYDROCHLOROTHIAZIDE
EXFORGE
HYZAAR

Medication
IRBESARTAN
IRBESARTAN/HYDROCHLOROTHIAZIDE
LOSARTAN
LOSARTAN/HYDROCHLOROTHIAZIDE
MICARDIS
MICARDIS HCT
OLMESARTAN
OLMESARTAN MEDOXOMIL
OLMESARTAN MEDOXOMIL/AMLODIPINE
OLMESARTAN/AMLODIPINE
OLMESARTAN/AMLODIPINE/HYDROCHLOROTHIAZIDE
OLMESARTAN/HYDROCHLOROTHIAZIDE
TASOSARTAN
TELMISARTAN
TELMISARTAN/AMLODIPINE
TELMISARTAN/HYDROCHLOROTHIAZIDE
TEVETEN
TEVETEN HCT
TRIBENZOR
TWYNSTA
VALSARTAN
VALSARTAN/ALISKIREN
VALSARTAN/AMLODIPINE
VALSARTAN/HYDROCHLOROTHIAZIDE
VALTURNA
VERDIA

Table Number 8.1: Statin Medications

Medication
Altoprev
Atorvastatin
Atorvastatin/amlodipine
Caduet
Crestor
Fluvastatin
Fluvastatin XL
Lescol
Lescol XL
Lipitor
Livalo
Lovastatin
Mevacor
Pitavastatin
Pravachol
Pravastatin
Rosuvastatin
Simvastatin
Simvastatin/ezetimibe
Vytorin
Zocor

Table Number 8.2: Antithrombotic Medications - Stroke

Medication
ASA
ASA Baby
ASA Baby Chewable
ASA Baby Coated

Medication
ASA Bayer
ASA Bayer Children's
ASA Buffered
ASA Children's
ASA EC
ASA Enteric Coated
ASA/Maalox
ASA/dipyridamole
Acetylsalicylic Acid
Acova
Acuprin 81
Aggrenox
Alka-Seltzer
Alka-Seltzer Morning Relief
Anacin
Apixaban
Argatroban
Arixtra
Arthritis Foundation Aspirin
Arthritis Pain Ascriptin
Arthritis Pain Formula
Ascriptin
Aspir-10
Aspir-Low
Aspir-Lox
Aspir-Mox
Aspir-Trin
Aspirbuf

Medication
Aspircaf
Aspirin
Aspirin Baby
Aspirin Bayer
Aspirin Bayer Children's
Aspirin Buffered
Aspirin Child
Aspirin Child Chewable
Aspirin Children's
Aspirin EC
Aspirin Enteric Coated
Aspirin Litecoat
Aspirin Lo-Dose
Aspirin Low Strength
Aspirin Tri-Buffered
Aspirin, Extended Release
Aspirin/caffeine
Aspirtab
Bayer Aspirin
Bayer Aspirin PM Extra Strength
Bayer Children's
Bayer EC
Bayer Enteric Coated
Bayer Low Strength
Bayer Plus
Buffered ASA
Buffered Aspirin
Buffered Baby ASA

Medication
Bufferin
Bufferin Arthritis Strength
Bufferin Extra Strength
Buffex
CTD Aspirin
Cama Arthritis Reliever
Child’s Aspirin
Clopidogrel
Coated Aspirin
Cosprin
Coumadin
Dabigatran
Dabigatran etexilate
Dalteparin
Dasprin
EC ASA
Easprin
Ecotrin
Ecotrin Low Strength Adult
Edoxaban
Effervescent Pain & Antacid
Eliquis
Empirin
Enoxaparin
Entab
Entaprin
Entercote
Enteric Coated Aspirin

Medication
Enteric Coated Baby Aspirin
Excedrin
Excedrin Extra Strength
Excedrin Geltab
Excedrin Migraine
Extra Strength Bayer
Fondaparinux
Fragmin
Genacote
Genprin
Halfprin
Heparin sodium I.V.
Hirudin
Jantoven
Lepirudin
Litecoat Aspirin
Lovenox
Low Dose ASA
Magnaprin
Med Aspirin
Norwich Aspirin
Pain Relief (Effervescent)
Pain Relief with Aspirin
Plavix
Pradaxa
Refludan
Rivaroxaban
Savaysa

Medication
Sloprin
St. Joseph Aspirin
Stanback Analgesic
Therapy Bayer
Ticlopidine
Tri Buffered Aspirin
Uni-As
Uni-Buff
Uni-Tren
Warfarin
Warfarin Sodium
Xarelto
Zorprin

Table Number 8.3: Anticoagulant Medications - Stroke

Medication
Acova
Apixaban
Argatroban
Arixtra
Coumadin
Dabigatran
Dabigatran etexilate
Dalteparin
Edoxaban
Eliquis
Enoxaparin
Fondaparinux

Medication
Fragmin
Heparin I.V.
Hirudin
Jantoven
Lepirudin
Lovenox
Pradaxa
Refludan
Rivaroxaban
Savaysa
Warfarin
Warfarin Sodium
Xarelto

Table Number 10.0: Antipsychotic Medications

Medication	Generic
Abilify Discmelt	Aripiprazole
Abilify Maintena	Aripiprazole
Abilify Oral Solution	Aripiprazole
Abilify Tablets	Aripiprazole
Antipsychotic Not Otherwise Specified (NOS)	Antipsychotic Not Otherwise Specified (NOS)
Aripiprazole Oral Solution	Aripiprazole
Aripiprazole Tablets	Aripiprazole
Aristada	Aripiprazole Lauroxil
Aristada Injectable-Long Acting	Aripiprazole Lauroxil
Asenapine	Asenapine
Chlorpromazine Oral Solution	Chlorpromazine
Chlorpromazine Oral Syrup	Chlorpromazine

Medication	Generic
Chlorpromazine Tablets	Chlorpromazine
Clozapine Tablets	Clozapine
Clozaril Tablets	Clozapine
Etrafon	Amitriptyline + Perphenazine
Fanapt	Iloperidone
FazaClo Orally Disintegrating Tablets	Clozapine
Fluphenazine	Fluphenazine
Fluphenazine Decanoate Injectable	Fluphenazine
Fluphenazine HCL Oral Solution	Fluphenazine
Fluphenazine HCL Tablets	Fluphenazine
Geodon Capsules	Ziprasidone
Haldol Decanoate Injectable-Long Acting	Haloperidol
Haldol Oral Solution	Haloperidol
Haldol Tablets	Haloperidol
Haloperidol Decanoate Injectable Long-Acting	Haloperidol
Haloperidol Oral Solution	Haloperidol
Haloperidol Tablets	Haloperidol
Iloperidone	Iloperidone
Invega Sustenna Injectable	Paliperidone Palmitate
Invega Tablets	Paliperidone
Latuda	Lurasidone
Loxapine Capsules	Loxapine
Loxitane Capsules	Loxapine
Lurasidone	Lurasidone
Mellaril Tablets	Thioridazine
Mesoridazine	Mesoridazine
Navane Capsules	Thiothixene
Olanzapine + Fluoxetine Capsules	Olanzapine + Fluoxetine

