The Joint Commission

Specifications Manual for Joint Commission National Quality Measures

Version 2022A

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Specifications Manual for Joint Commission National Quality Measures

Table of Contents

- Acknowledgment and Conditions of Use
- Introduction
- Using the Specifications Manual for Joint Commission National Quality Measures

National Quality Measure Sets

Section 1: Measure Information Forms

- Global Initial Patient Population for ED, IMM, SUB and TOB
- Emergency Department (ED)
    - ED-1
    - ED-2
- Hospital Based Inpatient Psychiatric Services (HBIPS)
    - HBIPS-1
    - HBIPS-2
    - HBIPS-3
    - HBIPS-5
- Immunization (IMM)
    - IMM-2
- Perinatal Care (PC)
    - PC-01
    - PC-02
    - PC-05
    - PC-06
- Substance Use Measures (SUB)
    - SUB-2
    - SUB-3
- Tobacco Treatment Measures (TOB)
    - TOB-2
    - TOB-3
- Venous Thromboembolism (VTE)
    - VTE-6

Certification Measure Sets

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Section 2: Measure Information Forms

- Acute Stroke Ready Inpatient (ASR-IP)
  - ASR-IP-1
  - ASR-IP-2
  - ASR-IP-3
- Acute Stroke Ready Outpatient (ASR-OP)
  - ASR-OP-1
  - ASR-OP-2 ***RETIRED Effective July 1, 2021***
- Advanced Certification Heart Failure (ACHF)
  - ACHF-01
  - ACHF-02
  - ACHF-03
  - ACHF-04
  - ACHF-05
  - ACHF-06
- Advanced Certification Heart Failure Outpatient (ACHFOP)
  - ACHFOP-01
  - ACHFOP-02
  - ACHFOP-03
  - ACHFOP-04
  - ACHFOP-05
  - ACHFOP-06
  - ACHFOP-07
- Comprehensive Cardiac Center Inpatient (CCCIP)
  - CCCIP-01
  - CCCIP-02
  - CCCIP-03
  - CCCIP-04
  - CCCIP-05
- Comprehensive Cardiac Center Outpatient (CCCOP)
  - CCCOP-01
  - CCCOP-02
  - CCCOP-03
- Comprehensive Stroke (CSTK)
  - CSTK-01
  - CSTK-02
  - CSTK-03
  - CSTK-04
  - CSTK-05
  - CSTK-06
  - CSTK-07
  - CSTK-08
  - CSTK-09
  - CSTK-10
  - CSTK-11

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    - CSTK-12
- Palliative Care (PAL)
    - PAL-01
    - PAL-02
    - PAL-03
    - PAL-04
    - PAL-05
- Stroke (STK)
    - STK-1
    - STK-10
    - STK-2
    - STK-3
    - STK-4
    - STK-5
    - STK-6
    - STK-8
- Stroke Outpatient (STK-OP)
    - STK-OP-1
- Total Hip and Total Knee Replacement Inpatient (THKR-IP)
    - THKR-IP-1
    - THKR-IP-2
    - THKR-IP-3
    - THKR-IP-4
    - THKR-IP-5
- Total Hip and Total Knee Replacement Outpatient (THKR-OP)
    - THKR-OP-1
    - THKR-OP-2
    - THKR-OP-3
    - THKR-OP-4
    - THKR-OP-5

Section 3: Introduction to the Data Dictionary

- Introduction to the Data Dictionary
- Alphabetical List of Data Elements

Section 4: Missing and Invalid Data

- Missing and Invalid Data

Section 5: Population and Sampling Specifications

- Population and Sampling Specifications

Section 6: Reserved for future use

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Section 7: Joint Commission National Quality Measures Data Processing

- Joint Commission National Quality Measures Data Processing
    - Joint Commission Clinical Data Processing Flow

Appendices

- A. Code Tables
- C. Medication Tables
- D. Glossary of General Terms
- E. Overview of Measure Information Form and Flowchart Formats
- G. Resources
- H. Miscellaneous Tables

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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:

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- **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.

Accelerate PI™ Performance Report

The dashboard report displays chart-based and electronic clinical quality measure (eCQM) quality measurement data reported by hospitals to The Joint Commission under the ORYX® program. In addition, the report uses a select subset of the most recent and available external data from the US Centers for Medicare & Medicaid Services (CMS) Compare websites that meet Joint Commission unique criteria for impact and actionability. For each measure, the dashboard shows that organization’s performance compared to national, state, and Joint Commission–accredited organization averages. The dashboard is not a scorable element on survey, but rather, a tool to facilitate discussion about ongoing quality improvement work. The report also includes access to vetted national improvement resources that help organizations explore solutions to challenge areas.

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

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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, 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 was released annually 2008-2017. 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 Joint Commission publications._

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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. Beginning CY 2020 and forward for chart-based measure data, all hospitals will utilize the DDS Platform for submission of data for Accreditation.

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

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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 and Medicaid Promoting Interoperability Program (previously known as the Medicare EHR Incentive Program). 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 and Medicaid Promoting Interoperability 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 portion of the Medicare and Medicaid Promoting Interoperability Program.

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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.

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.

Section 1 and 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: 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.

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Section 4: 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. 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 5: Population and Sampling Methods

Sampling is an available option for 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 submission of Initial Patient Population and sample as applicable, to the Joint Commission's DDSP site. Specific measure set sample size requirements tables are located in the Measure Information section.

Section 6: *Reserved for future use*

Section 7: Measures Processing

This section of the manual is provided to highlight the unique data Processing specifications for Joint Commission national quality measure data.

The Joint Commission Data Processing section provides information related to the processing of national quality measure data submitted to the Joint Commission.

Appendix A: 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 semi-annually 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

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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.

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The Joint Commission National Quality Measures

Global Initial Patient Population

Global is an umbrella name for four measure sets, Emergency Department (ED), Immunization (IMM), Substance Use (SUB) and Tobacco Treatment (TOB). The purpose of defining an umbrella name was to apply one population flow and one sampling on the Global population and reduce the burden of sampling for four measure sets or any number of these four measure sets that are selected. Therefore, if only two of the Global measure sets are selected and reported, the process would only apply for those two measure sets.

The Global Initial Patient Population is defined by two data elements:

- Admission Date
- Discharge Date

All patients discharged from acute inpatient care with Length of Stay (Discharge Date minus Admission Date) less than or equal to 120 days are included in the Global Initial Population and are eligible for sampling.

The cases that are accepted into the Global Initial patient population and are sampled would be selected for the specific measure set and return to the **Clinical Data Processing Flow** in the Data Processing section.

For The Joint Commission, hospitals must submit the same case for all applicable measure sets elected by the hospital (i.e., ED, IMM, SUB and TOB) under the Global Initial Patient Population.
Example:
If a hospital has elected to submit ED, TOB and IMM to The Joint Commission, for every ED case that is submitted the same case must also be submitted as a TOB case and an IMM case to The Joint Commission.

The Global Initial Patient Population only contains the population information and flow. There is no measure associated to Global; therefore there is no measure flow or MIF for Global.

For Emergency Department (ED), Immunization (IMM), Substance Use (SUB) and Tobacco Treatment (TOB) Initial Patient Population definitions and algorithms, please refer to the Global Initial Patient Population.

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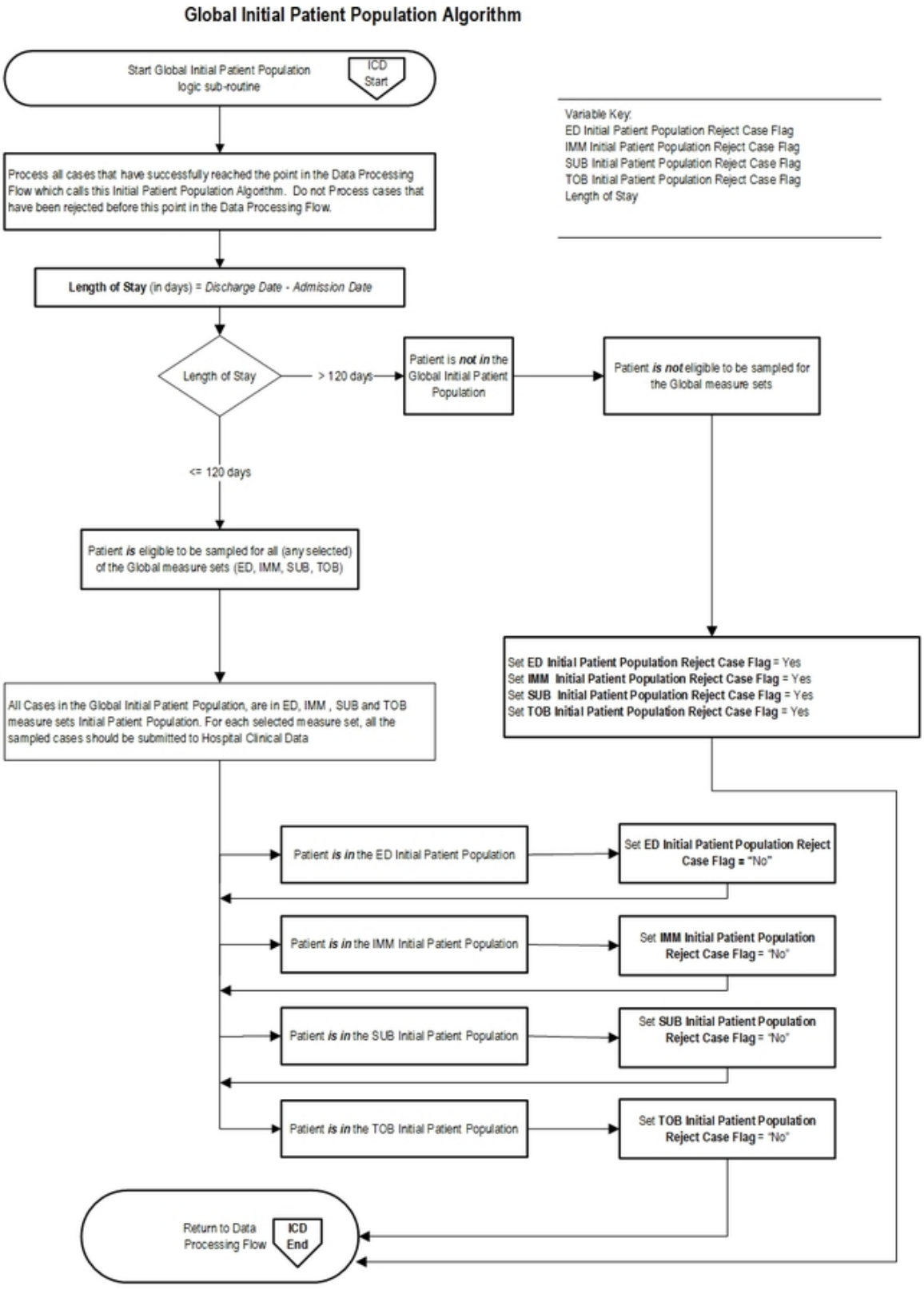
Initial Patient Population Algorithm



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Global 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.

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.

To reduce the burden of multiple sampling for different measure sets, those hospitals that are submitting any of the measure sets under the Global Initial Patient Population, the pulled sample must be used to identify the data for all measure sets or stratum that are submitted to The Joint Commission. For more information concerning how to perform sampling and using the Global sample size for other measure sets, please refer to the Population and Sampling Specifications section in this manual.

The following sample size tables for each option automatically build in the number of cases needed to obtain the required sample sizes for the measure sets under the Global initial patient population.

Quarterly Sampling

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

Quarterly Sample Size
Based on Hospital's Initial Patient Population Size for the Global Measures

Average Quarterly Initial Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
≥ 1530	306
765 – 1529	20% of Initial Patient Population size
153 — 764	153
< 153	No sampling; 100% Initial Patient Population required

Monthly Sampling

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

Monthly Sample Size
Based on Hospital's Global Initial Patient Population Size Measures

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Average Monthly Initial Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
≥ 510	102
255 - 509	20% of Initial Patient Population size
51 - 254	51
< 51	No sampling; 100% Initial Patient Population required

Sample Size Examples

- **Quarterly sampling:**
  - A hospital's Global Initial Patient Population size is 3000 patients during the fourth quarter. The required sample size is seen to be a minimum of 306 Global patients for this quarter.
  - A hospital's Global Initial Patient Population size 803 patients during the third quarter. The required sample size is 20% of the patient population or 161cases for the quarter (twenty percent of 803 equals 160.6 rounded to the next highest whole number equals 161).

- **Monthly sampling:**
  - A hospital's Global Initial Patient Population size is 600 patients during March. The required sample size is 102 cases from the patient population.
  - A hospital's Global Initial Patient Population size is 303 patients during July. The required sample size is 20% of the patient population or 61 cases for the month (twenty percent of 303 equals 60.6 rounded to the next highest whole number equals 61).

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Emergency Department (ED)

Set Measures

Set Measure ID	Measure Short Name
ED-1	Median Time from ED Arrival to ED Departure for Admitted ED Patients
ED-2	Admit Decision Time to ED Departure Time for Admitted 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 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, Used in calculation of the Joint Commission's aggregate data.
Payment Source	All Records, Optional for HBIPS-2 and HBIPS-3
Race	All Records,
Sex	All Records,

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Algorithm Output Data Elements

Element Name	Collected For
Measure Category Assignment	All Records, Calculation

Measure Set Specific Data Elements

Element Name	Collected For
Arrival Date	ED-1
Arrival Time	ED-1
Decision to Admit Date	ED-2
Decision to Admit Time	ED-2
ED Departure Date	ED-1, ED-2
ED Departure Time	ED-1, ED-2
ED Patient	ED-1, ED-2

Related Materials

Document Name
Appendix A
Appendix C
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
Global Initial Patient Population
Introduction to the Manual

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	Document Name	
	Joint Commission Clinical Data Processing Flow	
	Joint Commission National Quality Measures Data Processing	
	Missing and Invalid Data	
	Sampling	
	Table of Contents	
	Using the The Joint Commission's National Measure Specifications Manual	

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Emergency Department (ED) Initial Patient Population

Please refer to the Global Initial Patient Population for the ED Initial Patient Population Processing definition and Flow.

Sample Size Requirements

Please refer to the Global Initial Patient Population for the sampling requirements for the Emergency Department (ED) Measures.

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Measure Information Form

Measure Set: Emergency Department (ED)

Set Measure ID: ED-1

Set Measure ID	Performance Measure Name
ED-1a	Median Time from ED Arrival to ED Departure for Admitted ED Patients – Overall Rate
ED-1b	Median Time from ED Arrival to ED Departure for Admitted ED Patients – Reporting Measure
ED-1c	Median Time from ED Arrival to ED Departure for Admitted ED Patients – Psychiatric/Mental Health Patients

Performance Measure Name: Median Time from ED Arrival to ED Departure for Admitted ED Patients

Description: Median time from emergency department arrival to time of departure from the emergency room for patients admitted to the facility from the emergency department

Rationale: Reducing the time patients remain in the emergency department (ED) can improve access to treatment and increase quality of care. Reducing this time potentially improves access to care specific to the patient condition and increases the capability to provide additional treatment. In recent times, EDs have experienced significant overcrowding. Although once only a problem in large, urban, teaching hospitals, the phenomenon has spread to other suburban and rural healthcare organizations. According to a 2002 national U.S. survey, more than 90% of large hospitals report EDs operating "at" or "over" capacity. Approximately one third of hospitals in the US report increases in ambulance diversion in a given year, whereas up to half report crowded conditions in the ED. In a recent national survey, 40% of hospital leaders viewed ED crowding as a symptom of workforce shortages. ED crowding may result in delays in the administration of medication such as antibiotics for pneumonia and has been associated with perceptions of compromised emergency care. For patients with non-ST-segment-elevation myocardial infarction, long ED stays were associated with decreased use of guideline-recommended therapies and a higher risk of recurrent myocardial infarction. Overcrowding and heavy emergency resource demand have led to a number of problems, including ambulance refusals, prolonged patient waiting times, increased suffering for those who wait, rushed and unpleasant treatment environments, and potentially poor patient outcomes. When EDs are overwhelmed, their ability to respond to community emergencies and disasters may be compromised.

Type Of Measure: Process

Improvement Noted As: Decrease in the median value

Continuous Variable Statement: Time (in minutes) from ED arrival to ED departure for patients admitted to the facility from the emergency department.

> **Included Populations:** Any *ED Patient* from the facility's emergency department

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Excluded Populations: Patients who are not an *ED Patient*

Data Elements:

- *Arrival Date*
- *Arrival Time*
- *ED Departure Date*
- *ED Departure Time*
- *ED Patient*
- *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 opportunity 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: None

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:

- Derlet RW, Richards JR. Emergency department overcrowding in Florida, New York, and Texas. South Med J. 2002;95:846-9.
- Derlet RW, Richards JR. Overcrowding in the nation's emergency departments: complex causes and disturbing effects. Ann Emerg Med. 2000;35:63-8.
- Diercks DB, et al. Prolonged emergency department stays of non-ST-segment-elevation myocardial infarction patients are associated with worse adherence to the American College of Cardiology/American Heart Association guidelines for management and increased adverse events. Ann Emerg Med. 2007;50:489-96.
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- Hwang U, Richardson LD, Sonuyi TO, Morrison RS. The effect of emergency department crowding on the management of pain in older adults with hip fracture. J Am Geriatr Soc. 2006;54:270-5.
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- Pines JM, et al. ED crowding is associated with variable perceptions of care compromise. Acad Emerg Med. 2007;14:1176-81.
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- Siegel B, et al. Enhancing work flow to reduce crowding. Jt Comm J Qual Patient Saf. 2007;33(11 Suppl):57-67.
- Trzeciak S, Rivers EP. Emergency department overcrowding in the United States: an emerging threat to patient safety and public health. Emerg Med J. 2003;20:402-5.
- Wilper AP, Woolhandler S, Lasser KE,McCormick D, Cutrona SL, Bor DH, Himmelstein DU. Waits to see an emergency department physician: U.S. trends and predictors, 1997-2004. Health Aff (Millwood). 2008;27:w84-95.

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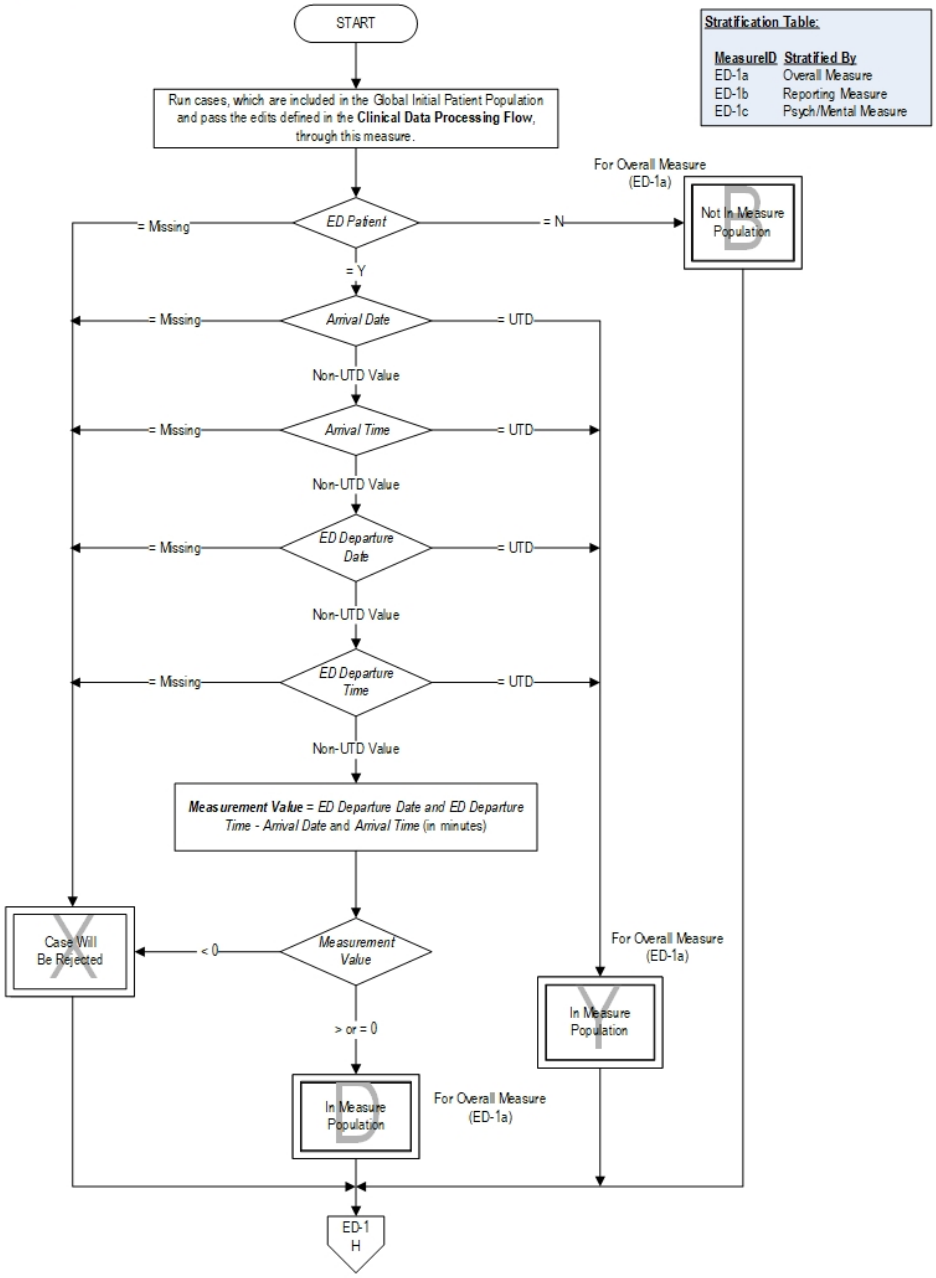
Measure Algorithm:

ED-1: Median Time from ED Arrival to ED Departure for Admitted ED Patients

Continuous Variable Statement: : Time (in minutes) from ED arrival to ED departure for patients admitted to the facility from the emergency department.



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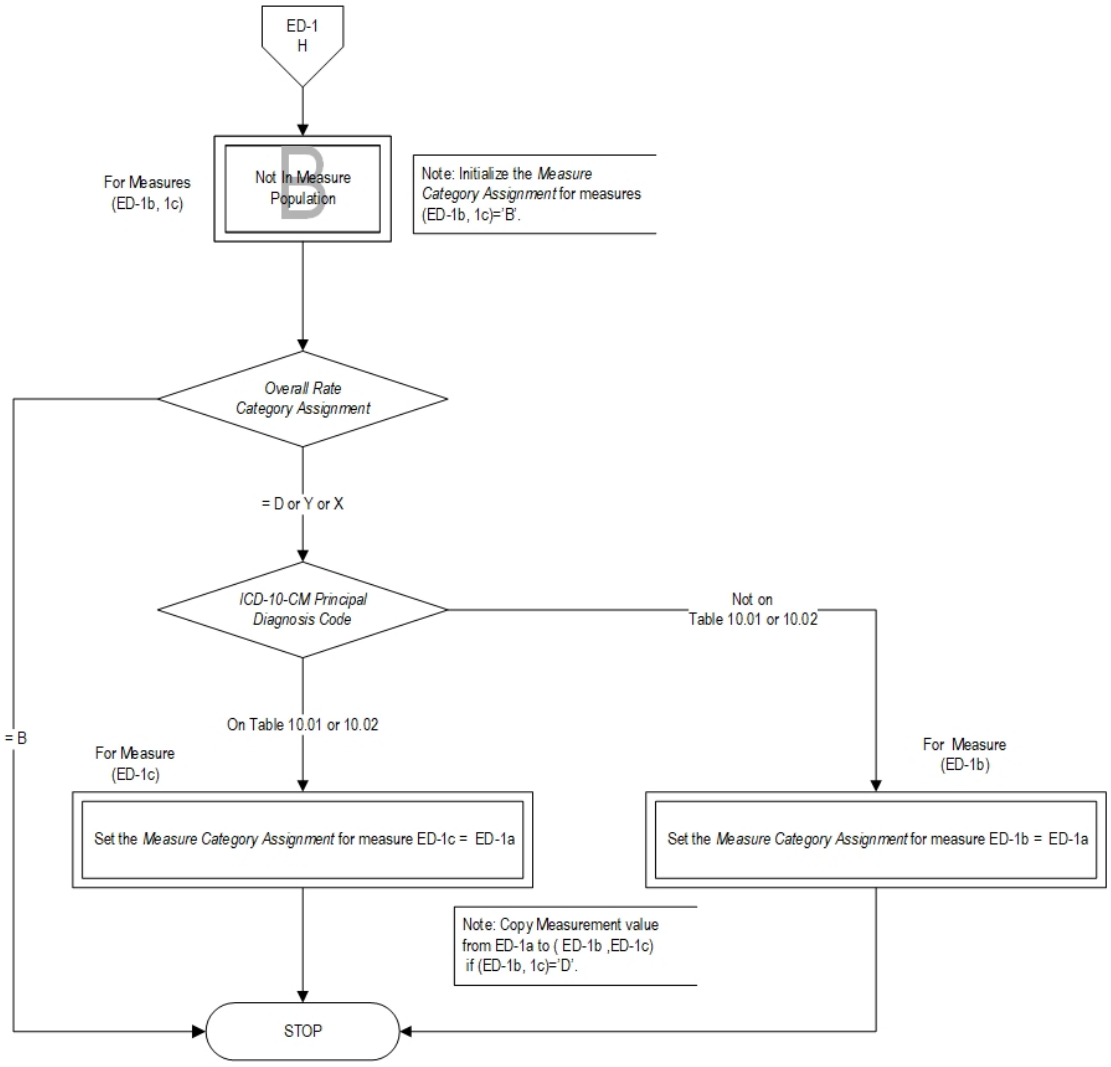

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Measure Information Form

Measure Set: Emergency Department (ED)

Set Measure ID: ED-2

Set Measure ID	Performance Measure Name
ED-2a	Admit Decision Time to ED Departure Time for Admitted Patients – Overall Rate
ED-2b	Admit Decision Time to ED Departure Time for Admitted Patients – Reporting Measure
ED-2c	Admit Decision Time to ED Departure Time for Admitted Patients –Psychiatric/Mental Health Patients

Performance Measure Name: Admit Decision Time to ED Departure Time for Admitted Patients

Description: Admit Decision Time to ED Departure Time for Admitted Patients.

Rationale: Reducing the time patients remain in the emergency department (ED) can improve access to treatment and increase quality of care. Reducing this time potentially improves access to care specific to the patient condition and increases the capability to provide additional treatment. In recent times, EDs have experienced significant overcrowding. Although once only a problem in large, urban, teaching hospitals, the phenomenon has spread to other suburban and rural healthcare organizations. According to a 2002 national U.S. survey, more than 90% of large hospitals report EDs operating "at" or "over" capacity. Approximately one third of hospitals in the US report increases in ambulance diversion in a given year, whereas up to half report crowded conditions in the ED. In a recent national survey, 40% of hospital leaders viewed ED crowding as a symptom of workforce shortages. ED crowding may result in delays in the administration of medication such as antibiotics for pneumonia and has been associated with perceptions of compromised emergency care. For patients with non-ST-segment-elevation myocardial infarction, long ED stays were associated with decreased use of guideline-recommended therapies and a higher risk of recurrent myocardial infarction. Overcrowding and heavy emergency resource demand have led to a number of problems, including ambulance refusals, prolonged patient waiting times, increased suffering for those who wait, rushed and unpleasant treatment environments, and potentially poor patient outcomes. When EDs are overwhelmed, their ability to respond to community emergencies and disasters may be compromised.

Type Of Measure: Process

Improvement Noted As: Decrease in the median value

Continuous Variable Statement: Time (in minutes) from admit decision time to time of departure from the emergency department for admitted patients.

> **Included Populations:** Any *ED Patient* from the facility's emergency department

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Excluded Populations: Patients who are not an *ED Patient*

Data Elements:

- *Decision to Admit Date*
- *Decision to Admit Time*
- *ED Departure Date*
- *ED Departure Time*
- *ED Patient*
- *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 opportunity 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: None

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:

- Derlet RW, Richards JR. Emergency department overcrowding in Florida,New York, and Texas. South Med J. 2002;95:846-9.
- Derlet RW, Richards JR. Overcrowding in the nation's emergency departments:complex causes and disturbing effects. Ann Emerg Med. 2000;35:63-8.
- Diercks DB, et al. Prolonged emergency department stays of non-ST-segment-elevation myocardial infarction patients are associated with worse adherence to the American College of Cardiology/American Heart Association guidelines for management and increased adverse events. Ann Emerg Med. 2007;50:489-96.
- Fatovich DM, Hirsch RL. Entry overload, emergency department overcrowding,and ambulance bypass. Emerg Med J. 2003;20:406-9.
- Hwang U, Richardson LD, Sonuyi TO, Morrison RS. The effect of emergency department crowding on the management of pain in older adults with hip fracture.J Am Geriatr Soc. 2006;54:270-5.
- Institute of Medicine of the National Academies. Future of emergency care:Hospital-based emergency care at the breaking point. The National Academies Press 2006.
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- Krochmal P, Riley TA. Increased health care costs associated with ED overcrowding. Am J Emerg Med. 1994;12:265-6.
- Kyriacou DN, Ricketts V, Dyne PL,McCollough MD, Talan DA. A 5-year time study analysis of emergency department patient care efficiency. Ann Emerg Med.1999;34:326-35.
- Nawar ED, Niska RW, Xu J. National Hospital Ambulatory Medical Care Survey:2005 emergency department summary. Adv Data. 2007; (386):1-32.
- Richardson DB. Increase in patient mortality at 10 days associated with emergency department overcrowding. Med J Aust. 2006;184:213-6.
- Sprivulis PC, et al. The association between hospital overcrowding and mortality among patients admitted via Western Australian emergency departments. Med JAust. 2006;184:208-12.
- Trzeciak S, Rivers EP. Emergency department overcrowding in the United States: an emerging threat to patient safety and public health. Emerg Med J.2003;20:402-5.
- United States General Accounting Office GAO. Hospital Emergency Departments: crowded conditions vary among hospitals and communities. 2003;GAO-03-460.
- Wilper AP, Woolhandler S, Lasser KE, McCormick D, Cutrona SL, Bor DH,Himmelstein DU. Waits to see an emergency department physician: U.S. trends and predictors, 1997-2004. Health Aff (Millwood). 2008;27:w84-95.

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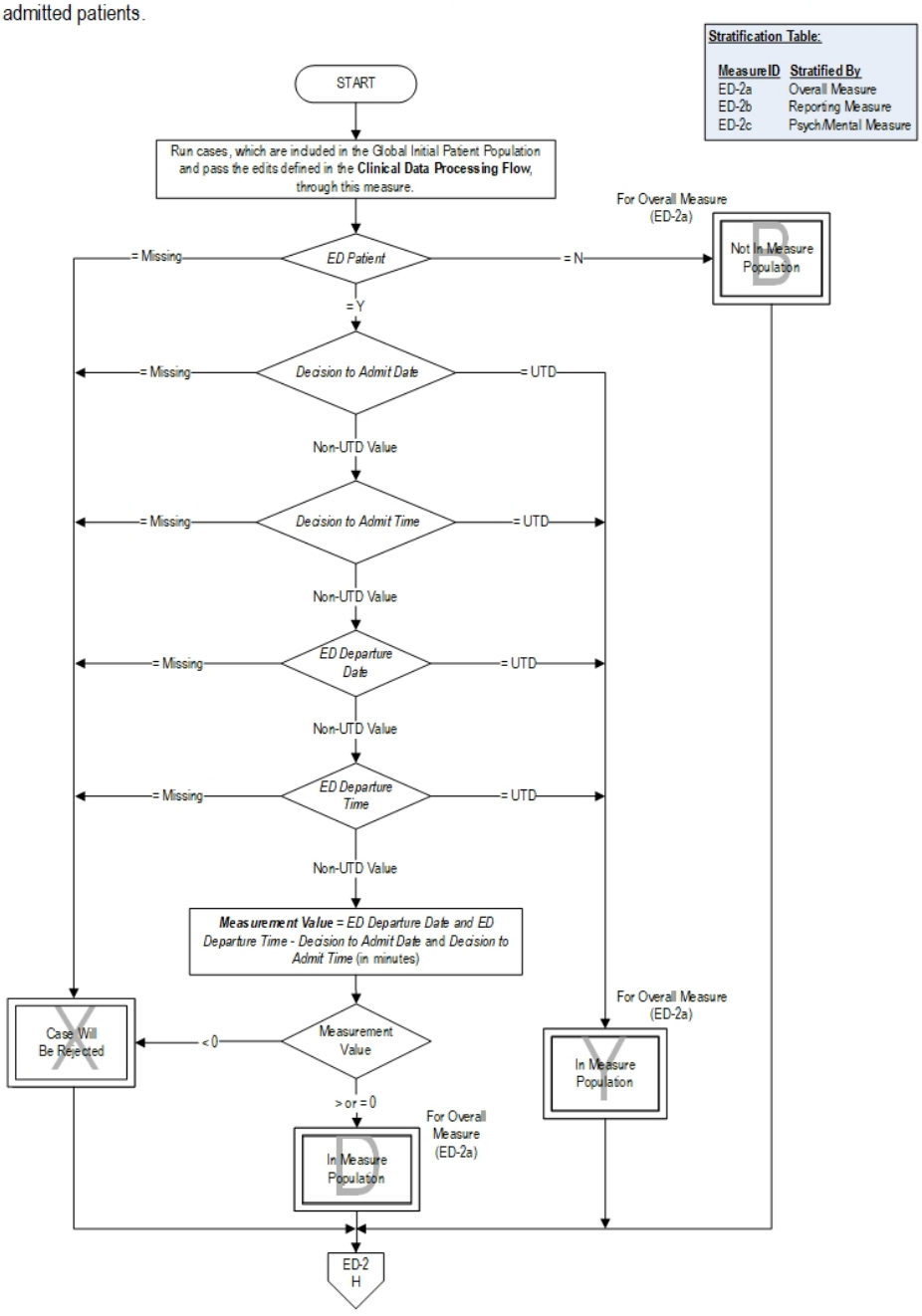
Measure Algorithm:

ED-2: Admit Decision Time to ED Departure Time for Admitted Patients

Continuous Variable Statement: Time (in minutes) from admit decision time to time of departure from the emergency department for admitted patients.



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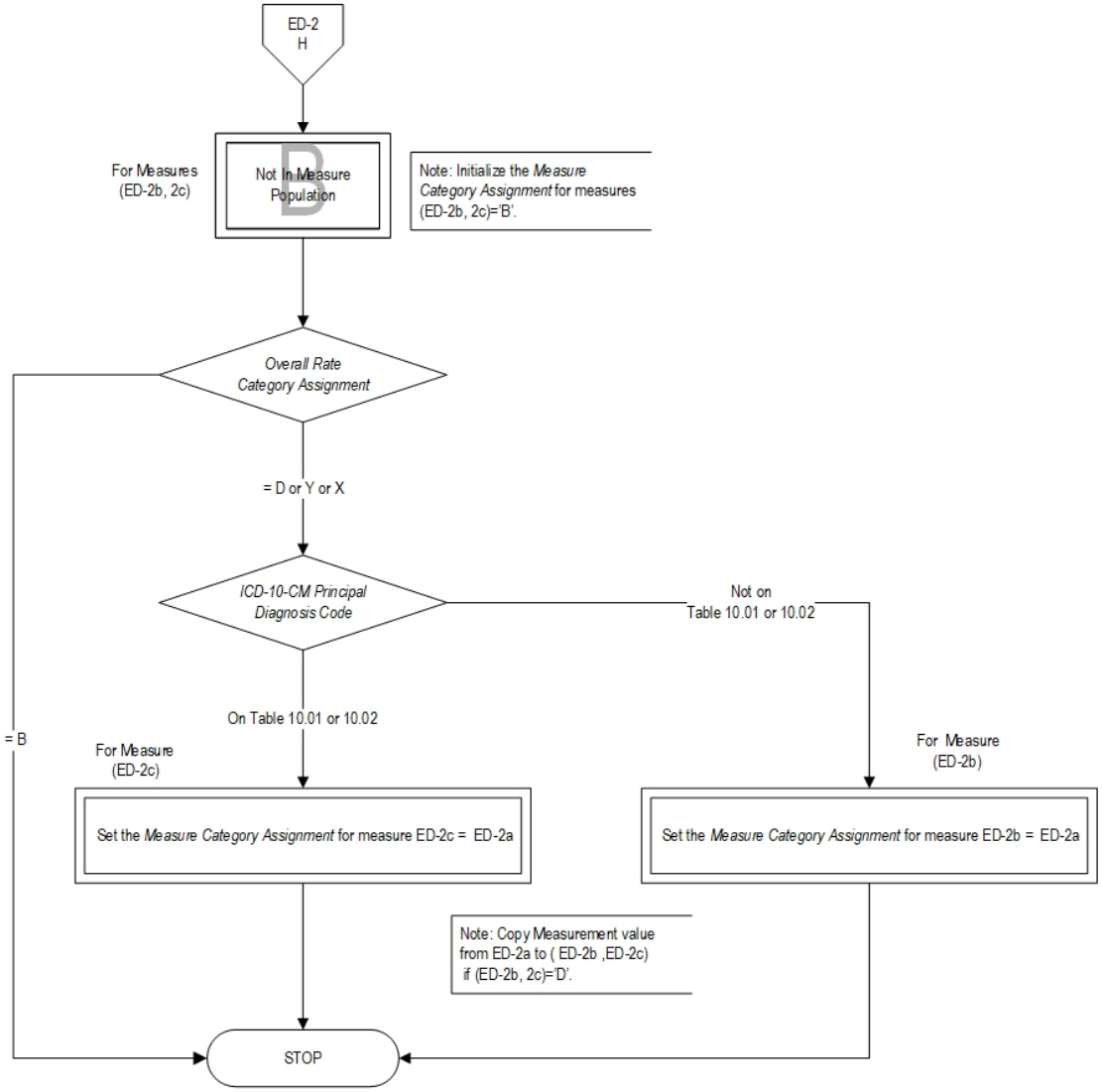

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Hospital Based Inpatient Psychiatric Services (HBIPS)

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,
Discharge Date	All Records, Not collected for HBIPS-2 and HBIPS-3
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, Used in calculation of the Joint Commission's aggregate data.
Payment Source	All Records, Optional for HBIPS-2 and HBIPS-3

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Element Name	Collected For
Psychiatric Care Setting	All Records, HBIPS
Race	All Records,
Sex	All Records,

Algorithm Output Data Elements

Element Name	Collected For
Measure Category Assignment	All Records, Calculation

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
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

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Element Name	Collected For
Violence Risk to Self	HBIPS-1

Related Materials

Document Name
Acknowledgement
Appendix A
Appendix C
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
Joint Commission Clinical Data Processing Flow
Joint Commission National Quality Measures Data Processing
Missing and Invalid Data
Sampling
Table of Contents
Using the The Joint Commission's National Measure Specifications Manual

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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
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

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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

---

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
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

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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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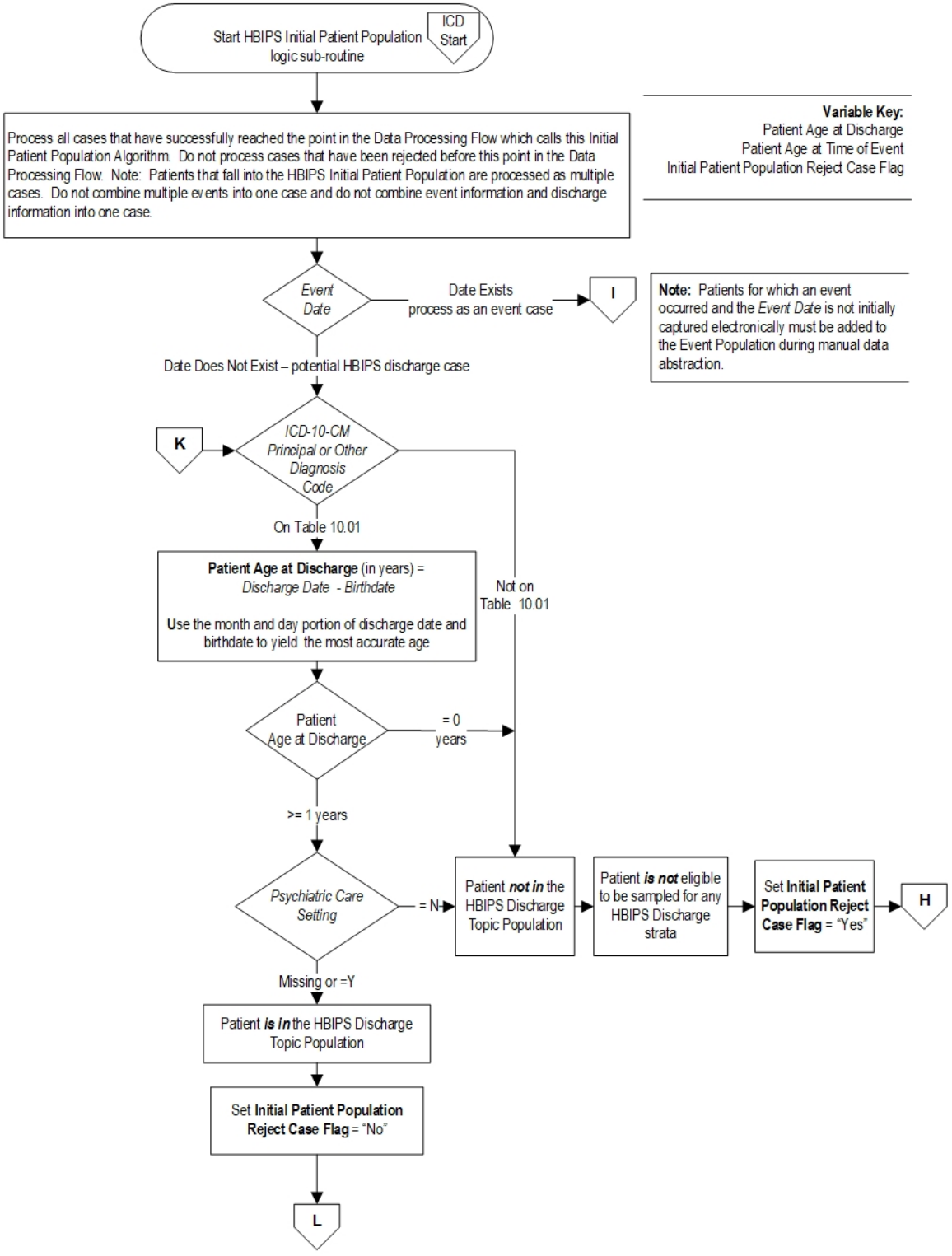
HBIPS Initial Patient Population Algorithm



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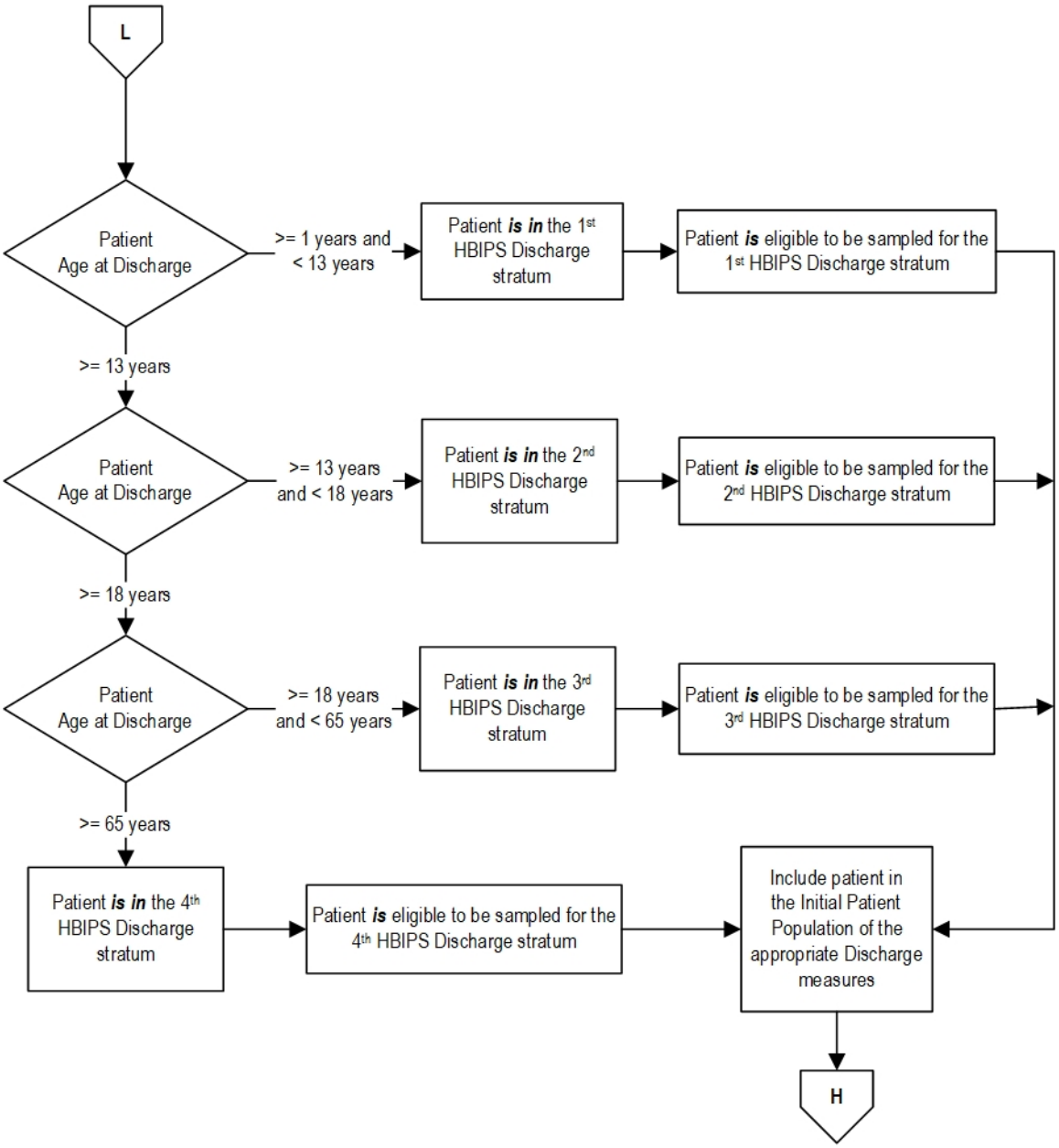

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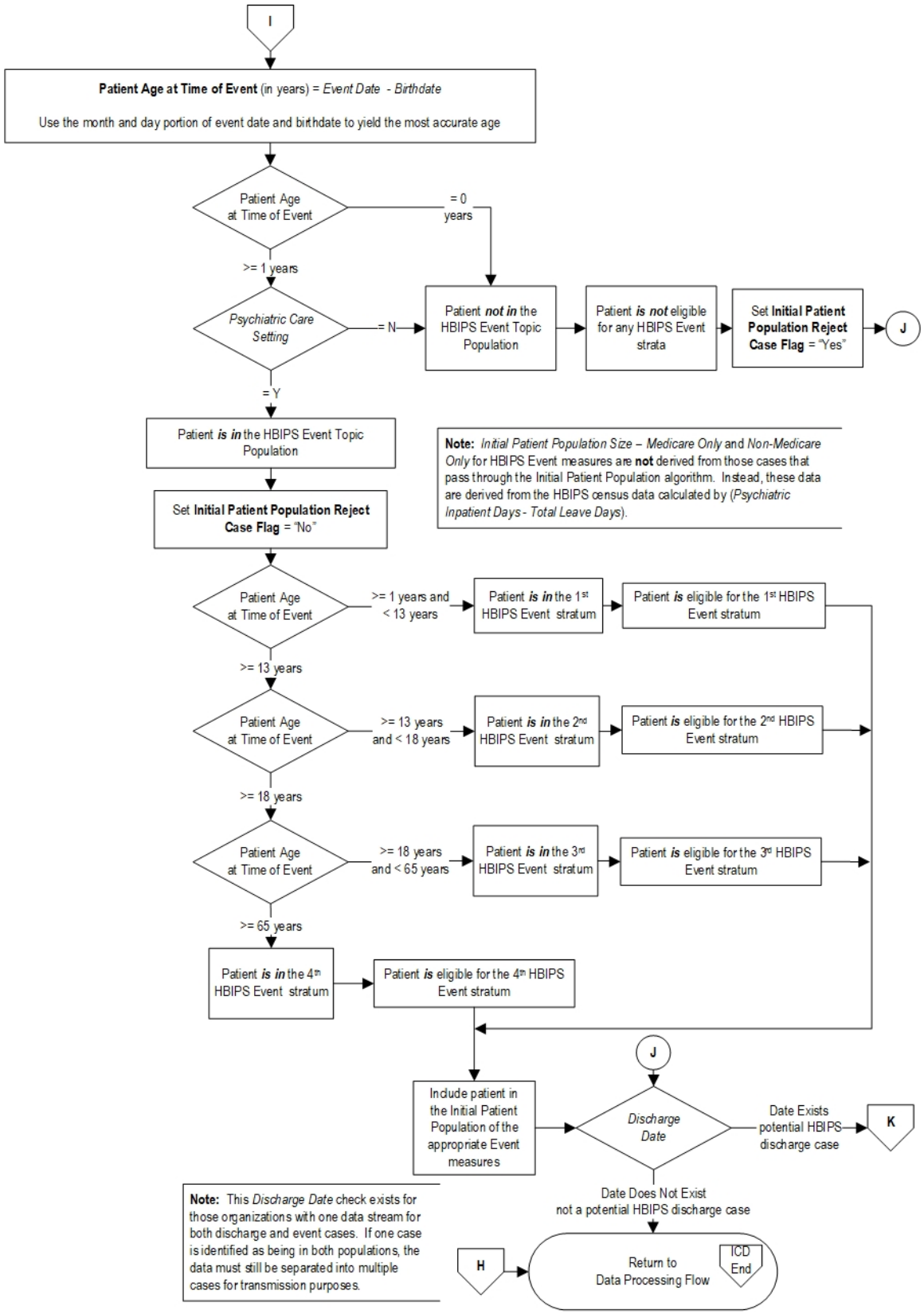

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Sample Size Requirements

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 submitted to the Joint Commission.

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"

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

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cific 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.

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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

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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:

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- American Psychiatric Association (2016). Practice Guidelines for the Psychiatric Evaluation of Adults. Third edition. Arlington (VA): American Psychiatric Association.
- 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.

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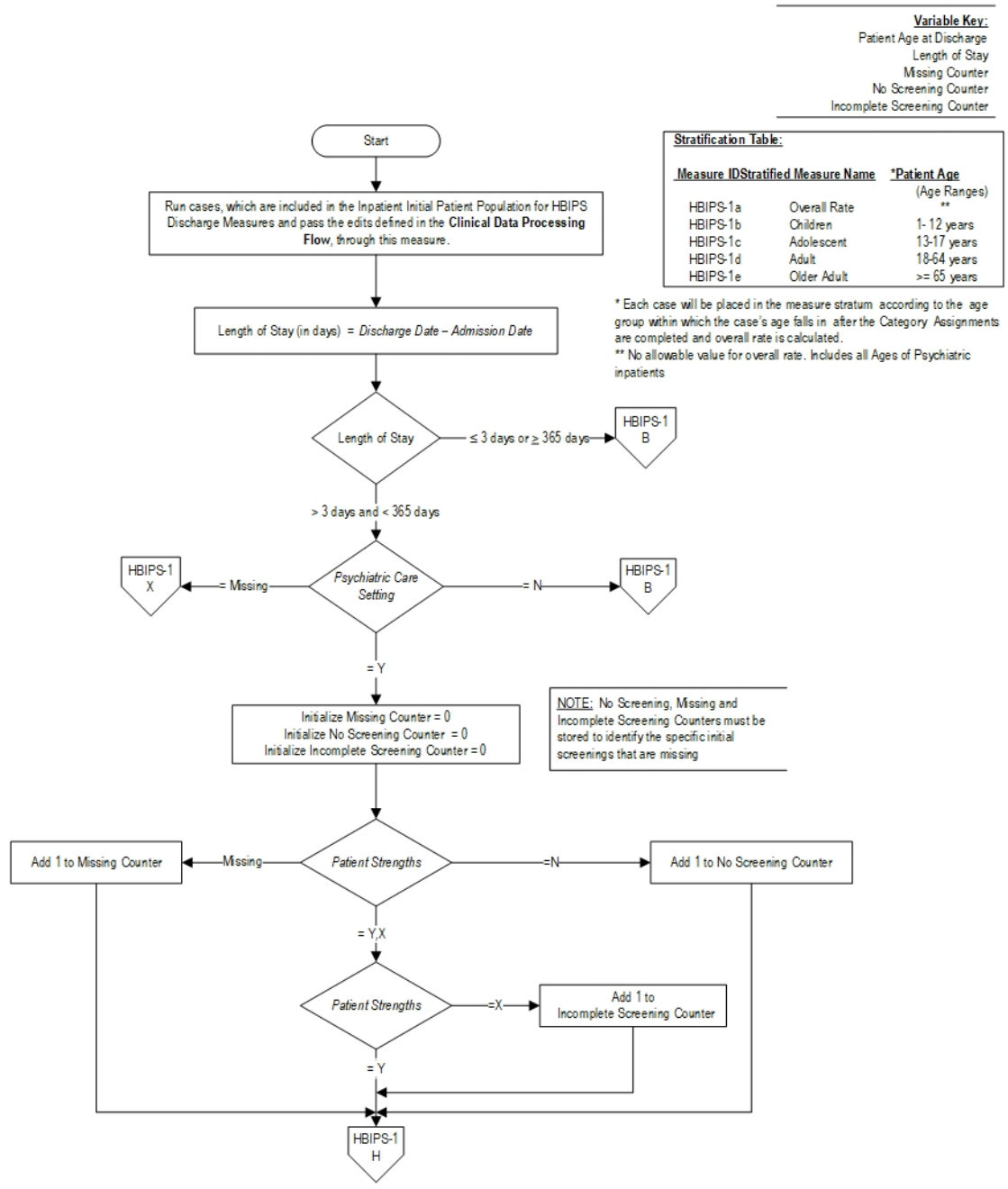
Measure Algorithm:

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.



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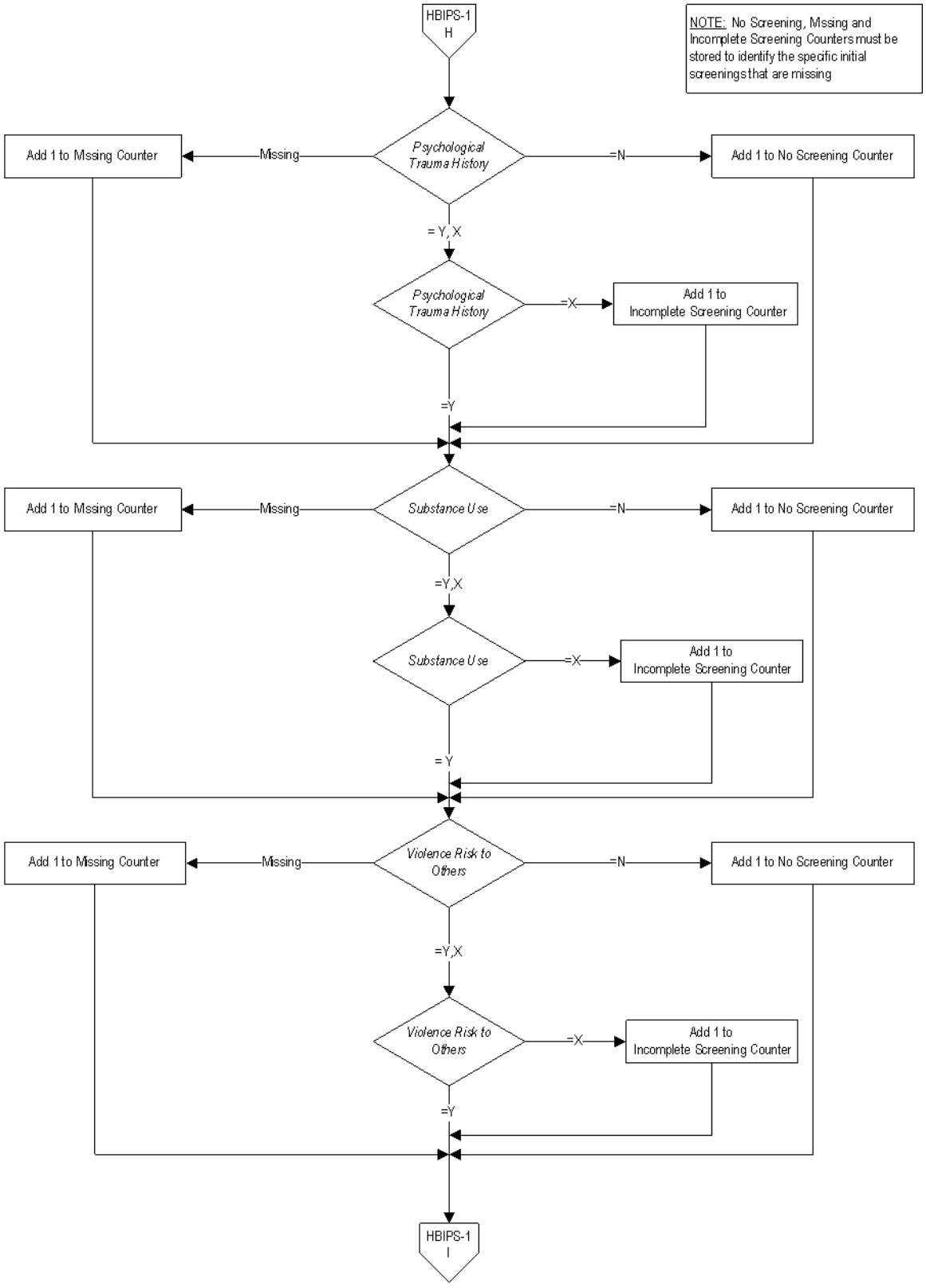

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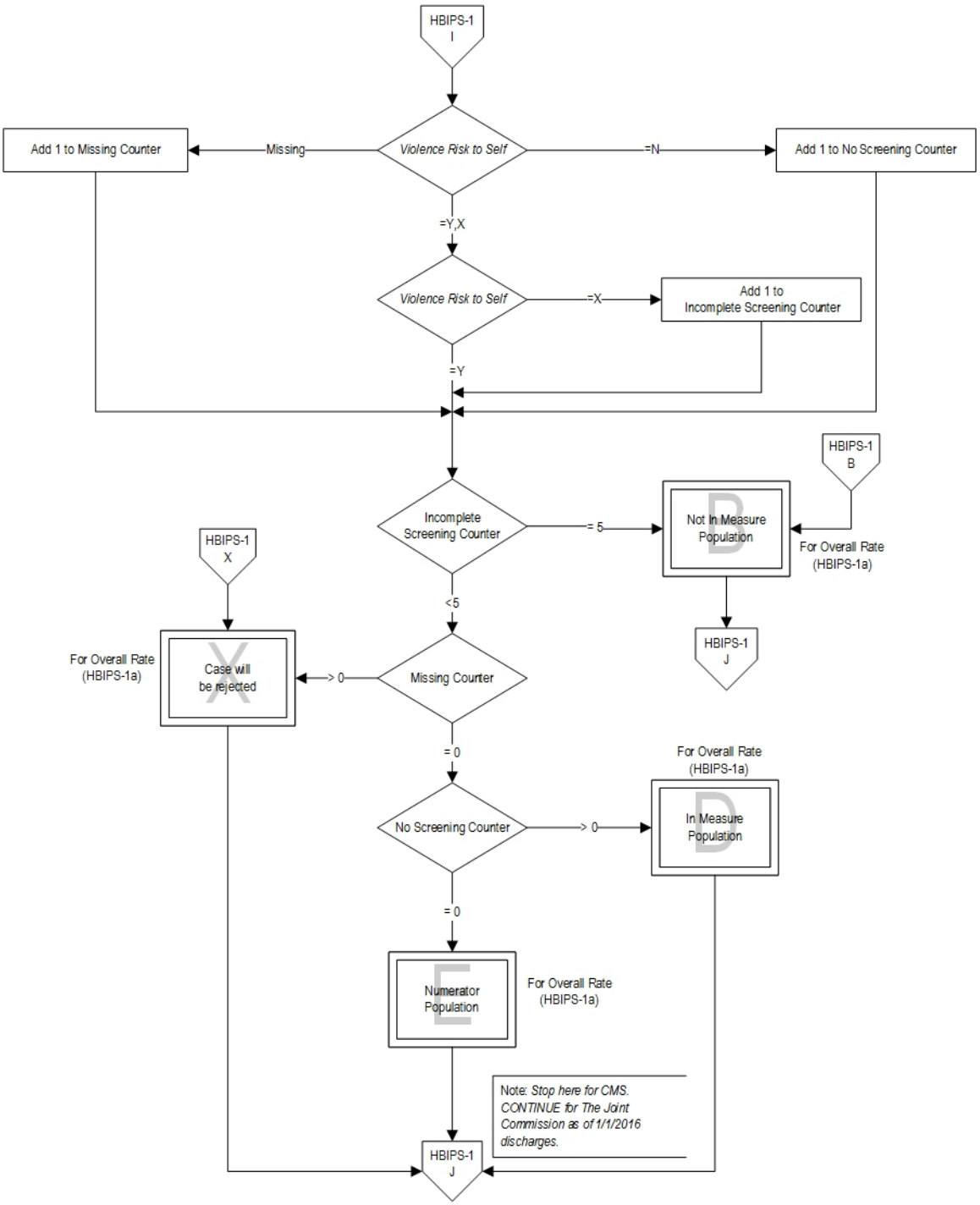

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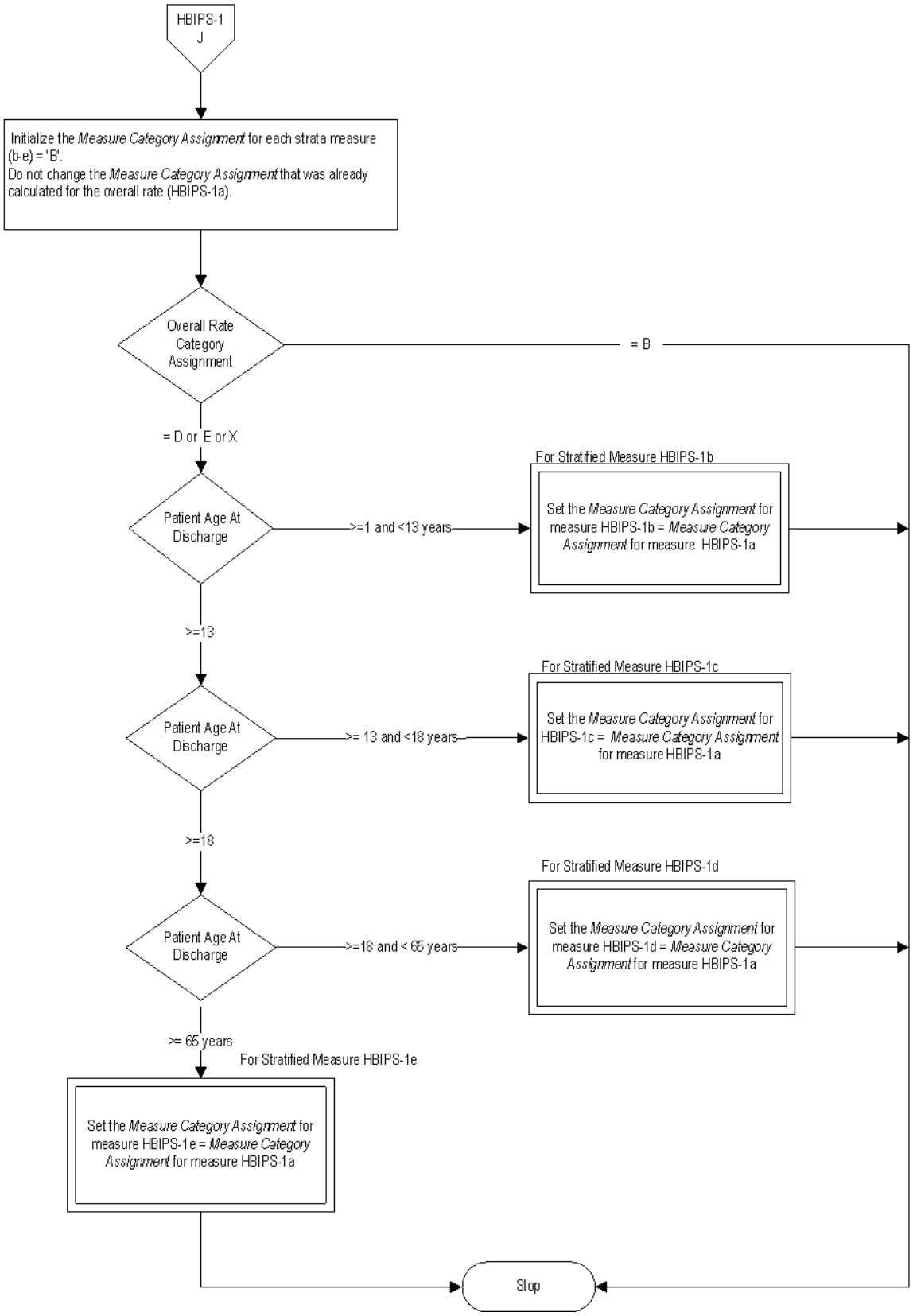

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****NQF-ENDORSED VOLUNTARY CONSENSUS STANDARDS FOR HOSPITAL CARE****

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

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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:

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- 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

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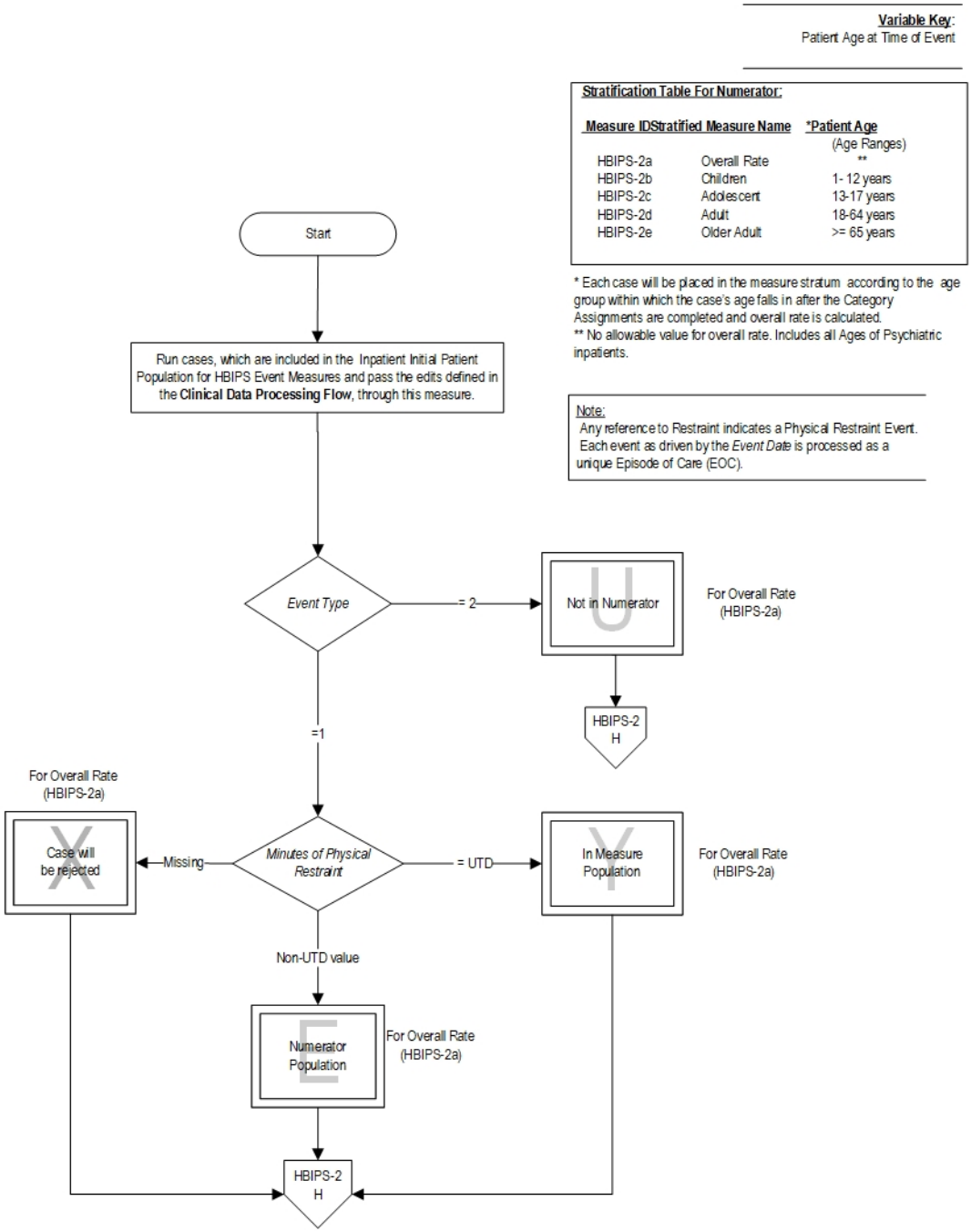
Measure Algorithm:

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



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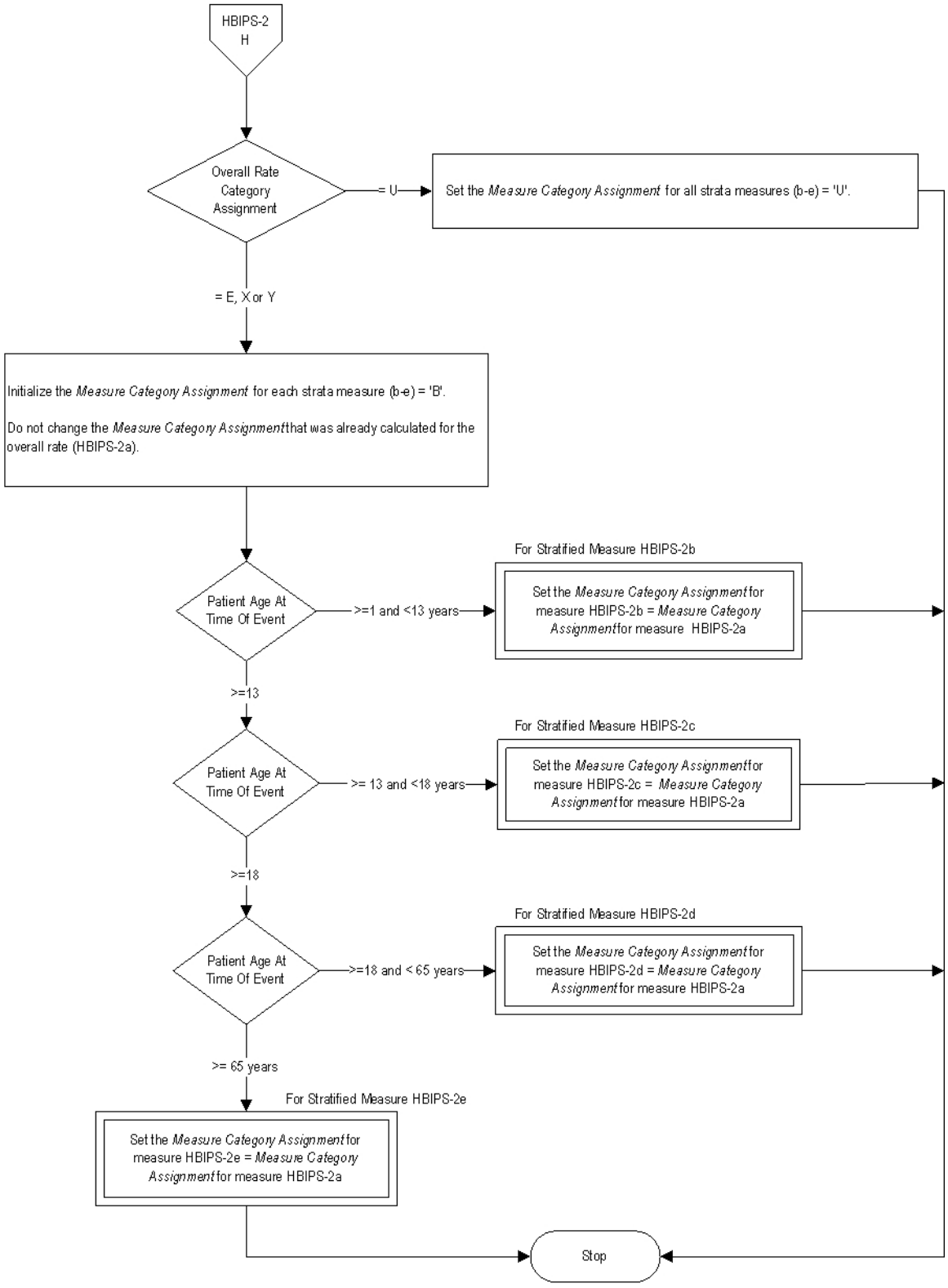

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Measure Calculation for Aggregated Denominator

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.

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NQF-ENDORSED VOLUNTARY CONSENSUS STANDARDS FOR HOSPITAL CARE

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

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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:

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- 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

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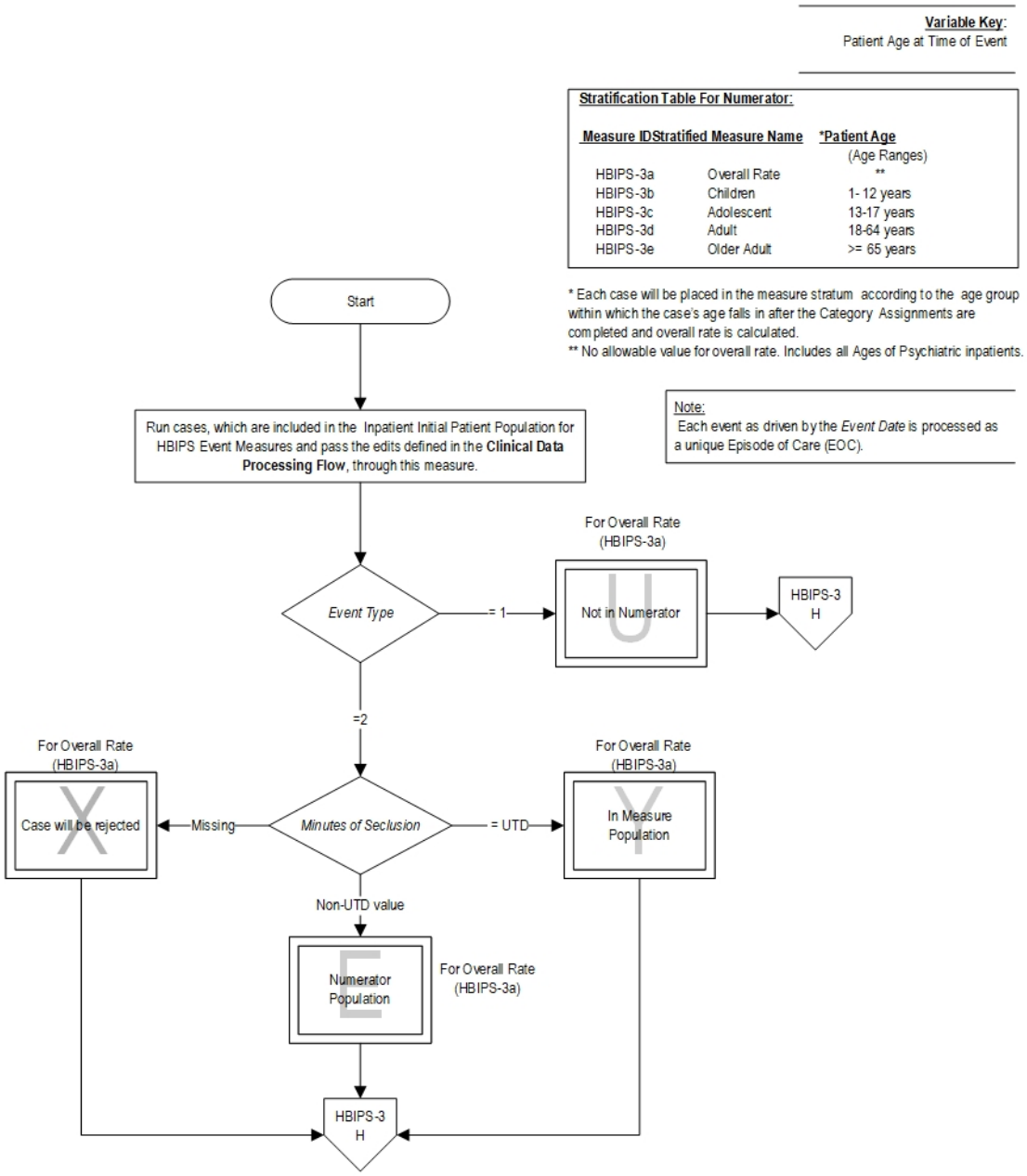
Measure Algorithm:

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



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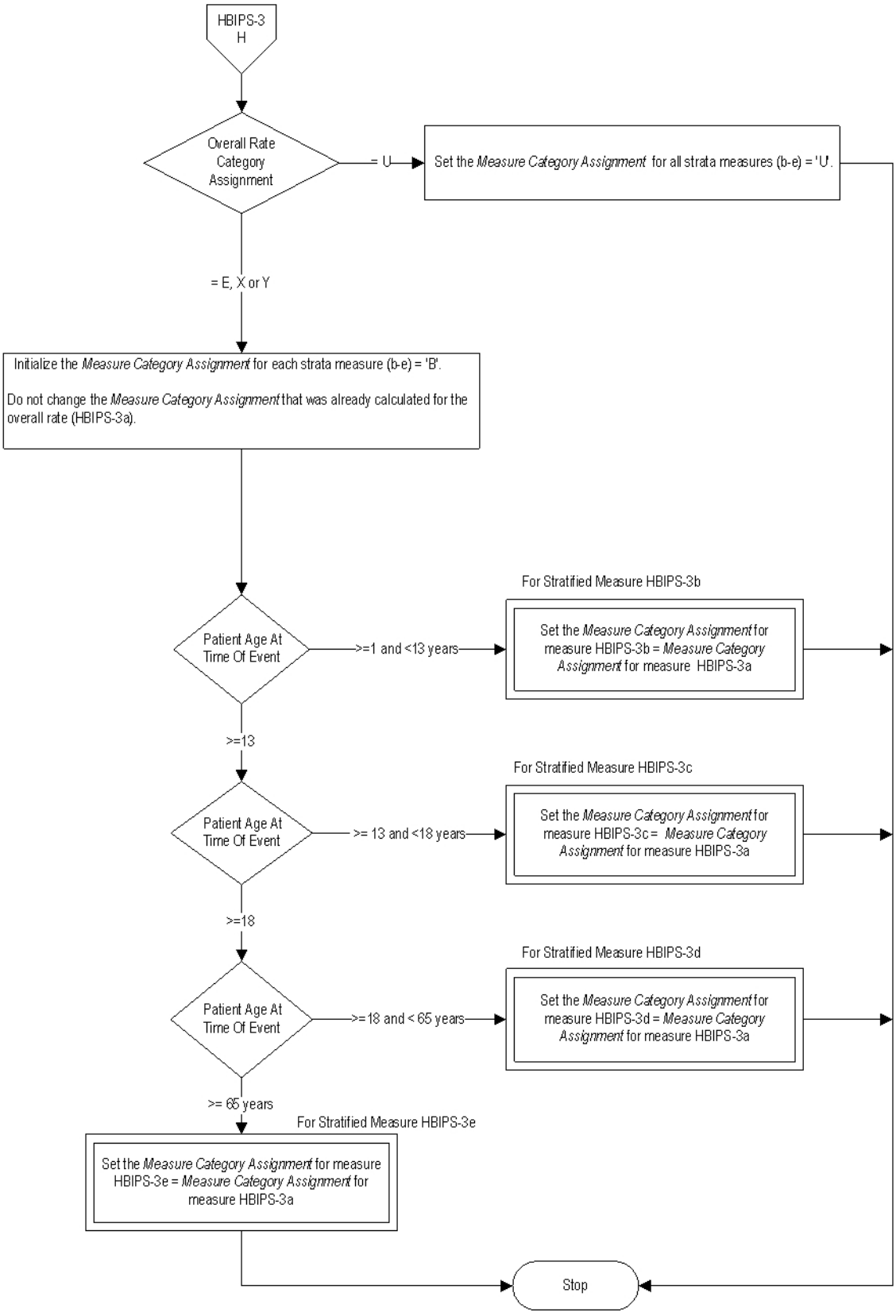

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Measure Calculation for Aggregated Denominator

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.

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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, Sal-

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vatore, 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*

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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

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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.

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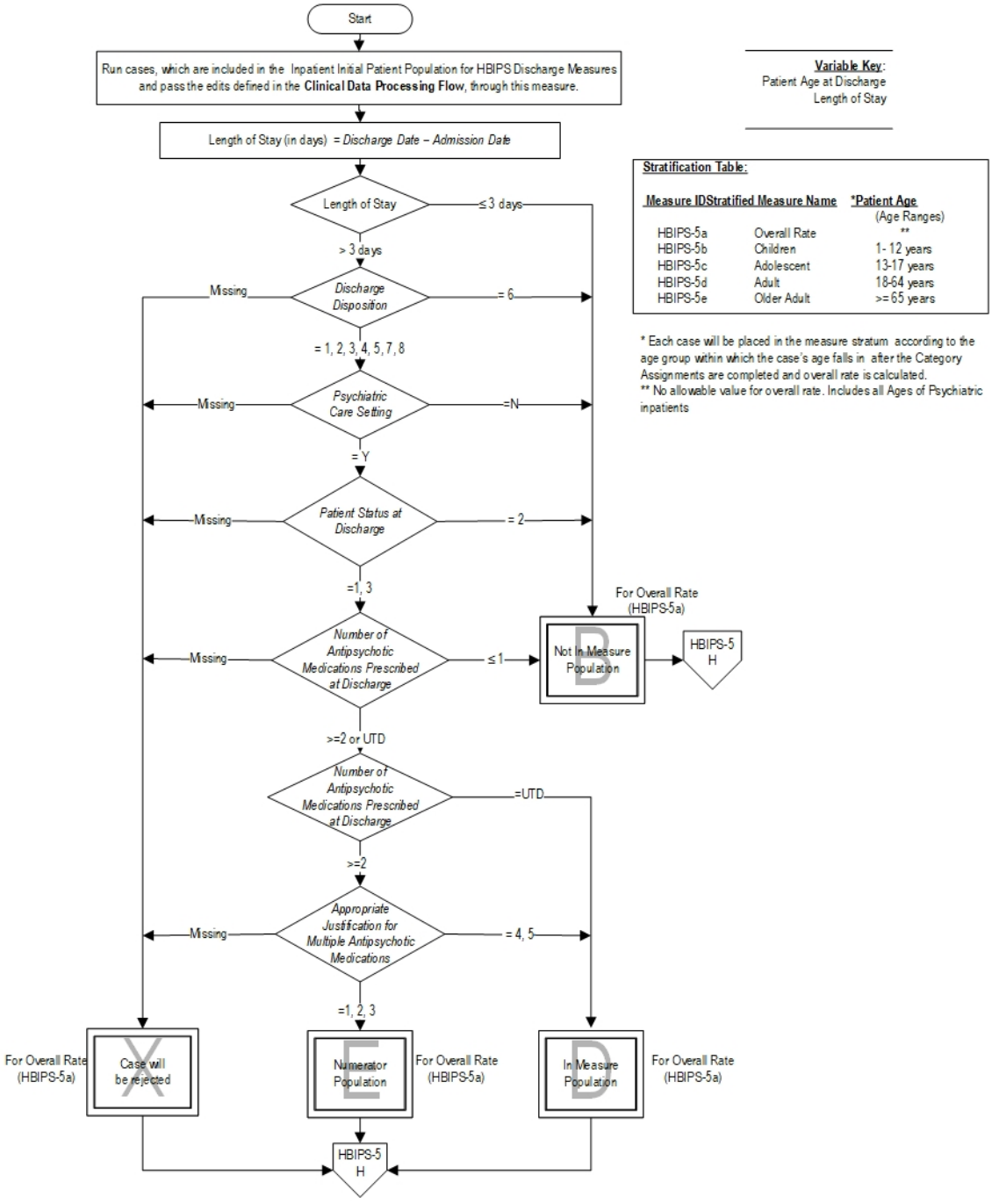
Measure Algorithm:

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 inpatients who are discharged on two or more routinely scheduled antipsychotic medications.



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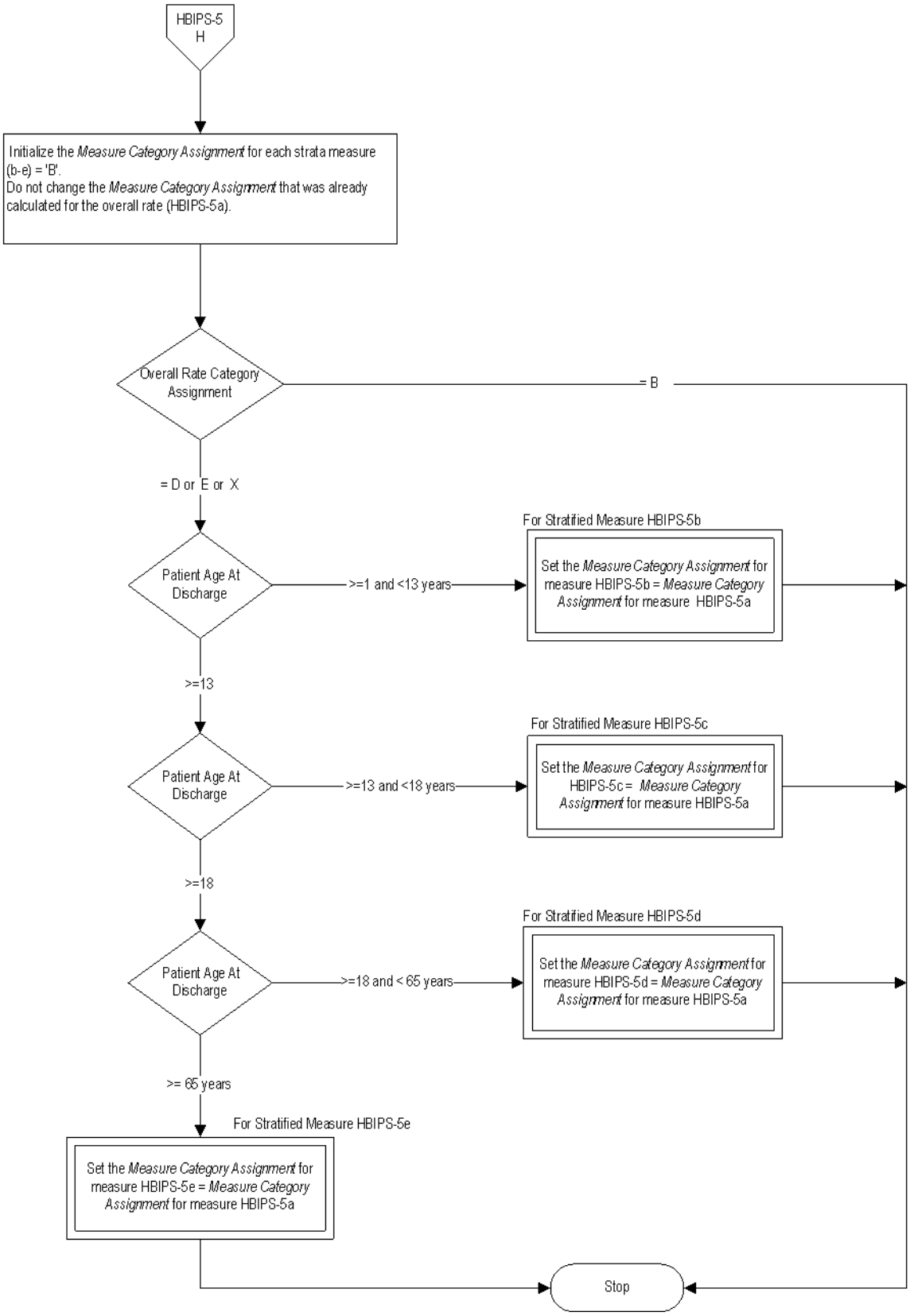

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Immunization (IMM)

Set Measures

Set Measure ID	Measure Short Name
IMM-2	Influenza Immunization

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 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, Used in calculation of the Joint Commission's aggregate data.
Payment Source	All Records, Optional for HBIPS-2 and HBIPS-3
Race	All Records,
Sex	All Records,

Algorithm Output Data Elements

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Element Name	Collected For
Measure Category Assignment	All Records, Calculation

Measure Set Specific Data Elements

Element Name	Collected For
Discharge Disposition	IMM-2
Influenza Vaccination Status	IMM-2

Related Materials

Document Name
Acknowledgement
Appendix A
Appendix C
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
Global Initial Patient Population
Introduction to the Manual
Joint Commission Clinical Data Processing Flow
Joint Commission National Quality Measures Data Processing
Missing and Invalid Data
Sampling
Table of Contents

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	Document Name	
	Using the The Joint Commission's National Measure Specifications Manual	

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Immunization (IMM) Initial Patient Population

Please refer to the GlobalInitialPatientPopulation for the Immunization Initial Patient Population Processing definition and Flow.

Sample Size Requirements

Please refer to the GlobalInitialPatientPopulation for the sampling requirements for the Immunization Measures.

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Measure Information Form

Measure Set: Immunization (IMM)

Set Measure ID: IMM-2

Performance Measure Name: Influenza Immunization

Description: This prevention measure addresses acute care hospitalized inpatients age 6 months and older who were screened for seasonal influenza immunization status and were vaccinated prior to discharge if indicated. The numerator captures two activities: screening and the intervention of vaccine administration when indicated. As a result, patients who had documented contraindications to the vaccine, patients who were offered and declined the vaccine and patients who received the vaccine during the current year's influenza season but prior to the current hospitalization are captured as numerator events.

Influenza (flu) is an acute, contagious, viral infection of the nose, throat and lungs (respiratory illness) caused by influenza viruses. Outbreaks of seasonal influenza occur annually during late autumn and winter months although the timing and severity of outbreaks can vary substantially from year to year and community to community. Influenza activity most often peaks in February, but can peak rarely as early as November and as late as April. In order to protect as many people as possible before influenza activity increases, most flu vaccine is administered in September through November, but vaccine is recommended to be administered throughout the influenza season as well. Because the flu vaccine usually first becomes available in September, health systems can usually meet public and patient needs for vaccination in advance of widespread influenza circulation.

Rationale: Up to 1 in 5 people in the United States get influenza every season (CDC, Key Facts 2015). Each year an average of approximately 226,000 people in the US are hospitalized with complications from influenza and between 3,000 and 49,000 die from the disease and its complications (Thompson 2003). Combined with pneumonia, influenza is the nation's 8th leading cause of death (Heron 2012). Up to two-thirds of all deaths attributable to pneumonia and influenza occur in the population of patients that have been hospitalized during flu season regardless of age (Fedson 2000). The Advisory Committee on Immunization Practices (ACIP) recommends seasonal influenza vaccination for all persons 6 months of age and older to highlight the importance of preventing influenza. Vaccination is associated with reductions in influenza among all age groups (Kostova 2013).

The influenza vaccination is the most effective method for preventing influenza virus infection and its potentially severe complications. Screening and vaccination of inpatients is recommended, but hospitalization is an underutilized opportunity to provide vaccination to persons 6 months of age or older.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Inpatient discharges who were screened for influenza vaccine status and were vaccinated prior to discharge if indicated.

> **Included Populations:**

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- Patients who received the influenza vaccine during this inpatient hospitalization
- Patients who received the influenza vaccine during the current year's flu season but prior to the current hospitalization
- Patients who were offered and declined the influenza vaccine
- Patients who have an allergy/sensitivity to the influenza vaccine,anaphylactic latex allergy or anaphylactic allergy to eggs, or for whom the vaccine is not likely to be effective because of bone marrow transplant within the past 6 months, or history of Guillian-Barre syndrome within 6 weeks after a previous influenza vaccination

Excluded Populations: None

Data Elements:

- *ICD-10-CM Other Diagnosis Codes*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Principal Procedure Code*
- *Influenza Vaccination Status*

Denominator Statement: Acute care hospitalized inpatients age 6 months and older discharged during October, November, December, January, February or March.

Included Populations: Inpatient discharges 6 months of age and older

Excluded Populations:

- Patients less than 6 months of age
- Patients who expire prior to hospital discharge
- Patients with an organ transplant during the current hospitalization(Appendix A, Table 12.10)
- Patients for whom vaccination was indicated, but supply had not been received by the hospital due to problems with vaccine production or distribution
- Patients who have a Length of Stay greater than 120 days
- Patients who are transferred or discharged to another acute care hospital
- Patients who leave Against Medical Advice (AMA)

Data Elements:

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

Risk Adjustment: No.

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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: Hospitals may wish to analyze the measure data by individual high risk populations, for example, diabetes, COPD, etc., in order to determine if all defined high risk populations are equally vaccinated or if there are opportunities to improve care to a specific population of patients.

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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- Centers for Disease Control and Prevention. (2015). Prevention and Control of Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices, United States, 2015–16 Influenza Season. MMWR,August 7, 2015; 64(30);818-825. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6430a3.htm
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- Mandell LA, Wunderink RG, Anzueta A, Bartlett JG, Infectious Diseases Society of America; American Thoracic Society. Infectious Diseases Society of America/American Thoracic Society consensus guidelines on the management of community-acquired pneumonia in adults. Clin Infect Dis. 2007 March 1;44 Suppl2:S27-72.
- Nichol KL, Nordin J, Mullooly J, et al. Influenza Vaccination and Reduction in Hospitalizations for Cardiac Disease and Stroke among the Elderly. N Engl JMed. 2003;348:1322-1332.
- Reed C, Chaves SS, Daily Kirley P, Emerson R, Aragon D, Hancock EB, et al.(2015). Estimating Influenza Disease Burden from Population-Based Surveillance Data in the United States. PLoS ONE 10(3): e0118369
- Thompson WW, Shay DK, Weintraub E, Brammer L, Cox N, Anderson LJ,Fukuda. Mortality associated with influenza and respiratory syncytial virus in the United States. JAMA. 2003 January 8; 289 (2): 179-186.