Medication	Generic
Olanzapine Tablets	Olanzapine
Olanzapine ZYDIS Orally Disintegrating Tablets	Olanzapine
Orap Tablets	Pimozide
Paliperidone Tablets	Paliperidone
Permitril	Fluphenazine
Perphenazine Tablets	Perphenazine
Pimozide Tablets	Pimozide
Prolixin Decanoate Injectable- Long Acting	Fluphenazine
Prolixin Oral Solution	Fluphenazine
Prolixin Tablets	Fluphenazine
Quetiapine Fumarate	Quetiapine
Quetiapine Tablets	Quetiapine
Rexulti	Brexpiprazole
Risperal Consta Injectable- Long Acting	Risperidone
Risperdal M-Tab Orally Disintegrating Tablets	Risperidone
Risperdal Oral Solution	Risperidone
Risperdal Tablets	Risperidone
Risperidone Injectable - Long Acting	Risperidone
Risperidone M- Tab Orally Disintegrating Tablets	Risperidone
Risperidone Tablets	Risperidone
Saphris	Asenapine
Serentil	Mesoridazine
Seroquel Tablets	Quetiapine
Seroquel XR Tablets	Quetiapine
Stelazine Tablets	Trifluoperazine
Symbyax Capsules	Olanzapine + Fluoxetine
Thioridazine HCL Tablets	Thioridazine
Thiothixene Capsules	Thiothixene

Medication	Generic
Thorazine Oral Solution	Chlorpromazine
Thorazine Oral Syrup	Chlorpromazine
Thorazine Tablets	Chlorpromazine
Triavil	Amitriptyline + Perphenazine
Trifluroperazine HCL Tablets	Trifluoperazine
Trilafon Tablets	Perphenazine
Vraylar	Cariprazine
Ziprasidone HCL Tablets	Ziprasidone
Zyprexa Relprevv Injectable	Olanzapine
Zyprexa Tablets	Olanzapine
Zyprexa ZYDIS Orally Disintegrating Tablets	Olanzapine

Table Number 10.1: Short-Acting Intramuscular Antipsychotic Medications

Medication	Generic
Abilify Injectable- Short Acting	Aripiprazole
Aripiprazole Injectable- Short Acting	Aripiprazole
Chlorpromazine Injectable- Short Acting	Chlorpromazine
Geodon Injectable- Short Acting	Ziprasidone
Haldol Injectable- Short Acting	Haloperidol
Haloperidol Injectable- Short Acting	Haloperidol
Olanzapine Injectable- Short Acting	Olanzapine
Prolixin Injectable- Short Acting	Fluphenazine
Thorazine Injectable- Short Acting	Chlorpromazine
Ziprasidone Mesylate Injectable- Short Acting	Ziprasidone
Zyprexa Injectable- Short Acting	Olanzapine

Table Number 11.0: Antenatal Steroid Medications

Medication	Generic
Betamethasone	Betamethasone
Betamethasone Sodium Phosphate	Betamethasone Sodium Phosphate
Betamethasone Sodium Phosphate and Betamethasone Acetate	Betamethasone Sodium Phosphate and Betamethasone Acetate
Celestone	Betamethasone
Celestone Phosphate	Betamethasone Sodium Phosphate
Celestone Soluspan	Betamethasone Sodium Phosphate and Betamethasone Acetate
Cortastat	Dexamethasone Sodium Phosphate
Dalalone	Dexamethasone Sodium Phosphate
Dalalone DP	Dexamethasone Acetate
Dalalone LA	Dexamethasone Acetate
Decadron	Dexamethasone
Decadron LA	Dexamethasone Acetate
Decadron Phosphate	Dexamethasone Sodium Phosphate
Decadron w/Xylocaine	Dexamethasone Sodium Phosphate with Lidocaine HCL
Decaject	Dexamethasone Sodium Phosphate
Decaject LA	Dexamethasone Sodium Phosphate
Dexamethasone	Dexamethasone
Dexamethasone Acetate	Dexamethasone Acetate
Dexamethasone Intensol	Dexamethasone
Dexamethasone Sodium Phosphate	Dexamethasone Sodium Phosphate
Dexamethasone Sodium Phosphate with Lidocaine	Dexamethasone Sodium Phosphate with Lidocaine
Dexamethasone Sodium Phosphate with Lidocaine HCL	Dexamethasone Sodium Phosphate with Lidocaine HCL
Dexasone	Dexamethasone Sodium Phosphate
Dexasone LA	Dexamethasone Acetate
Dexone	Dexamethasone
Dexone LA	Dexamethasone Acetate
Hexadrol	Dexamethasone

Medication	Generic
Hexadrol Phosphate	Dexamethasone Sodium Phosphate
Solurex	Dexamethasone Sodium Phosphate
Solurex LA	Dexamethasone Acetate

Appendix D

General Glossary of Terms

AMA (Against Medical Advice) When a patient checks himself out of a hospital against the advice of his doctor.

accuracy (of data) The extent to which data are free of identifiable errors.

acute hemorrhagic stroke A non-traumatic intracerebral hemorrhage, subarachnoid hemorrhage or hemorrhagic infarction.

acute ischemic stroke A measurable neurological deficit of sudden onset, presumed secondary to focal cerebral ischemia, and not otherwise attributable to intracerebral hemorrhage (ICH) or another disease process. Cerebrovascular disorder caused by deprivation of blood flow to an area of the brain, generally as a result of thrombosis, embolism, or reduced blood pressure.

administrative/billing data (data source) Administrative data are patient-identifiable data used for administrative, regulatory, and payment (financial) purposes. Administrative data that generally reflect the content of discharge abstracts (for example, demographic information on patients such as age, sex, zip code; information about the episode of care such as admission source, length of stay, charges, discharge status; and ICD-10-CM diagnostic and ICD-10-PCS procedure codes). Namely, the Uniform Hospital Discharge Data Set and the Uniform Bill of the Health Care Financing Administration (UB-04) provides specifications for the abstraction of administrative/billing data.

Agency for Healthcare Research and Quality (AHRQ) The Agency for Healthcare Research and Quality (AHRQ) is the health services research arm of the U.S. Department of Health and Human Services (HHS), complementing the biomedical research mission of its sister agency, the National Institutes of Health. AHRQ is a home to research centers that specialize in major areas of health care research such as quality improvement and patient safety, outcomes and effectiveness of care, clinical practice and technology assessment, and health care organization and delivery systems.

aftercare (see next level of care) Inpatient or outpatient care that the patient will receive after discharge from the hospital.

aggregate (hospital data) Aggregate data elements derived for a specific hospital from the results of each measure's algorithm over a given time period (e.g., monthly, quarterly). These data are transmitted to The Joint Commission by ORYX® Vendors.

aggregate risk-adjusted data elements Aggregate data elements derived from episode of care (EOC) records that result from the application of risk adjustment models by ORYX® Vendors for transmission to The Joint Commission.

algorithm An ordered sequence of data element retrieval and aggregation through which numerator and denominator events or continuous variable values are identified by a measure. The algorithms are depicted using flowcharting symbols.

allowable value A list of acceptable responses for a data element.