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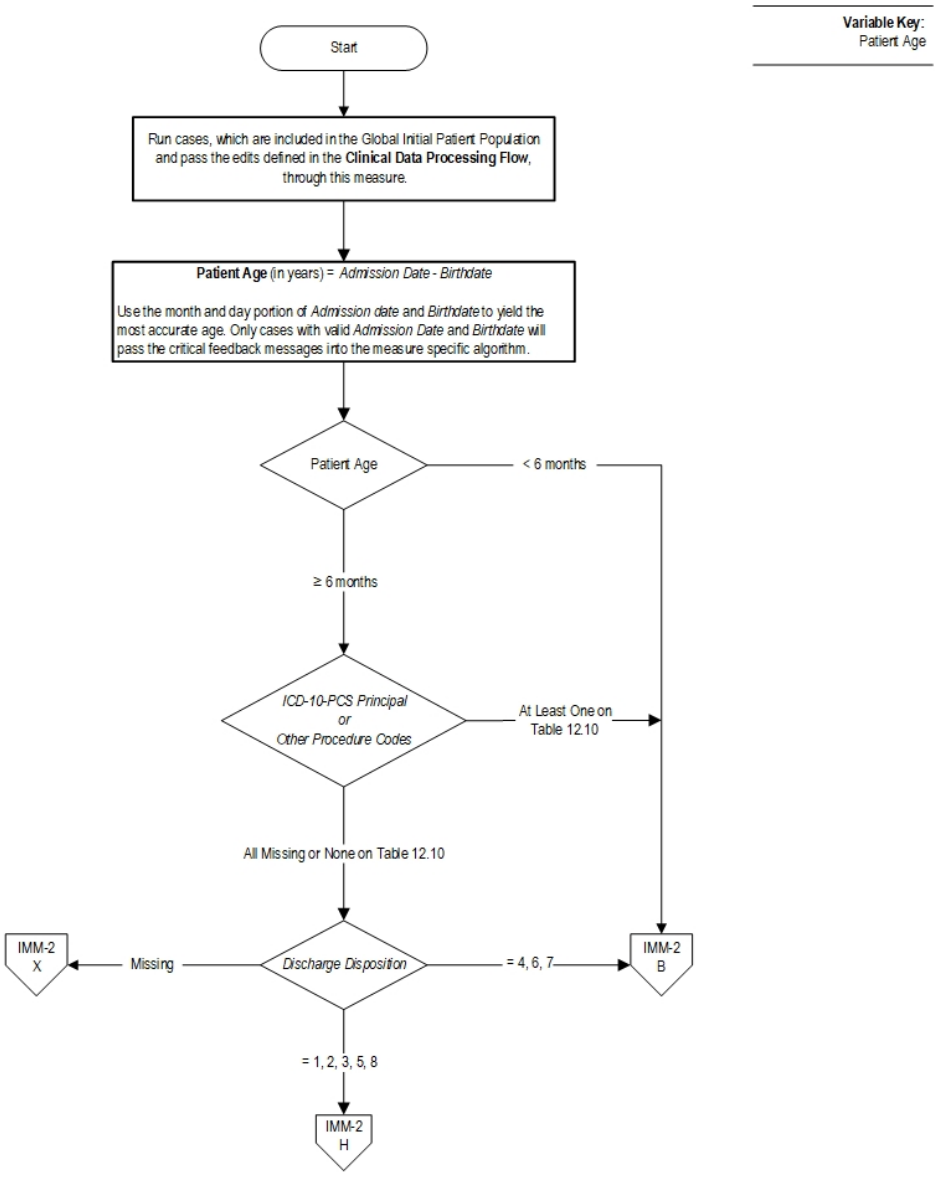
Measure Algorithm:

IMM-2: Influenza Immunization

Numerator Statement: Inpatient discharges who were screened for Influenza vaccine status and were vaccinated prior to discharge if indicated.

Denominator Statement: Acute care hospitalized inpatients age 6 months and older discharged during October, November, December, January, February or March.



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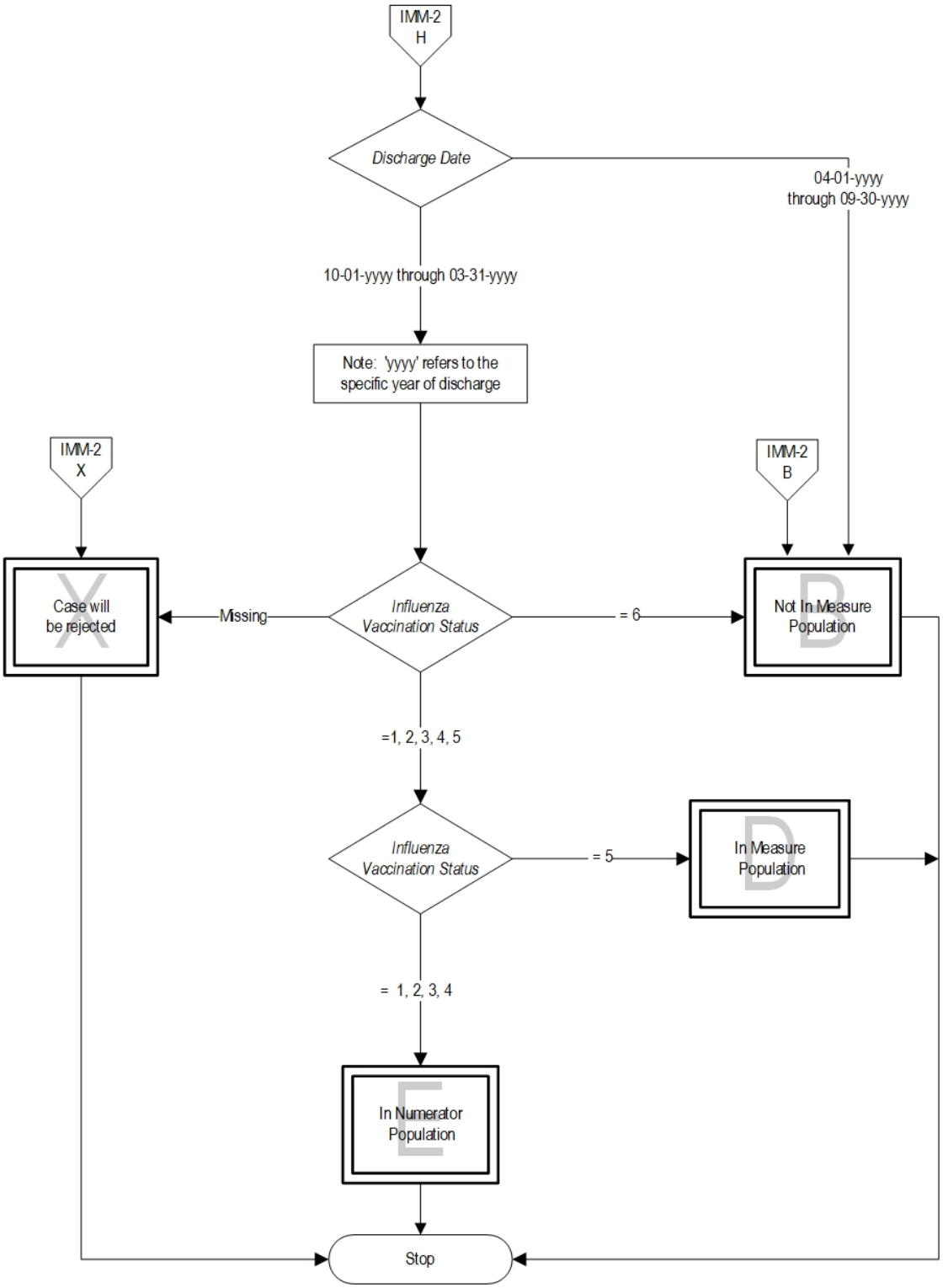

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Perinatal Care (PC)

Set Measures

Set Measure ID	Measure Short Name
PC-01	Elective Delivery
PC-02	Cesarean Birth
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
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, Used in calculation of the Joint Commission's aggregate data.
Payment Source	All Records, Optional for HBIPS-2 and HBIPS-3
Race	All Records,

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Element Name	Collected For
Sex	All Records,

Algorithm Output Data Elements

Element Name	Collected For
Measure Category Assignment	All Records, Calculation

Measure Set Specific Data Elements

Element Name	Collected For
Admission to NICU	PC-05
Birth Weight	PC-06
Discharge Disposition	PC-05, PC-06
Exclusive Breast Milk Feeding	PC-05
Gestational Age	PC-01, PC-02
History of Stillbirth	PC-01
Labor	PC-01
Previous Live Births	PC-02
Prior Uterine Surgery	PC-01
Term Newborn	PC-05, PC-06

Related Materials

	Document Name	
	Acknowledgement	
	Appendix A	
	Appendix C	

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	Document Name	
	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	
	Joint Commission National Quality Measures Data Processing	
	Missing and Invalid Data	
	Table of Contents	
	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, and 02) 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 Delivery, 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.

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Newborns
The population of the PC-Newborn measures (PC-05, PC-06) are identified using 4 data elements:

- *Admission Date*
- *Birthdate*
- *Discharge Date*
- *ICD-10-CM Principal or Other Diagnosis Code*

Patients admitted to the hospital for inpatient acute care are included in the PC Newborn Initial population if they have: A Patient Age (Admission Date — Birthdate) <= 1 day and ICD-10-CM Principal or Other Diagnosis Codes as defined in Appendix A, Table 11.20.1 Single Liveborn Newborn

Within the PC-Newborn population, there are two baby measures, Exclusive Breast Milk Feeding and Unexpected Complications in Term Newborns. The patients in each measure are processed independently. Patients in the newborn population always run against the Unexpected Complication in Term Newborns measure and they may run against Exclusive Breast Milk Feeding measure if sampled.

Measures	Initial Patient Population definition
PC-05, 06	The count of all patients in PC-Newborn population

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.

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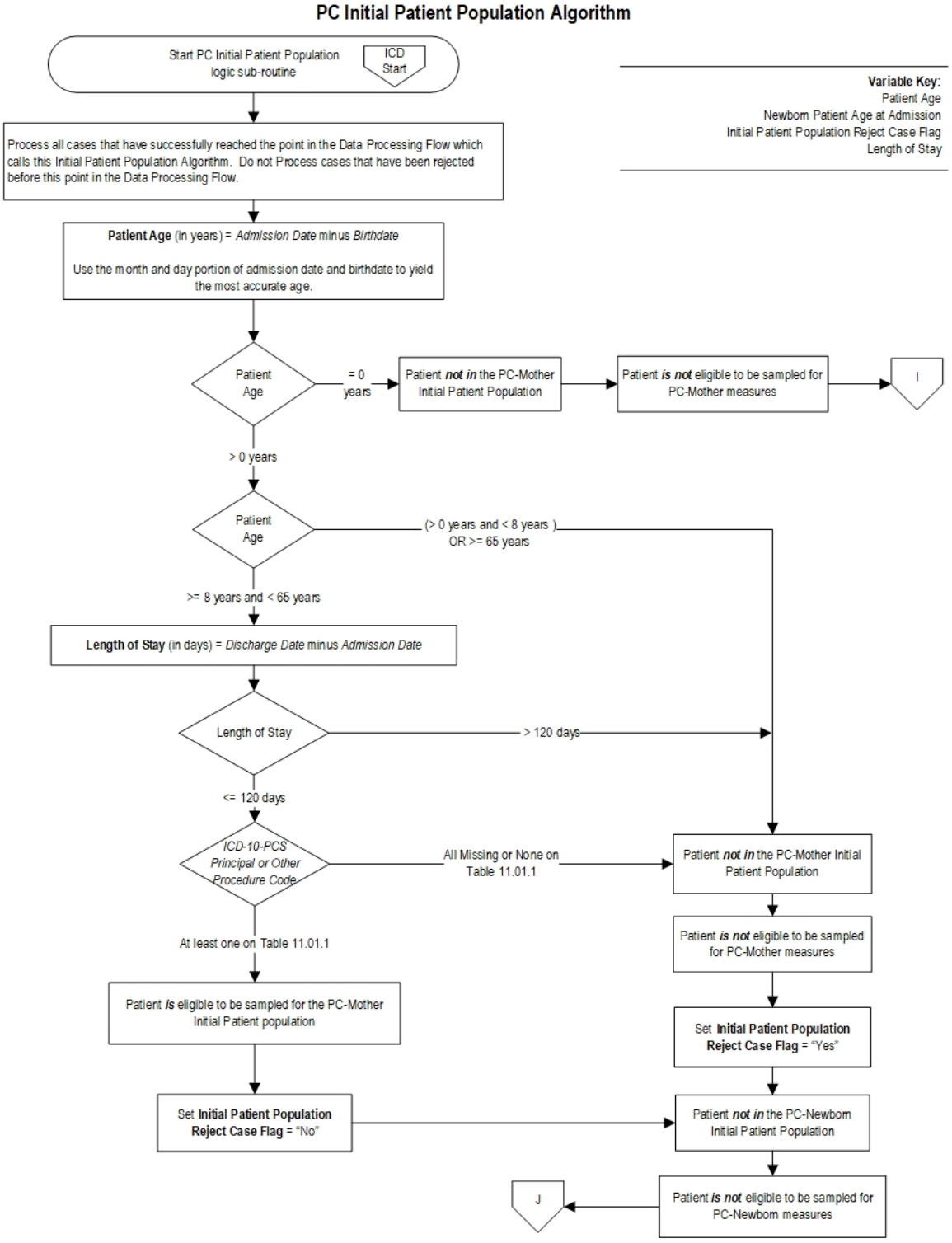
Initial Patient Population Algorithm



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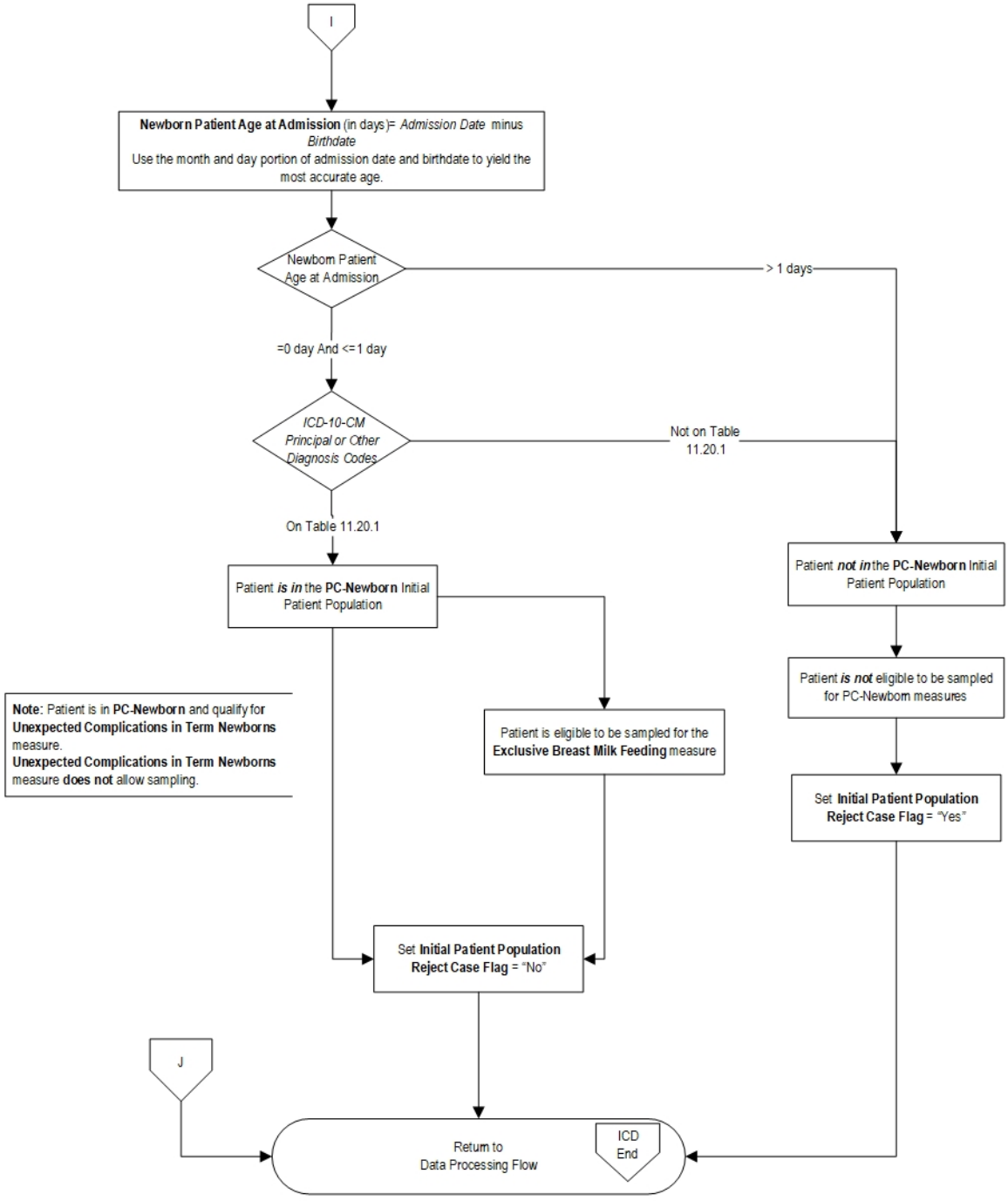

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Sample Size Requirements

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.

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 condition:

- *Select within the two individual measure sampling groups (mothers and babies).*

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
< 75	No sampling; 100% of the Initial Patient Population required

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Within the **PC-Newborn** population, there are two baby measures Exclusive Breast Milk Feeding and Unexpected Complications in Term Newborns. All patients in this population must run against Unexpected Complications in Term Newborns measure. However, they may run against Exclusive Breast Milk Feeding measure if the patient is sampled for Exclusive Breast Milk Feeding.

- Hospitals selecting cases for the PC-Newborn with **Exclusive Breast Milk Feeding** must ensure that the patient population size for this measure meets the following conditions:

Quarterly Sample Size
Based on PC-Newborn Initial Patient Population to use for Exclusive Breast Milk Feeding

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
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 two baby measures, Exclusive Breast Milk Feeding and Unexpected Complications in Term Newborns. All patients in this population must run against Unexpected Complications

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in Term Newborns measure. However, they may run against Exclusive Breast Milk Feeding measure if the patient is sampled for Exclusive Breast Milk Feeding measure.

- Hospitals sampling for the PC-Newborn with Exclusive Breast Milk Feeding must ensure that the patient population size for this subpopulation meets the following conditions:

Monthly Sample Size
Based on Initial Patient Population for Exclusive Breast Milk 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.

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.

PC-Newborn sampled for Exclusive Breast Milk Feeding

- A hospital's PC-Newborn Population size is 600 cases during the second quarter. Using the quarterly sampling table for the Exclusive Breast Milk Feeding measure, the sample size required is 109 cases.
- A hospital's PC-Newborn Population size is 350 cases during the second quarter. Using the quarterly sampling table for for the Exclusive Breast Milk Feeding measure, the sample size required is 20% of this

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sub-population or 70 cases for the quarter .
- A hospital's PC-Newborn Population size is 99 cases during the second quarter. Using the quarterly sampling table for the Exclusive Breast Milk Feeding measure, the sample size required 27 cases for the quarter.
- A hospital's PC-Newborn Population size is 25 cases during the second quarter. Using the quarterly sampling table for the Exclusive Breast Milk Feeding measure, the sample size is less than the minimum required quarterly sample size, so 100% of this sub-population or all 25 cases are sampled.

PC-Newborn with Unexpected Complications In Term Newborns
The PC-Newborn with Unexpected Complications in Term Newborns population *is not eligible* for sampling. Report the entire PC-Newborn Population.

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.

PC-Newborn sampled for Exclusive Breast Milk Feeding

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

PC-Newborn for with Unexpected Complications in Term Newborns
The PC-Newborn with Unexpected Complications in Term Newborns measure is not eligible for sampling. Report the entire PC-Newborn Population.

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****NQF-ENDORSED VOLUNTARY CONSENSUS STANDARDS FOR HOSPITAL CARE****

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. Interventions that decrease the chance of a cesarean delivery include avoiding non–medically indicated induction of labor prior to 39 weeks gestation (Quinlan and Murphy, 2015). 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 Medical Induction of Labor while not in *Labor* prior to the procedure
> - Cesarean birth as defined in Appendix A, Table 11.06 Cesarean Birth and all of the following:
>   - not in *Labor*
>   - no history of a *Prior Uterine Surgery*
>
> **Excluded Populations:** None
>
> **Data Elements:**

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- *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 Delivery

- *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 Planned Cesarean Birth in Labor

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 Conditions Possibly Justifying Elective Delivery
- 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 pat-

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terns 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 College of Obstetricians and Gynecologists. (November 1996). ACOG Educational Bulletin.
- Borders, E.B., Birsner, M.L., Gyanmfi-Bannerbaum, C. (2019). Avoidance of nonmedically indicated early-term deliveries and associated neonatal morbidities. American College of Obstetricians and Gynecologists Committee Opinion, 133:2, e156-163.
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- Quinlan, J. D., & Murphy, N. J. (2015). Cesarean delivery: counseling issues and complication management. American family physician, 91(3), 178–184.

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

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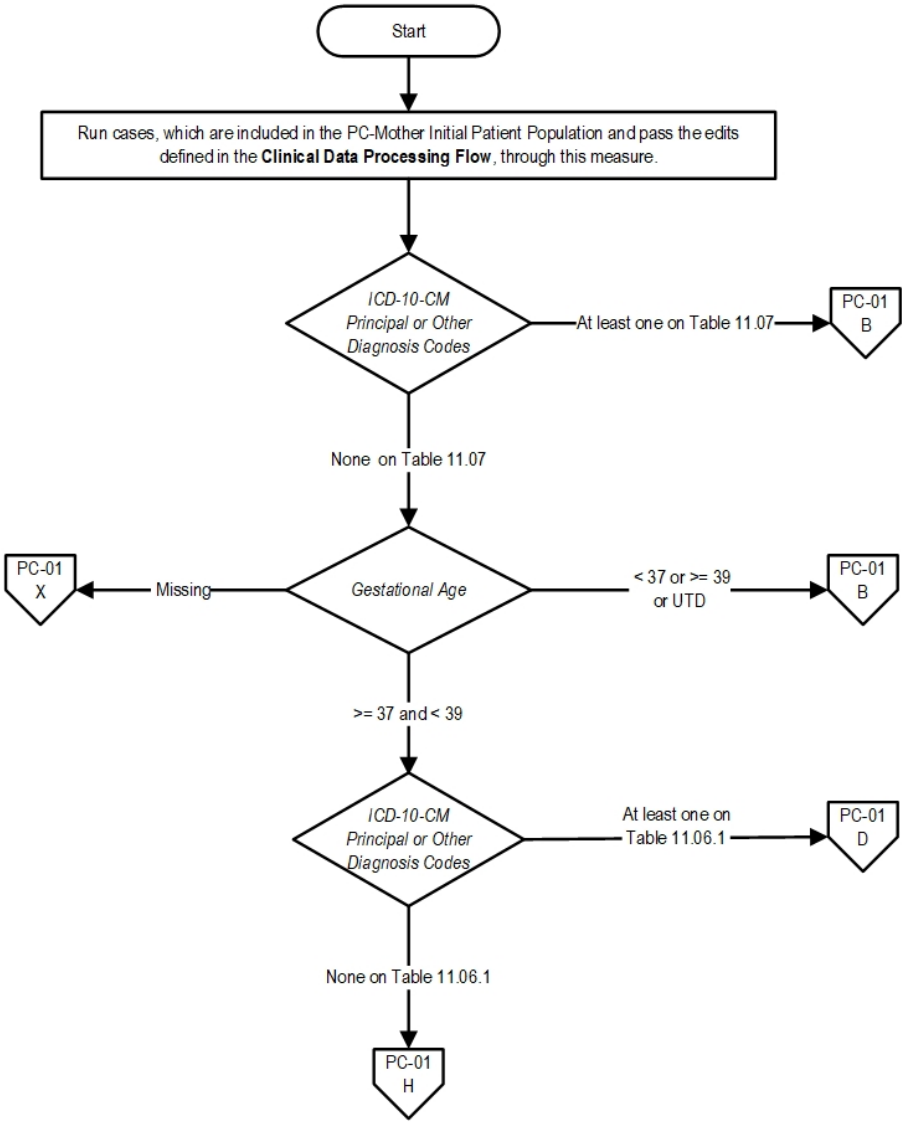
Measure Algorithm:

PC-01: Elective Delivery

Numerator: Patients with elective deliveries

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



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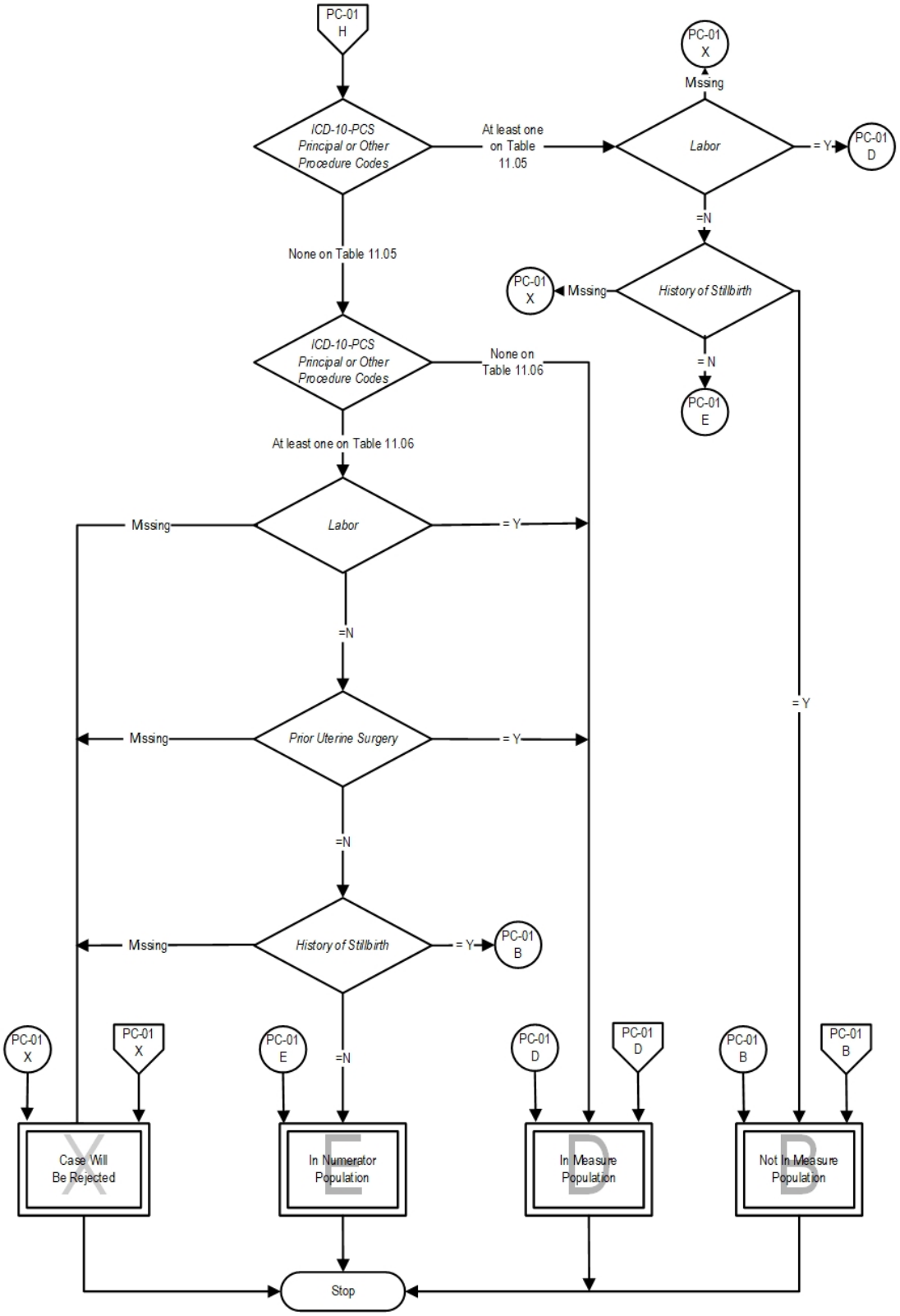

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NQF-ENDORSED VOLUNTARY CONSENSUS STANDARDS FOR HOSPITAL CARE

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 Cesarean Birth
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *ICD-10-PCS Other Procedure Codes*

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- *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 Delivery
- 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 Outcome of Delivery 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 Multiple Gestations and Other Presentations
- 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.

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

Selected References:

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

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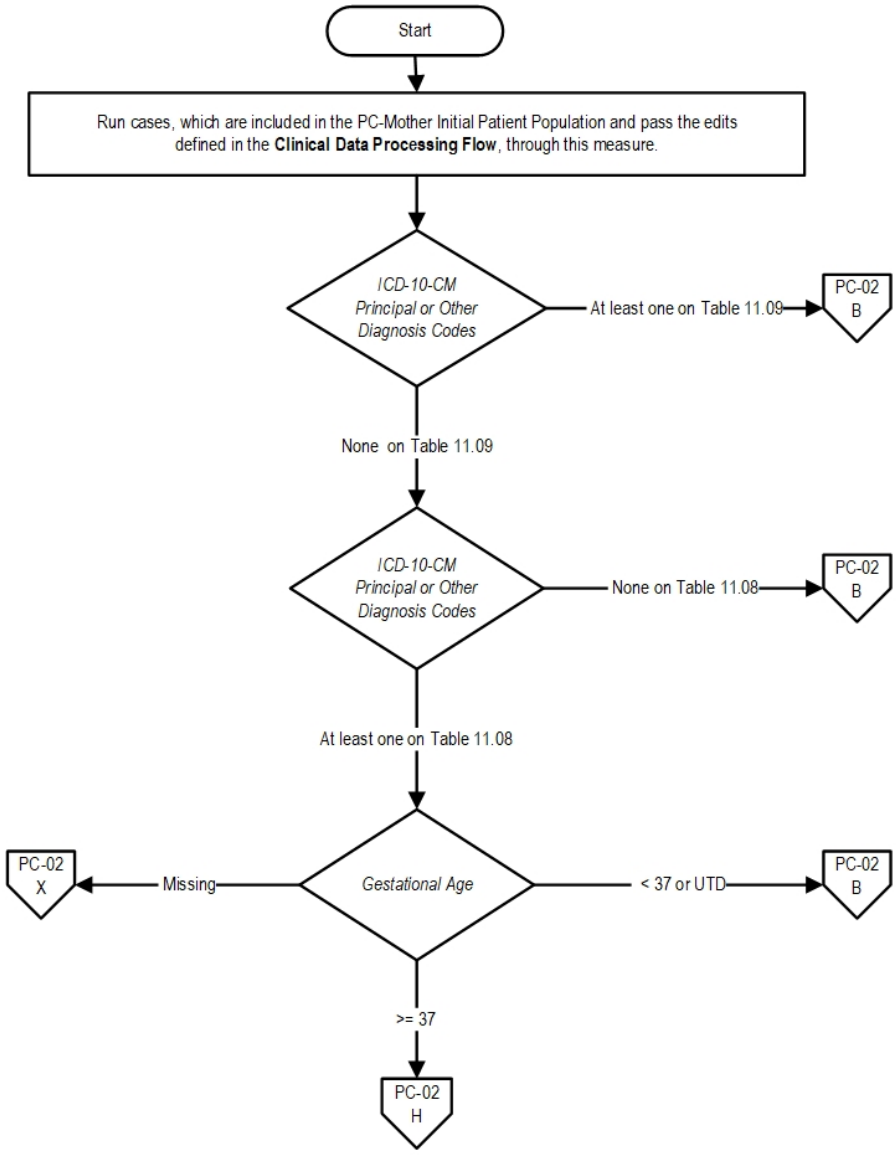
Measure Algorithm:

PC-02: Cesarean Birth

Numerator: Patients with cesarean births

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



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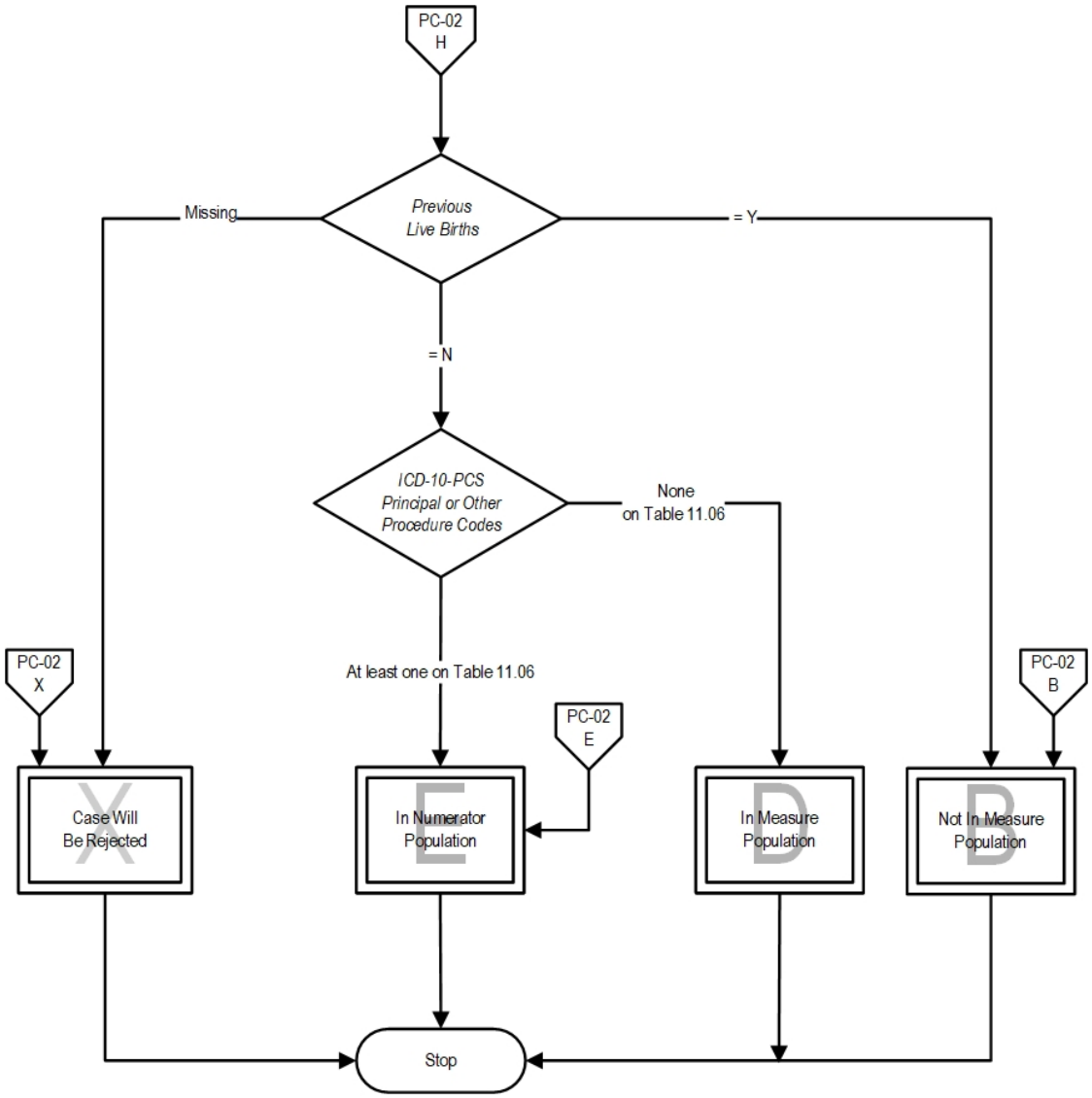

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NQF-ENDORSED VOLUNTARY CONSENSUS STANDARDS FOR HOSPITAL CARE

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, 2018). A Cochrane review substantiates the benefits (Kramer et al., 2012). 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], 2020; CDC, 2013; Petrova et al., 2007; 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 2020 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 Single Liveborn Newborn
>
> **Excluded Populations:**

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- 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 Galactosemia
- *ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes* for parenteral nutrition as defined in Appendix A, Table 11.22 Parenteral Nutrition
- 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:

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

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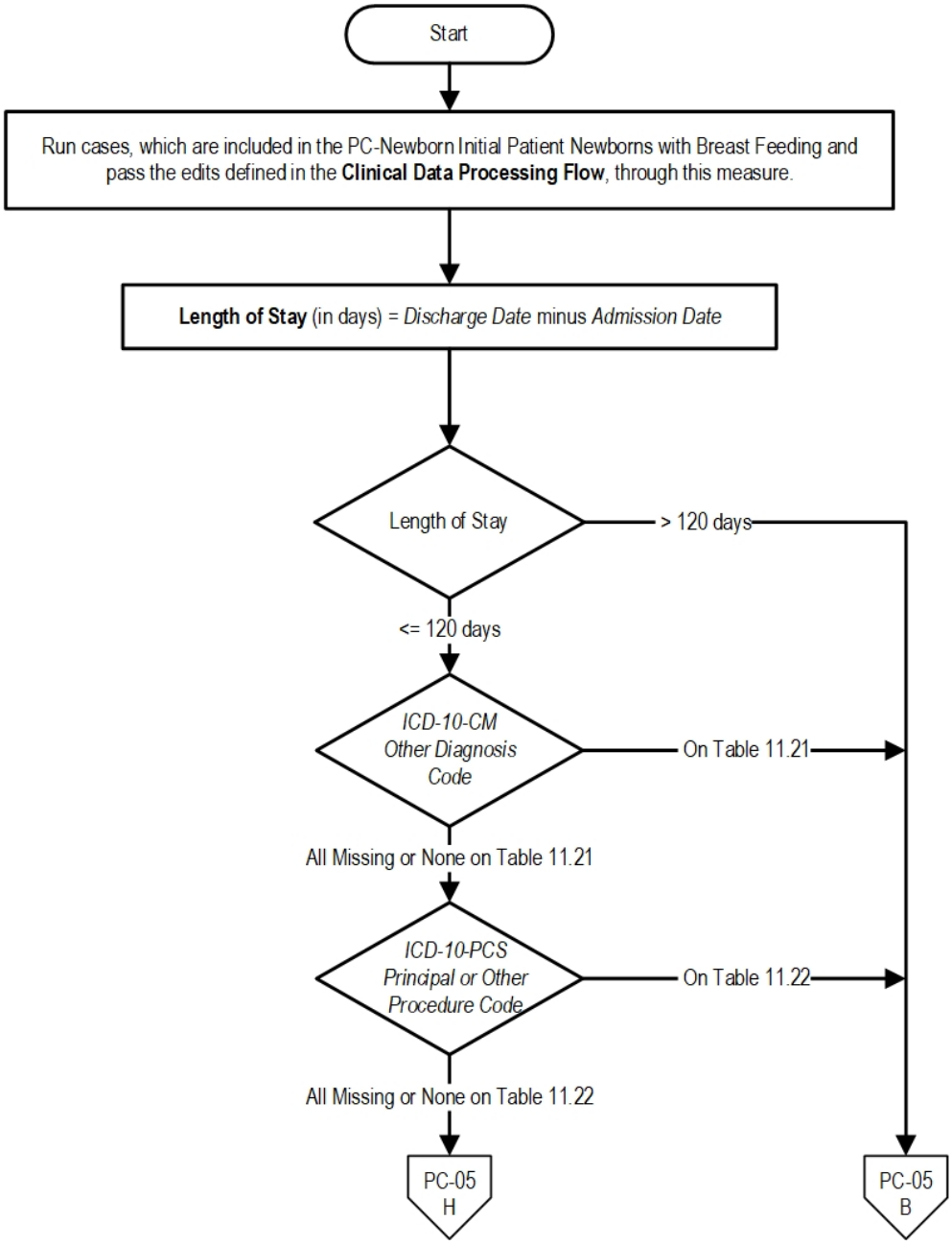
Measure Algorithm:

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



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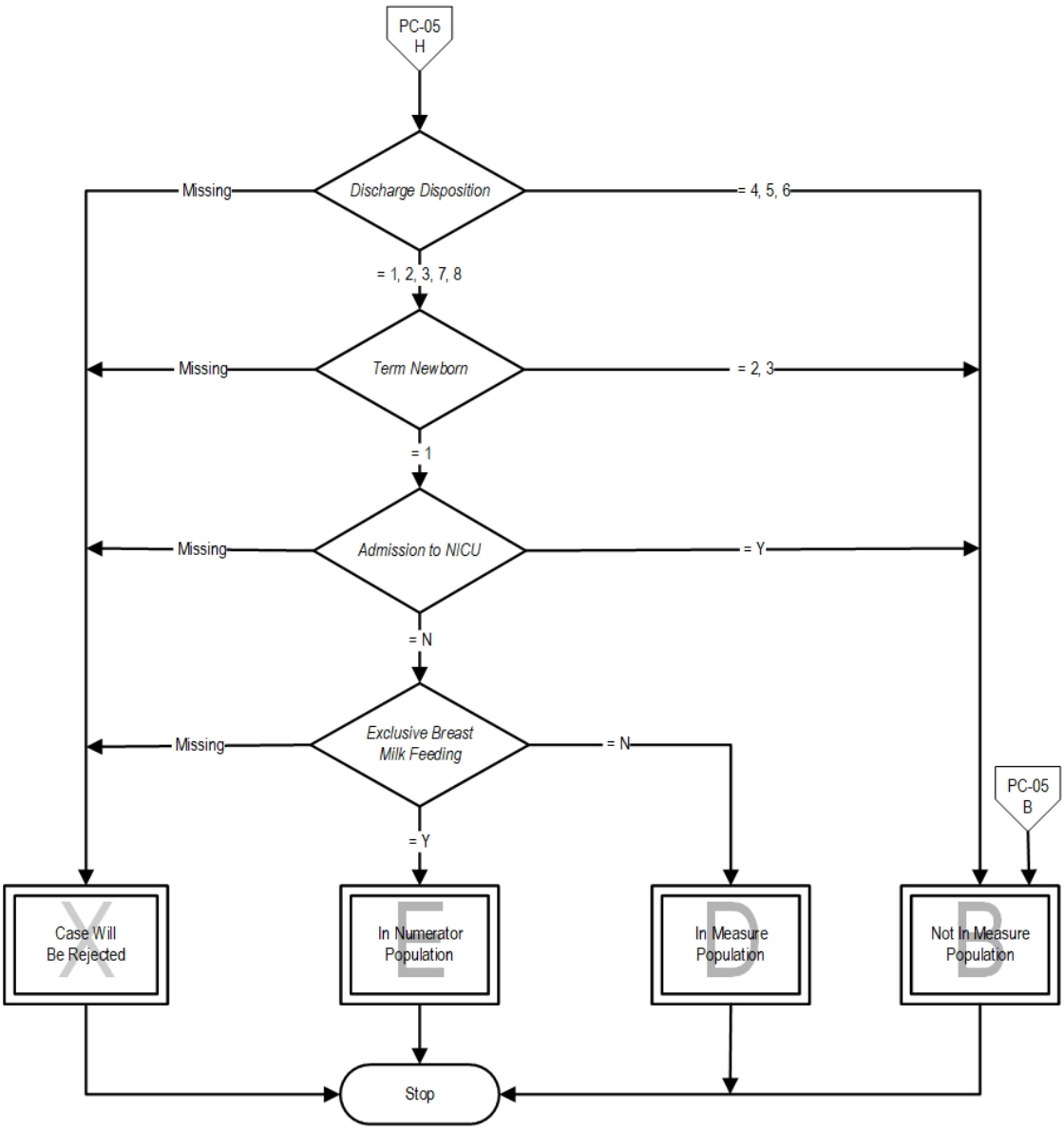

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****NQF-ENDORSED VOLUNTARY CONSENSUS STANDARDS FOR HOSPITAL CARE****

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: Unexpected 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. This measure also uses length of stay (LOS) modifiers to guard against overcoding and undercoding of diagnoses. 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:
PC-06.0 Newborns with severe complications and moderate complications.

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PC-06.1 Newborns with severe complications.
PC-06.2 Newborns with moderate complications.

Included Populations:
Severe Complications:

- Death
- Transfer to another acute care facility for higher level of care
- *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

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    - 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 2500 gm or over 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
- *Birth Weight* < 2500 gm
- Patients who are not term or with < 37 weeks gestation completed
- Patients whose term status or gestational age is missing and birthweight < 3000 gm
- *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*

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- *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.
Note:
All 3 sub-measures will have the same Final Denominator.
Final Denominator = Number of patients in Overall Numerator (PC-06.0=category E) + Number of cases in Overall Denominator (PC-06.0= category of D)

Rate Calculation:
PC-06.0: Overall rate = ((Number of patients with Severe Complications + Number of patients with Moderate Complications) / Final Denominator) * 1000
PC-06.1: Severe rate = (Number of patients with Severe Complications / Final Denominator) * 1000
PC-06.2: Moderate rate = (Number of patients with Moderate Complications / Final Denominator) * 1000

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

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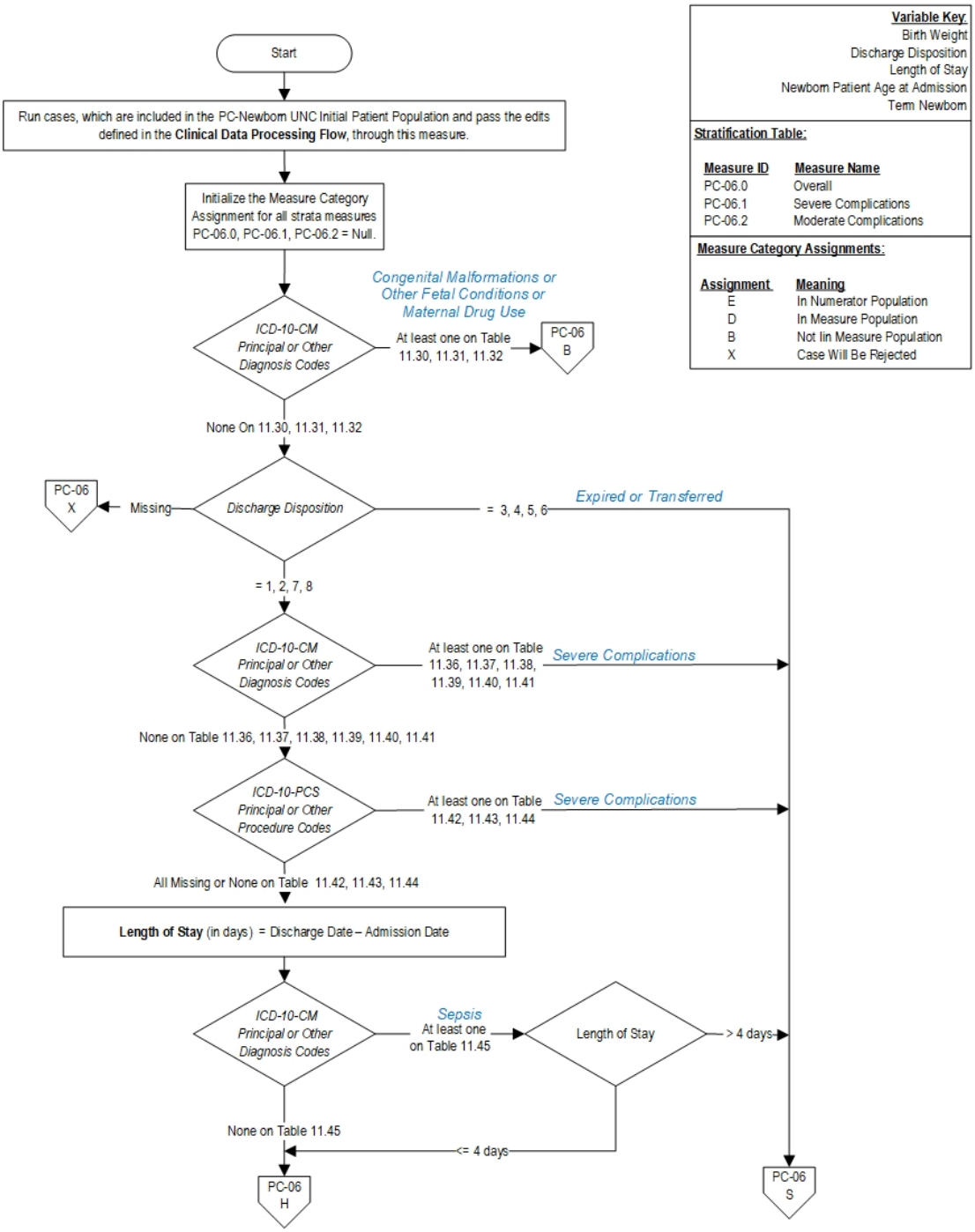
Measure Algorithm:

PC-06: Unexpected Complications in Term Newborns

Numerator: Newborns with severe complications and moderate complications.