ANSI X12 The American National Standards Institute's standard for transmitting data electronically, or electronic data interchange (EDI).

antenatal steroids Steroids given before birth.

atherosclerosis Common disorder characterized by yellowish plaques of cholesterol, other lipids, and cellular debris in the inner layers of the walls of arteries.

augmentation of clozapine The addition of a second antipsychotic medication for patients receiving clozapine.

binary outcome Events or conditions that occur in one or two possible states often labeled 0 or 1. Such data are frequently encountered in medical research. Common examples include dead or alive, and improved or not improved.

calculation model A description of the steps or statistical calculations (computations) used to derive the numerator and denominator or continuous variable values required for a measure. Measure Information Forms in this manual will include either an algorithm or calculation model.

caregiver The patient's family or any other person who will be responsible for care of the patient after discharge.

central tendency A property of the distribution of a variable, usually measured by statistics such as the mean, median, and mode.

cesarean birth Birth of the fetus(es) from the uterus through an abdominal incision. Does not apply if any of the following occur: abdominal pregnancy, ectopic pregnancy.

chemotherapy For purposes of the IMM measure sets, chemotherapy is defined as antineoplastic agents used to treat cancer. Types include targeted agents, alkylating agents, antimetabolites, plant alkaloids and terpenoids, topoisomerase inhibitors, antitumor antibiotics, monoclonal antibodies, and biologics and related agents. Hormonal therapies are not included.

clinical chorioamnionitis Usually includes otherwise unexplained fever (at or above 38 degree C (100.4F)) with one or more of the following: uterine tenderness and/or irritability, leukocytosis, fetal tachycardia, maternal tachycardia or malodorous vaginal discharge.

clinical measures Measures designed to evaluate the processes or outcomes of care associated with the delivery of clinical services; allow for intra- and interorganizational comparisons to be used to continuously improve patient health outcomes; may focus on the appropriateness of clinical decision making and implementation of these decisions; must be condition specific, procedure specific, or address important functions of patient care (e.g., medication use, infection control, patient assessment, etc.).

comparison group The group of health care organizations to which an individual health care organization is compared.

confounding factors Intervening variables that distort the true relationship between/among the variables of interest. They are related to the outcome of interest, but extraneous to the study question and are non-randomly distributed among the groups being compared. They can hide a true correlation or give the appearance of a correlation when none actually exists.

continuous variable An aggregate data measure in which the value of each measurement can fall anywhere along a continuous scale (e.g., the time [in minutes] from hospital arrival to administration of thrombolysis).

continuous variable data elements Those data elements required to construct the measure as stated in the section labeled "Continuous Variable Statement."

critical access hospital (CAH) A facility that meets the following criteria may be designated by CMS as a CAH:

- Is located in a State that has established with CMS a Medicare rural hospital flexibility program; and
- Has been designated by the State as a CAH; and
- Is currently participating in Medicare as a rural public, non-profit or for-profit hospital; or was a participating hospital that ceased operation during the 10-year period from November 29, 1989 to November 29, 1999; or is a health clinic or health center that was downsized from a hospital; and
- Is located in a rural area or is treated as rural; and Is located more than a 35-mile drive from any other hospital or CAH (in mountainous terrain or in areas with only secondary roads available, the mileage criterion is 15 miles); and
- Maintains no more than 25 inpatient beds; and
- Maintains an annual average length of stay of 96 hours per patient for acute inpatient care; and
- Complies with all CAH Conditions of Participation, including the requirements to make available 24-hour emergency care services 7 days per week.
- A CAH may also be granted "swing-bed" approval to provide post-hospital Skilled Nursing Facility-level care in its inpatient beds. In the case of hospice care, a hospice may contract with a CAH to provide the Medicare hospice hospital benefit. Reimbursement from Medicare is made to the hospice. The CAH may dedicate beds to the hospice, but the beds must be counted toward the 25-bed maximum. However, the hospice patient is not included in the calculation of the 96-hour annual average length of stay. The hospice patient can be admitted to the CAH for any care involved in their treatment plan or for respite care. The CAH negotiates reimbursement through an agreement with the hospice. In addition to the 25 inpatient CAH beds, a CAH may also operate a psychiatric and/or a rehabilitation distinct part unit of up to 10 beds each. These units must comply with the Hospital Conditions of Participation.

data collection The act or process of capturing raw or primary data from a single or number of sources. Also called "data gathering."

data collection effort The availability and accessibility of the required data elements, the relative effort required, and associated cost of abstracting or collecting the data.

data element A discrete piece of data, such as patient birthdate or principal diagnosis. See also *denominator data elements, numerator data elements, continuous variable data elements*, and *risk adjustment data elements*.

data entry The process by which data are transcribed or transferred into an electronic format.

data quality The accuracy and completeness of measure data on performance in the context of the analytic purposes for which they will be used.

data transmission The process by which data are electronically sent from one organization to another. For example, a hospital sending patient-level data to their selected ORYX® Vendor, and the vendor sending measure-level data to The Joint Commission or patient-level data to the QIO Clinical Warehouse.

denominator The lower part of a fraction used to calculate a rate, proportion, or ratio. Also the population for a rate based measure.

denominator data elements Those data elements required to construct the denominator.

disaster medical assistance team (DMAT) Provides emergency medical assistance following a catastrophic disaster or other major emergency.

discrete variable See *rate-based measure*.

elective carotid endarterectomy Surgical procedure performed by choice, involving excision of atheromatous segments of the endothelium and tunica media of the carotid artery, leaving a smooth tissue lining and facilitating blood flow through the vessel; surgery done to prevent stroke.

elective carotid intervention Surgery (i.e., carotid endarterectomy) and other procedures (e.g., carotid angioplasty, stenting) involving the carotid artery, performed due to the patient's choice.

elective delivery Delivery of a newborn(s) when the mother was not in active labor or presented with spontaneous ruptured membranes prior to medical induction and/or cesarean section.

electrocardiogram (ECG) A graphic tracing of the heart's electrical impulses.

electronic data interchange (EDI) An instance of data being sent electronically between parties, normally according to predefined industry standards.

elopement When a patient wanders away, walks away, runs away, escapes, or otherwise leaves the hospital unsupervised, unnoticed, and/or prior to their scheduled discharge.

emergency department (ED) A portion of the hospital where emergency diagnosis and treatment of illness or injury is provided.

emergency medical system (EMS) Network of services coordinated to provide aid and medical assistance from primary response to definitive care, involving personnel trained in the rescue, stabilization, transportation, and advanced treatment of traumatic or medical emergencies.

empiric antibiotic therapy Antibiotic treatment based on the clinician's judgment and the patients signs and symptoms and offered before a diagnosis has been confirmed.

episode of care (EOC) An Episode of Care (EOC) is defined as the health care services given during a certain period of time, usually during a hospital stay (e.g., from the day of arrival or admission to the day of discharge).