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



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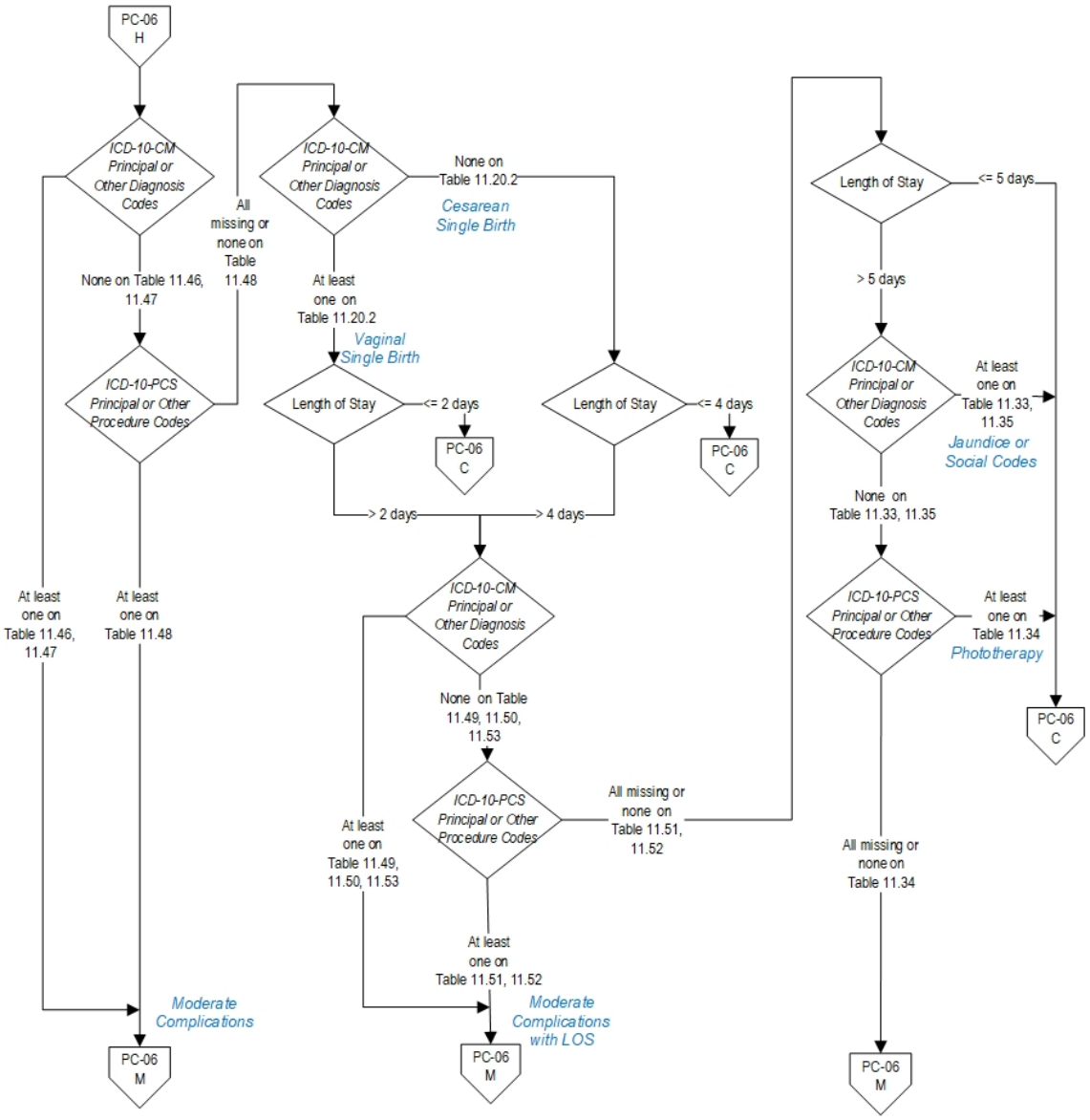

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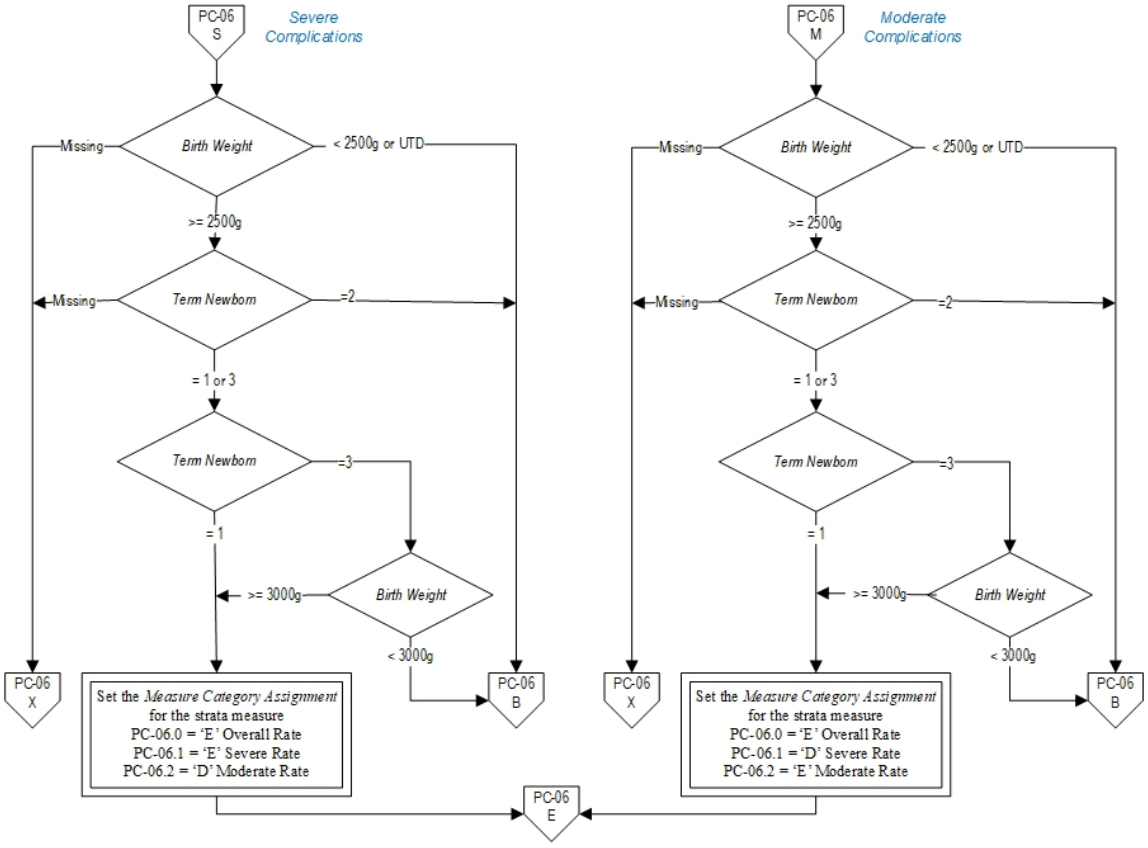

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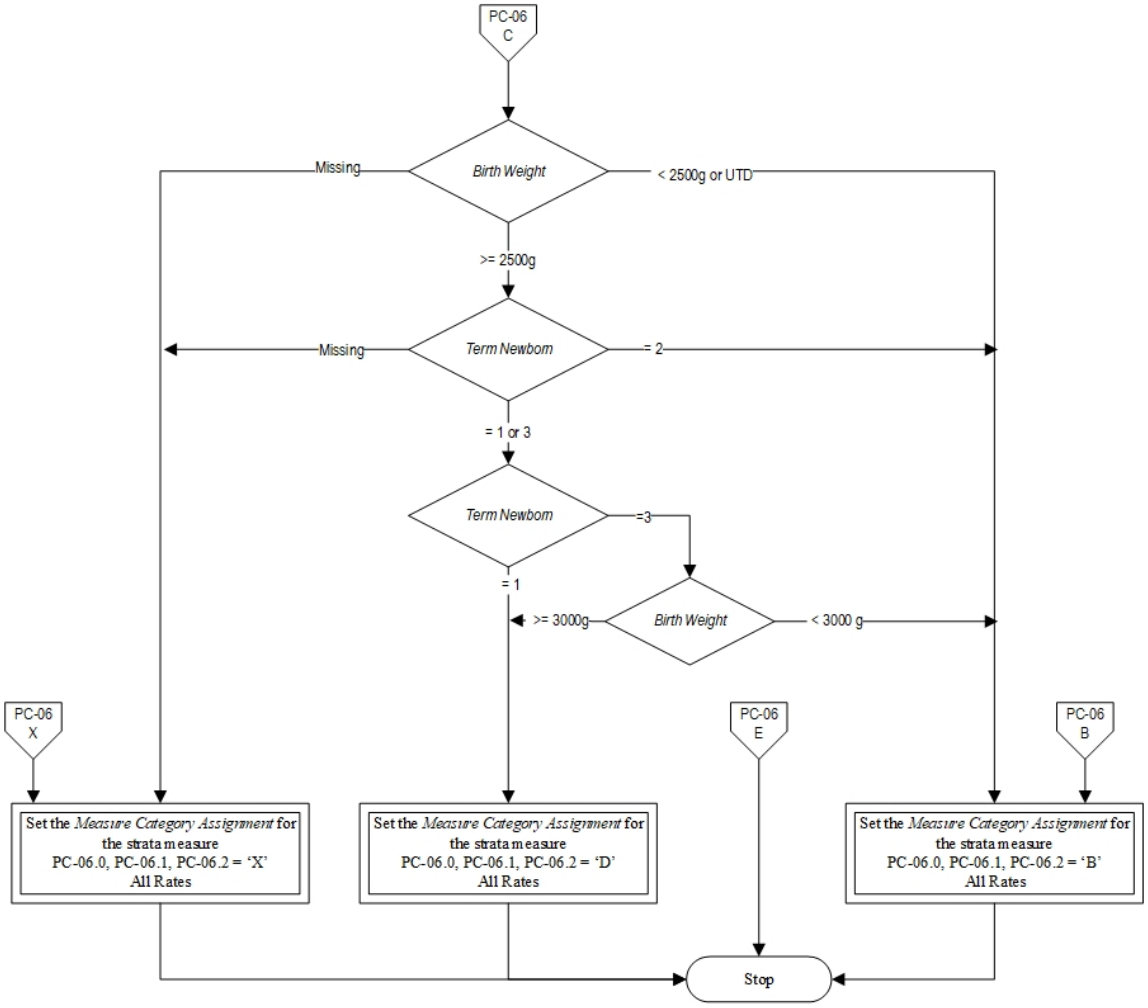

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Substance Use Measures (SUB)

Set Measures

Set Measure ID	Measure Short Name
SUB-2	Alcohol Use Brief Intervention Provided or Offered
SUB-3	Alcohol & Other Drug Use Disorder Treatment Provided or Offered at Discharge

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 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, Used in calculation of the Joint Commission's aggregate data.
Payment Source	All Records, Optional for HBIPS-2 and HBIPS-3
Race	All Records,
Sex	All Records,

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Algorithm Output Data Elements

Element Name	Collected For
Measure Category Assignment	All Records, Calculation

Measure Set Specific Data Elements

Element Name	Collected For
Alcohol Use Status	SUB-2, SUB-3
Brief Intervention	SUB-2
Comfort Measures Only	SUB-2, SUB-3
Discharge Disposition	SUB-3
Prescription for Alcohol or Drug Disorder Medication	SUB-3
Referral for Addictions Treatment	SUB-3

Related Materials

Document Name
Acknowledgement
Appendix A
Appendix C
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
Global Initial Patient Population
Introduction to the Manual

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	Document Name	
	Joint Commission Clinical Data Processing Flow	
	Joint Commission National Quality Measures Data Processing	
	Missing and Invalid Data	
	Sampling	
	Table of Contents	
	Using the The Joint Commission's National Measure Specifications Manual	

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Substance Use (SUB) Initial Patient Population

Please refer to the GlobalInitialPatientPopulation for the SUB Initial Patient Population Processing definition and Flow.

Sample Size Requirements

Please refer to the GlobalInitialPatientPopulation for the sampling requirements for the Substance Use (SUB) Measures.

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Measure Information Form

Measure Set: Substance Use Measures (SUB)

Set Measure ID: SUB-2

Set Measure ID	Performance Measure Name
SUB-2	Alcohol Use Brief Intervention Provided or Offered
SUB-2a	Alcohol Use Brief Intervention

Performance Measure Name: Alcohol Use Brief Intervention Provided or Offered

Description:
SUB-2 Patients who screened positive for unhealthy alcohol use who received or refused a brief intervention during the hospital stay.
SUB-2a Patients who received the brief intervention during the hospital stay.

The measure is reported as an overall rate which includes all patients to whom a brief intervention was provided, or offered and refused, and a second rate, a subset of the first, which includes only those patients who received a brief intervention. The Provided or Offered rate (SUB-2), describes patients who screened positive for unhealthy alcohol use who received or refused a brief intervention during the hospital stay. The Alcohol Use Brief Intervention (SUB-2a) rate describes only those who received the brief intervention during the hospital stay. Those who refused are not included.

Rationale: Excessive use of alcohol and drugs has a substantial harmful impact on health and society in the United States. It is a drain on the economy, and a source of enormous personal tragedy (The National Quality Forum, A consensus Report, 2007). In 1998 the economic costs to society were 185 billion dollars for alcohol misuse and 143 billion dollars for drug misuse (Harwood 2000). Health care spending was 19 billion dollars for alcohol problems and 14 billion dollars was spent treating drug problems.

Nearly a quarter of a trillion dollars per year in lost productivity is attributable to substance use. More than 537,000 die each year as a consequence of alcohol, drug, and tobacco use, making use of these substances the cause of one out of four deaths in the United States (Mokdad 2004).

An estimated 22.6 million adolescents and adults meet criteria for a substance use disorder. In a multi-state study that screened 459,599 patients in general hospital and medical settings, 23% of patients screened positive (Madras 2009).

Clinical trials have demonstrated that brief interventions, especially prior to the onset of addiction, significantly improve health and reduce costs, and that similar benefits occur in those with addictive disorders who are referred to treatment (Fleming 2002).

In a study on the provision of evidence-based care and preventive services provided in hospitals for 30 different medical conditions, quality varied substantially according to diagnosis. Adherence to recommended practices for

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treatment of substance use ranked last, with only 10% of patients receiving proper care (Gentilello 2005). Currently, less than one in twenty patients with an addiction are referred for treatment (Gentilello 1999).

Hospitalization provides a prime opportunity to address the entire spectrum of substance use problems within the health care system (Bernstein 2005).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement:
SUB-2: The number of patients who received or refused a brief intervention.

SUB-2a: The number of patients who received a brief intervention

> **Included Populations:**
>
> **Sub-2**
> Patients who refuse/decline the offered brief intervention.
>
> **Sub-2a**
> Not Applicable
>
> **Excluded Populations:**
>
> **SUB-2 and SUB-2a**
> None
>
> **Data Elements:**
>
> - *Brief Intervention*

Denominator Statement:

- SUB-2 The number of hospitalized inpatients 18 years of age and older who screen positive for unhealthy alcohol use or an alcohol use disorder (alcohol abuse or alcohol dependence).
- SUB-2a The number of hospitalized inpatients 18 years of age and older who screen positive for unhealthy alcohol use or an alcohol use disorder (alcohol abuse or alcohol dependence), excluding those:
    - Screened with a non-validated tool within the first day of admission (by end of Day 1).
    - Not screened for alcohol use within the first day of admission (by end of Day 1) or unable to determine from medical record documentation.

> **Included Populations:** Not applicable
>
> **Excluded Populations:**

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- Patients less than 18 years of age
- Patients who are cognitively impaired
- Patients who refused screening for Alcohol Use Status during the hospital stay
- Patients who have a duration of stay less than or equal to one day and greater than 120 days
- Patients receiving *Comfort Measures Only* documented

Data Elements:

- *Admission Date*
- *Alcohol Use Status*
- *Birthdate*
- *Comfort Measures Only*
- *Discharge Date*

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.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: Data accuracy is enhanced when all definitions are used without modification. The data dictionary should be referenced for definitions and abstraction notes when questions arise during data collection.

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:

- Bernstein J, Bernstein E, Tassiopoulos K, Heeren T, Levenson S, Hingson R. Brief motivational interventions at a clinic visit reduces cocaine and heroin use. Drug Alcohol Depend. 2005 Jan 7;77(1):49-59.
- Fleming MF, Mundt MP, French MT, Manwell LB, Stauffacher EA, Barry KL. Brief physician advice for problem drinkers: Long-term efficacy and cost-benefit analysis. Alcohol Clin Exp Res. 2002 Jan;26(1):36-43.
- Gentilello LM, Ebel BE, Wickizer TM, Salkever DS Rivera FP. Alcohol interventions for trauma patients treated in emergency departments and hospitals: A cost benefit analysis. Ann Surg. 2005 Apr;241(4):541-50.

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- Gentilello LM, Villaveces A, Ries RR, Nason KS, Daranciang E, Donovan DM Copass M, Jurkovich GJ Rivara FP. Detection of acute alcohol intoxication and chronic alcohol dependence by trauma center staff. J Trauma. 1999 Dec;47(6):1131-5; discussion 1135-9.
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- Jonas DE, et al. Behavioral Counseling After Screening for Alcohol Misuse in Primary Care: A Systematic Review and Meta-analysis for the U.S. Preventive Services Task Force. Ann Intern Med. 2012;157:645-654.
- Kirchner JE, Owen RR, Nordquist C, Fischer EP. Diagnosis and management of substance use disorders among inpatients with schizophrenia. Psychiatr Serv. 1998 Jan;49(1):82-5.
- Madras BK, Compton WM, Avula D, Stegbauer T, Stein JB, Clark HW. Screening, brief interventions, referral to treatment (SBIRT) for illicit drug and alcohol use at multiple healthcare sites: Comparison at intake and 6 months later. Drug Alcohol Depend. 2009 Jan 1;99(1-3):280-95. Epub 2008 Oct 16.
- McGlynn EA, Asch SM, Adams J. The Quality of Healthcare Delivered to Adults in the United States. N Engl J Med. 2003 Jun 26;348(26):2635-45.
- Mokdad AH, Marks JS, Stroup DF, Gerberding JL. Actual Causes of Death in the United States, 2000. JAMA. 2004 Mar 10;291(10):1238-45.
- Prochaska JJ, Gill PH, Stephen E, Hall SM. Identification and Treatment of Substance Misuse on an Inpatient Psychiatry Unit. Psychiatr Serv. 2005 Mar;56(3):347-9.
- Smothers BA, Yahr HT, Ruhl CE. Detection of alcohol use disorders in general hospital admissions in the United States. Arch Intern Med. 2004 Apr 12;164(7):749-56.
- The National Quality Forum, National Voluntary Consensus Standards for the Treatment of Substance Use Conditions: Evidence-Based Treatment Practices; A Consensus Report; 2007.
- Whitlock EP, Polen MR, Green CA, Orleans T, Klein J. Behavioral Counseling Interventions in Primary Care To Reduce Risky/Harmful Alcohol Use by Adults: A Summary of the Evidence for the U.S. Preventive Services Task Force. Ann Intern Med. 2004;140:557-568.

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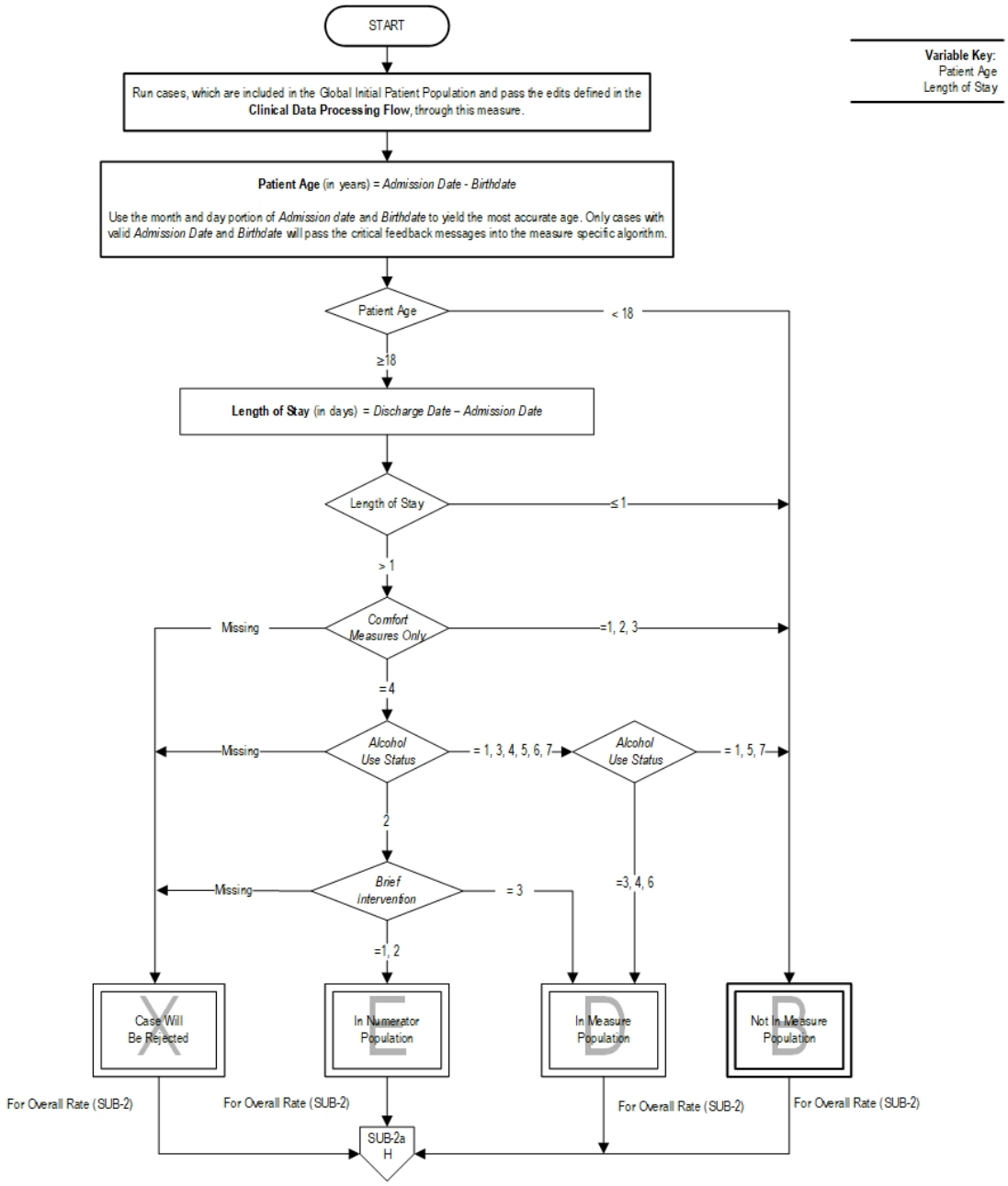
Measure Algorithm:

SUB-2: Alcohol Use-Brief Intervention Provided or Offered

Numerator: The number of patients who received or refused a brief intervention.

Denominator: The number of hospitalized inpatients 18 years of age and older who screen positive for unhealthy alcohol use or an alcohol use disorder (alcohol abuse or alcohol dependence).



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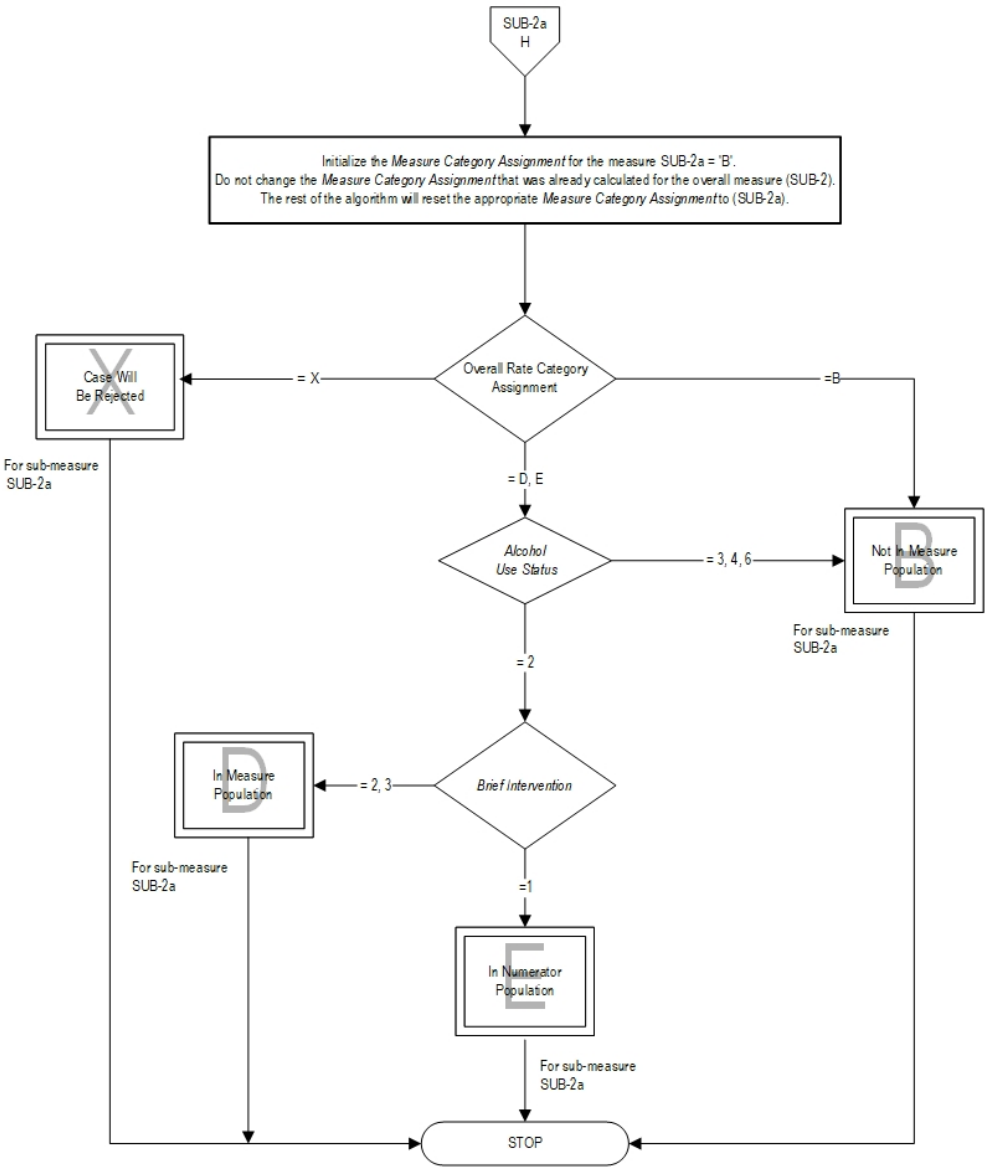
SUB-2a: Alcohol Use-Brief Intervention

Numerator: The number of patients who received a brief intervention.

Denominator: The number of hospitalized inpatients 18 years of age and older who screen positive for unhealthy alcohol use or an alcohol use disorder (alcohol abuse or alcohol dependence), excluding those:
- Screened with a non-validated tool within the first day of admission (by end of Day 1).
- Not screened for alcohol use within the first day of admission (by end of Day 1) or unable to determine from medical record documentation.



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Measure Information Form

Measure Set: Substance Use Measures (SUB)

Set Measure ID: SUB-3

Set Measure ID	Performance Measure Name
SUB-3	Alcohol & Other Drug Use Disorder Treatment Provided or Offered at Discharge
SUB-3a	Alcohol & Other Drug Use Disorder Treatment at Discharge

Performance Measure Name: Alcohol & Other Drug Use Disorder Treatment Provided or Offered at Discharge

Description:
SUB-3 Patients who are identified with alcohol or drug use disorder who receive or refuse at discharge a prescription for FDA-approved medications for alcohol or drug use disorder, OR who receive or refuse a referral for addictions treatment.
SUB-3a Patients who are identified with alcohol or drug disorder who receive a prescription for FDA-approved medications for alcohol or drug use disorder OR a referral for addictions treatment.

The measure is reported as an overall rate which includes all patients to whom alcohol or drug use disorder treatment was provided, or offered and refused, at the time of hospital discharge, and a second rate, a subset of the first, which includes only those patients who received alcohol or drug use disorder treatment at discharge. The Provided or Offered rate (SUB-3) describes patients who are identified with alcohol or drug use disorder who receive or refuse at discharge a prescription for FDA-approved medications for alcohol or drug use disorder, OR who receive or refuse a referral for addictions treatment. The Alcohol and Other Drug Disorder Treatment at Discharge (SUB-3a) rate describes only those who receive a prescription for FDA-approved medications for alcohol or drug use disorder OR a referral for addictions treatment. Those who refused are not included.

Rationale: Excessive use of alcohol and drugs has a substantial harmful impact on health and society in the United States. It is a drain on the economy and a source of enormous personal tragedy (The National Quality Forum, A Consensus Report 2007). In 1998 the economic costs to society were $185 billion dollars for alcohol misuse, and 143 billion dollars for drug misuse (Harwood 2000). Health care spending was 19 billion dollars for alcohol problems, and 14 billion dollars was spent treating drug problems.

Nearly a quarter of a trillion dollars per year in lost productivity is attributable to substance use. More than 537,000 die each year as a consequence of alcohol, drug, and tobacco use making use of these substances the cause of one out of four deaths in the United States (Mokdad 2005).

An estimated 22.6 million adolescents and adults meet criteria for a substance use disorder. In a multi-state study that screened 459,599 patients in general hospital and medical settings, 23% of patients screened positive (Madras 2009).

Clinical trials have demonstrated that brief interventions, especially prior to the onset of addiction, significantly improve health and reduce costs, and that similar benefits occur in those with addictive disorders who are re-

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ferred to treatment (Fleming 2002).

In a study on the provision of evidence-based care and preventive services provided in hospitals for 30 different medical conditions, quality varied substantially according to diagnosis. Adherence to recommended practices for treatment of substance use ranked last, with only 10% of patients receiving proper care (Gentilello 2005). Currently, less than one in twenty patients with an addiction are referred for treatment (Gentilello 1999).

Hospitalization provides a prime opportunity to address the entire spectrum of substance use problems within the health care system (Gentilello 2005, 1999). Approximately 8% of general hospital inpatients and 40 to 60 percent of traumatically-injured inpatients and psychiatric inpatients have substance use disorders (Gentilello 1999).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement:
SUB-3: The number of patients who received or refused at discharge a prescription for medication for treatment of alcohol or drug use disorder OR received or refused a referral for addictions treatment.

SUB-3a: The number of patients who received a prescription at discharge for medication for treatment of alcohol or drug use disorder OR a referral for addictions treatment.

> **Included Populations:**
>
> **Sub-3**
> Patients who refused a prescription for FDA-approved medication for treatment of an alcohol or drug dependence. Patients who refused a referral for addictions treatment.
>
> **Sub-3a**
> Not Applicable
>
> **Excluded Populations: SUB-3 and SUB-3a**
> None
>
> **Data Elements:**
>
> - *Prescription for Alcohol or Drug Disorder Medication*
> - *Referral for Addictions Treatment*

Denominator Statement: The number of hospitalized inpatients 18 years of age and older identified with an alcohol or drug use disorder.

> **Included Populations:**

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- Patients with ICD-10-CM Principal or Other Diagnosis Code for alcohol or drug use disorder listed on Table 13.1 and 13.2
- Patients with a Principal or Other ICD-10-PCS Procedure Code listed on Table 13.3

Excluded Populations:

- Patients less than 18 years of age
- Patient drinking at unhealthy levels who do not meet criteria for an alcohol use disorder
- Patients who are cognitively impaired
- Patients who expire
- Patients discharged to another hospital
- Patients who left against medical advice
- Patients discharged to another healthcare facility
- Patients discharged to home or another healthcare facility for hospice care
- Patients who have a duration of stay less than or equal to one day or greater than 120 days
- Patients who do not reside in the United States
- Patients receiving *Comfort Measures Only* documented

Data Elements:

- *Admission Date*
- *Alcohol Use Status*
- *Birthdate*
- *Comfort Measures Only*
- *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: 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.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: Data accuracy is enhanced when all definitions are used without modification. The data dictionary should be referenced for definitions and abstraction notes when questions arise during data collection.

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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 analyze data to show patients that refused both a medication prescription and referral and those who refused only one or the other.

Sampling: Yes. 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:

- Bernstein J, Bernstein E, Tassiopoulos K, Heren T, Levenson S, Hingson R. Brief motivational interventions at a clinic visit reduces cocaine and heroin use. Drug Alcohol Depend. 2005 Jan 7;77(1):49-59.
- Fleming MF, Mundt MP, French MT, Manwell LB, Stauffacher EA, Barry KL. Brief physician advice for problem drinkers: Long-term efficacy and cost-benefit analysis. Alcohol Clin Exp Res. 2002 Jan;26(1):36-43.
- Gentilello LM, Ebel BE, Wickizer TM, Salkever DS Rivera FP. Alcohol interventions for trauma patients treated in emergency departments and hospitals: A cost benefit analysis. Ann Surg. 2005 Apr;241(4):541-50.
- Gentilello LM, Villaveces A, Ries RR, Nason KS, Daranciang E, Donovan DM Copass M, Jurkovich GJ Rivara FP. Detection of acute alcohol intoxication and chronic alcohol dependence by trauma center staff. J Trauma. 1999 Dec;47(6):1131-5; discussion 1135-9.
- Harwood, HJ, 2000. Updating Estimates of the Economic Costs of Alcohol Abuse in the United States. National Institute on Alcohol Abuse and Alcoholism. Available from: http://pubs.niaaa.nih.gov/publications/economic-2000/, Office of National Drug Control Policy. The Economic Costs of Drug Abuse in the United States: 1992–2002. Washington, DC: Executive Office of the President (Publication No. 207303), 2004.
- Havassy BE, Alvidrez J, Owen KK. Comparisons of patients with comorbid psychiatric and substance use disorders: implications for treatment and service delivery. Am J Psychiatry. 2004 Jan;161(1):139-45.
- Kirchner JE, Owen RR, Nordquist C, Fischer EP. Diagnosis and management of substance use disorders among inpatients with schizophrenia. Psychiatr Serv. 1998 Jan;49(1):82-5.
- Madras BK, Compton WM, Avula D, Stegbauer T, Stein JB, Clark HW. Screening, brief interventions, referral to treatment (SBIRT) for illicit drug and alcohol use at multiple healthcare sites: Comparison at intake and 6 months later. Drug Alcohol Depend. 2009 Jan 1;99(1-3):280-95. Epub 2008 Oct 16.
- Mokdad AH, Marks JS, Stroup DS, Gerberding JL. Actual Causes of Death in the United States, 2000. JAMA. 2004 Mar 10;291(10):1238-45 (Erratum in: JAMA. 2005 Jan 19;293(3):293-4.)
- McGlynn EA, Asch SM, Adams J. The Quality of Healthcare Delivered to Adults in the United States. N Engl J Med. 2003 Jun 26;348(26):2635-45.
- Prochaska JJ, Gill PH, Stephen E, Hall SM. Identification and Treatment of Substance Misuse on an Inpatient Psychiatry Unit. Psychiatr Serv. 2005 Mar;56(3):347-9.
- Smothers BA, Yahr HT, Ruhl CE. Detection of alcohol use disorders in general hospital admissions in the United States. Arch Intern Med. 2004 Apr 12;164(7):749-56.
- The National Quality Forum, National Voluntary Consensus Standards for the Treatment of Substance Use Conditions: Evidence-Based Treatment Practices; A Consensus Report; 2007.

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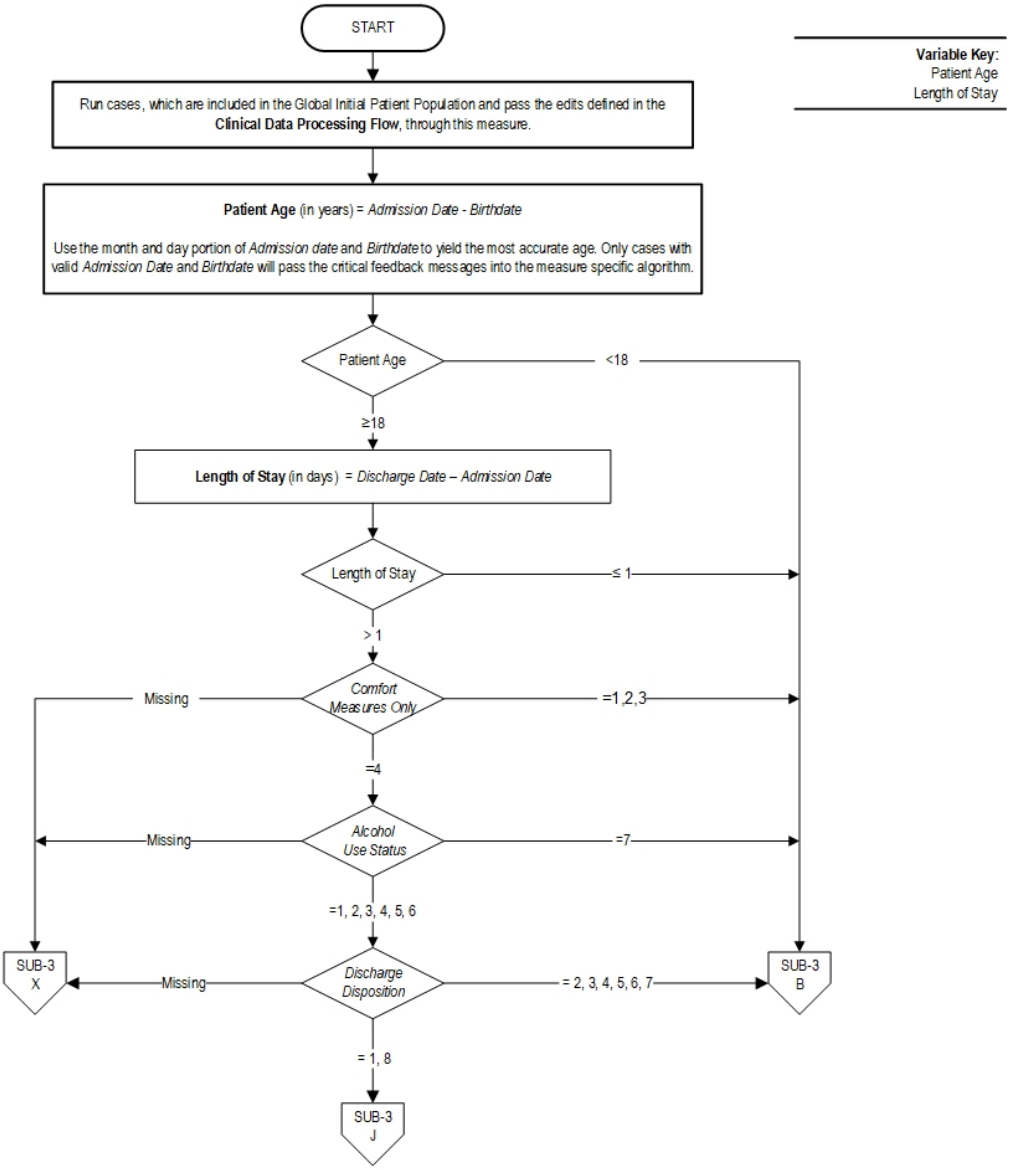
Measure Algorithm:

SUB-3: Alcohol and Other Drug Use Disorder Treatment Provided or Offered at Discharge

Numerator: The number of patients who received or refused at discharge a prescription for medication for treatment of alcohol or drug use disorder OR received or refused a referral for addictions treatment.

Denominator: The number of hospitalized inpatients 18 years of age and older identified with an alcohol or drug use disorder.



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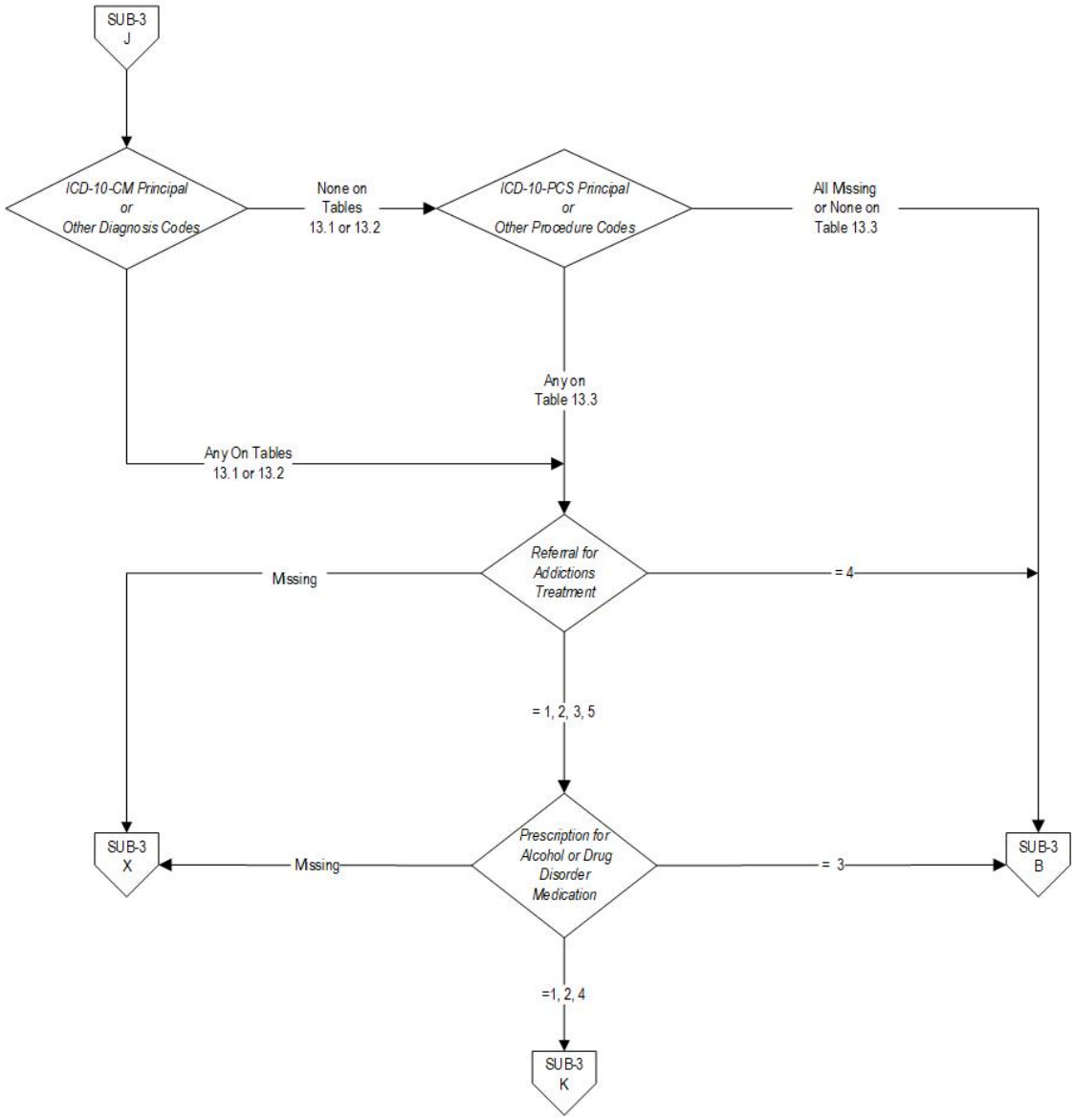

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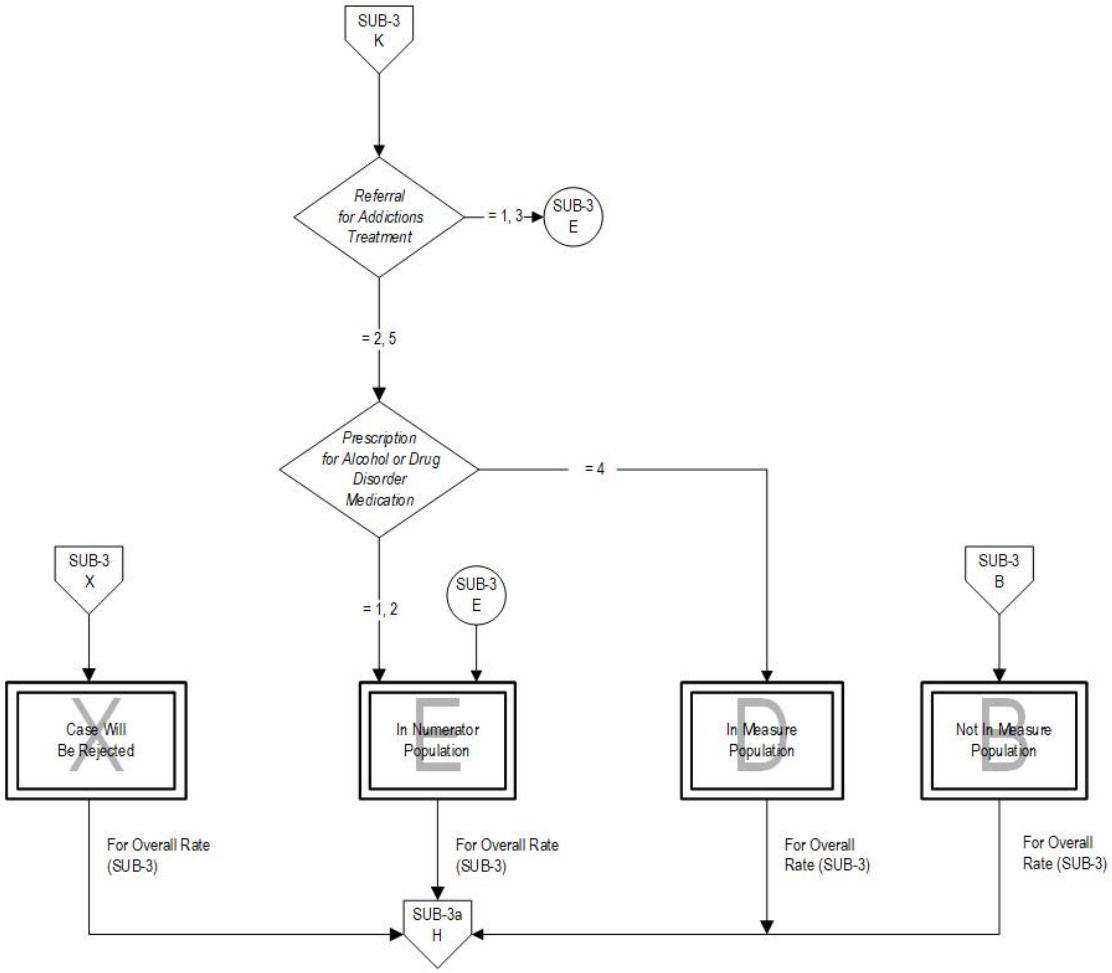

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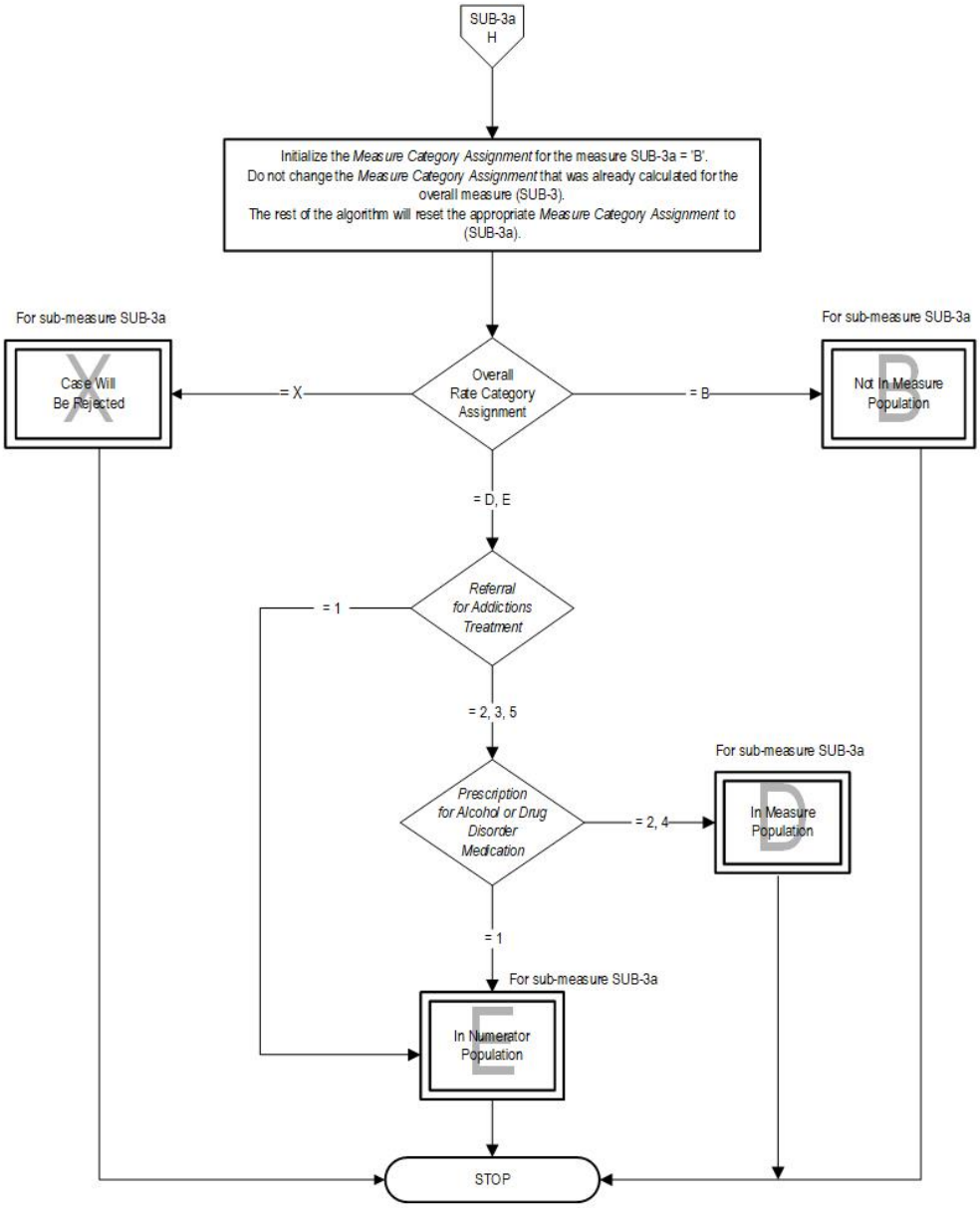
SUB-3a: Alcohol and Other Drug Use Disorder Treatment at Discharge

Numerator: The number of patients who received a prescription at discharge for medication for treatment of alcohol or drug use disorder OR a referral for addictions treatment.

Denominator: The number of hospitalized inpatients 18 years of age and older identified with an alcohol or drug use disorder.



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Tobacco Treatment Measures (TOB)

Set Measures

Set Measure ID	Measure Short Name
TOB-2	Tobacco Use Treatment Provided or Offered
TOB-3	Tobacco Use Treatment Provided or Offered at Discharge

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 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, Used in calculation of the Joint Commission's aggregate data.
Payment Source	All Records, Optional for HBIPS-2 and HBIPS-3
Race	All Records,
Sex	All Records,

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Algorithm Output Data Elements

Element Name	Collected For
Measure Category Assignment	All Records, Calculation

Measure Set Specific Data Elements

Element Name	Collected For
Comfort Measures Only	TOB-2, TOB-3
Discharge Disposition	TOB-3
Prescription for Tobacco Cessation Medication	TOB-3
Reason for No Tobacco Cessation Medication During the Hospital Stay	TOB-2
Reason for No Tobacco Cessation Medication at Discharge	TOB-3
Referral for Outpatient Tobacco Cessation Counseling	TOB-3
Tobacco Use Status	TOB-2, TOB-3
Tobacco Use Treatment FDA-Approved Cessation Medication	TOB-2
Tobacco Use Treatment Practical Counseling	TOB-2

Related Materials

	Document Name	
	Acknowledgement	
	Appendix A	
	Appendix C	
	Appendix D - Glossary of Terms	
	Appendix E - Overview of Measure Information Form and Flowchart Formats	
	Appendix G - Resources	
	Appendix H - Miscellaneous Tables	

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	Document Name	
	Cover Page for the Joint Commission Manual	
	Data Dictionary	
	Global Initial Patient Population	
	Introduction to the Manual	
	Joint Commission Clinical Data Processing Flow	
	Joint Commission National Quality Measures Data Processing	
	Missing and Invalid Data	
	Sampling	
	Table of Contents	
	Using the The Joint Commission's National Measure Specifications Manual	

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Tobacco Treatment (TOB) Initial Patient Population

Please refer to the GlobalInitialPatientPopulation for the TOB Initial Patient Population Processing definition and Flow.

Sample Size Requirements

Please refer to the GlobalInitialPatientPopulation for the sampling requirements for the Tobacco Treatment (TOB) Measures.

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Measure Information Form

Measure Set: Tobacco Treatment Measures (TOB)

Set Measure ID: TOB-2

Set Measure ID	Performance Measure Name
TOB-2	Tobacco Use Treatment Provided or Offered
TOB-2a	Tobacco Use Treatment

Performance Measure Name: Tobacco Use Treatment Provided or Offered

Description:
TOB-2 Patients identified as tobacco product users who receive or refuse practical counseling to quit AND receive or refuse FDA-approved cessation medications during the hospital stay.
TOB-2a Patients who received counseling AND medication as well as those who received counseling and had reason for not receiving the medication during the hospital stay.

The measure is reported as an overall rate which includes all patients to whom tobacco use treatment was provided, or offered and refused, and a second rate, a subset of the first, which includes only those patients who received tobacco use treatment. The Provided or Offered rate (TOB-2), describes patients identified as tobacco product users who receive or refuse practical counseling to quit AND receive or refuse FDA-approved cessation medications during the hospital stay. The Tobacco Use Treatment (TOB-2a) rate describes only those who received counseling AND medication as well as those who received counseling and had reason for not receiving the medication. Those who refused are not included.

Rationale: Tobacco use is the single greatest cause of disease in the United States today and accounts for more than 480,000 deaths each year (CDC MMWR 2014). Smoking is a known cause of multiple cancers, heart disease, stroke, complications of pregnancy, chronic obstructive pulmonary disease, other respiratory problems, poorer wound healing, and many other diseases (DHHS 2014). Tobacco use creates a heavy cost to society as well as to individuals. Smoking-attributable health care expenditures are estimated to be at least $130 billion per year in direct medical expenses for adults, and over $150 billion in lost productivity (DHHS 2014).

There is strong and consistent evidence that tobacco dependence interventions, if delivered in a timely and effective manner, significantly reduce the user's risk of suffering from tobacco-related disease and improve outcomes for those already suffering from a tobacco-related disease (DHHS 2000; Baumeister 2007; Lightwood 2003 and 1997; Rigotti 2012). Effective, evidence-based tobacco dependence interventions have been clearly identified and include brief clinician advice, individual, group, or telephone counseling, and use of FDA-approved medications. These treatments are clinically effective and extremely cost-effective relative to other commonly used disease prevention interventions and medical treatments. Hospitalization (both because hospitals are a tobacco-free environment and because patients may be more motivated to quit as a result of their illness) offers an ideal opportunity to provide cessation assistance that may promote the patient's medical recovery. Patients who receive even brief advice and intervention from their care providers are more likely to quit than those who receive no intervention (DHHS, 2008).

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Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement:
TOB-2: The number of patients who received or refused practical counseling to quit AND received or refused FDA-approved cessation medications during the hospital stay.

TOB-2a: The number of patients who received practical counseling to quit AND received FDA-approved cessation medications during the hospital stay.

> **Included Populations:**
>
> **TOB-2:**
>
> - Patients who refuse counseling
> - Patients who refuse FDA- Approved cessation medication
>
> **TOB-2a:**
>
> - Not applicable
>
> **Excluded Populations:**
>
> **TOB-2 and TOB-2a**
> For FDA Approved Medications Only
>
> - Smokeless tobacco users
> - Pregnant smokers
> - Patients with reasons for not administering FDA-approved cessation medication.
>
> **Data Elements:**
>
> - *Reason for No Tobacco Cessation Medication During the Hospital Stay*
> - *Tobacco Use Status*
> - *Tobacco Use Treatment FDA-Approved Cessation Medication*
> - *Tobacco Use Treatment Practical Counseling*

Denominator Statement:

- TOB-2: The number of hospitalized inpatients 18 years of age and older identified as current tobacco users.
- TOB-2a: The number of hospitalized inpatients 18 years of age and older identified as current tobacco users excluding those whose tobacco use status is unknown.

> **Included Populations:** Not applicable

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Excluded Populations:

- Patients less than 18 years of age
- Patient who are cognitively impaired
- Patients who are not current tobacco users
- Patients who refused screening for Tobacco Use Status during the hospital stay
- Patients who have a duration of stay less than or equal to one day or greater than 120 days
- Patients with *Comfort Measures Only* documented

Data Elements:

- *Admission Date*
- *Birthdate*
- *Comfort Measures Only*
- *Discharge Date*
- *Tobacco Use Status*

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: Data accuracy is enhanced when all definitions are used without modification. The data dictionary should be referenced for definitions and abstraction notes when questions arise during data collection.

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 refused either counseling or medications or both so as to have a better understanding of which treatment type is refused 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:

- Baumeister, S. E., Schumann, A., Meyer, C., John, U., Volzke, H., & Alte, D. (2007). *Effects of smoking cessation on health care use: Is elevated risk of hospitalization among former smokers attributable to smoking-related morbidity*? Drug and Alcohol Dependence, 88(2–3), 197–203.

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- Centers for Disease Control and Prevention. (2014). *Current cigarette smoking among adults—United States, 2005–2013*. Morbidity and Mortality Weekly Report (MMWR), 63(47), 1108–1112. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6347a4.htm?s_cid=mm6347a4_w.
- Lightwood, J. M. (2003). *The economics of smoking and cardiovascular disease*. Progress in Cardiovascular Diseases, 46(1), 39–78.
- Lightwood, J. M., & Glantz, S. A. (1997). Short-term economic and health benefits of smoking cessation: Myocardial infarction and stroke. Circulation, 96(4), 1089–1096.
- Rigotti, N. A., Clair, C., Munafo, M. R., & Stead, L. F. (2012). *Interventions for smoking cessation in hospitalised patients*. Cochrane Database of Systematic Reviews. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/22592676.
- U.S. Department of Health and Human Services. (2014). *The health consequences of smoking—50 years of progress: A report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. Retrieved from http://www.surgeongeneral.gov/library/reports/50-years-of-progress/full-report.pdf .
- U.S. Department of Health and Human Services. (2008). *Tobacco use and dependence guideline panel. Treating tobacco use and dependence: 2008 update*. Rockville, MD: U.S. Department of Health and Human Services. Retrieved from http://www.ncbi.nlm.nih.gov/books/NBK63952/.
- U.S. Department of Health and Human Services. (2000). *Reducing tobacco use: A report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.

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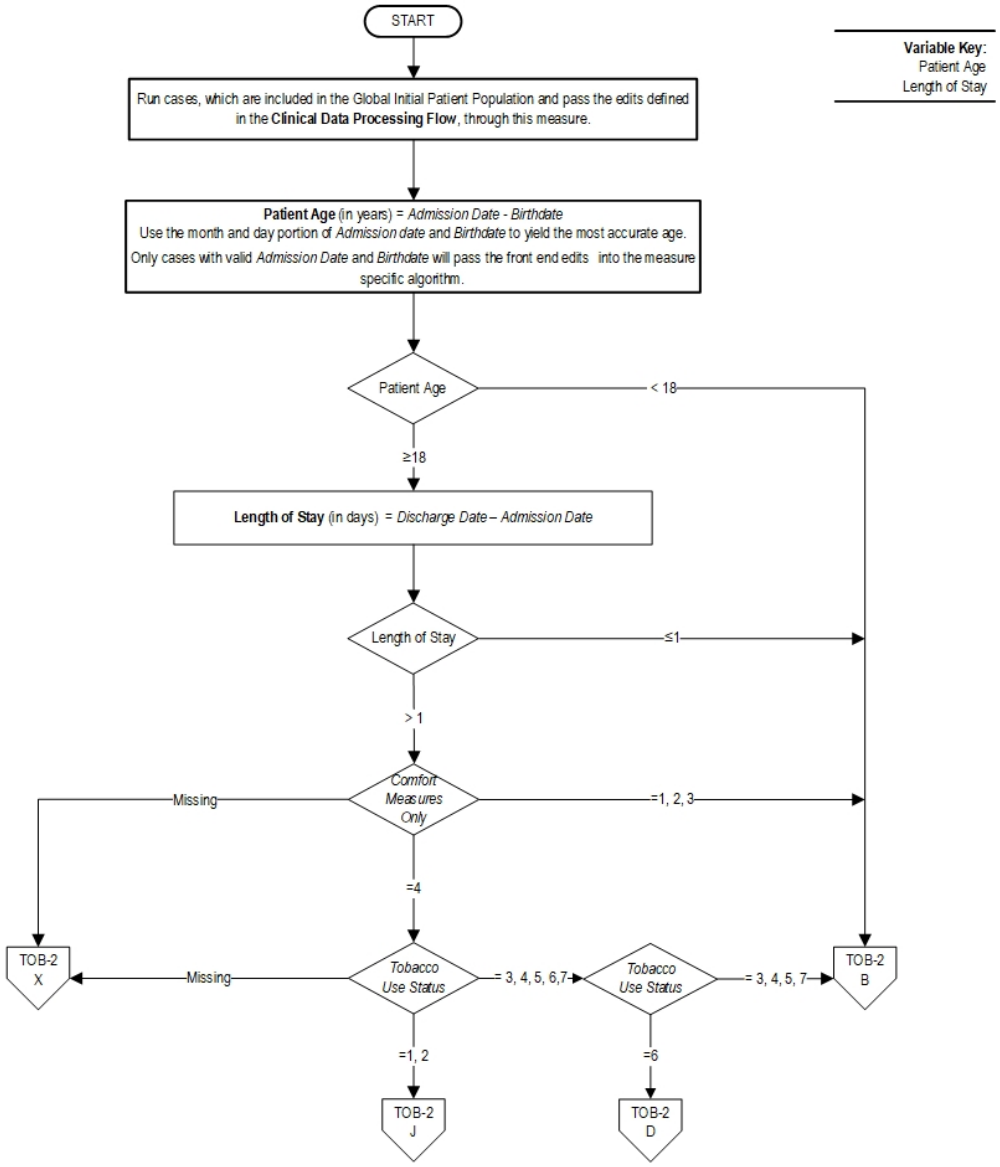
Measure Algorithm:

TOB-2: Tobacco Use Treatment Provided or Offered

Numerator: The number of patients who received or refused practical counseling to quit AND received or refused FDA-approved cessation medications during the hospital stay.

Denominator: The number of hospitalized inpatients 18 years of age and older identified as current tobacco users.



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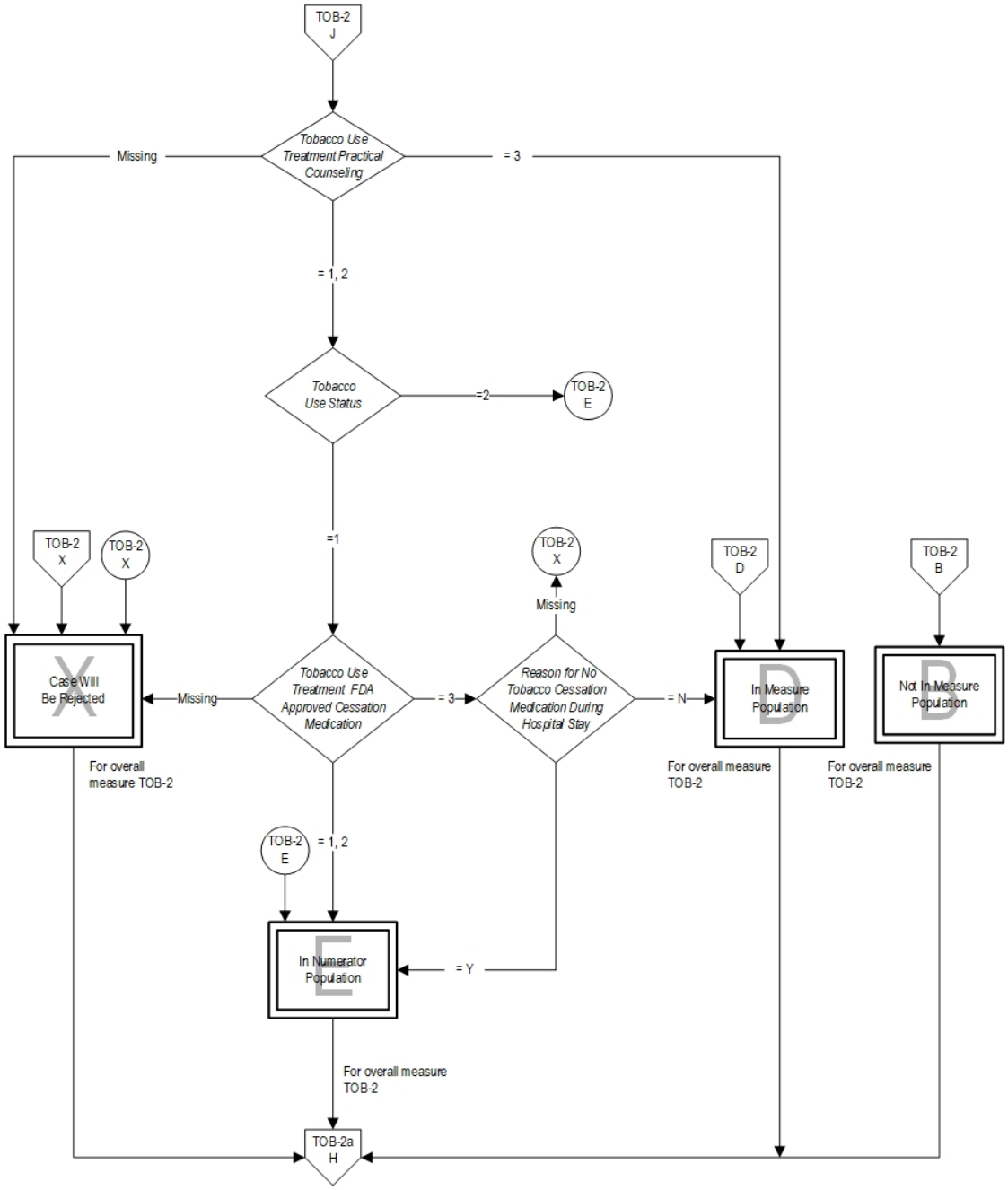

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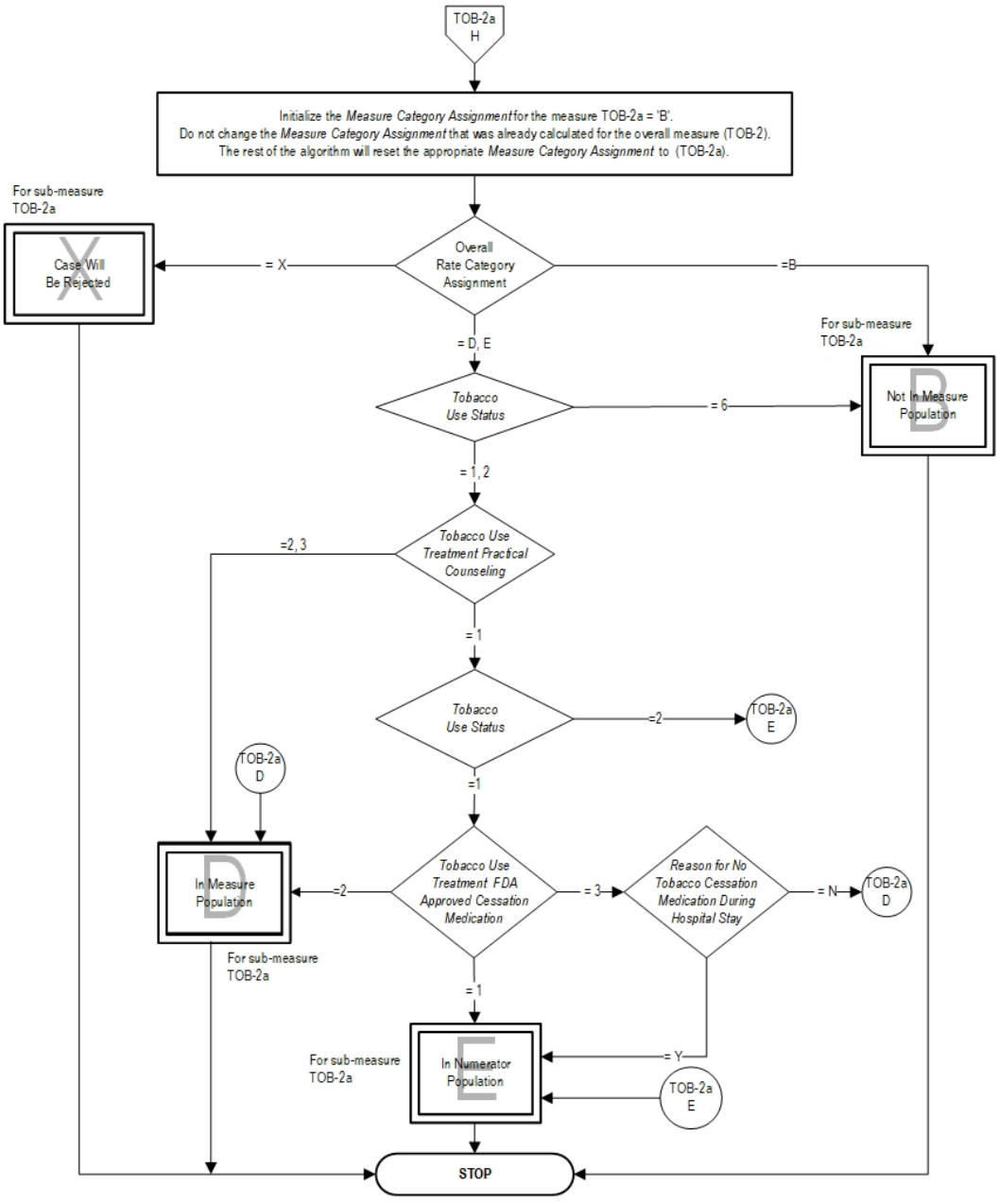
TOB-2a: Tobacco Use Treatment Provided or Offered

Numerator: The number of patients who received practical counseling to quit AND received FDA-approved cessation medications during the hospital stay.

Denominator: The number of hospitalized inpatients 18 years of age and older identified as current tobacco users excluding those whose tobacco use status is unknown.



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Measure Information Form

Measure Set: Tobacco Treatment Measures (TOB)

Set Measure ID: TOB-3

Set Measure ID	Performance Measure Name
TOB-3	Tobacco Use Treatment Provided or Offered at Discharge
TOB-3a	Tobacco Use Treatment at Discharge

Performance Measure Name: Tobacco Use Treatment Provided or Offered at Discharge

Description:
TOB-3 Patients identified as tobacco product users who were referred to or refused evidence-based outpatient counseling AND received or refused a prescription for FDA-approved cessation medication upon discharge.
TOB-3a Patients who were referred to evidence-based outpatient counseling AND received a prescription for FDA-approved cessation medication upon discharge as well as those who were referred to outpatient counseling and had reason for not receiving a prescription for medication.

The measure is reported as an overall rate which includes all patients to whom tobacco use treatment was provided, or offered and refused, at the time of hospital discharge, and a second rate, a subset of the first, which includes only those patients who received tobacco use treatment at discharge. The Provided or Offered rate (TOB-3) describes patients identified as tobacco product users who were referred to or refused evidence-based outpatient counseling AND received or refused a prescription for FDA-approved cessation medication upon discharge. The Tobacco Use Treatment at Discharge (TOB-3a) rate describes only those who were referred to evidence-based outpatient counseling AND received a prescription for FDA-approved cessation medication upon discharge as well as those who were referred to outpatient counseling and had reason for not receiving a prescription for medication. Those who refused are not included.

Rationale: Tobacco use is the single greatest cause of disease in the United States today and accounts for more than 480,000 deaths each year (CDC MMWR 2014). Smoking is a known cause of multiple cancers, heart disease, stroke, complications of pregnancy, chronic obstructive pulmonary disease, other respiratory problems, poorer wound healing, and many other diseases (DHHS 2014). Tobacco use creates a heavy cost to society as well as to individuals. Smoking-attributable health care expenditures are estimated to be at least $130 billion per year in direct medical expenses for adults, and over $150 billion in lost productivity (DHHS 2014).

There is strong and consistent evidence that tobacco dependence interventions, if delivered in a timely and effective manner, significantly reduce the user's risk of suffering from tobacco-related disease and improve outcomes for those already suffering from a tobacco-related disease (DHHS 2000; Baumeister 2007; Lightwood 2003 and 1997; Rigotti 2012). Effective, evidence-based tobacco dependence interventions have been clearly identified and include brief clinician advice, individual, group, or telephone counseling, and use of FDA-approved medications. These treatments are clinically effective and extremely cost-effective relative to other commonly used disease prevention interventions and medical treatments. Hospitalization (both because hospitals are a tobacco-free environment and because patients may be more motivated to quit as a result of their illness) offers an

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ideal opportunity to provide cessation assistance that may promote the patient's medical recovery. Patients who receive even brief advice and intervention from their care providers are more likely to quit than those who receive no intervention (DHHS, 2008).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement:
TOB-3: The number of patients who were referred to or refused evidence-based outpatient counseling AND received or refused a prescription for FDA-approved cessation medication at discharge.

TOB-3a: The number of patients who were referred to evidence-based outpatient counseling AND received a prescription for FDA-approved cessation medication at discharge.

> **Included Populations:** Not applicable
>
> **TOB-3**
>
> - Patients who refused a prescription for FDA- Approved tobacco cessation medication at discharge.
> - Patients who refused a referral to evidence-based outpatient counseling.
>
> **TOB-3a**
>
> - Not Applicable
>
> **Excluded Populations:**
>
> **TOB-3 and TOB-3a**
> For FDA Approved Medications Only
>
> - Smokeless tobacco users
> - Pregnant smokers
> - Patients with reasons for not administering FDA-approved cessation medication.
>
> **Data Elements:**
>
> - *Prescription for Tobacco Cessation Medication*
> - *Reason for No Tobacco Cessation Medication at Discharge*
> - *Referral for Outpatient Tobacco Cessation Counseling*
> - *Tobacco Use Status*

Denominator Statement: The number of hospitalized inpatients 18 years of age and older identified as current tobacco users.

> **Included Populations:** Not applicable

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Excluded Populations:

- Patients less than 18 years of age
- Patient who are cognitively impaired
- Patients who are not current tobacco users
- Patients who refused or were not screened for tobacco use status during the hospital stay
- Patients who have a duration of stay less than or equal to one day or greater than 120 days
- Patients who expired
- Patients who left against medical advice
- Patients discharged to another hospital
- Patients discharged to another health care facility
- Patients discharged to home for hospice care
- Patients who do not reside in the United States
- Patients with *Comfort Measures Only* documented

Data Elements:

- *Admission Date*
- *Birthdate*
- *Comfort Measures Only*
- *Discharge Date*
- *Discharge Disposition*
- *Tobacco Use Status*

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: Data accuracy is enhanced when all definitions are used without modification. The data dictionary should be referenced for definitions and abstraction notes when questions arise during data collection.

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 refused either counseling or medications or both at discharge so as to have a better understanding of which treatment type was accepted or refused 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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Selected References:

- Baumeister, S. E., Schumann, A., Meyer, C., John, U., Volzke, H., & Alte, D. (2007). Effects of smoking cessation on health care use: Is elevated risk of hospitalization among former smokers attributable to smoking-related morbidity? Drug and Alcohol Dependence, 88(2–3), 197–203.
- Centers for Disease Control and Prevention. (2014). Current cigarette smoking among adults—United States, 2005–2013. Morbidity and Mortality Weekly Report (MMWR), 63(47), 1108–1112. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6347a4.htm?s_cid=mm6347a4_w.
- Lightwood, J. M. (2003). The economics of smoking and cardiovascular disease. Progress in Cardiovascular Diseases, 46(1), 39–78.
- Lightwood, J. M., & Glantz, S. A. (1997). Short-term economic and health benefits of smoking cessation: Myocardial infarction and stroke. Circulation, 96(4), 1089–1096.
- Rigotti, N. A., Clair, C., Munafo, M. R., & Stead, L. F. (2012). Interventions for smoking cessation in hospitalised patients. Cochrane Database of Systematic Reviews. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/22592676.
- U.S. Department of Health and Human Services. (2014). The health consequences of smoking—50 years of progress: A report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. Retrieved from http://www.surgeongeneral.gov/library/reports/50-years-of-progress/full-report.pdf .
- U.S. Department of Health and Human Services. (2008). Tobacco use and dependence guideline panel. Treating tobacco use and dependence: 2008 update. Rockville, MD: U.S. Department of Health and Human Services. Retrieved from http://www.ncbi.nlm.nih.gov/books/NBK63952/.
- U.S. Department of Health and Human Services. (2000). Reducing tobacco use: A report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.

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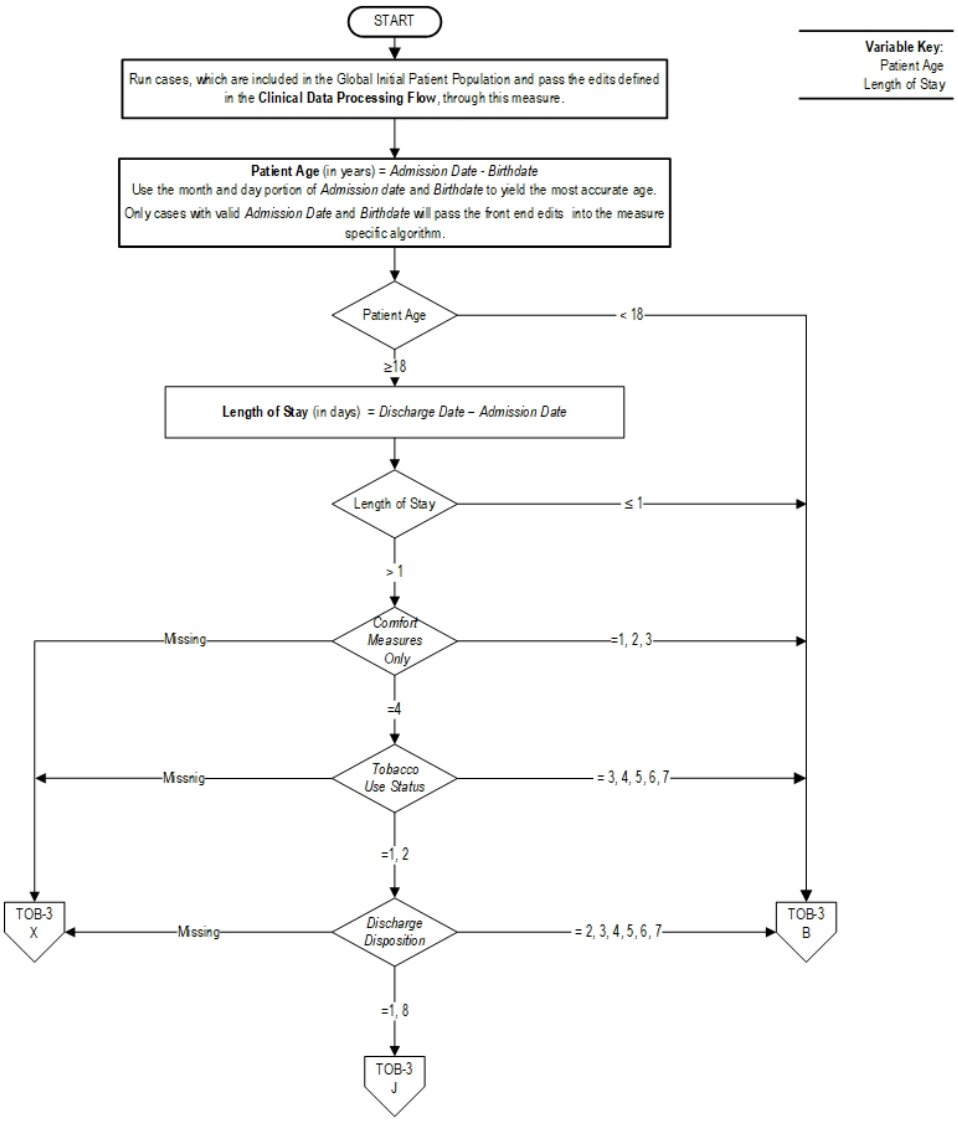
Measure Algorithm:

TOB-3: Tobacco Use Treatment Provided or Offered at Discharge

Numerator: The number of patients who were referred to or refused evidence-based outpatient counseling AND received or refused a prescription for FDA-approved cessation medication at discharge.

Denominator: The number of hospitalized inpatients 18 years of age and older identified as current tobacco users.



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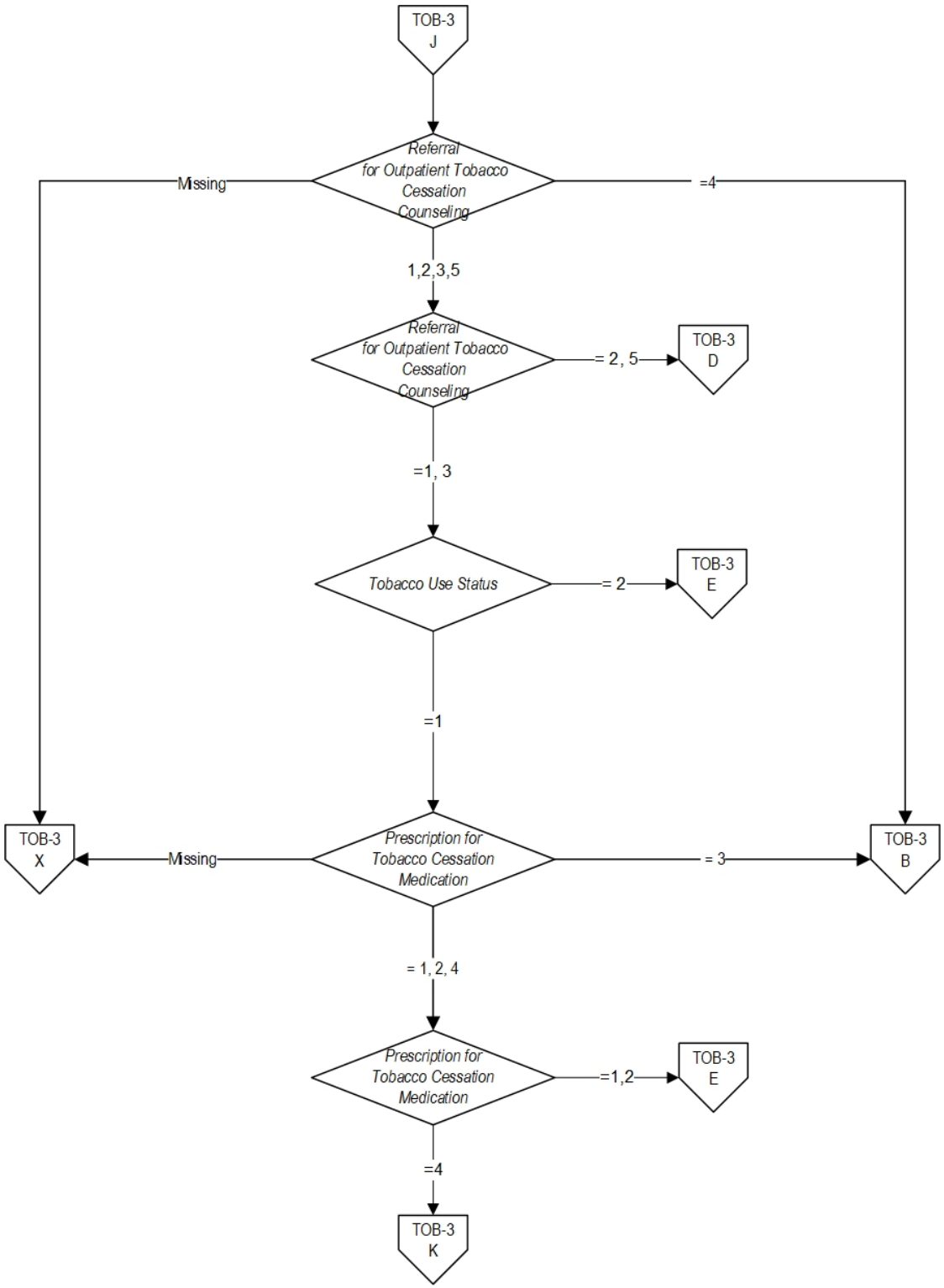

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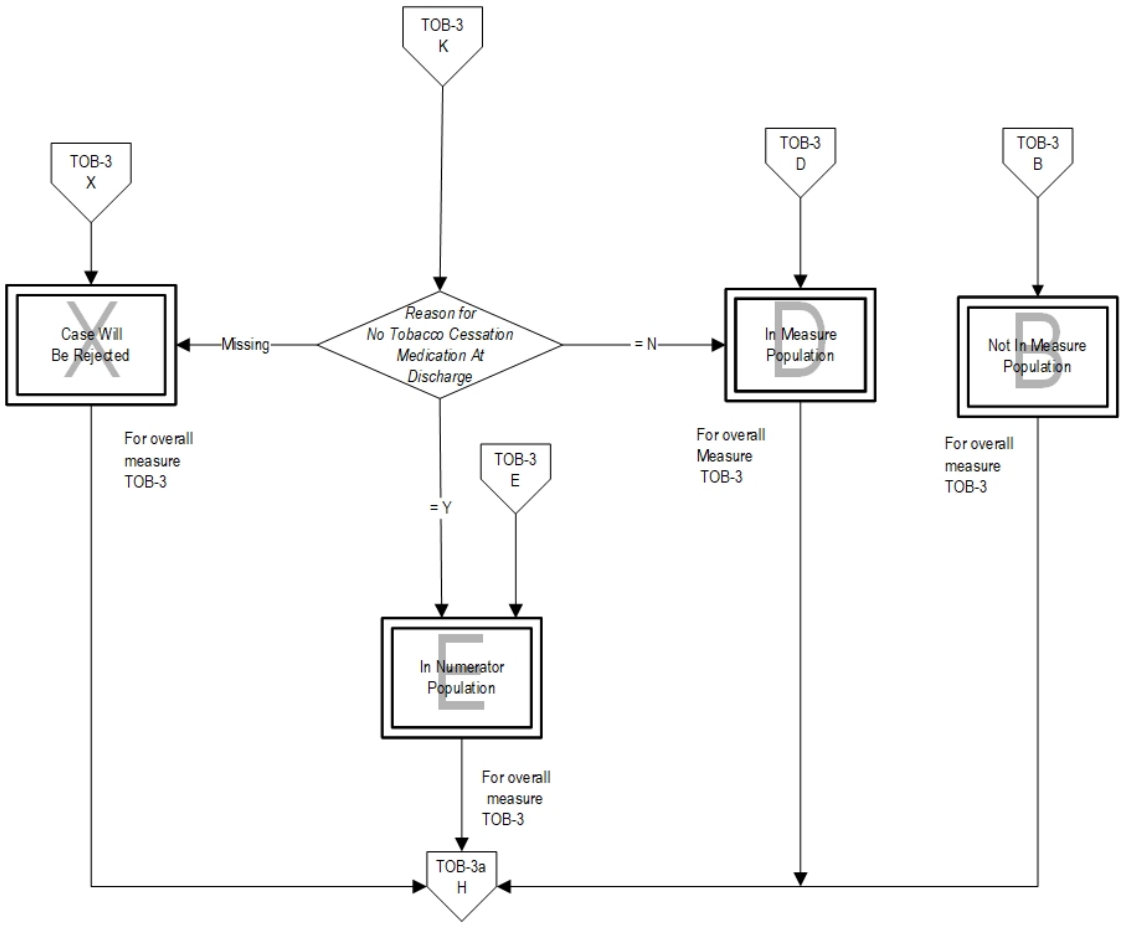

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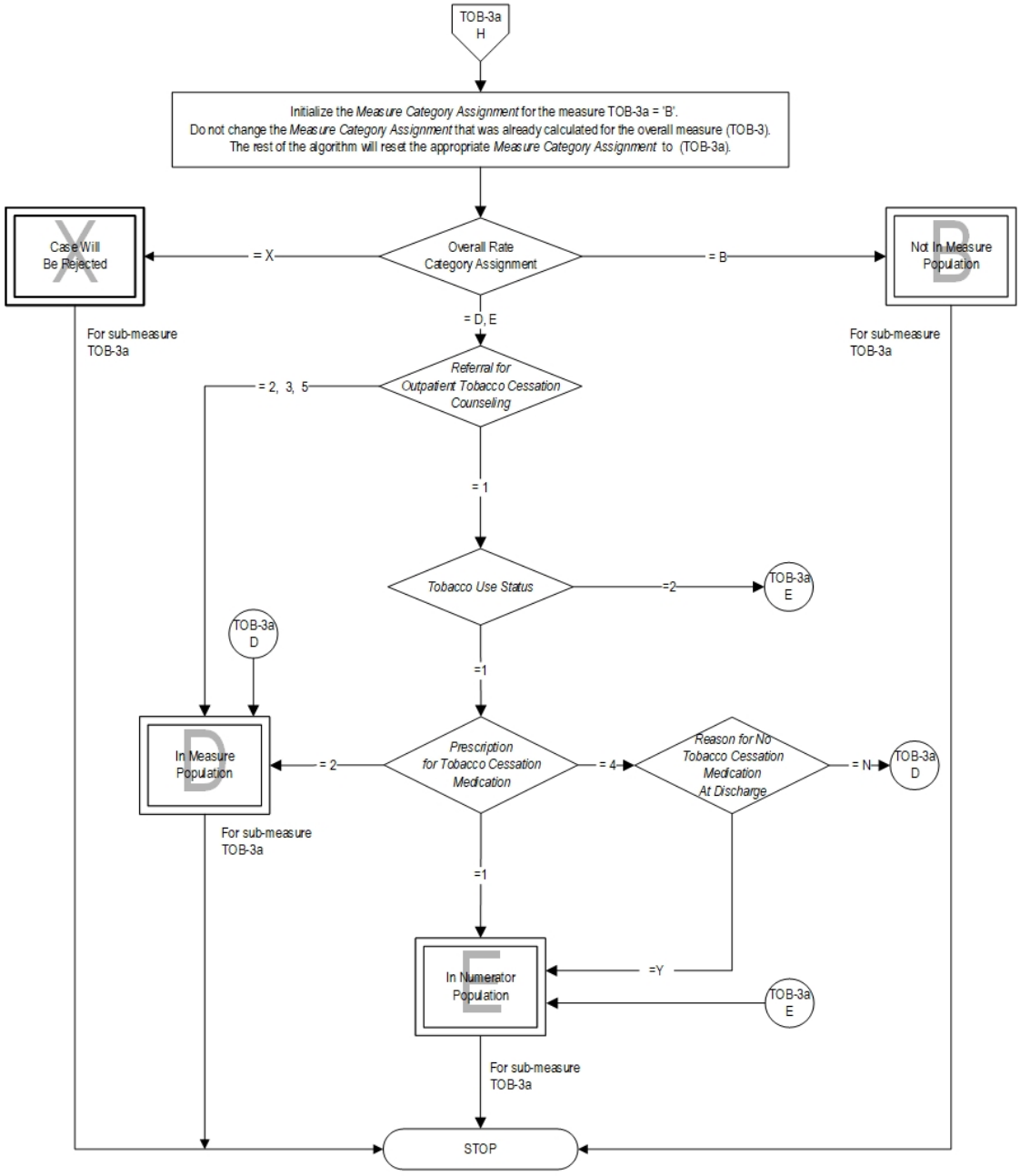
TOB-3a: Tobacco Use Treatment Provided or Offered at Discharge

Numerator: The number of patients who were referred to evidence-based outpatient counseling AND received a prescription for FDA- approved cessation medication at discharge.

Denominator: The number of hospitalized inpatients 18 years of age and older identified as current tobacco users.



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Venous Thromboembolism (VTE)

Set Measures

Set Measure ID	Measure Short Name
VTE-6	Hospital Acquired Potentially-Preventable Venous Thromboembolism

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 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, Used in calculation of the Joint Commission's aggregate data.
Payment Source	All Records, Optional for HBIPS-2 and HBIPS-3
Race	All Records,
Sex	All Records,

Algorithm Output Data Elements

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Element Name	Collected For
Measure Category Assignment	All Records, Calculation

Measure Set Specific Data Elements

Element Name	Collected For
Clinical Trial	VTE-6
Comfort Measures Only	VTE-6
Reason for No Administration of VTE Prophylaxis	VTE-6
VTE Confirmed	VTE-6
VTE Diagnostic Test	VTE-6
VTE Present at Admission	VTE-6
VTE Prophylaxis Status	VTE-6

Related Materials

	Document Name	
	Acknowledgement	
	Appendix A	
	Appendix C	
	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	
	Joint Commission Clinical Data Processing Flow	

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	Document Name	
	Joint Commission National Quality Measures Data Processing	
	Missing and Invalid Data	
	Sampling	
	Table of Contents	
	Using the The Joint Commission's National Measure Specifications Manual	

Venous Thromboembolism (VTE) Initial Patient Population

The VTE measure set is unique in that there is only one sub-population within the measure set.

Initial Patient Population Definitions Table

Measures	Initial Patient Population definition
VTE-6	The count of all patients in sub-population 3

The VTE sub-population utilizes four data elements:

- *Admission Date*
- *Birthdate*
- *Discharge Date*
- *ICD-10-CM Other Diagnosis Code*

Patients admitted to the hospital for inpatient acute care are included in the VTE ICD sub-populations if they have:
1 – No VTE sub-population – is retired.
2 – Principal VTE sub-population – is retired.
3 - Other VTE Only sub-population – Patients with an ICD-10-CM Other Diagnosis Code as defined in Appendix A, Tables 7.03 and 7.04, 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. The patients cannot have an ICD-10-CM Principal Diagnosis Code as defined in Appendix A, Tables 7.03 and 7.04.