estimated due date The best estimated due date is determined by: last menstrual period if confirmed by early ultrasound or no ultrasound performed, or early ultrasound if no known last menstrual period or the ultrasound is not consistent with last menstrual period, or known date of fertilization (eg, assisted reproductive technology).

excluded populations Detailed information describing the populations that should not be included in the indicator. For example, specific age groups, ICD-10-PCS procedure or ICD-10-CM diagnostic codes, or certain time periods could be excluded from the general population drawn upon by the indicator.

extranet A private network using the Internet protocol to securely share business information or operations with vendors, customers, and/or other businesses. “The Joint Commission Connect TM” is the name given to the Joint Commission's extranet site.

event An occurrence of physical restraint or seclusion. Events that occur during the patient's stay do not define new episodes of care.

format Specifies the character length of a specific data element; the type of information the data element contains: numeric, decimal, number, date, time, character, or alphanumeric; and the frequency with which the data element occurs.

general data elements Data elements that must be collected by hospitals for each patient record. These data are patient demographic data, hospital identifiers, and patient identifiers.

global Global is an umbrella term for all measure sets that share the same Initial Patient Population definition.

gravida A woman who currently is pregnant or has been in the past, irrespective of the pregnancy outcome.

gravidty The number of pregnancies, current and past, regardless of the pregnancy outcome.

health care-associated infection A localized or systemic condition resulting from an adverse reaction to the presence of an infectious agent(s) or its toxin(s). There must be no evidence that the infection was present or incubating at the time of admission to the care setting.

health care organization (HCO) The business entity which is participating in an ORYX Vendor (e.g., health care organization level data describes information about the business entity).

health care organization (HCO) level data Aggregation of patient level data to summarize the performance of an individual health care organization on a performance measure. This data is transmitted to The Joint

Commission by the hospital's ORYX Vendor.

heart failure (HF) A clinical syndrome characterized by signs and symptoms resulting from disturbances in cardiac output or from increased venous pressure, including fatigue, shortness of breath, or leg swelling.

hospital According to the American Hospital Association, hospitals are licensed institutions with at least six beds whose primary function is to provide diagnostic and therapeutic patient services for medical conditions by an organized physician staff, and have continuous nursing services under the supervision of registered nurses.

hospital-based inpatient psychiatric services (HBIPS) The Hospital-Based Inpatient Psychiatric Services (HBIPS) is a national quality partnership of organizations focused on improving quality and performance in impatient psychiatric settings through performance measurement utilizing 5 process measures in 3 separate domains (assessment, patient safety, continuity/transition of care).

Hospital Inpatient Quality Reporting Program The Hospital Inpatient Quality Reporting Program initiative is intended to empower consumers with quality of care information to make more informed decisions about their health care, while encouraging hospitals and clinicians to improve the quality of inpatient care provided to all patients. The hospital quality of care information gathered through the Hospital Inpatient Quality Reporting Program initiative is available to consumers on the Hospital Compare website.

hospitalist A physician whose main practice provides care for hospitalized patients.

ICD-10 Codes The 10th revision of the International Statistical Classification of Diseases and Related Health Problems (ICD), a medical classification list by the World Health Organization. It contains codes for diseases, signs and symptoms, abnormal findings, complaints, social circumstances, and external causes of injury or diseases and procedures.

immunization (IMM) The process by which a person becomes protected against a disease through vaccination or inoculation. For the purposes of this measure set, the population is defined as hospitalized inpatients screened for pneumococcal and seasonal influenza immunization status.

induction of labor The use of pharmacological and/or mechanical methods to initiate labor. Examples of methods include but are not limited to: artificial rupture of membranes, balloons, oxytocin, prostaglandin, laminaria, or other cervical ripening agents. Still applies even if any of the following are performed: unsuccessful attempts at initiating labor or initiation of labor following spontaneous ruptured membranes without contractions.

initial patient populations Detailed information describing the population(s) that the indicator intends to measure. Details could include such information as specific age groups, diagnoses, ICD-10-CM diagnostic and ICD-10-PCS procedure codes, CPT codes, revenue codes, enrollment periods, insurance and health plan groups, etc.

inpatient mortality Any patient death occurring while admitted as an in-patient in the hospital.

inpatient prospective payment system (IPPS) rule A prospective payment system (PPS) under Medicare for hospital acute inpatient services. Hospitals contract with Medicare to furnish acute inpatient care and are reimbursed through pre-determined payment on a per discharge or per case basis for Medicare beneficiaries with inpatient stays.

inpatient psychiatric services Inpatient psychiatric services include care provided to a patient for a mental disorder while hospitalized in a psychiatric unit of an acute care hospital or a free-standing psychiatric hospital. Services rendered to outpatients or "day treatment" patients are not considered inpatient psychiatric services.

intracerebral hemorrhage (ICH) Non-traumatic abrupt onset of headache or altered level of consciousness and/or focal neurological deficit that is associated with a focal collection of blood within the brain parenchyma on CT scan and is not due to trauma or hemorrhagic conversion of a cerebral infarction.

invalid data Values for data elements that are required for calculating and/or risk adjusting a measure that fall outside of the acceptable range of values defined for that data element. Refer to the Missing and Invalid Data section for further information.

IV thrombolytic therapy Intravenous administration of a thrombolytic agent, such as tissue plasminogen activator (TPA), to dissolve an arterial clot.

"The Joint Commission Connect" The name given to the Joint Commission's extranet site, a secured online connection to The Joint Commission.

leave day An authorized or unauthorized absence from a facility, excluding discharges, during which the patient is absent from the facility at the time of the daily census and is not under the direct supervision of facility staff while absent.

low-density lipoprotein (LDL) Plasma protein provided by the liver, carrying relatively more cholesterol and triglycerides than protein. The high cholesterol content may account for its greater atherogenic potential. Also known as "bad cholesterol".

mean A measure of central tendency for a continuous variable measure. The mean is the sum of the values divided by the number of observations.

measure data elements Data elements used by one specific measure or several measures in two or more measure sets, such as Clinical Trial.

measure information form Tool to provide specific clinical and technical information on a measure. The information contained includes: measure set, performance measure name, description, rationale, type of measure, improvement noted as, numerator/ denominator/continuous variable statements, included populations, excluded populations, data elements, risk adjustment, data collection approach, data accuracy, measure analysis suggestions, sampling, data reported as, and selected references.

measure of performance See *performance measure*.

measure-specific data elements Data elements used by one specific measure or several measures in one specific measure set, such as *Infection Prior to Anesthesia* in the SCIP measures.

measurement system See *performance measurement system*.

median The value in a group of ranked observations that divides the data into two equal parts.

medical record (data source) Data obtained from the records or documentation maintained on a patient in any health care setting (for example, hospital, home care, long term care, practitioner office). Includes automated and paper medical record systems.

military time A 24 —hour period from midnight to midnight using a 4-digit number of which the first two digits indicate the hour and the last two digits indicate the minute.

missing data No values present for one or more data elements that are required for calculating and/or risk adjusting a national quality measure. Refer to the Missing and Invalid Data section for further information.