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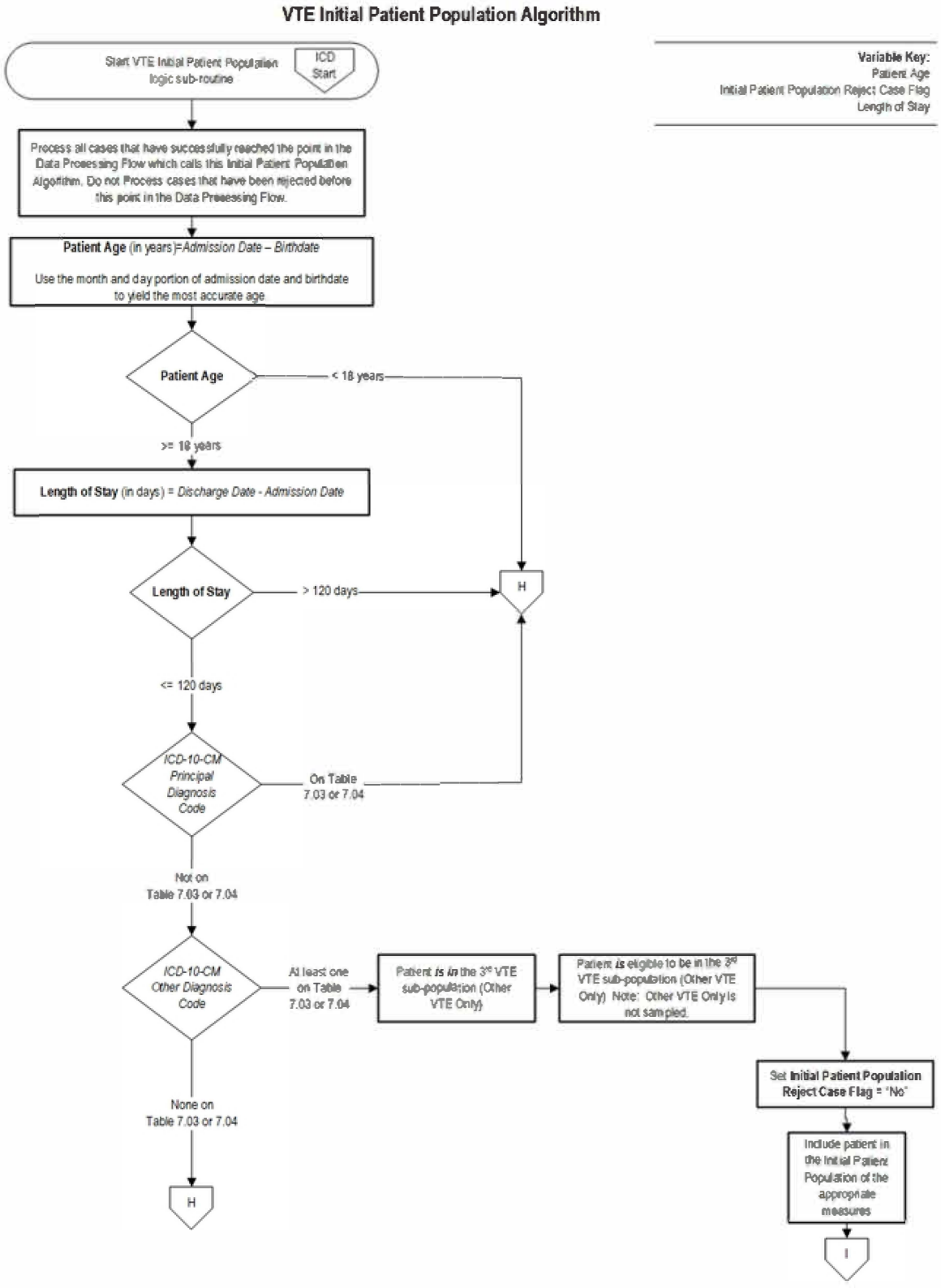
Initial Patient Population Algorithm



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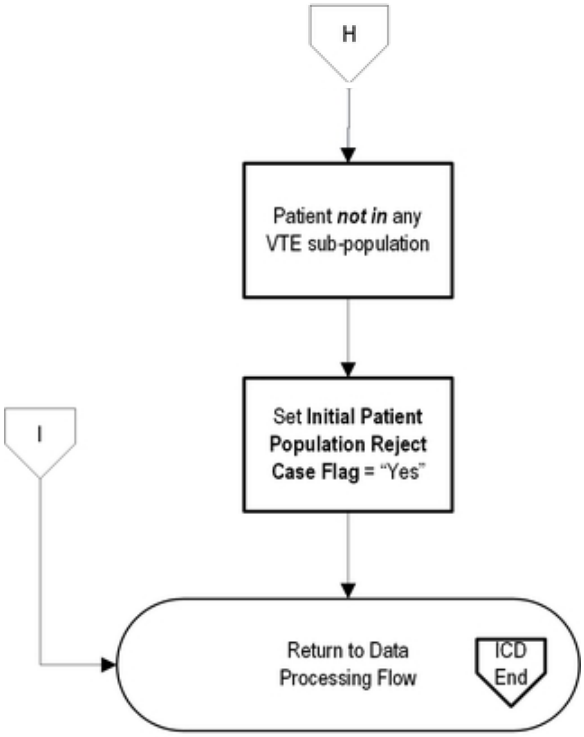

Sample Size Requirements

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. 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.

For information concerning how to perform sampling, refer to the Population and Sampling Specifications section in this manual.

Quarterly Sampling
Sampling for VTE Sub-population 3 – The Other VTE Only sub-population is not eligible for sampling and will use the entire Initial Patient Population for reporting.

Monthly Sampling
Sampling for VTE Sub-population 3 – The Other VTE Only sub-population is not eligible for sampling and will use the entire Initial Patient Sub-Population for reporting.

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Measure Information Form

Measure Set: Venous Thromboembolism (VTE)

Set Measure ID: VTE-6

Performance Measure Name: Hospital Acquired Potentially-Preventable Venous Thromboembolism

Description: This measure assesses the number of patients diagnosed with confirmed VTE during hospitalization (not present at admission) who did not receive VTE prophylaxis between hospital admission and the day before the VTE diagnostic testing order date.

Rationale: The concept of "failure to prevent" has generated interest in national health policy organizations to identify evidence-based practice that will improve patient safety in the hospital setting (Wachter et al 2001). The incidence of preventable venous thromboembolism (VTE) among hospitalized patients is overwhelming, and contributes to extended hospital stays, and the rising cost of health care. Zhan 2003, states that "VTE was the second most common medical complication of postoperative patients, the second most common cause of excess length of stay, and the third most common cause of excess mortality and excess charges". According to Arnold, D.M. (2001), preventable VTE is defined as "objectively diagnosed Deep Vein Thrombosis (DVT) or Pulmonary Emboli (PE) that occurred in a setting in which thromboprophylaxis was indicated but was either administered inadequately or not administered at all." In spite of formal guidelines, and recommendations for preventative care, pulmonary embolism is still the most common preventable cause of death among hospitalized patients (Wachter et al 2001).

Type Of Measure: Outcome

Improvement Noted As: Decrease in the rate

Numerator Statement: Patients who received no VTE prophylaxis prior to the VTE diagnostic test order date.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *VTE Prophylaxis Status*

Denominator Statement: Patients who developed confirmed VTE during hospitalization.

> **Included Populations:** Discharges with an ICD-10-CM Other Diagnosis Codes of VTE as defined in Appendix A, Table 7.03 or 7.04
>
> **Excluded Populations:**
>
> - Patients less than 18 years of age

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- Patients who have a length of stay greater than 120 days
- Patients with *Comfort Measures Only* documented
- Patients enrolled in clinical trials
- Patients with ICD-10-CM Principal Diagnosis Code of VTE as defined in Appendix A, Table 7.03 or 7.04
- Patients with *VTE Present at Admission*
- Patients with reasons for not administering mechanical and pharmacologic prophylaxis
- Patients without VTE confirmed by diagnostic testing

Data Elements:

- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Date*
- *ICD-10-CM Other Diagnosis Codes*
- *ICD-10-CM Principal Diagnosis Code*
- *Reason for No Administration of VTE Prophylaxis*
- *VTE Confirmed*
- *VTE Diagnostic Test*
- *VTE Present at Admission*

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: In order to identify areas for improvement, hospitals may want to stratify the numerator cases by patient age, diagnosis, or service designation. Patients that developed a VTE during hospitalization (denominator) that received prophylaxis could be evaluated in a separate analysis to determine if appropriate prophylaxis (modality, start time, duration) was administered.

Sampling: No. Please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications.

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

Selected References:

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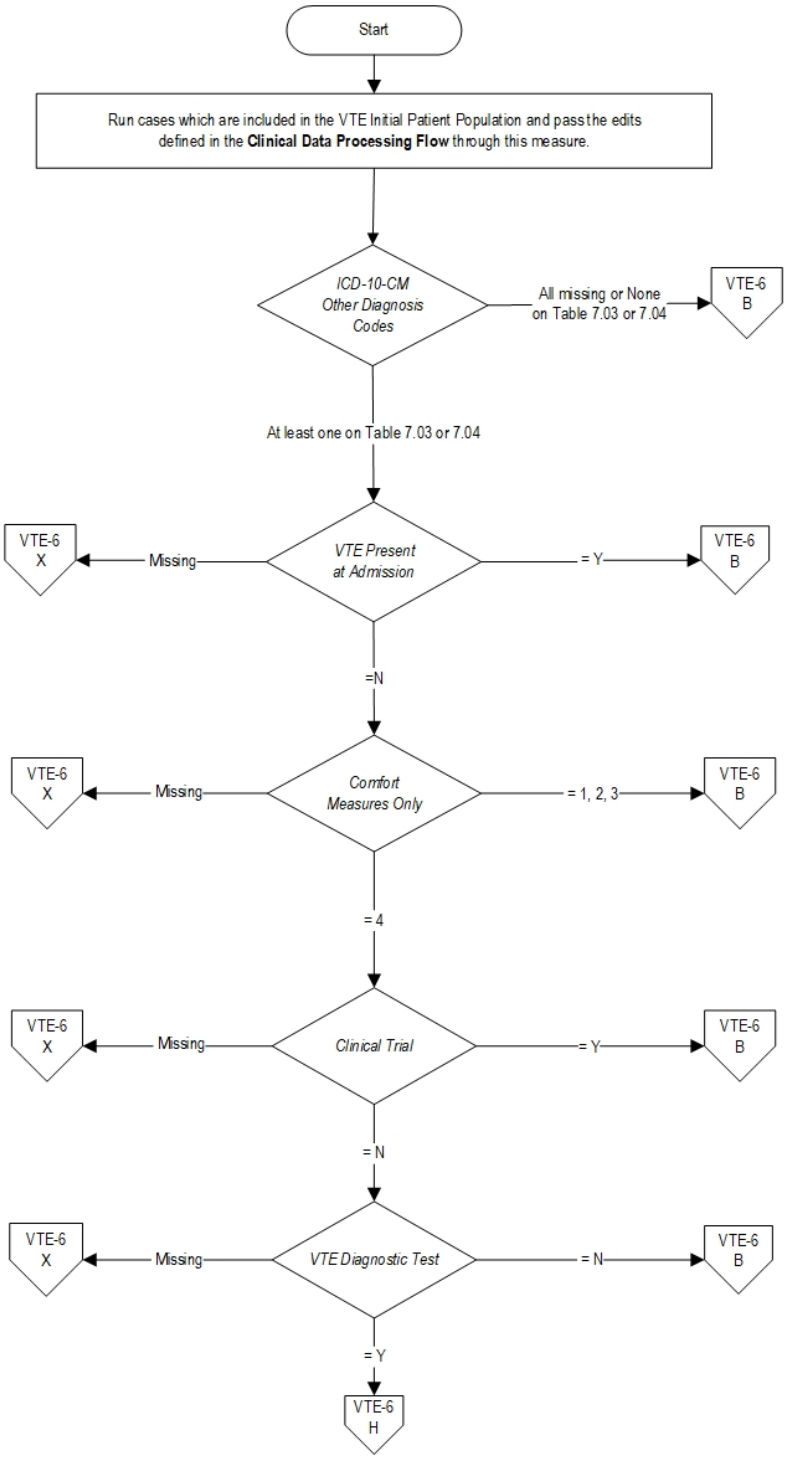
Measure Algorithm:

VTE-6: Hospital Acquired Potentially-Preventable Venous Thromboembolism

Numerator: Patients who received no VTE prophylaxis prior to the VTE diagnostic test order date

Denominator: Patients who developed confirmed VTE during hospitalization



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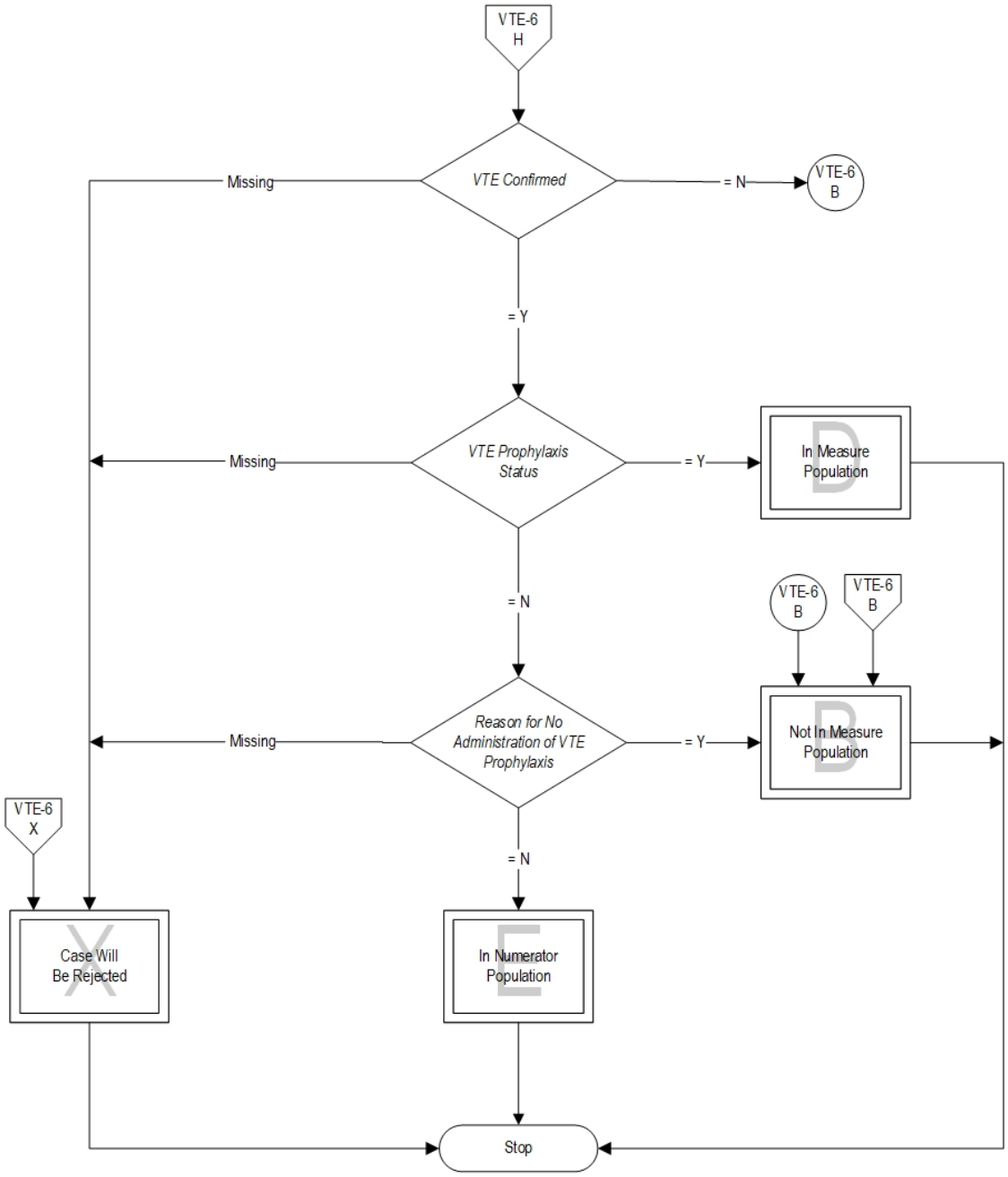

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Acute Stroke Ready Inpatient (ASR-IP)

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
Measure Category Assignment	All Records, Calculation, Used in calculation of the Joint Commission's aggregate data.
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

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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
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

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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.

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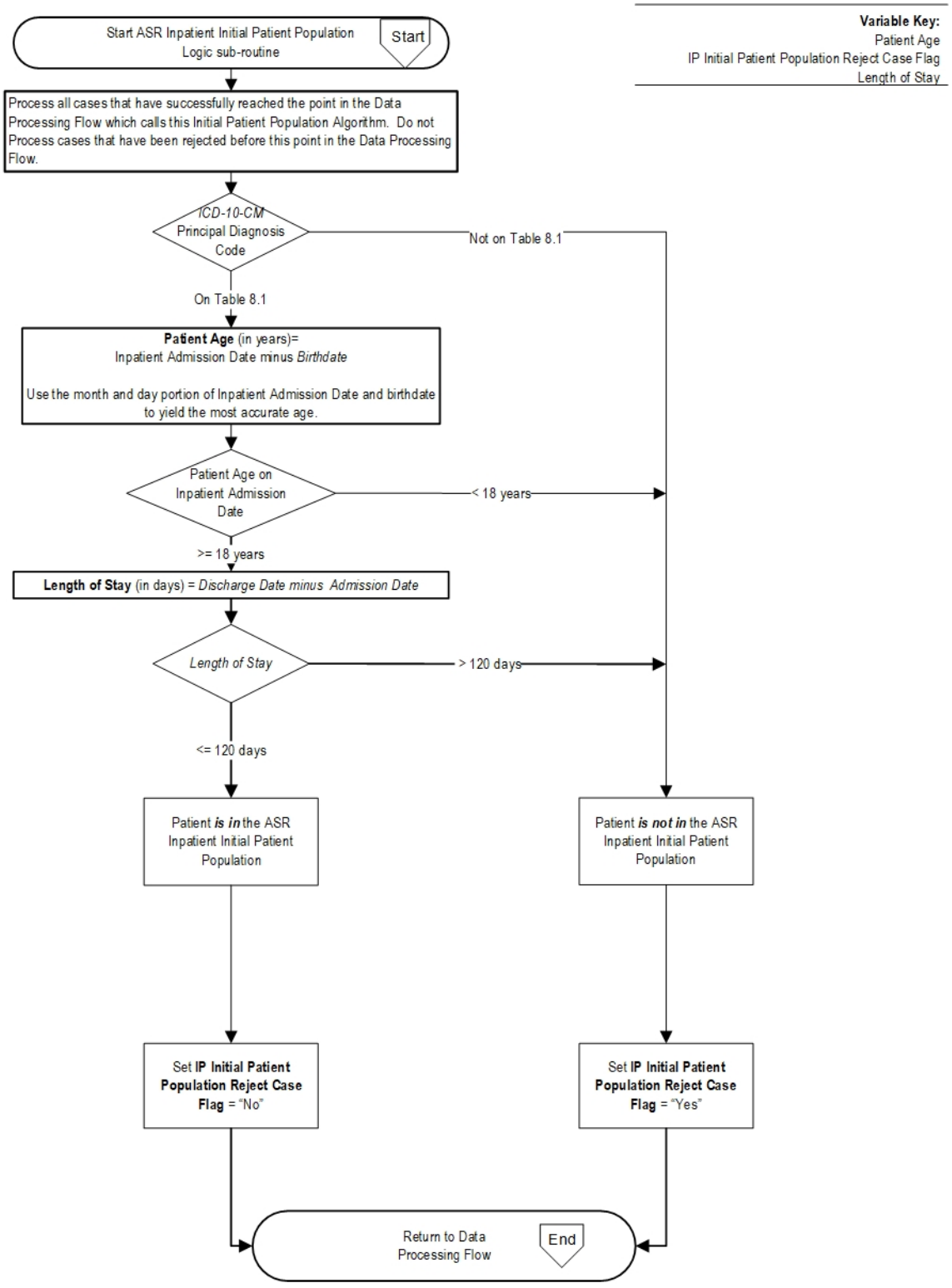
Acute Stroke Ready Hospital Inpatient Initial Patient Population Algorithm



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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:**

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- *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.

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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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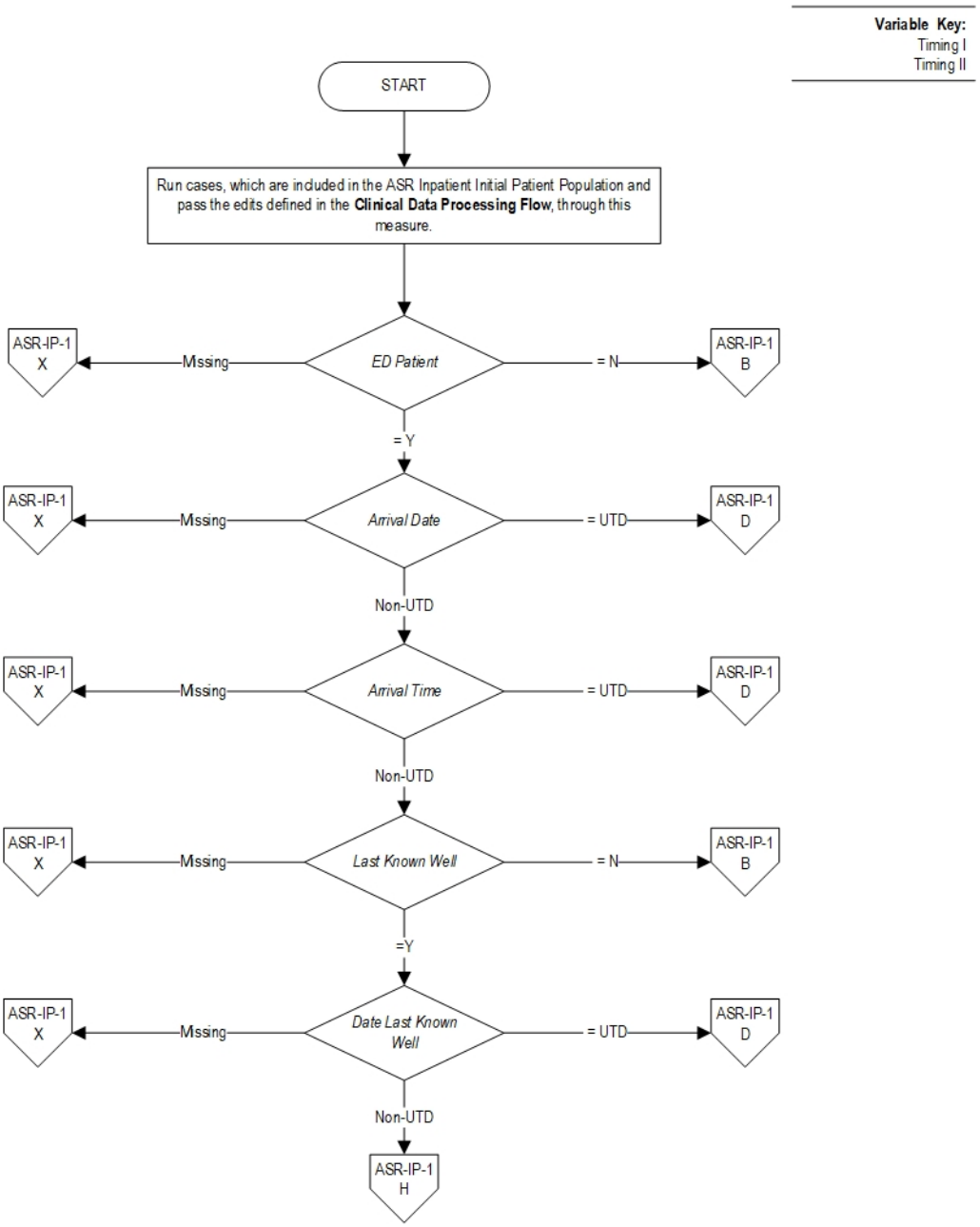
Measure Algorithm:

ASR–IP–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.



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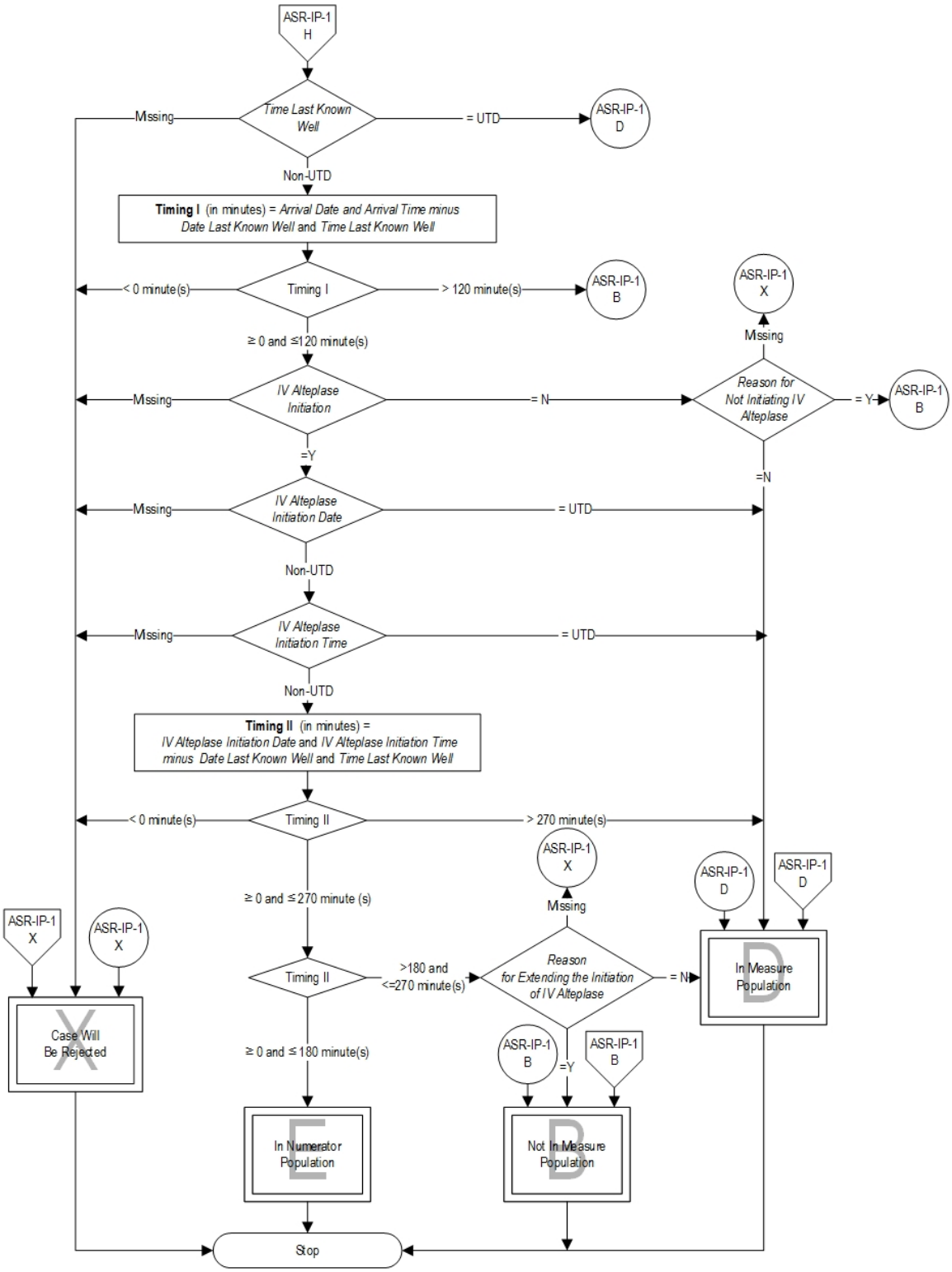

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Measure Information Form

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

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- 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:

- 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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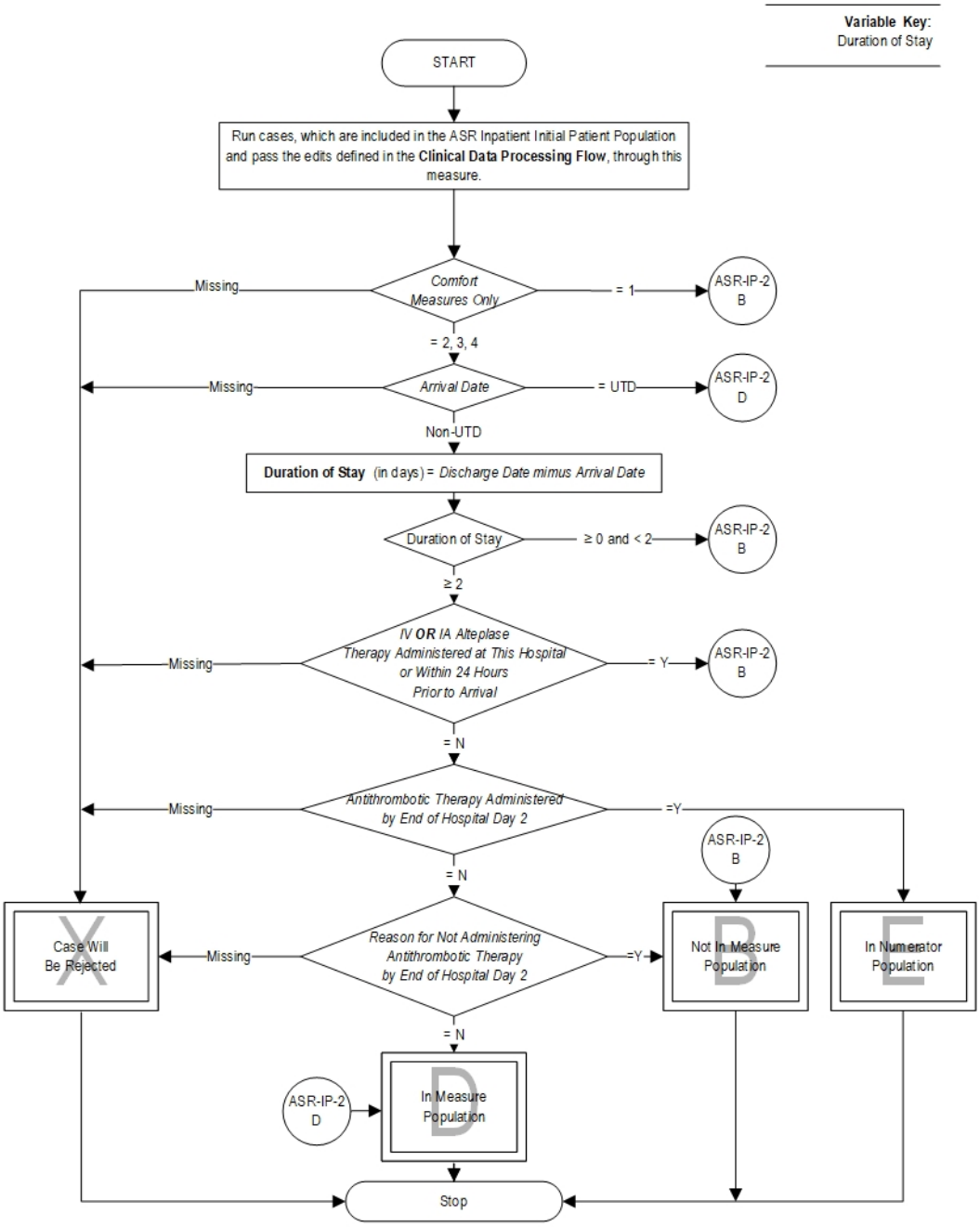
Measure Algorithm:

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.



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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:**

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- 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:

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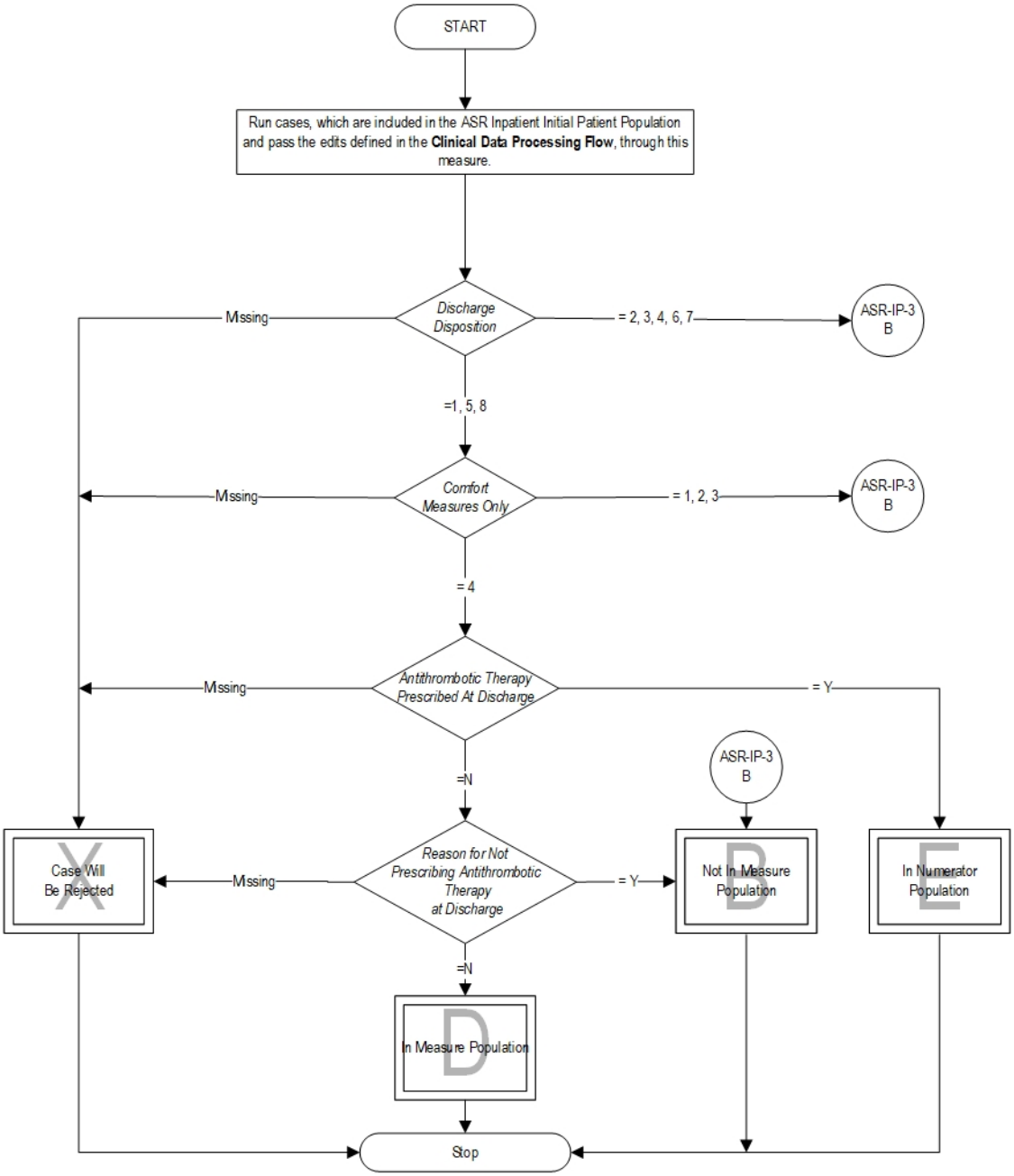
Measure Algorithm:

ASR–IP–3: Discharged on Antithrombotic Therapy

Numerator: Ischemic stroke patients prescribed antithrombotic therapy at hospital discharge

Denominator: Ischemic stroke patients.



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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
Measure Category Assignment	All Records, Calculation, Used in calculation of the Joint Commission's aggregate data.
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

Measure Set Specific Data Elements

Element Name	Collected For

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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
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.

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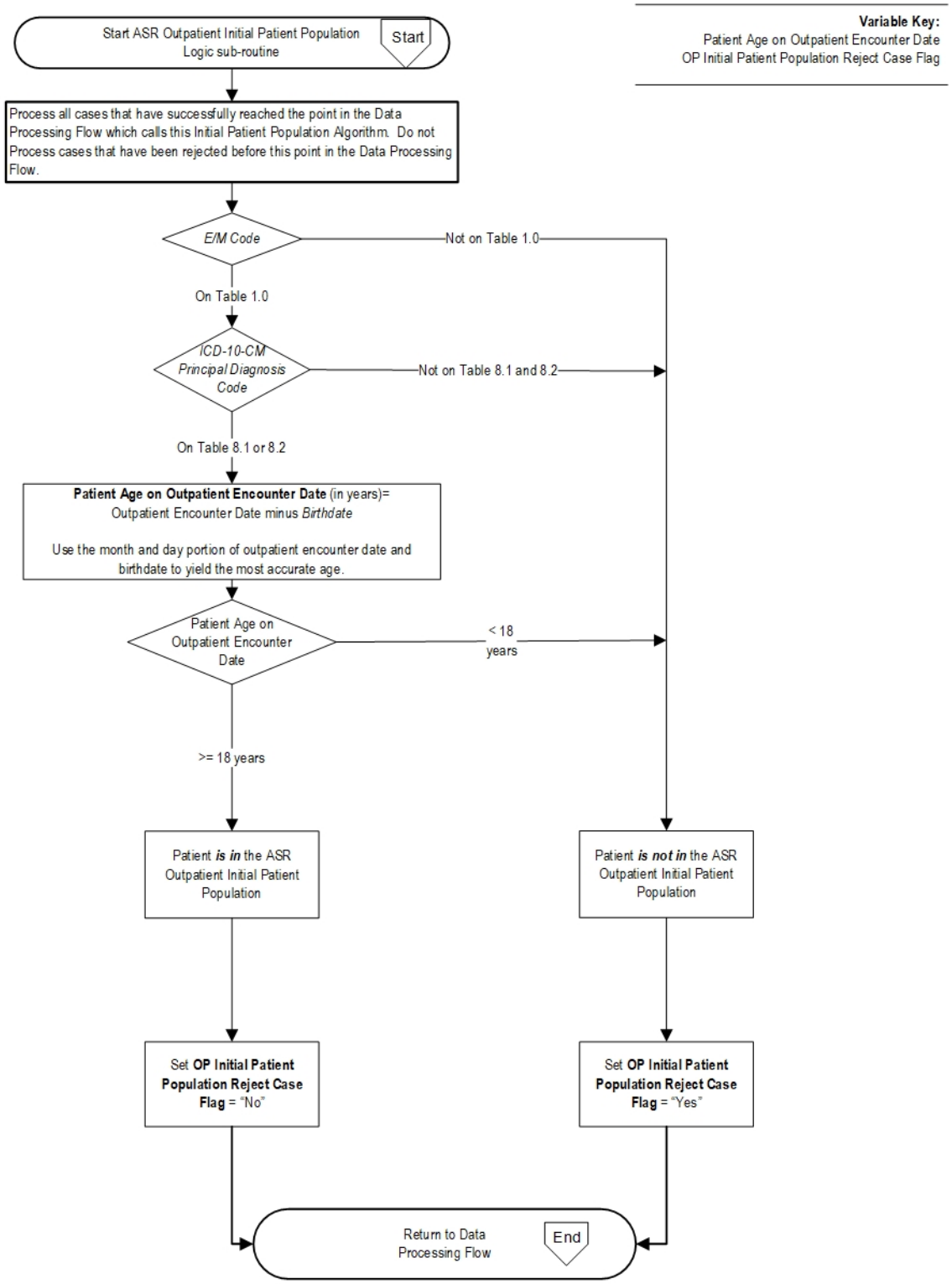
Acute Stroke Ready Hospital Outpatient Initial Patient Population Algorithm



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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:**

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- *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.

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Measure Analysis Suggestions: None

Sampling: No.

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

Selected References:

- 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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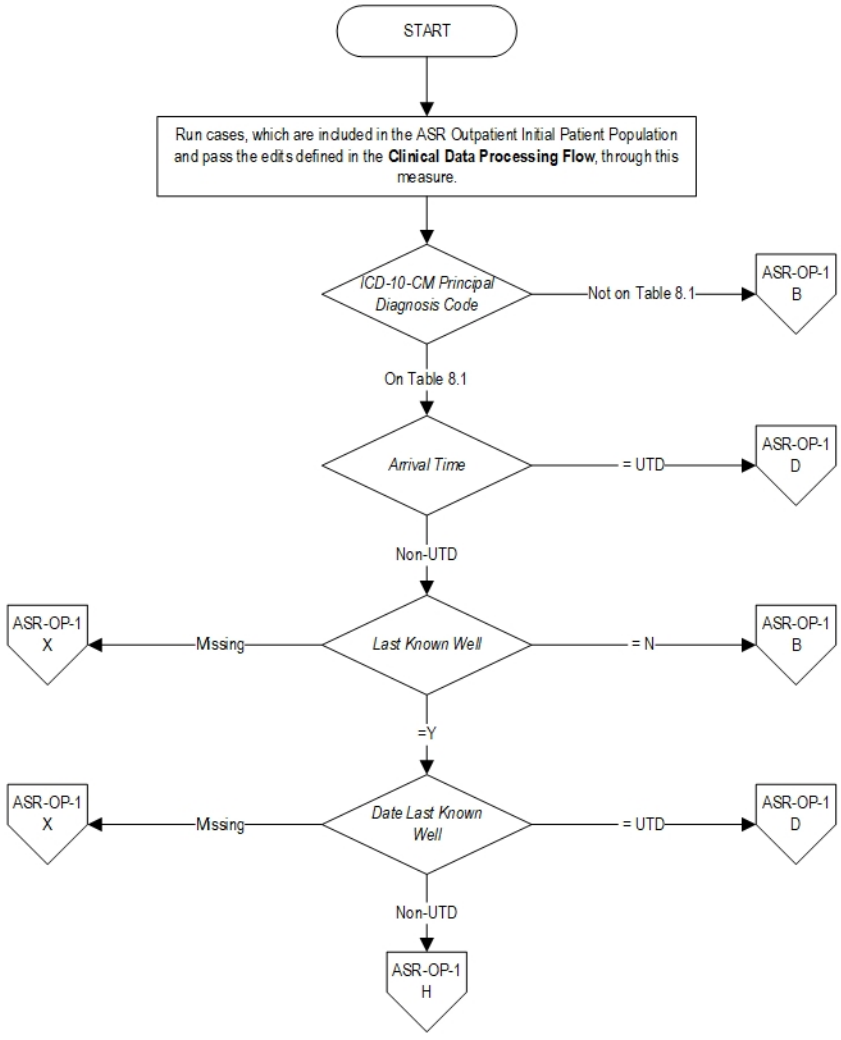
Measure Algorithm:

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



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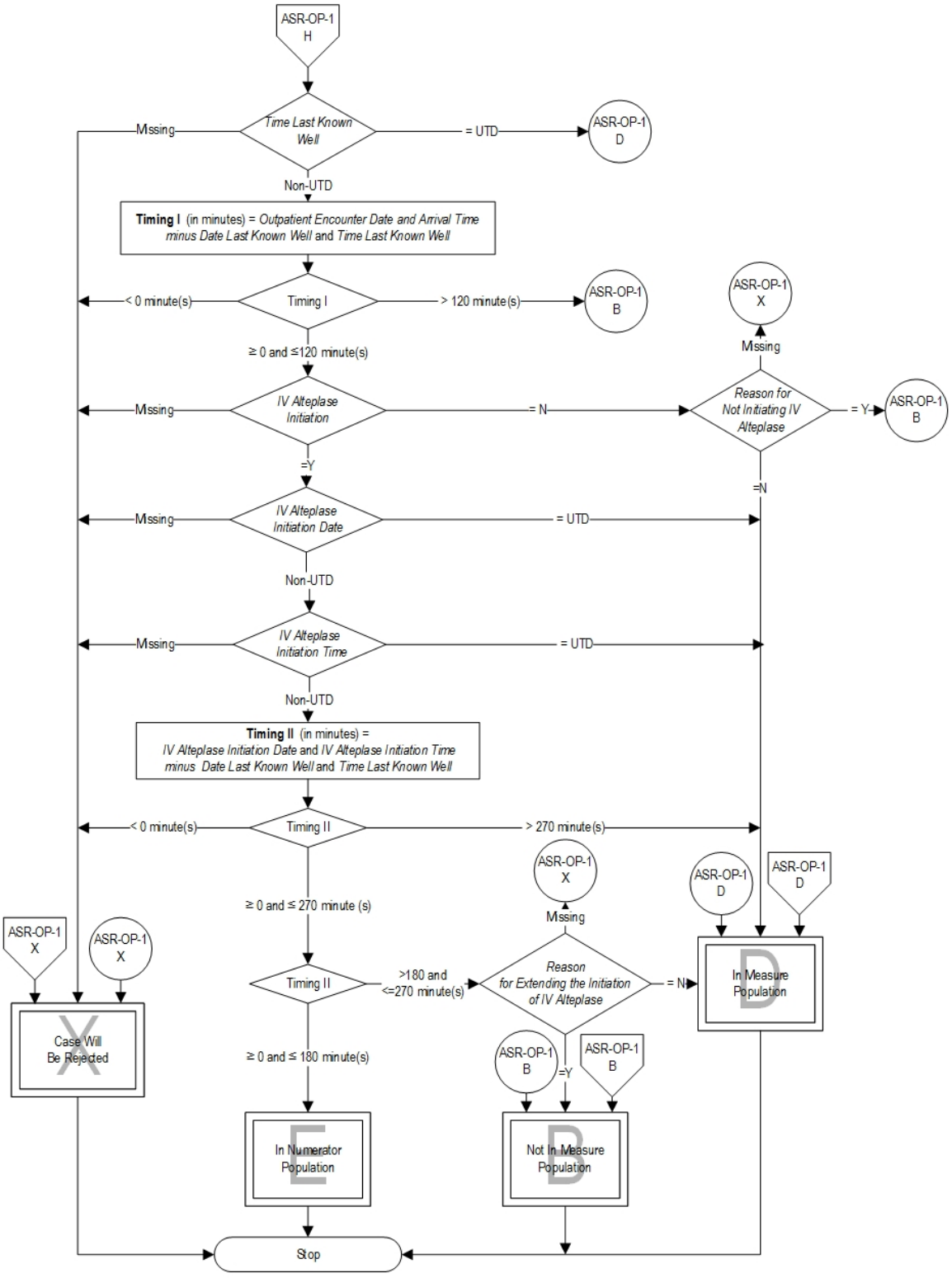

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Measure Information Form

RETIRED Effective July 1, 2021*

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

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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 popu-

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lation 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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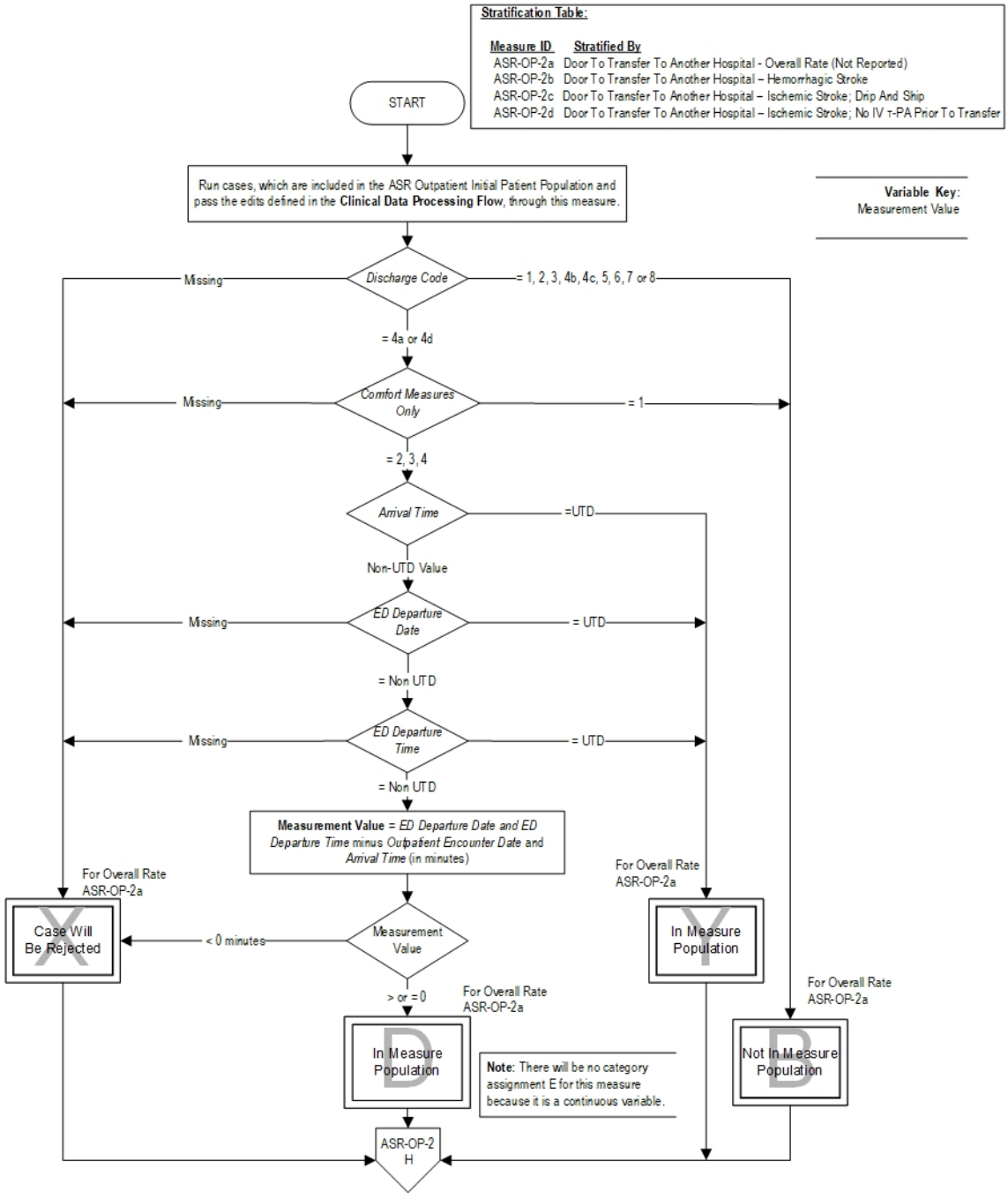
Measure Algorithm:

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.



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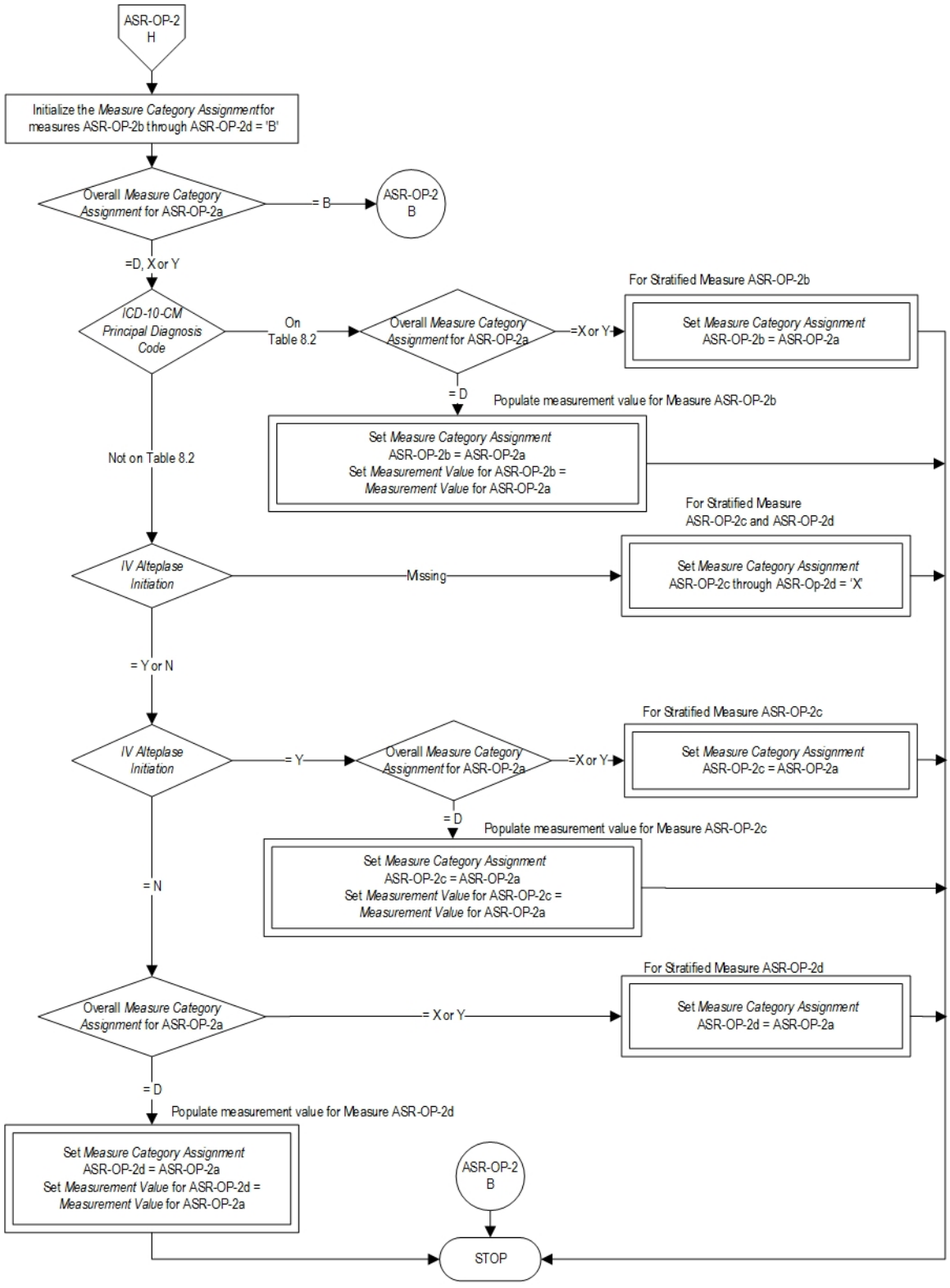

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Advanced Certification Heart Failure (ACHF)

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,

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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	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	
	Acknowledgement	
	Appendix A	

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	Document Name	
	Appendix C	
	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	
	Joint Commission Clinical Data Processing Flow	
	Joint Commission National Quality Measures Data Processing	
	Missing and Invalid Data	
	Sampling	
	Table of Contents	
	Using the The Joint Commission's National Measure Specifications Manual	

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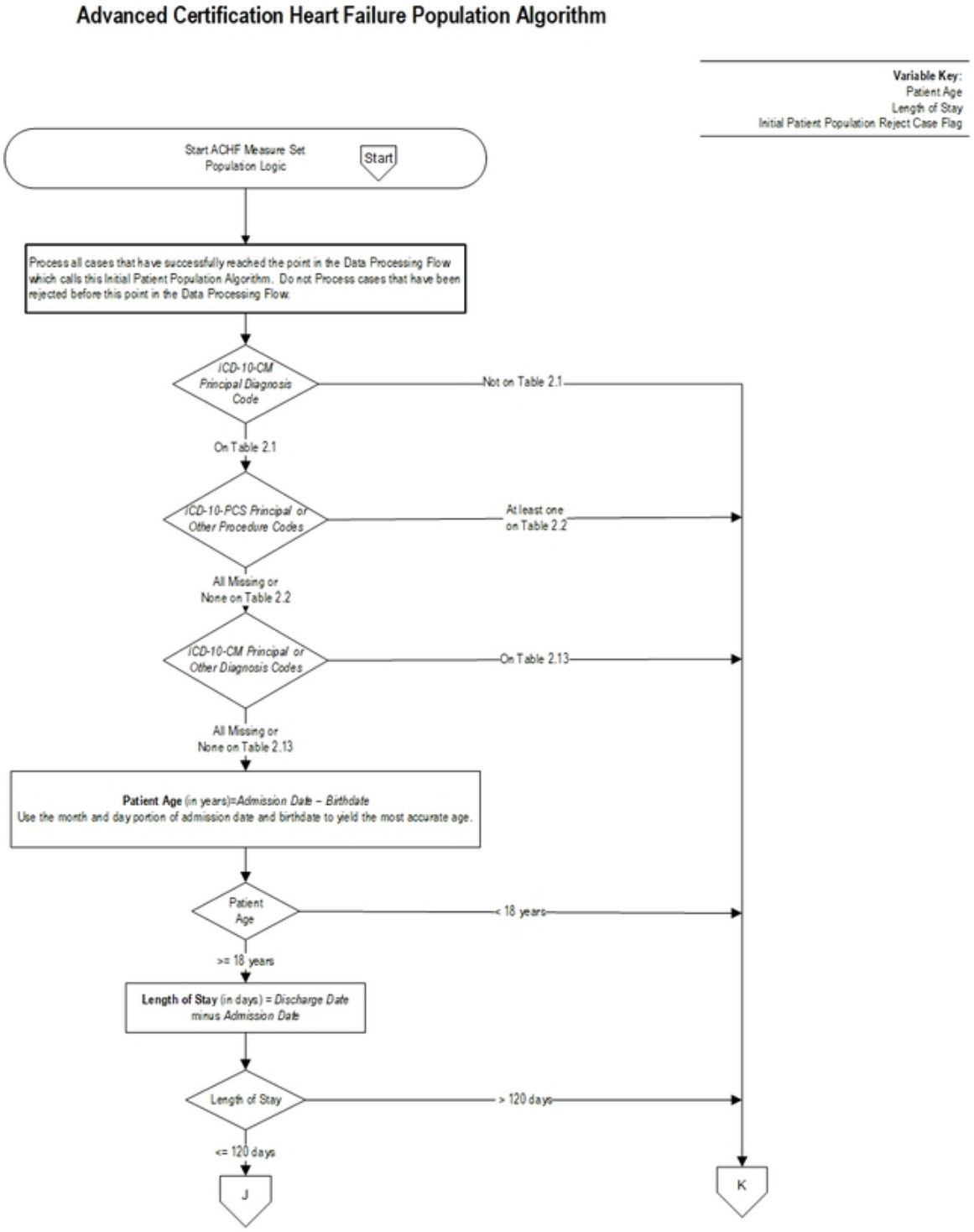
Initial Patient Population Algorithm



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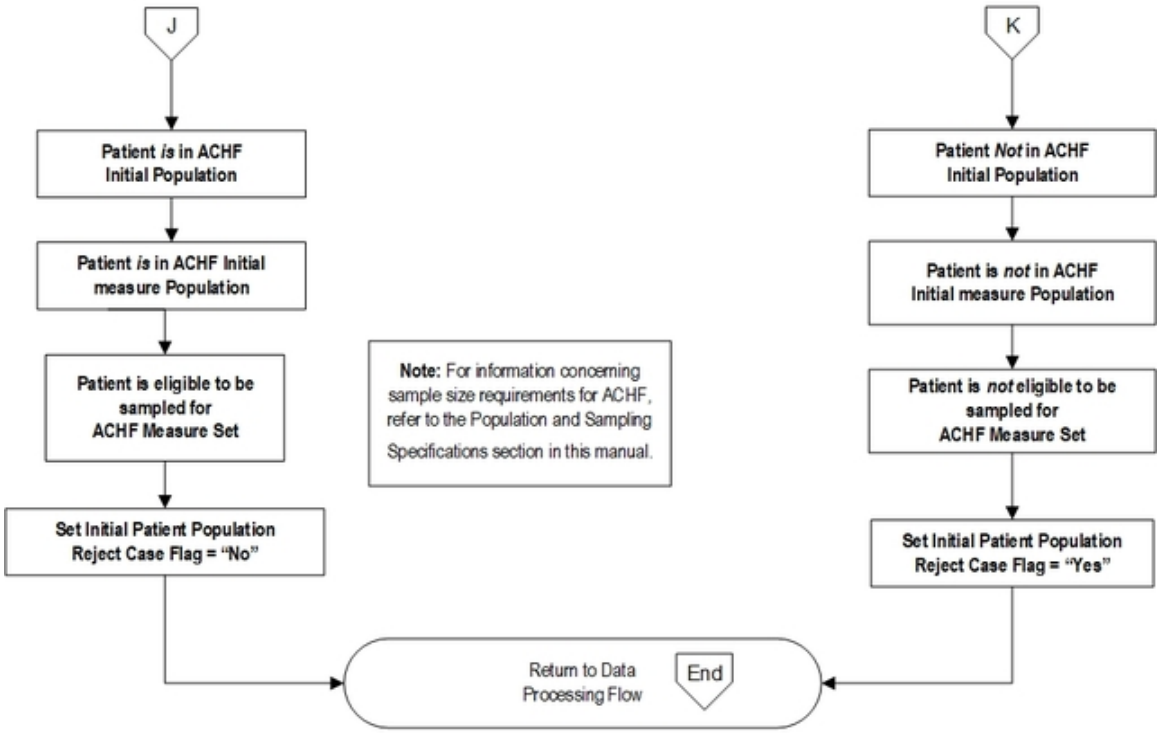

ACHF Sample Size Requirements

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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.

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 ACHF 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 ACHF 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
0 —- 75	No sampling; 100% Initial Patient Population required

Monthly Sampling

Hospitals performing monthly sampling for ACHF 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 ACHF Measure Set

Hospital's Measure

Average Monthly Initial Patient Population Size *"N"*	Minimum Required Sample Size *"n"*

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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 ACHF 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 ACHF 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).

- Monthly sampling:
  - A hospital's ACHF 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 ACHF 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).

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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%

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Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during the hospital stay or a past medical history of an LVAD or heart transplant (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A Table 2.2, and ICD-10 diagnosis codes on Table 2.13)
- 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*
- *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.

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

Selected References:

- American College of Cardiology Foundation, American Heart Association, Physician Consortium for Performance Improvement® (PCPI). Heart Failure Performance Measurement Set. Jan. 2011; 47-56.
- 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.

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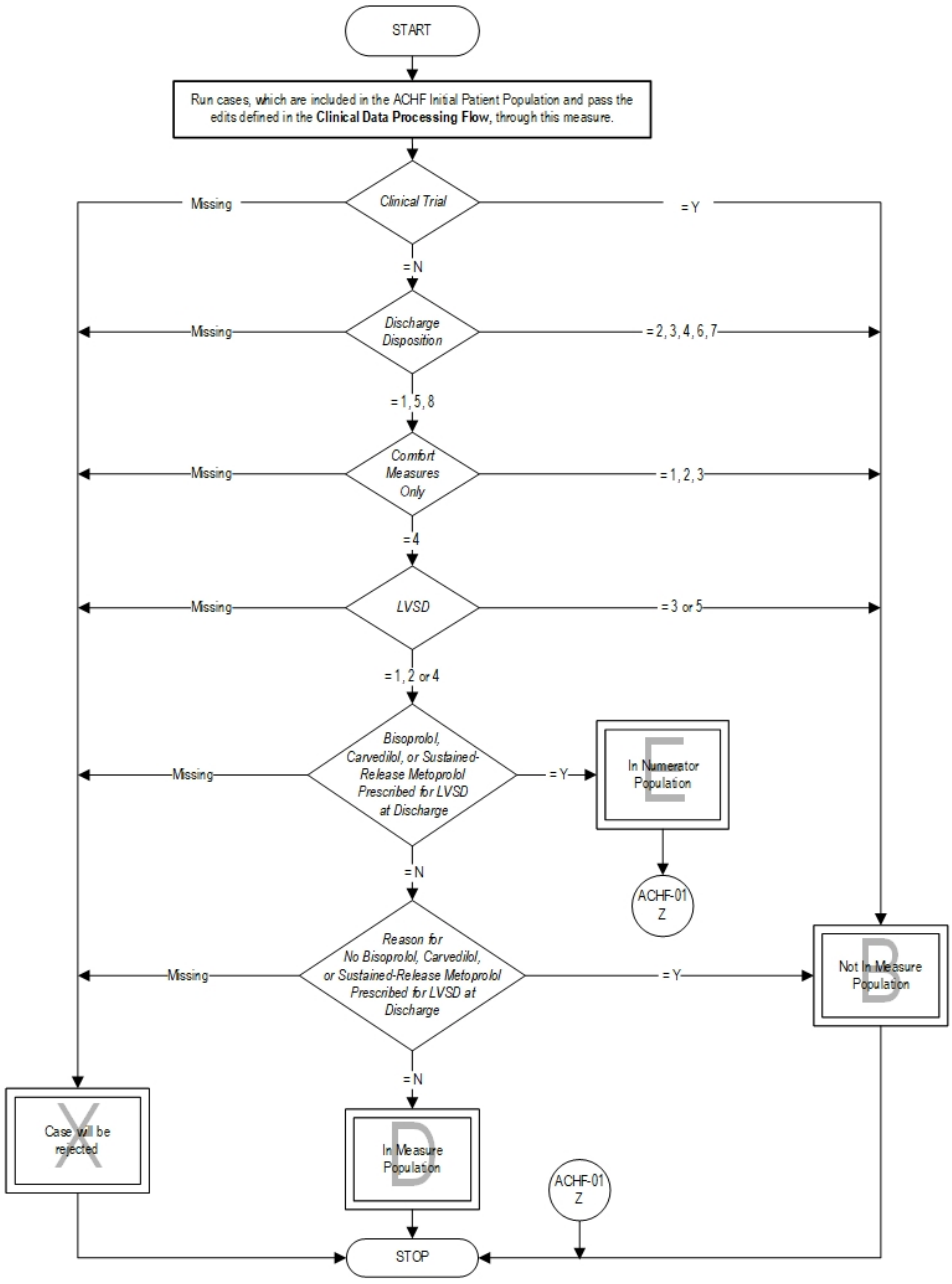
Measure Algorithm:

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%.



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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 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*

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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 the hospital stay or a past medical history of an LVAD or heart transplant (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A Table 2.2, and ICD-10 diagnosis codes on Table 2.13)
- 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

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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 College of Cardiology Foundation, American Heart Association, Physician Consortium for Performance Improvement® (PCPI). Heart Failure Performance Measurement Set. Jan. 2011; 47-56.
- 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.
- The Joint Commission. The Joint Commission's 2019 Comprehensive Certification Manual for Disease-Specific Care. Oakbrook Terrace, IL: Author. 2019.
- 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.

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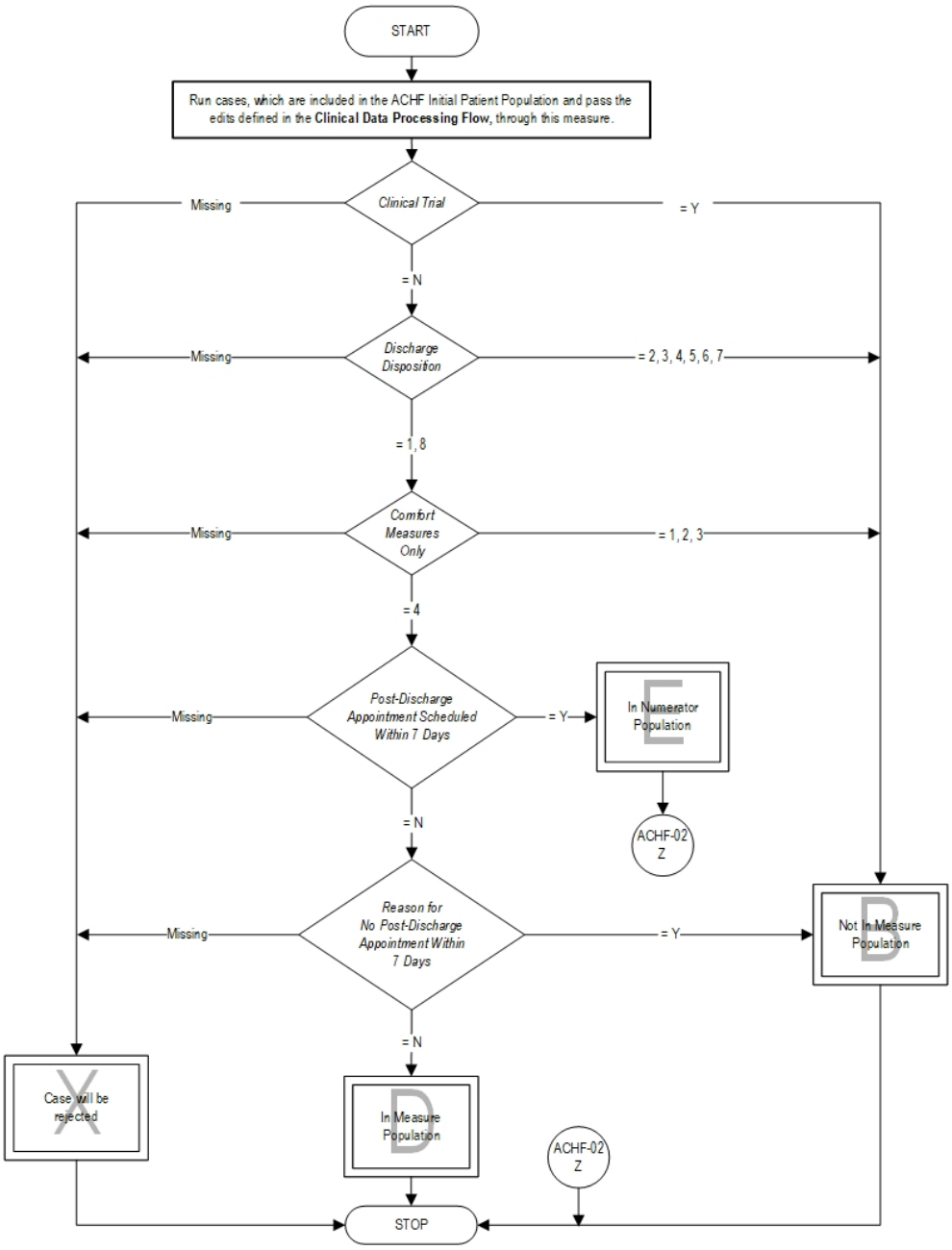
Measure Algorithm:

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.



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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 Disease-Specific Care Advanced Certification Heart Failure standards require:

- That the program includes both inpatient and outpatient services, including transitions.
- The provision of care coordination services across inpatient and outpatient settings.

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

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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 the hospital stay or a past medical history of an LVAD or heart transplant (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A Table 2.2, and ICD-10 diagnosis codes on Table 2.13)
- 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.

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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:

- 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.
- Bodenheimer T. Coordinating care a perilous journey through the health care system.NEJM. 2008;358(10): 1064-1071.
- 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.
- 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.
- 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.
- The Joint Commission. The Joint Commission's 2019 Comprehensive Certification Manual for Disease-Specific Care: Advanced Certification in Heart Failure Addendum. Oakbrook Terrace, IL: Author. 2019.

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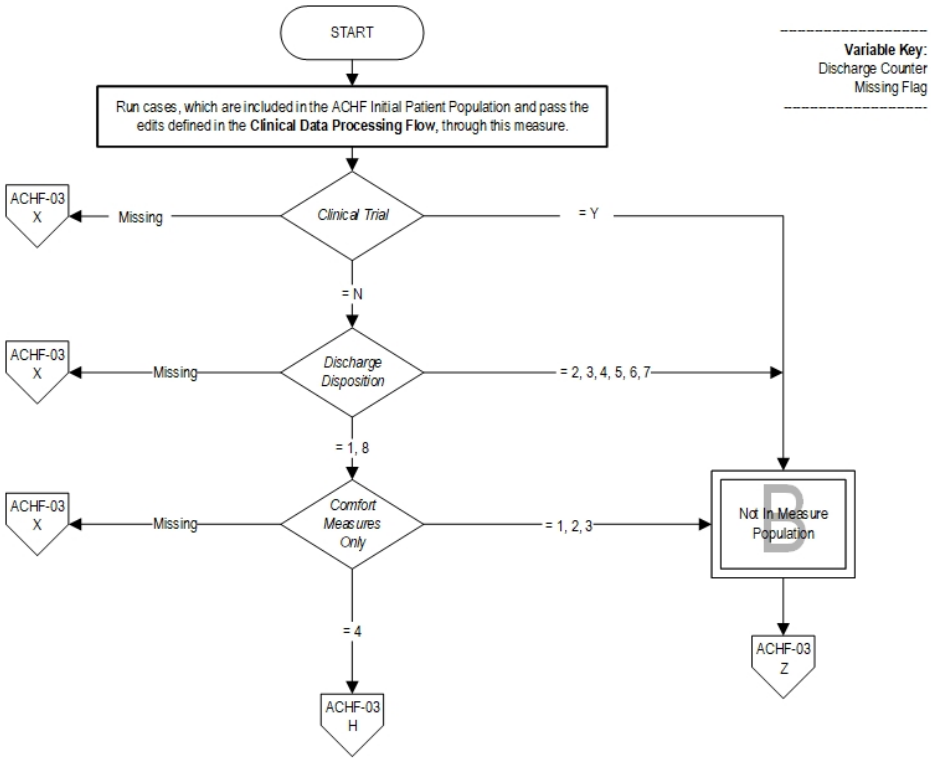
Measure Algorithm:

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.



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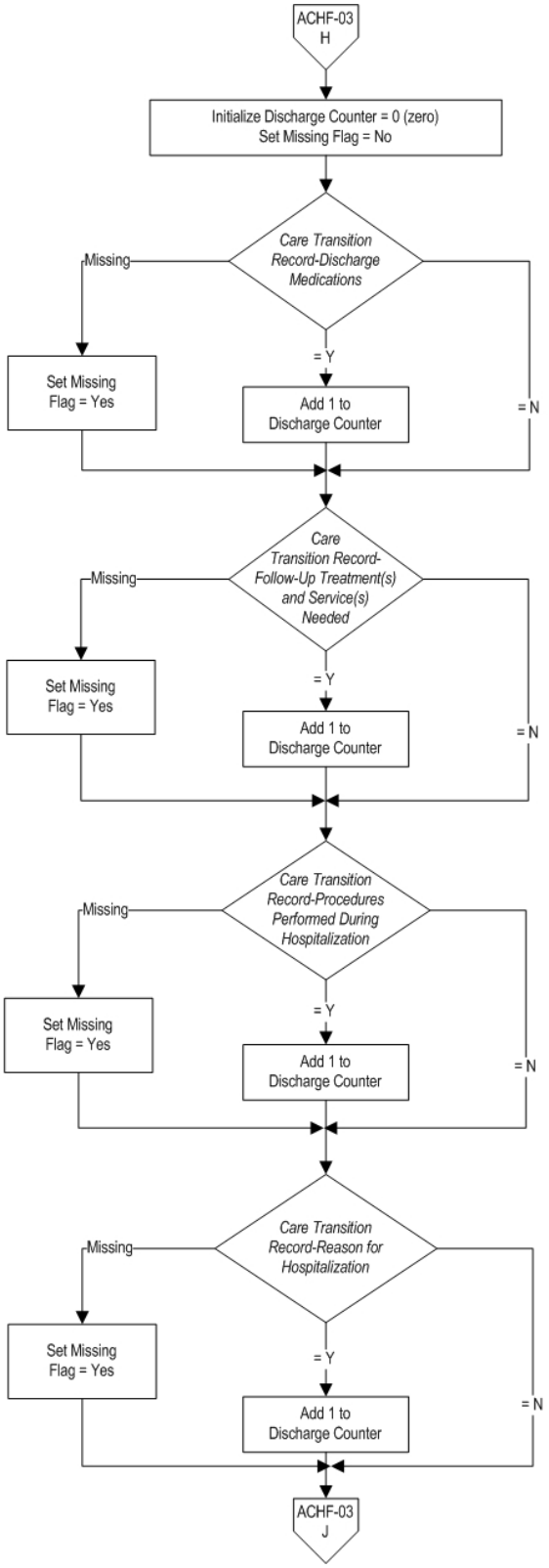

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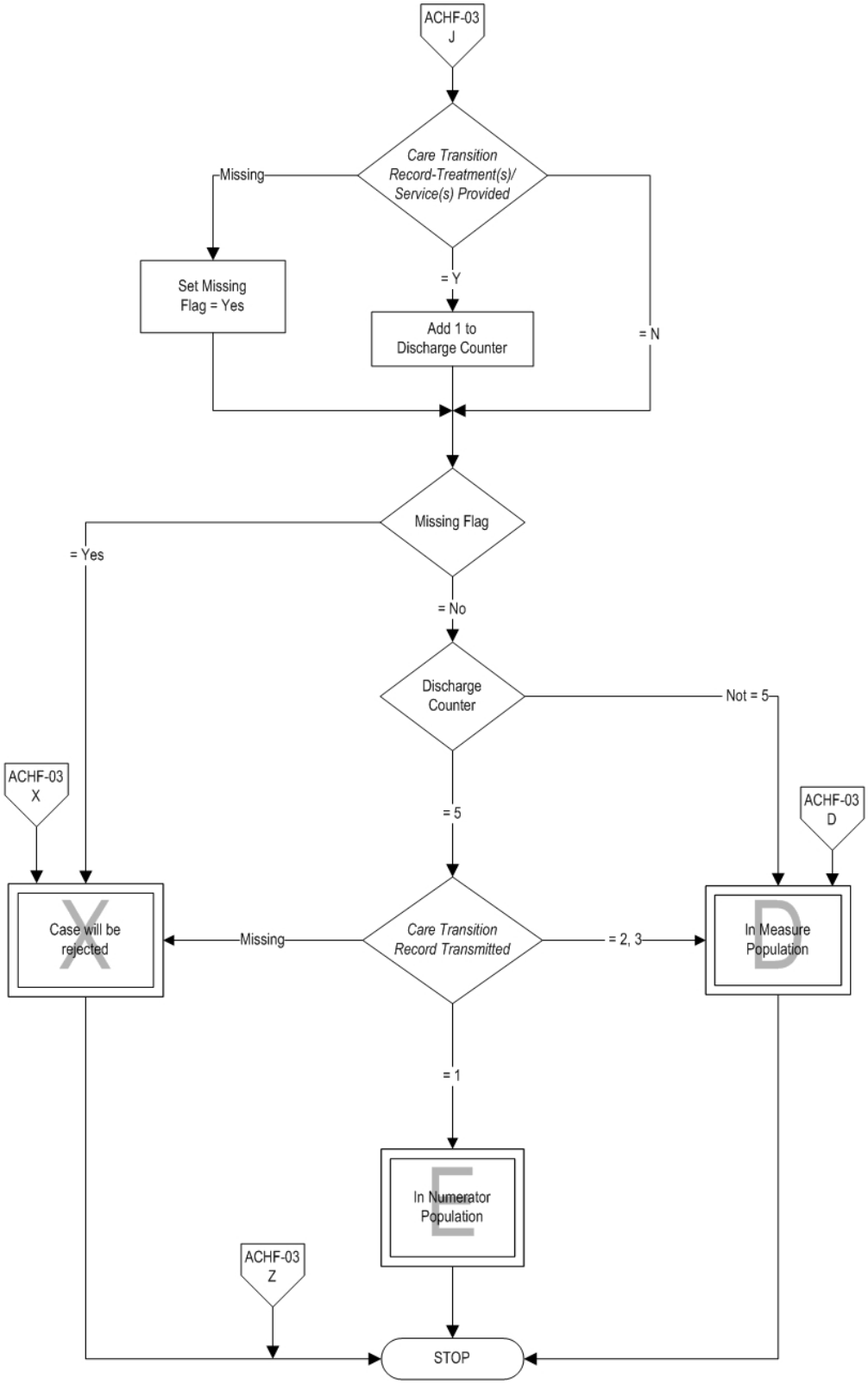

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Measure Information Form

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

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Excluded Populations:

-
- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during the hospital stay or a past medical history of an LVAD or heart transplant (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A Table 2.2, and ICD-10 diagnosis codes on Table 2.13)
- 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:

- 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.

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- Hefner JE, Barberi C. End-of-life care preferences of patients enrolled in cardiovascular rehabilitation programs. Chest. 2000;117(5);1474-1481.
- 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.
- Perkins HS. Time to move advance care planning beyond advance directives. Chest. 2000;117(5);128-1231.
- 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.
- 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.

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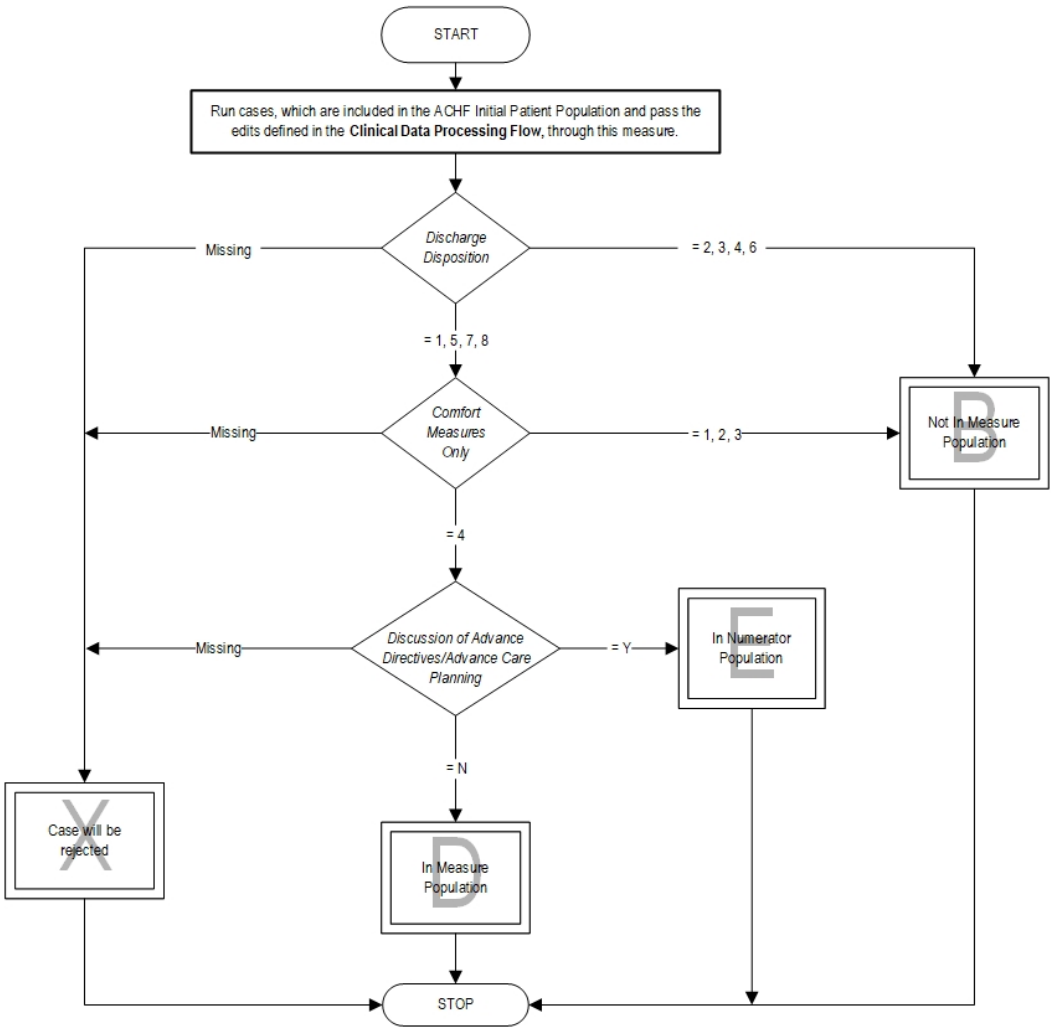
Measure Algorithm:

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.



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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:**

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- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during the hospital stay or a past medical history of an LVAD or heart transplant (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A Table 2.2, and ICD-10 diagnosis codes on Table 2.13)
- 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:

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

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

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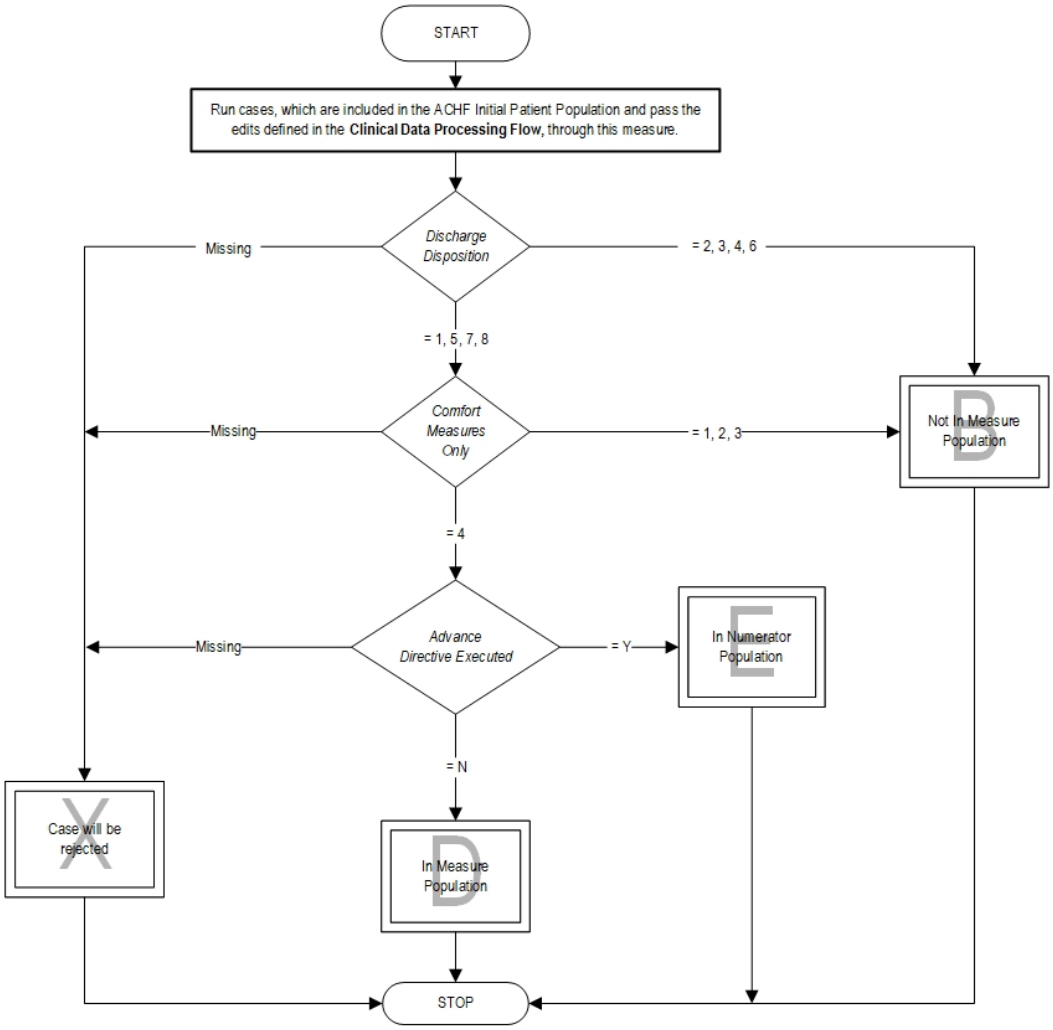
Measure Algorithm:

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.



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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 Disease-Specific Care Advanced Certification Heart Failure standards require:

- Assessment and reassessment are completed and that the patient is reevaluated within 72 hours after inpatient discharge.

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

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- Patients who left against medical advice (AMA)

Excluded Populations:

-
- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during the hospital stay or a past medical history of an LVAD or heart transplant (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A Table 2.2, and ICD-10 diagnosis codes on Table 2.13)
- 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:

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- Hoyt RE, Bowling LS. Reducing Readmissions for Congestive Heart Failure. *Am Fam Physician* 2001;63(8):1593-1598.
- Jha AK, Orav EJ, Epstein AM. Public Reporting of Discharge Planning and Rate of Readmissions. *N Eng J Med* 2009; 361(27):2637-2645.
- The Joint Commission. The Joint Commission's 2019 Comprehensive Certification Manual for Disease-Specific Care: Advanced Certification in Heart Failure Addendum. Oakbrook Terrace, IL: Author. 2019.

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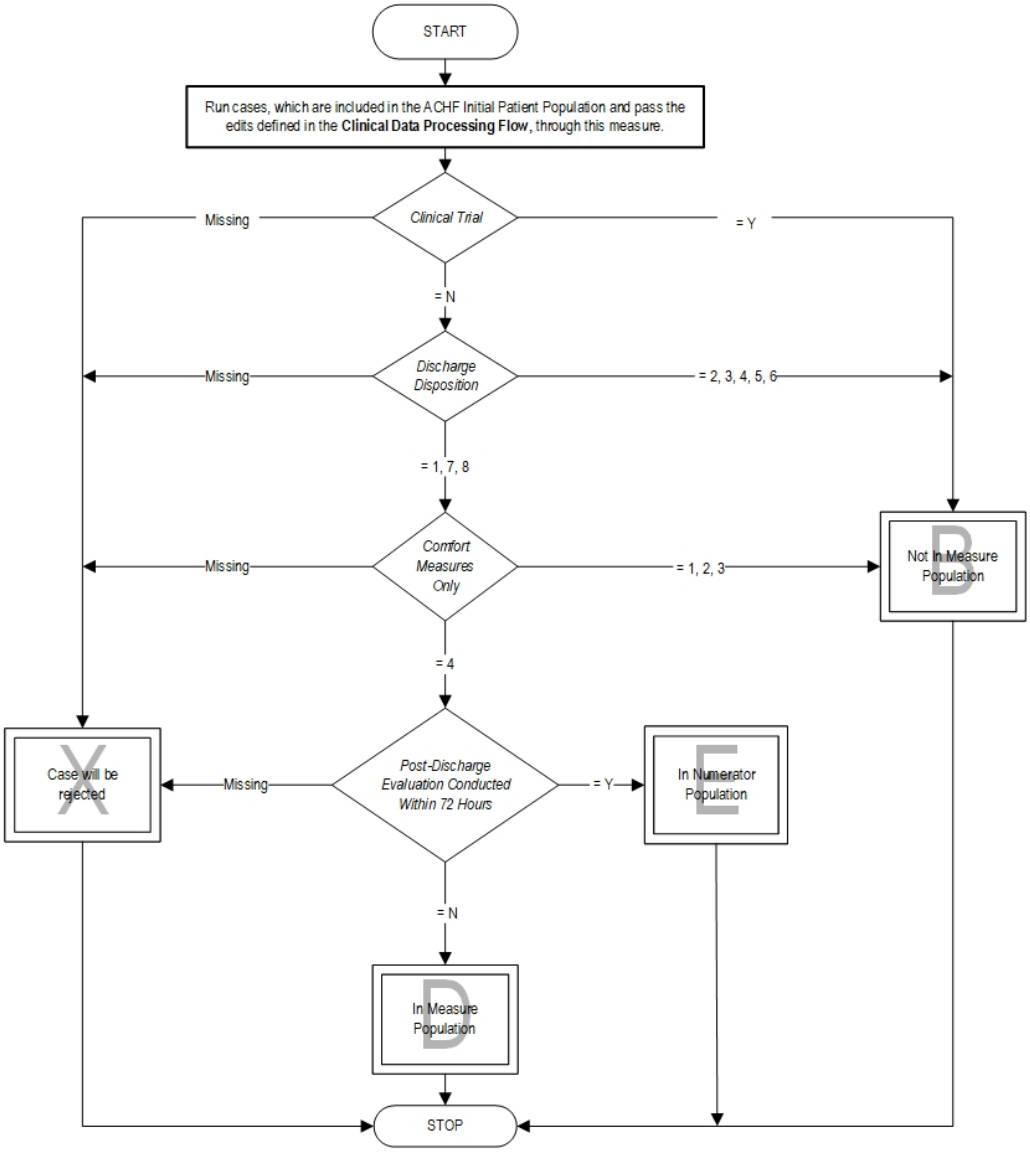
Measure Algorithm:

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).



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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
ACHFOP-04	Hospital 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

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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 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	ACHFOP-01, ACHFOP-02, ACHFOP-03
New York Heart Association (NYHA) Classification	ACHFOP-03, 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 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

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	Document Name	
	Acknowledgement	
	Appendix A	
	Appendix C	
	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	
	Joint Commission Clinical Data Processing Flow	
	Joint Commission National Quality Measures Data Processing	
	Missing and Invalid Data	
	Sampling	
	Table of Contents	
	Using the The Joint Commission's National Measure Specifications Manual	

Initial Patient Population Algorithm

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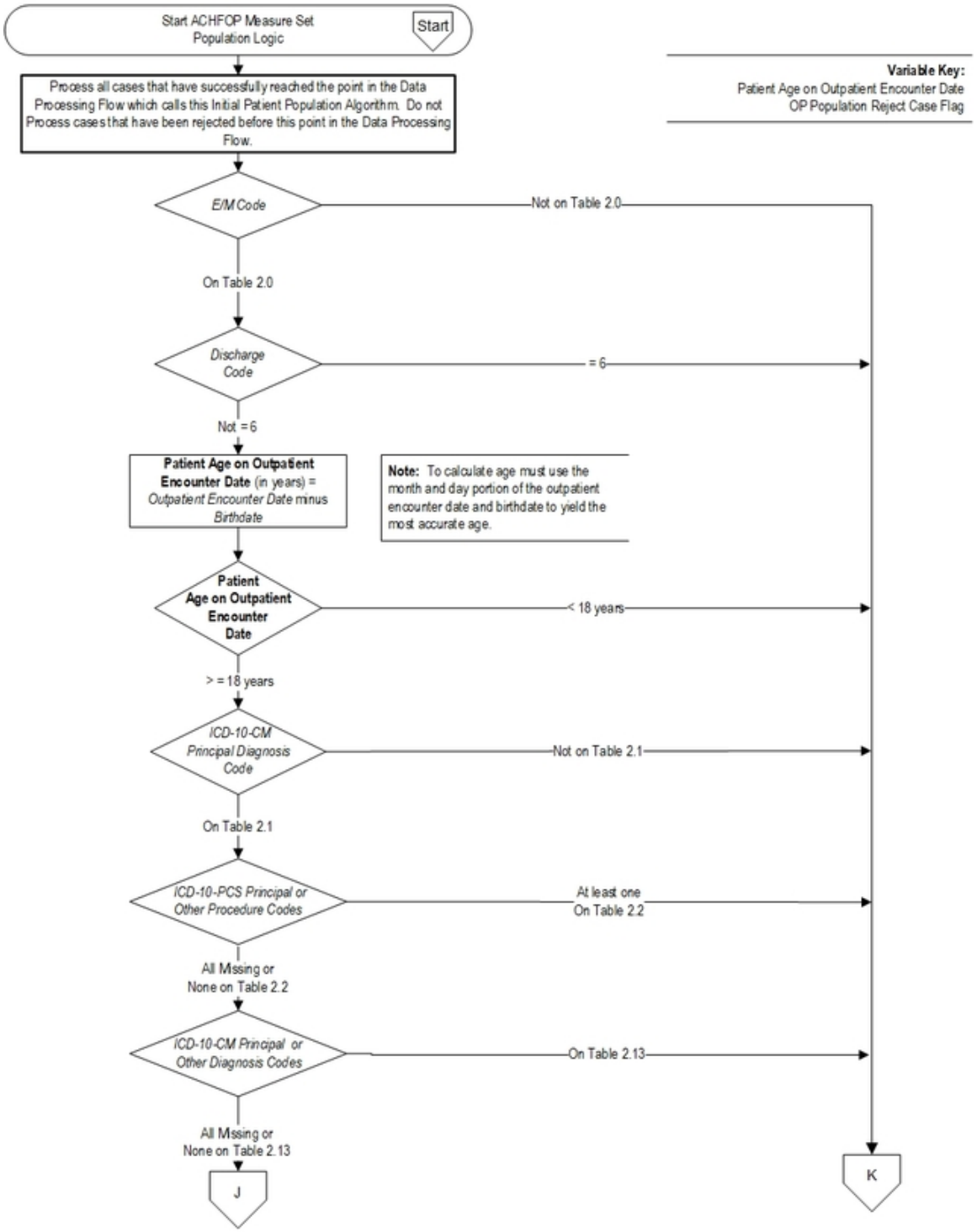
Advanced Certification Heart Failure Outpatient Population Algorithm



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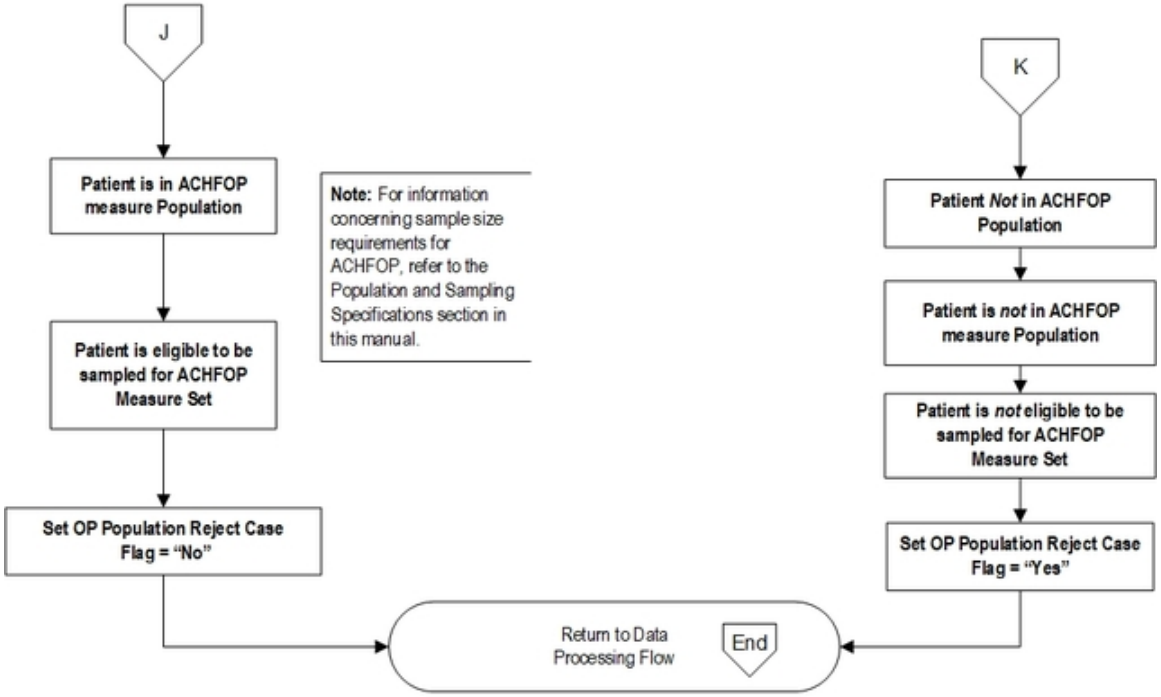

ACHF Sample Size Requirements

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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.