mode The most frequently occurring response for that data element.

monotherapy The use of a single antipsychotic medication.

multiple antipsychotic medications Antipsychotic medications are drugs prescribed to treat certain mental disorders; if two or more of these medications are routinely administered or prescribed this is considered multiple antipsychotic medications.

national hospital inpatient quality measure A standardized performance measure that meets the Centers for Medicare & Medicaid Services and Joint Commission evaluation criteria, has precisely defined specifications, can be uniformly embedded in extant systems, has standardized data collection protocols to permit uniform implementation by health care organizations and permit comparisons of health care organization performance over time through the establishment of a national comparative data base.

national hospital inpatient quality measure set A unique grouping of performance measures carefully selected to provide, when viewed together, a robust picture of the care provided in a given area (e.g., cardiovascular care, pregnancy).

neonatal intensive care unit (NICU) A hospital unit organized with personnel and equipment to provide continuous life support and comprehensive care for extremely high-risk newborn infants and those with complex and critical illness.

newborn A very young child from birth to one year who has not yet begun to walk or talk.

next level of care (see aftercare) Inpatient or outpatient care that the patient will receive after discharge from the hospital.

nulliparous A woman with a parity of zero.

numerator The upper portion of a fraction used to calculate a rate, proportion, or ratio.

numerator data elements Those data elements necessary or required to construct the numerator.

observed rate The observed rate is the measure rate that is based on a hospital's aggregated data for the reporting period. This is calculated as the number of measure numerator cases for the reporting period divided by the number of denominator cases. Observed rates are used to measure hospital performances.

ORYX® vendor An entity consisting of an automated database(s), that facilitates performance improvement in health care organizations through the collection and dissemination of process and/or outcome measures of performance. ORYX Vendors must be able to generate internal comparisons of organization performance over time, and external comparisons of performance among participating organizations at comparable times.

outpatient prospective payment system (OPPS) Rule A prospective payment system (PPS) under Medicare for hospital outpatient services, certain Part B services furnished to hospital inpatients that have no Part A coverage, and partial hospitalization services furnished by community mental health centers. All services paid under the PPS are classified into groups called Ambulatory Payment Classifications or APCs. A payment rate is established for each APC. Depending on the services provided, hospitals may be paid for more than one APC for an encounter.

parenteral Not through the alimentary canal but rather by injection through some other route, as subcutaneous, intramuscular, intraorbital, intracapsular, intraspinal, intrasternal, intravenous, etc.

parity The number of live deliveries the patient experienced prior to current hospitalization.

paroxysmal Occurring as sudden or periodic attacks or recurrences of symptoms of a disease; exacerbation.

patient level data Collection of data elements that depict the health care services provided to an individual (patient). Patient level data are aggregated to generate hospital level data and comparison group data.

patient survey (data source) Survey data are exclusively obtained from patients and/or their family members/significant others.

percentile A value on a scale of 100 that indicates the percentage of a distribution that is equal to or below it.

performance measure A quantitative tool (for example, rate, ratio, index, percentage) that provides an indication of an organization's performance in relation to a specified process or outcome. Refer to *process measure* and the *outcome measure* in Appendix E.

performance measurement system's extranet track (PET) An electronic information and message center available to ORYX Vendors. Access to the Internet and a browser are necessary to connect to PET. Access to PET is available by clicking on the "Joint Commission Connect" button on the Joint Commission's home page (www.jointcommission.org).

perinatal care (PC) The care and management of the fetus and newborn infant in the perinatal period before, during, and after delivery.

physical restraint A physical restraint is any manual method or physical or mechanical device, material, or equipment that immobilizes or reduces the ability of a patient to move his or her arms, legs, body or head freely when it is used as a restriction to manage a patient's behavior or restrict the patient's freedom of movement and is not a standard treatment for the patient's medical or psychiatric condition.

post discharge continuing care plan Communication from the hospital to the next level of care provider after a patient is discharged from the hospital. The plan must contain the reason for hospitalization, main diagnosis at discharge, a list of medications at discharge, and recommendations for the next level of care.

predicted value The statistically expected response or outcome for a patient after the risk adjustment model has been applied and the patient's unique set of risk factors have been taken into account.

P.R.N. Abbreviation for pro re nata, Latin term for "as needed".

process An interrelated series of events, activities, actions, mechanisms, or steps that transform inputs into outputs.

prophylactic antibiotic An antibiotic used to prevent, rather than treat or cure, disease. For the purposes of SCIP-Inf-1-3, antibiotics given to prevent postoperative infection will be collected. Because the overuse of antibiotics can lead to resistance, antibiotics taken to prevent infection should be used only for a short time.

process measure A measure which focuses on a process which leads to a certain outcome, meaning that a scientific basis exists for believing that the process, when executed well, will increase the probability of achieving a desired outcome.

proportion measure A measure which shows the number of occurrences over the entire group within which the occurrence should take place (e.g., patients delivered by cesarean section over all deliveries).

randomization A technique for selecting or assigning cases such that each case has an equal probability of being selected or assigned. It is done to stimulate chance distribution, reduce the effects of confounding factors, and produce unbiased statistical data.

range A measure of the spread of a data set. The difference between the smallest and largest observation.

rate Derived by dividing the numerator (e.g., cases that meet the criterion for good or poor care) by the denominator (e.g., all cases to which the criterion applies) within a given time frame. In other words, the numerator is a subset of the denominator.

rate based (measure) An aggregate data measure in which the value of each measurement is expressed as a proportion or as a ratio. In a proportion, the numerator is expressed as a subset of the denominator (for example, patients with cesarean section, divided by all patient who deliver). In a ratio, the numerator and denominator measure different phenomena (for example, the number of patients with central lines who develop infections divided by the number of central line days).

ratio A relationship between two counted sets of data, which may have a value of zero or greater. In a ratio, the numerator is not necessarily a subset of the denominator (e.g., pints of blood transfused to number of patients discharged).

reliability The ability of the indicator to accurately and consistently identify the events it was designed to identify across multiple health care settings.

reporting period The defined time period which describes the patient's end-of-service.

risk adjusted measures Measures that are risk adjusted using statistical modeling or stratification methods.

risk adjusted rate A rate that takes into account differences in case mix to allow for more valid comparisons between groups.

risk adjustment A statistical process for reducing, removing, or clarifying the influences of confounding factors that differ among comparison groups (for example, logistic regression, stratification).

risk adjustment data elements Those data elements used to risk adjust a performance measure (e.g., reduce, remove, or clarify the influences of confounding patient factors that differ among comparison groups). Such data elements may be used exclusively for risk adjustment (e.g., not required to construct the numerator or denominator) or may be required for numerator or denominator construction as well as risk adjustment.

risk adjustment model The statistical algorithm that specifies the numerical values and the sequence of calculations used to risk adjust (e.g., reduce or remove the influence of confounding factors) performance measures.

risk factor A factor that produces or influences a result. In statistics, an independent variable used to identify membership of qualitatively different groups.

risk factor value A specific value assigned to a risk factor for a given episode of care (EOC) record.

risk model The statistical algorithm that specifies the numerical values and the sequence of calculations used to risk adjust (e.g., reduce or remove the influence of confounding factors) performance measures.

routinely scheduled medications Medications prescribed to be taken regularly after discharge from the hospital.

sampling frequency If a hospital chooses to sample, they may sample data on either a monthly or quarterly basis. Refer to the “Sample Size Requirements” discussion in the Population and Sampling Specifications section for further information.

sampling method Describes the process used to select a sample. Sampling approaches for national hospital inpatient quality measures are simple random sampling and systematic sampling. Refer to the “Sampling Approaches” discussion in the Population and Sampling Specifications section for further information.

sample size The number of individuals or particular patients included in a study. Usually chosen so that the study has a particular statistical power of detecting an effect of a particular size. Refer to the “Sample Size Requirements” discussion in the Population and Sampling Specifications for further information. For measure set specific "Sample Size Requirements" refer to Measure Information section.

score A rating, usually expressed as a number, and based on the degree to which certain qualities or attributes are present (e.g., Glascow coma, ASA scores).

seclusion Seclusion is the involuntary confinement of a patient alone in a room or an area where the patient is physically prevented from leaving.

severity The degree of biomedical risk, or mortality of medical treatment.

simple random sample A process in which a sample of data is selected from the total population in such a way that every case has the same chance of being selected and that the sample size is met. Refer to the “Sampling Approaches” discussion in the Population and Sampling Specifications section for further information.

spontaneous onset of labor Labor without the use of pharmacological and/or mechanical interventions to initiate labor. Does not apply if the following is performed: artificial rupture of membranes before the onset of labor.

standard deviation A measure of variability that indicates the dispersion, spread, or variation in a distribution.

statin A class of pharmaceutical agents that modify LDL-cholesterol by blocking the action of an enzyme in the liver which is needed to synthesize cholesterol, thereby decreasing the level of cholesterol circulating in the blood; HMG-CoA reductase inhibitors.

strata See stratified measure.

stratification A form of risk adjustment which involves classifying data into subgroups based on one or more characteristics, variables, or other categories.

stratification based approach for risk adjustment The process of dividing or classifying subgroups known as strata in order to facilitate more valid comparisons. For example, a measure's outcome may be divided into type of surgery-specific categories or strata.

stratified measure A performance measure that is classified into a number of strata to assist in analysis and interpretation. The overall or un-stratified measure evaluates all of the strata together. The stratified measure or each stratum consists of a subset of the overall measure.

stratum See stratified measure.

stroke (STK) See definitions for acute ischemic stroke and acute hemorrhagic stroke.

subarachnoid hemorrhage (SAH) Non-traumatic abrupt onset of headache or altered level of consciousness that is associated with blood in the subarachnoid space on CT or a clinical history and exam consistent with SAH (sudden onset of severe headache or altered level of consciousness) with xanthochromia and many red blood cells in the cerebrospinal fluid.

sub-population A population that is part of a larger population. For example, the measure set Perinatal Care evaluates the obstetrical population in the hospital. This measure set is broken into two distinct sub-populations, mothers (PC-01, PC-02 and PC-03) and newborns (PC-04, PC-05 and PC-06).

subset measure(s) A subset measure contains overlapping sets of patients. For example, the patients in the TOB-2a measure are a subset of those in the TOB-2 measure, i.e., the two measures have overlapping populations.

substance use (SUB) For the purposes of the Substance Use measure set (SUB) substance use includes unhealthy alcohol use and drug abuse or dependence including opioids, sedative/hypnotics, cocaine, cannabis, amphetamines, and hallucinogens.

systematic random sampling A process in which the starting case is selected randomly, and the next cases are selected according to a fixed interval that is based upon the number of cases in the population. For example, the starting case is the second patient that arrives at the hospital. This patient and every subsequent fifth patient becomes part of the random sample until the sample size is reached. Refer to the "Sampling Approaches" discussion in the Population and Sampling Specifications section for further information.

term Greater than or equal to 37 weeks and 0 days using best EDD. It is divided into the following categories: Early Term - 37 weeks and 0 days through 38 weeks and 6 days, Full Term - 39 weeks and 0 days through 40 weeks and 6 days, Late Term - 41 weeks and 0 days through 41 weeks and 6 days and Post Term - Greater than or equal to 42 weeks and 0 days.

time last known well Time at which the patient was last known to be without the signs and symptoms of the current stroke or at his or her prior baseline. Variation may exist if the signs and symptoms are not witnessed.

time-out The restriction of a patient for any period of time to a designated area from which the patient is not physically prevented from leaving and for the purpose of providing the patient an opportunity to regain self-control.

tissue plasminogen activator (TPA) Clot-dissolving substance produced naturally by cells in the walls of blood vessels, and also manufactured synthetically. TPA activates plasminogen to dissolve clots and is used therapeutically to open occluded arteries.

tobacco use (TOB) For the purposes of the Tobacco Treatment measure set (TOB), tobacco use includes cigarettes, pipes, cigars and smokeless tobacco products.

transmission schedule The schedule of dates on which data are expected to be transmitted to The Joint Commission and the QIO Clinical Warehouse.

unable to be determined (UTD) Each data element that is applicable per the algorithm for each of the measures within a topic must be "touched" by the abstractor. While there is an expectation that all data elements are collected, it is recognized that in certain situations information may not be available (i.e., dates, times, codes, etc.). If, after due diligence, the abstractor determines that a value is not documented or is not able to determine the answer value, the abstractor must select "Unable to Determine (UTD)" as the answer.

vaccine A vaccine is a suspension of an attenuated (weakened) or killed microorganism, such as bacteria or virus, administered for the prevention, amelioration, or treatment of infectious diseases.

validation The process by which the integrity and correctness of data are established. Validation processes can occur immediately after a data item is collected or after a complete set of data are collected. The Centers for Medicare & Medicaid Services (CMS) chart level validation will validate the data at several levels. There are consistency and internal edit checks to assure the integrity of the submitted data; there are external edit checks to verify expectations about the volume of the data received, and, there will be chart level audits to assure the reliability of the submitted data. Information on these procedures is available on www.qualitynet.org.

validity Ability to identify opportunities for improvement in the quality of care; demonstration that the indicator use results in improvements in outcomes and/or quality of care.

variance Equal to the square of the standard deviation.

venous thromboembolism (VTE) A term that includes deep vein thrombosis and/or pulmonary embolism.

verification The process used to ensure consistent implementation of measure algorithms specified in this manual across disparate ORYX Vendors .

vertex presentation A fetal presentation where the head is presenting first in the pelvic inlet. Does not apply if compound or breech presentation or if brow, face, hand, shoulder, etc., present first in the pelvic inlet.

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Appendix E

Overview of Measure Information Form and Flowchart Formats for collected measures

Measure Information Form Introduction

Measure Set

The specific national hospital quality measure set to which an individual measure belongs (e.g., acute myocardial infarction, stroke).

Set Measure ID

A unique alpha-numeric identifier assigned to a measure. Information associated with a measure is identified by this unique alpha-numeric number.

Performance Measure Name

A brief title that uniquely identifies the measure.

Description

A brief explanation of the measure"s focus, such as the activity or the area on which the measure centers attention (e.g., ischemic stroke patients prescribed antithrombotic therapy at hospital discharge)

Rationale

The reason for performing a specified process to improve the quality of care outcomes. This may include specific literature references, evidence based information, expert consensus, etc.

Type of Measure

Indicates whether the measure is used to examine a process or an outcome over time.

- **Process:** A measure used to assess a goal directed, interrelated series of actions, events, mechanisms, or steps, such as measure of performance that describes what is done to, for, or by patients, as in performance of a procedure.

- **Outcome:** A measure that indicates the result of performance (or non-performance) of a function(s) or process(es).

Improvement Noted As

Describes how improvement would be indicated by the measure.

- An increase in the rate/score/number of occurrences (for example, immunizations)
- A decrease in the rate/score/number of occurrences (for example, potentially preventable venous thromboembolism)
- Either an increase or a decrease in the rate/score/number of occurrences, depending upon the context of the measure (for example, utilization)

Numerator Statement

Represents the portion of the denominator population that satisfies the conditions of the performance measure to be an indicator event.

Note: If the measure is reported as a rate (proportion or ratio), the Numerator and Denominator Statement are completed. If a performance measure does not have both a numerator and a denominator, then a Continuous Variable Statement is completed.

Included Population in Numerator Specific information describing the population(s) comprising the numerator, not contained in the numerator statement, or not applicable

Excluded Population in Numerator Specific information describing the population(s) that should not be included in the numerator, or none

Data Elements Those data elements necessary or required to determine (or establish) the numerator.

Denominator Statement

Represents the population evaluated by the performance measure.

Note: If measure is reported as a rate (proportion or ratio), the Numerator and Denominator Statement are completed. If a performance measure does not have both a numerator and a denominator, then a Continuous Variable Statement is completed.

Included Population in Denominator Specific information describing the population(s) comprising the denominator, not contained in the denominator statement or not applicable

Excluded Population in Denominator Specific information describing the population(s) that should not be included in the denominator, or none

Data Elements Those data elements required to determine (or establish) the denominator

Continuous Variable Statement

Describes an aggregate data measure in which the value of each measurement can fall anywhere along a continuous scale.

Note: If measure is reported as a central tendency, Continuous Variable Statement is completed. This item is only completed when the performance measure does not have numerator and denominator statements.

Included Population in Continuous Variable Specific information describing the population(s) comprising the performance measure, not contained in the continuous variable statement or not applicable

Excluded Population in Continuous Variable Specific information describing the population(s) that should not be included in the performance measure or none

Date Elements Those data elements required to determine (or establish) the measure for a continuous variable

Risk Adjustment

Indicates whether a measure is subject to the statistical process for reducing, removing, or clarifying the influences of confounding factors to allow more useful comparisons.

Data Collection Approach

Recommended timing for when data should be collected for a measure. Data collection approaches include retrospective, concurrent or prospective data collection. **Retrospective** data collection involves collecting data for events that have already occurred. **Concurrent** data collection is the process of gathering data on how a process works or is working while a patient is in active treatment. **Prospective** data collection is data collection in anticipation of an event or occurrence.

Data Accuracy

Recommendations to reduce identifiable data errors, to the extent possible.

Measure Analysis Suggestions

Recommendations to assist in the process of interpreting data and drawing valid conclusions.

Sampling

Indicates whether or not a measure can be sampled. Sampling is a process of selecting a representative part of a population in order to estimate the organization's performance, without collecting data for the entire population.

Data Reported As

Indicates how data will be reported for a measure.

- Aggregate rate generated from count data reported as a **proportion** (for example, rate-based measures which report summary data generated from the number of Cesarean sections as a proportion of deliveries)
- Aggregate rate generated from count data reported as a **ratio** (e.g., bloodstream infection per 1,000 line days).
- Aggregate measures of **central tendency** (e.g., continuous variables which report means and medians such as length of stay).

Calculation Model

A description of the steps or statistical calculations (computations) used to derive the numerator and denominator or continuous variable values required for a measure. Measure Information Forms in this manual will include either an algorithm or calculation model.

Selected References

Specific literature references that are used to support the importance of the performance measure.

Algorithm Introduction

Each measure's initial patient population and the measure is described by a unique algorithm. An algorithm is a predefined set of rules that help to break down complex processes into simple, repetitive steps.

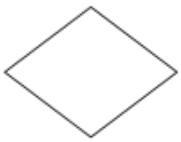
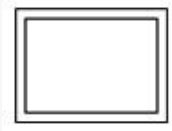
Measure algorithms serve two purposes. First, they evaluate and identify which episode of care (EOC) records contain missing and/or invalid data that will prohibit the ability to properly evaluate the measure. Second, they determine if:

- For rate-based measures, the patient's EOC record belongs in the measure population of interest described by the denominator, and if the patient experienced the event described in the numerator.
- For continuous variable measures, the patient's EOC record belongs in the patient population described in the measure's statement and, if so, to define and calculate the *measurement* value.

This section contains some standard flow-charting conventions used to develop each algorithm:

- **Flow lines** are used to guide the reader to different parts of the algorithm, with arrows denoting the direction of movement. Generally, movement is from the top to the bottom of the chart.
- **Symbols** used in each algorithm flow charts are described later in this section under Flow Chart Symbols.
- **Temporary variables** within the algorithm are noted in the variable key at the top of each page.

Flowchart Symbols

Symbol	Explanation
	Start/Stop denotes the beginning or end of an algorithm
	Diamonds represent "If...Then" decision points for logic tests and comparisons. Two or three flow lines exit the decision point to reflect alternative actions based upon an evaluation of the condition(s) stated around the decision point.
	Rectangles or process boxes show when computation or manipulation of the data are required, such as a calculation or summarization.
	Circle or "On-page: connectors, labeled with a letter, show a link to sections of the algorithm which are continued on the same page.
	Five-sided or "Off-page" connectors, labeled with a letter, show a link to sections of the algorithm which are continued on different pages. *Note: Both circular, On-page, five-sided*, and *Off-page* Connectors containing the letters B, D, E, U, X, or Y lead to *measure Outcome Boxes*.
	Outcome Boxes represent the result of data passed through the algorithm. Connectors extending from outcome boxes lead to the end of the algorithm, or to risk adjustment procedures, where applicable. This symbol is also used to identify the strata within a stratified measure.
	Symbol to represent comments that should be taken into account when programming flowchart.
	This symbol is placed along side the Process box to which they are applicable. Comments are used to expand upon information contained within the process box, such as how to properly calculate age. Comments are never the sole location where processing logic is provided.
	Start/Return denotes the beginning and ending of a sub-routine. Algorithms that use this symbol are called from another algorithm and the data processing flow returns to the calling algorithm when the Return' is encountered. See the Initial Patient Population Algorithms and Transmission Data Processing Flows for an example of the usage of this symbol.

Appendix G

Resources

The following are available resources to those using the Specifications Manual for National Quality Measures.

Healthcare Organizations
If you are a Joint Commission accredited healthcare organization with questions about National Quality Measures, ORYX; requirements, etc., please contact Accreditation and Certification Operations at http://manual.jointcommission.org/

ORYX® Vendors
If you are an ORYX Vendor with questions about Joint Commission National Quality Measures, please contact the Division of Quality Measurement and Research at http://manual.jointcommission.org/

CMS Abstraction & Reporting Tool (CART) For technical assistance with CART, please contact the QualityNet help desk at qnetsupport@hcqis.org, or call 1-866-288-8912.

CMS Hospital Inpatient Quality Reporting Program For information on measures that are required for CMS Hospital IQR Program and/or used for Public Reporting on Hospital Compare, refer to the Measure Comparison Document at https://www.qualitynet.org/. Please go to the QualityNet web site and select "Measure Comparison" under "Hospital Inpatient Quality Reporting Program" located under Hospitals-Inpatient; or refer to the Final IPPS Rule at http://www.cms.gov/AcuteInpatientPPS/.

For information on voluntary electronic submission of the Hospital IQR Program specified measures requirements and technical specifications, resources are available at https://www.qualitynet.org/. From the QualityNet web site select "Electronically Specified Clinical Quality Measures (eCQMs) Reporting" located under Hospitals-Inpatient. If you have questions regarding the EHR Incentive Program measures collected for the Hospital IQR Program, please refer to the CMS website, https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/index.html or the QualityNet helpdesk.

National Uniform Billing Committee (NUBC) For further information regarding the UB-04 and NUBC related data elements, please refer to the NUBC manual, "Official UB-04 Data Specifications Manual© Copyright American Hospital Association" or website at http://www.nubc.org/index.html.

Appendix H

Miscellaneous Tables

Table 2.1 VTE Prophylaxis Inclusion Table

VTE Prophylaxis	Inclusion/Synonyms
Coumadin/Warfarin	Coumadin Jantoven Warfarin Warfarin Sodium
Factor Xa Inhibitor	Arixtra Fondaparinux sodium
Oral Factor Xa Inhibitor	Apixaban[1] Betrixaban[4] BEVYXXA[4] Edoxaban[3] Eliquis[1] Rivaroxaban[2] Savaysa[3] Xarelto[2]
Low Dose Unfractionated Heparin (LDUH) - Include only Heparin given by the subcutaneous (SQ, Subcu, SC, SubQ) route	HEP Heparin Heparin Na Heparin Sod Heparin Sodium Heparin Sodium Inj. Heparin Sodium Inj. Pork Heparin Subcu/SQ/SC/SubQ
Low Molecular Weight Heparin (LMWH)	Dalteparin Enoxaparin Fragmin Innohep Lovenox Tinzaparin

VTE Prophylaxis	Inclusion/Synonyms
Intermittent Pneumatic Compression Device (IPC)	AE pumps (anti-embolic pumps)-calf/thigh DVT boots-calf/thigh EPC cuffs/ stockings-External pneumatic compression-calf/thigh Intermittent pneumatic compression stockings Intermittent compression device (ICD) Leg pumpers Pneumatic intermittent impulse compression device Rapid inflation asymmetrical compression (RIAC) devices Sequential compression device Sequential pneumatic hose Thrombus pumps-calf/thigh
Venous Foot Pump (VFP)	AE pumps-foot only Foot pump Plantar venous plexus pump-foot only SC boots-foot only SCD boots-foot only Venous foot pump

Note: This table is not meant to be an inclusive list of all available prophylaxis; rather it represents current information available at the time of publication.

1 The U.S. Food and Drug Administration (FDA) has approved Eliquis (apixaban) to reduce the risk of stroke and systemic embolism in patients with non-valvular atrial fibrillation or to reduce the risk of blood clots, deep vein thrombosis (DVT) and pulmonary embolism (PE) following knee or hip replacement surgery only. It is additionally approved for treatment of DVT and PE and for the reduction in the risk of recurrent DVT and PE following initial therapy.

2 The U.S. Food and Drug Administration has approved Xarelto (rivaroxaban) to reduce the risk of blood clots, deep vein thrombosis (DVT) and pulmonary embolism (PE) following knee or hip replacement surgery only. It is additionally approved: to reduce the risk of stroke in patients with non-valvular atrial fibrillation; for treatment of DVT or PE; to reduce the risk of recurrent DVT and PE following initial treatment.

3 The FDA approved edoxaban (Savaysa) to reduce the risk of stroke and dangerous blood clots (systemic embolism) in patients with atrial fibrillation that is not caused by a heart valve problem. Savaysa has been approved to treat deep vein thrombosis (DVT) and pulmonary embolism (PE) in patients who have already been treated with anti-clotting drug administered by injection or infusion (parenterally), for five to ten days.

4 The U.S. Food and Drug Administration (FDA) has approved betrixaban (BEVYXXA) for the prophylaxis of venous thromboembolism (VTE) in adult patients hospitalized for an acute medical illness who are at risk for thromboembolic complications due to moderate or severe restricted mobility and other risk factors for VTE.

Table 2.6 Qualifiers and Modifiers Table

Note: These guideleines apply only to those data elements that refer to them in their Guidelines for Abstraction Exclusion list(s)

Qualifiers	Modifiers
Qualifiers are words used as adjectives to indicate some uncertainty about whether or not a condition really exists.	Quantitative modifiers are adjectives that quantitatively describe a condition
The following qualifiers should be abstracted as ***negative findings***, unless otherwise specified - **Consider this list all-inclusive:** • And/or (+/-; e.g., "ST abnormalities consistent with ischemia and/or injury"), except when comparing only inclusions (e.g., "ST segment elevation and/or STEMI") • Cannot exclude • Cannot rule out • Could/may/might be • Could/may/might have • Could/may/might have been • Could/may/might have had • Could/may/might indicate • Or, except when comparing only inclusions • Possible • Questionable (?) • Risk of • Rule out (r'd/o, r/o'd) • Suggestive of • Suspect • Suspicious • Vs., except when comparing only inclusions **Example:** If the in-hospital echocardiogram report documents "questionable LVSD", this should be abstracted as a **negative** finding.	The following quantitative modifiers should be abstracted as ***negative findings***, unless otherwise specified - **Consider this list all-inclusive**: • Borderline • Insignificant/not significant/no significant • Minor • Scant • Slight • Sub-clinical • Subtle • Trace • Trivial

Table 2.7 Anticoagulation Therapy Table

Anticoagulation Therapy – All Inclusive	Inclusion/Synonyms

Anticoagulation Therapy – All Inclusive	Inclusion/Synonyms
Direct Thrombin Inhibitors	Acova Angiomax Angiox Argatroban Bivalirudin Dabigatran Dabigatran etexilate Lepirudin Pradaxa Recombinant Hirudin Refludan
Glycoprotein IIb/IIIa Inhibitor:	Abciximab Aggrastat Eptifibatide Integrilin ReoPro Tirofiban