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 ACHF 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 ACHF 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
0 — 75	No sampling; 100% Initial Patient Population required

Monthly Sampling

Hospitals performing monthly sampling for ACHF 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 ACHF Measure Set

Hospital's Measure

Average Monthly Initial Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
≥ 506	102

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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 ACHF 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 ACHF 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).

- Monthly sampling:
  - A hospital's ACHF 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 ACHF 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).

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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

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- 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 assistive device (LVAD) or heart transplant procedure during the hospital stay or a past medical history of an LVAD or heart transplant (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A Table 2.2, and ICD-10 diagnosis codes on Table 2.13)
- 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*
- *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:

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- American College of Cardiology Foundation, American Heart Association, Physician Consortium for Performance Improvement® (PCPI). Heart Failure Performance Measurement Set. Jan. 2011; 47-56.
- 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.

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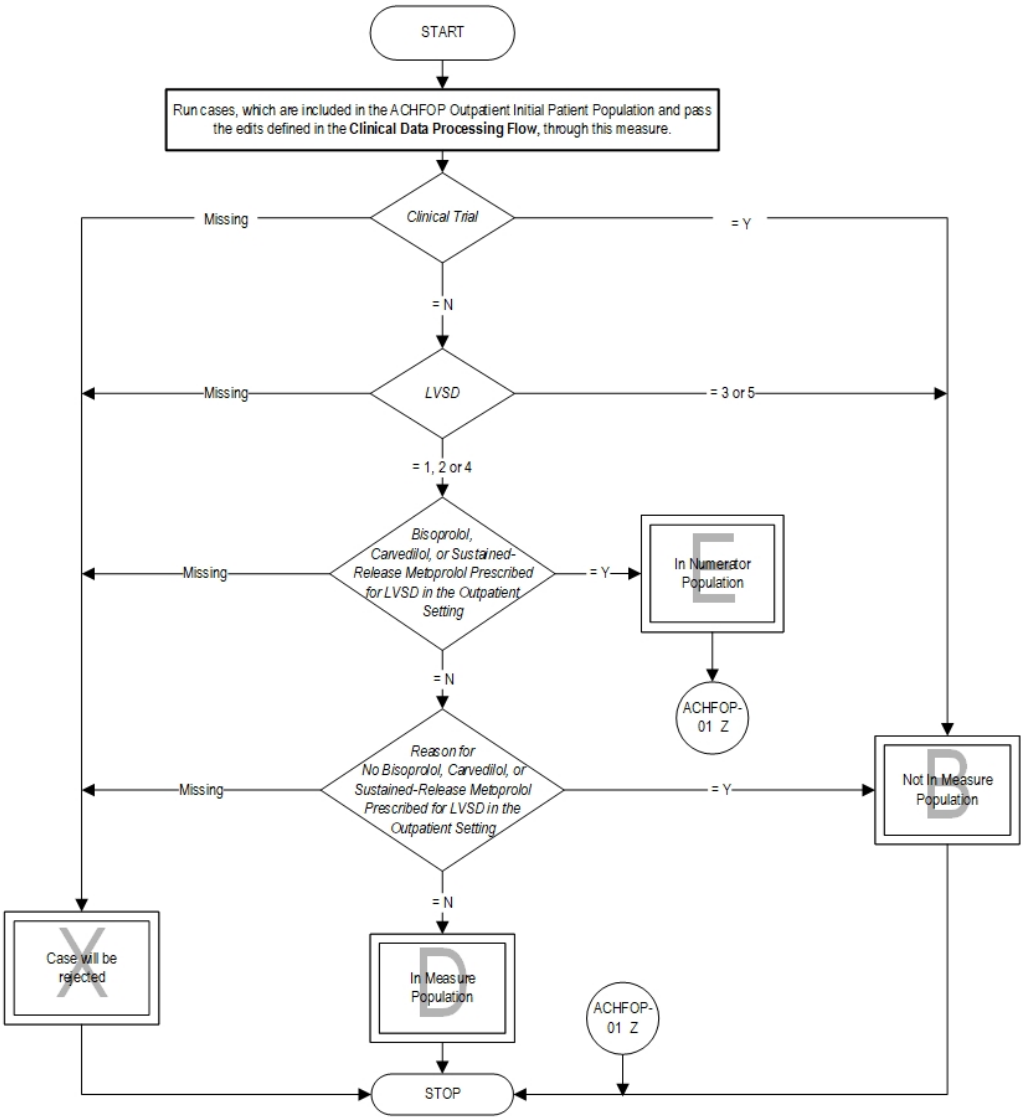
Measure Algorithm:

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%.



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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%

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Excluded Populations:

- Patients enrolled in a Clinical Trial
- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during the hospital stay or a past medical history of an LVAD or heart transplant (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A Table 2.2, and ICD-10 diagnosis codes on Table 2.13)
- 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*
- *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.

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- 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.

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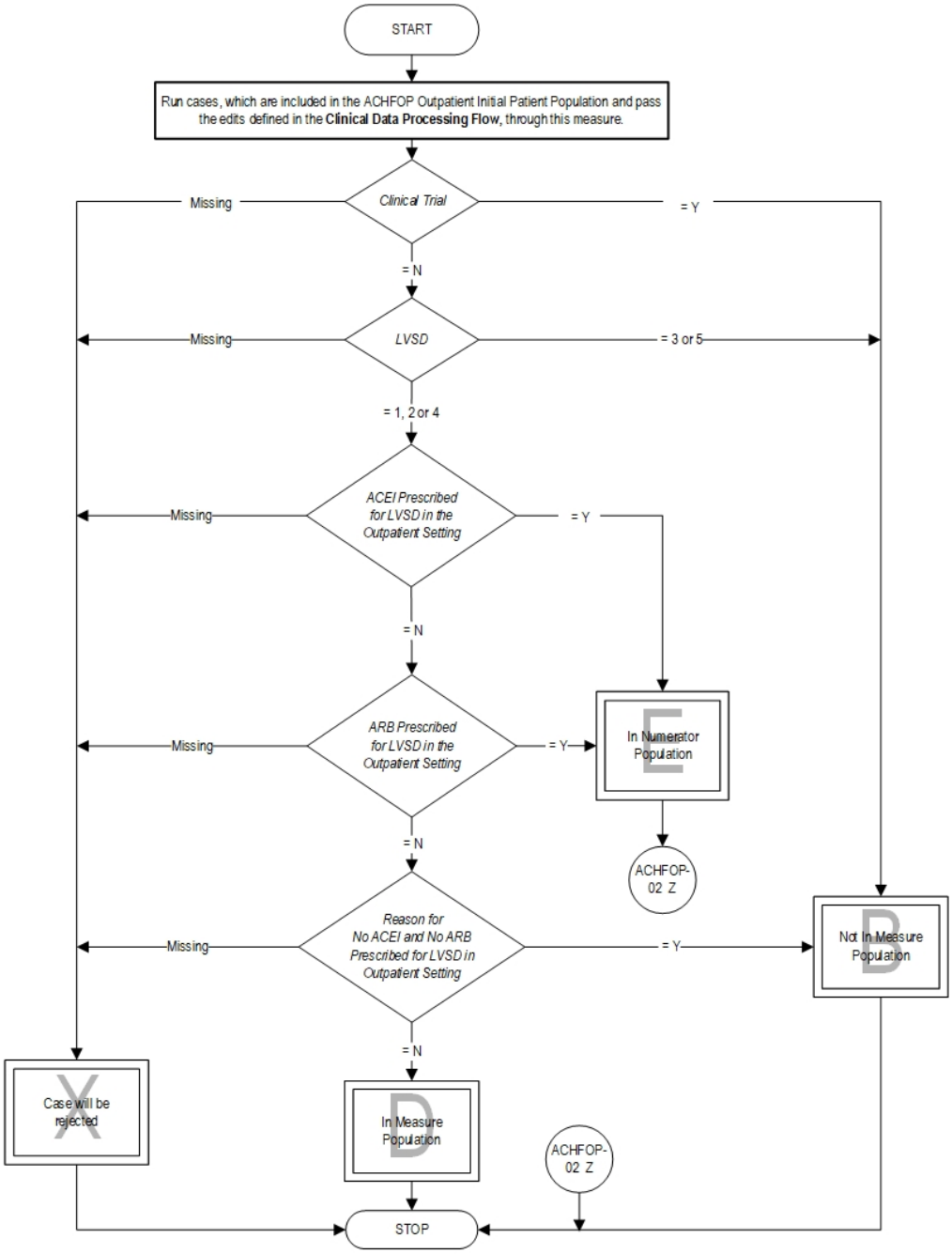
Measure Algorithm:

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%.



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Measure Information Form

Measure Set: Advanced Certification Heart Failure Outpatient (ACHFOP)

Set Measure ID: ACHFOP-03

Performance Measure Name: Hospital Outpatient Aldosterone Receptor Antagonists

Description: Patients with a diagnosis of heart failure, a New York Heart Association (NYHA) class III-IV, and heart failure with a left ventricular ejection fraction (LVSD) ≤35% or a narrative description of left ventricular systolic (LVS) function consistent with moderate or severe systolic dysfunction who are prescribed an aldosterone receptor antagonist.

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 mortality. 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 with 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.

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 (i.e. Aldactone, Aldactazide [Hydrochlorothiazide + Spironolactone], Eplerenone, Inspra, Spironolactone) when seen in the outpatient setting.

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

Denominator Statement: Heart failure patients with a NYHA class III-IV and current or prior documentation of left ventricular ejection fraction (LVSD) ≤35%.

> **Included Populations:**
>
> - E/M Code for hospital outpatient encounter as defined in Appendix A, Table 2.0

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- An ICD-10-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1, and
- Documentation of LVSD ≤35%
- New York Heart Association (NYHA) Functional Classification III-IV

Excluded Populations:

- Clinical Trial
- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during the hospital stay or a past medical history of an LVAD or heart transplant (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A Table 2.2, and ICD-10 diagnosis codes on Table 2.13)
- 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*
- *New York Heart Association (NYHA) Classification*
- *Outpatient Encounter Date*
- *Reason for No Aldosterone Receptor Antagonist Prescribed 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:

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- 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.

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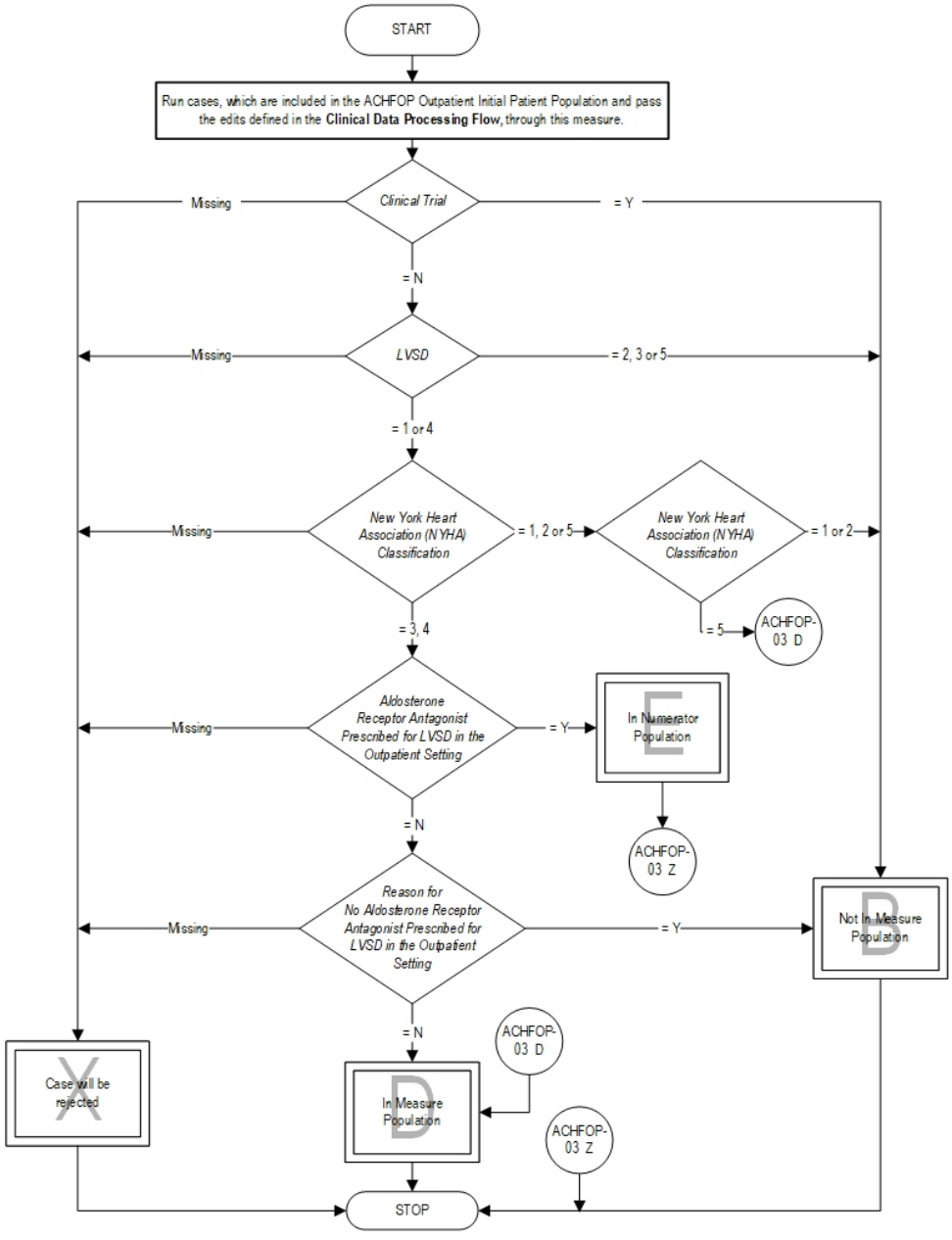
Measure Algorithm:

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

Numerator: Patients who are prescribed an aldosterone receptor antagonist (i.e. Aldactone, Aldactazide [Hydrochlorothiazide + Spironolactone], Eplerenone, Inspra, Spironolactone) when seen in the outpatient setting.

Denominator: Heart failure patients with a NYHA class III-IV and current or prior documentation of left ventricular ejection fraction (LVSD) ≤35%.



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Measure Information Form

Measure Set: Advanced Certification Heart Failure Outpatient (ACHFOP)

Set Measure ID: ACHFOP-04

Performance Measure Name: Hospital 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 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:**

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- 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 the hospital stay or a past medical history of an LVAD or heart transplant (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A Table 2.2, and ICD-10 diagnosis codes on Table 2.13)
- 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:

- 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.
- 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-

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reported outcome measures and clinical measures in outpatients with heart failure. Am Heart J. 2009;158(4 Suppl):S64-71

- 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.
- 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.
- 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.
- The Joint Commission. The Joint Commission's 2019 Comprehensive Certification Manual for Disease-Specific Care: Advanced Certification in Heart Failure Addendum. Oakbrook Terrace, IL: Author. 2019.
- 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.

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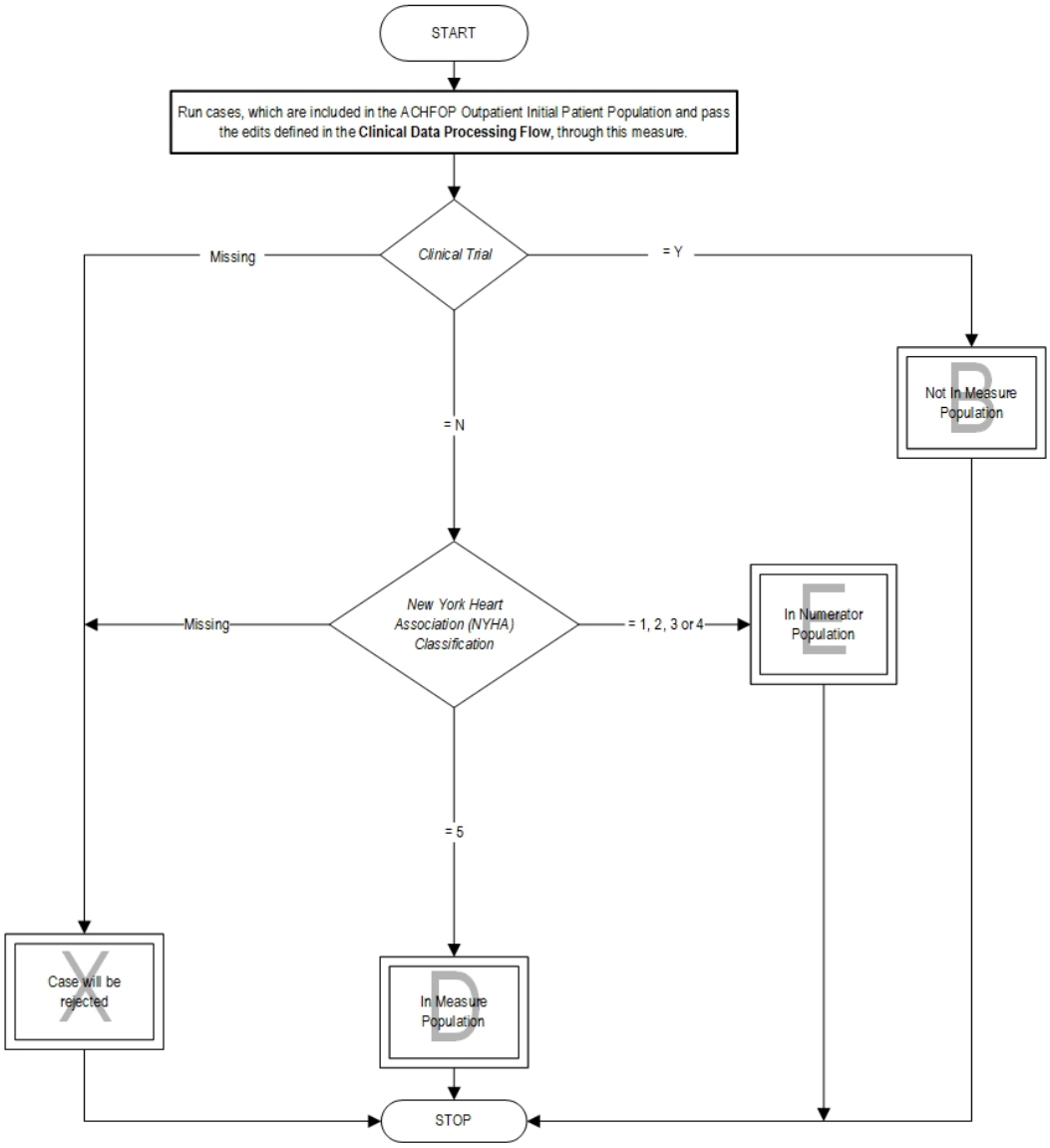
Measure Algorithm:

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.



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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*

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- *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 the hospital stay or a past medical history of an LVAD or heart transplant (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A Table 2.2, and ICD-10 diagnosis codes on Table 2.13)
- 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.

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

Selected References:

- 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.
- 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.
- 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.

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Measure Algorithm:

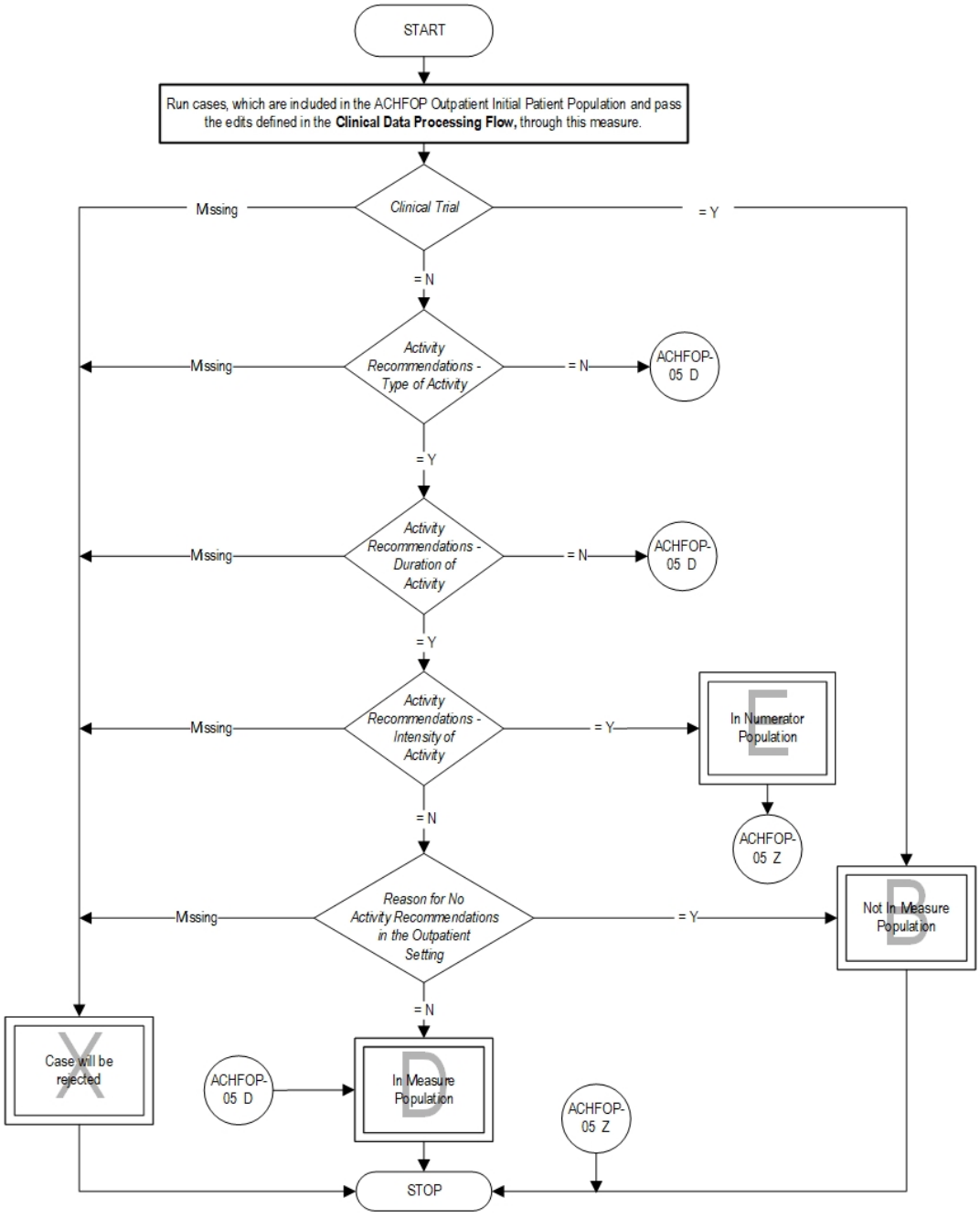
ACHFOP–05: Hospital Outpatient Activity Recommendations

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.



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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:**

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- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during the hospital stay or a past medical history of an LVAD or heart transplant (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A Table 2.2, and ICD-10 diagnosis codes on Table 2.13)
- 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:

- 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.
- Hefner JE, Barberi C. End-of-life care preferences of patients enrolled in cardiovascular rehabilitation programs. Chest. 2000;117(5);1474-1481.
- 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.
- Perkins HS. Time to move advance care planning beyond advance directives. Chest. 2000;117(5);128-1231.
- 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.
- 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,

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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.

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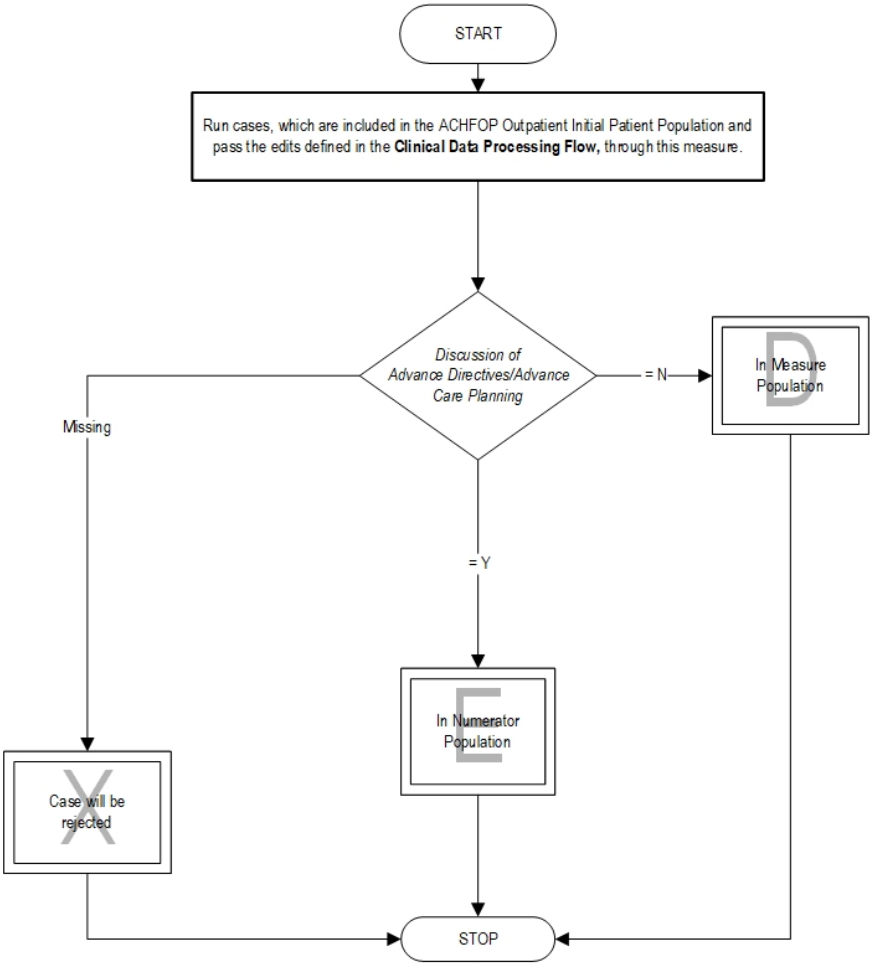
Measure Algorithm:

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.



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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:**

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- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during the hospital stay or a past medical history of an LVAD or heart transplant (ICD-10-PCS procedure code for LVAD and heart transplant as defined in Appendix A Table 2.2, and ICD-10 diagnosis codes on Table 2.13)
- 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:

- 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.
- Hefner JE, Barberi C. End-of-life care preferences of patients enrolled in cardiovascular rehabilitation programs. Chest. 2000;117(5);1474-1481.
- 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.
- Perkins HS. Time to move advance care planning beyond advance directives. *Chest*. 2000;117(5);128-1231.
- 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.
- 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,

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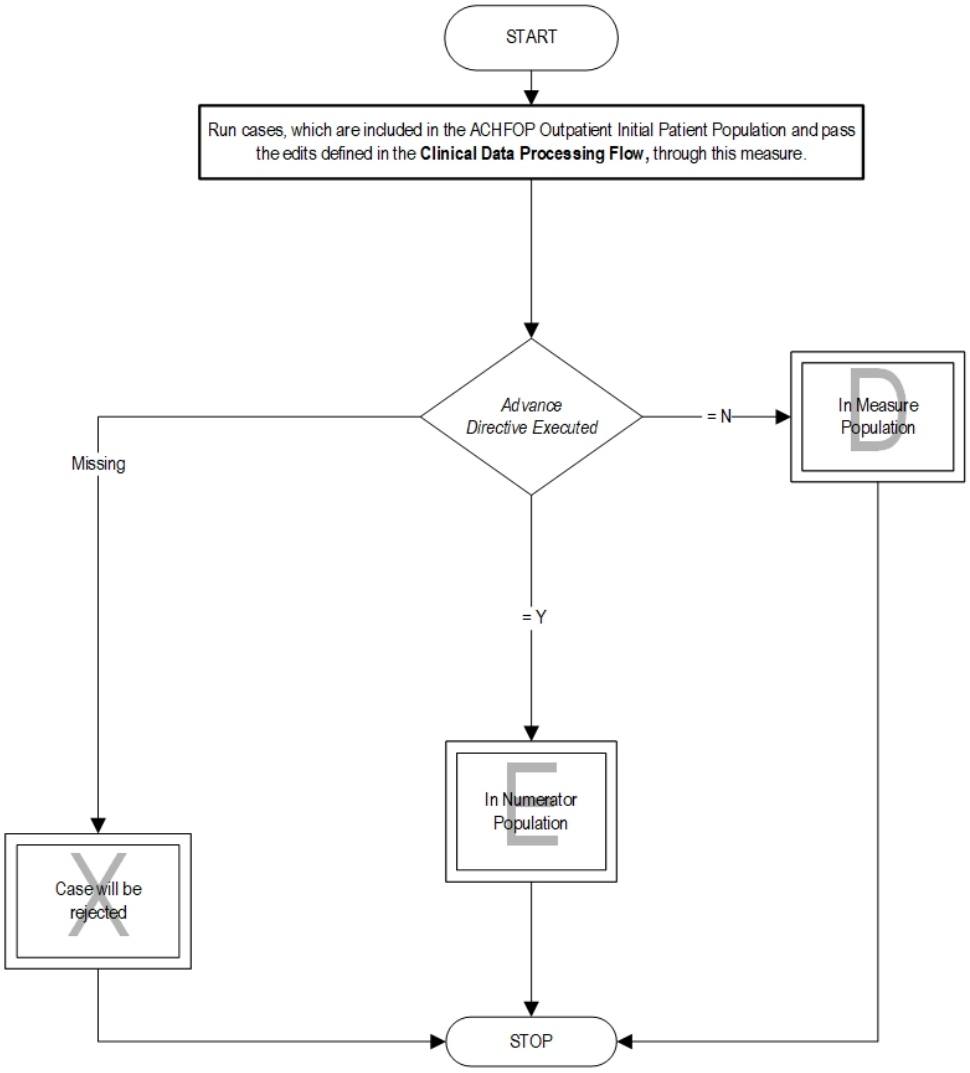
Measure Algorithm:

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.



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Comprehensive Cardiac Center-Inpatient (CCCIP)

Set Measures

Set Measure ID	Measure Short Name
CCCIP-01	High-intensity Statin Prescribed at Discharge
CCCIP-02	Aldosterone Antagonist Prescribed at Discharge
CCCIP-03	Cardiac Rehabilitation Referral from an Inpatient Setting
CCCIP-04	Cardiac Rehabilitation Referral for Heart Failure Patients with Reduced Ejection Fraction from an Inpatient Setting
CCCIP-05	Cardiac Rehabilitation Enrollment from an Inpatient Setting

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 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
Race	All Records,
Sex	All Records,

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Measure Set Specific Data Elements

Element Name	Collected For
Aldosterone Receptor Antagonist Prescribed for LVSD at Discharge	CCCIP-02
Cardiac Rehabilitation Attendance	CCCIP-05
Clinical Trial	CCCIP-01, CCCIP-02, CCCIP-03, CCCIP-04
Comfort Measures Only	CCCIP-01, CCCIP-02, CCCIP-03, CCCIP-04
Communication of Outpatient Referral to Patient	CCCIP-03, CCCIP-04
Discharge Disposition	CCCIP
High-intensity Statin at Discharge	CCCIP-01
LVSD	CCCIP-02, CCCIP-04
Reason for No Aldosterone Receptor Antagonist Prescribed at Discharge	CCCIP-02
Reason for No Cardiac Rehabilitation Enrollment	CCCIP-05
Reason for No Referral to Outpatient Cardiac Rehabilitation Program	CCCIP-03, CCCIP-04
Reason for Not Prescribing a High-Intensity Statin	CCCIP-01
Referral to Outpatient Cardiac Rehabilitation	CCCIP-03, CCCIP-04, CCCIP-05

Related Materials

	Document Name	
	Data Dictionary	

Comprehensive Cardiac Center (CCC) Initial Patient Population

Data collection for five new standardized performance measures are required for Comprehensive Cardiac Center (CCC) certification. In addition, a second set of optional measures are available. All currently certified CCC organizations, as well as those seeking initial certification, are required to implement data collection on the five mandatory standardized measures.

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The measures chosen for implementation within the CCC certification program address major aspects of cardiac care, within the following 4 domains: cardiac rehabilitation, myocardial infarction (MI), heart failure (HF), and cardiac surgery (coronary artery bypass graft, cardiac valve repair/replacement and percutaneous coronary intervention [PCI]). The measures are separated into mandatory and optional measures and then again by inpatient and outpatient status. The certification program also includes 5 measures that are currently used in The Joint Commission's Advanced Heart Failure Certification program (ACHF-01, ACHF-02, ACHF-06, ACHFOP-03, and ACHFOP-06). Organizations should follow the ACHF and ACHFOP initial patient population algorithm's that are posted to The Joint Commission's Measure Specifications Manual to determine the patient population for the heart failure measures.

There are 5 mandatory measures: high-intensity statin, aldosterone antagonist, beta-blockers, post-discharge appointment and post-discharge evaluation that all certified organizations must abstract. The additional 3 inpatient and 5 outpatient measures are optional. It is highly recommended that the all organizations collect the optional measures to assist them with advancing quality of care for the cardiac patients they serve.

All the mandatory measures capture the quality of care provided to myocardial infarction (MI) and heart failure patients. Organizations are required to submit inpatient cases for their heart failure patient population and observation and inpatient cases for their MI patient population for the mandatory measures. If the organization submits data for the optional inpatient measures, submitting observation cases is optional.

In order to assist organizations in determining their patient populations for performance measurement, The Joint Commission has defined outpatient, inpatient, and observation.

Patients assigned as outpatients are defined as, a patient who is not hospitalized overnight but who visits a hospital, clinic, or associated facility for diagnosis or treatment. CPT® codes are utilized to bill outpatient cases when the patient undergoes a procedure. Any patient who has outpatient surgery that is billed using a CPT® code should be assigned to the outpatient bucket to determine cases for abstraction.

Patients assigned as inpatient or observation are defined as, a patient who is hospitalized overnight. ICD-10 PCS codes are utilized to bill inpatient and observation cases when the patient undergoes a procedure. Any patient who is listed as an inpatient or observation and has surgery that is billed using an ICD-10 PCS code should be assigned to the inpatient bucket to determine cases for abstraction.

Comprehensive Cardiac Center (CCC) Inpatient Initial Patient Population
The population for the inpatient measures is identified using the 5 data elements:

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

Patients admitted to the hospital for observation or inpatient acute care are included in the inpatient initial patient population if they have: Patient Age (Admission Date — Birthdate) ≥18 years old and a length of stay (Discharge Date - Admission Date) ≤120 days.

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AND

- Subpopulation Medial-heart failure and myocardial infarction is identified by ICD-10-CM Principal Diagnosis Code as defined in:
    - (HF) Appendix A, Table 2.1, or
    - (MI) Appendix A, Table 2.3, or
- Surgical-PCI, CABG, Valve, is identified by ICD-10-PCS Principal or Other Procedure Code as defined in:
    - (PCI) Appendix A, Table 2.4, or
    - (CABG) Appendix A, Table 2.5, or
    - (Valve) Appendix A, Table 2.6

* Myocardial observation cases are required. Heart failure, PCI, CABG, and valve observation cases are optional .

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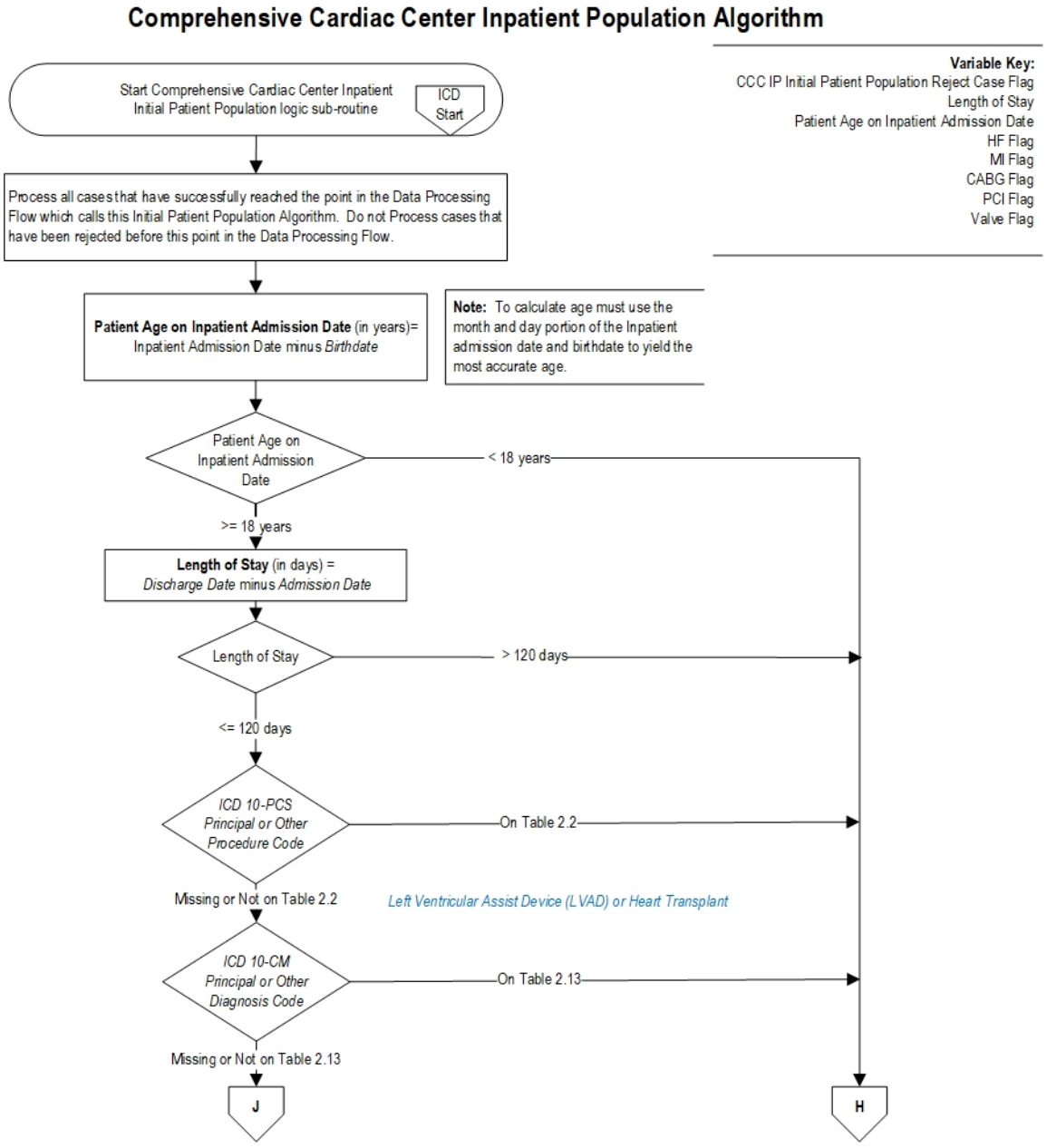
Initial Patient Population Algorithm



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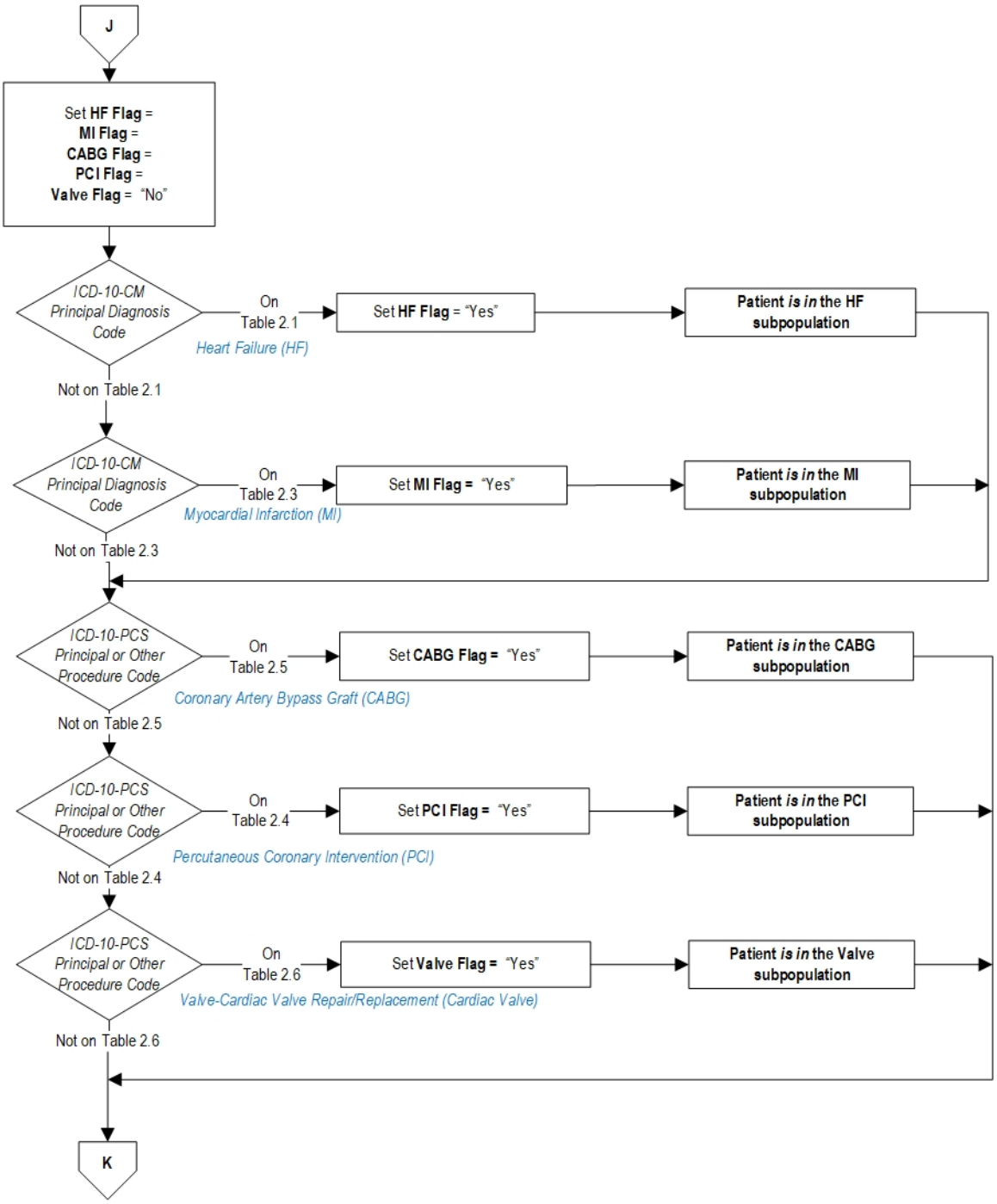

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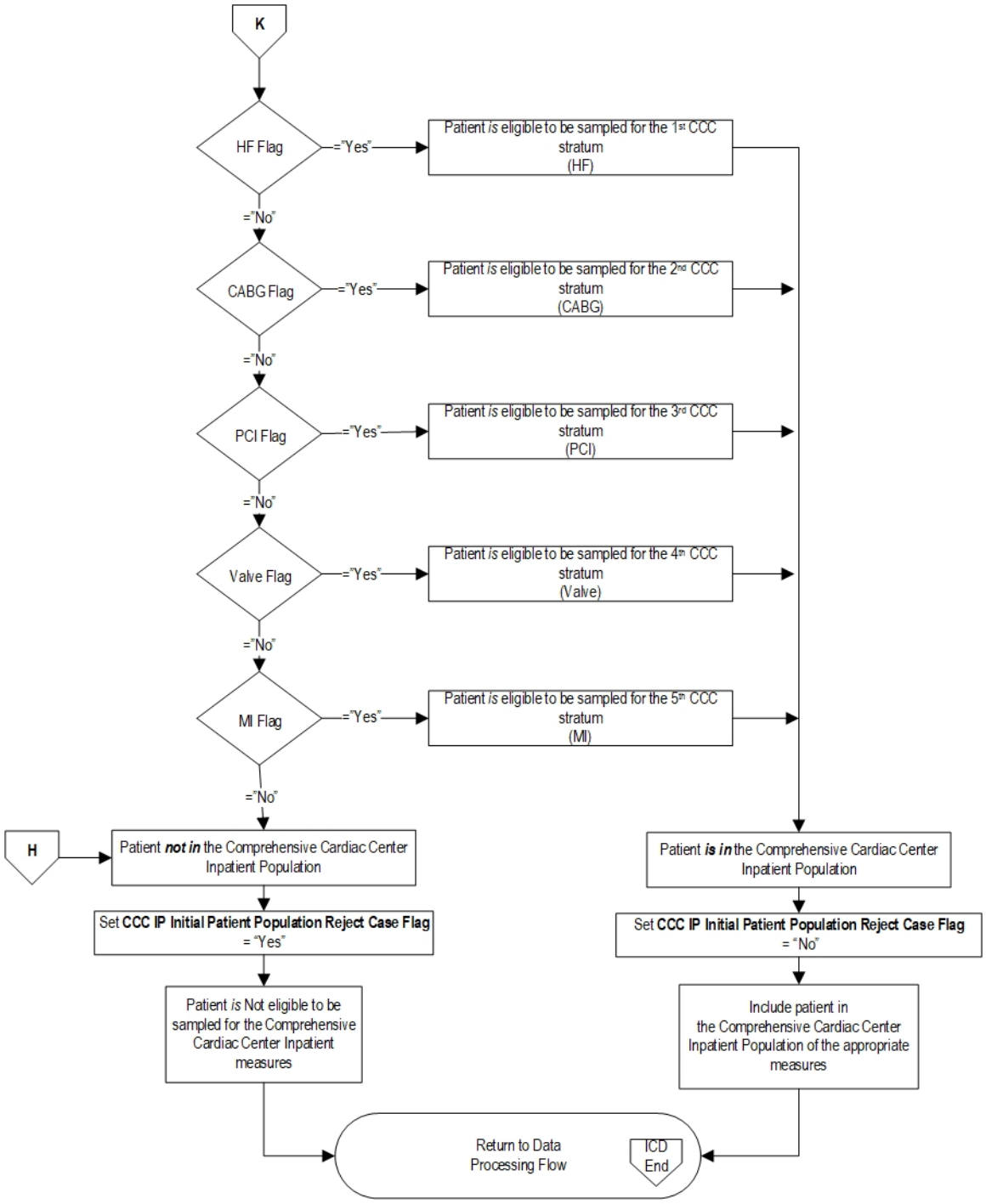

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CCC Sample Size Requirements

Hospitals that choose to sample have the option of sampling quarterly or monthly. A hospital may choose to use a larger sample size than is required. Hospitals whose patient population size is less than the minimum number of cases per quarter for the measure set cannot sample.

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.

Sample sizes are based on the hospital's patient population for each measure category. Once the patient population for each measure category is determined the coinciding measures should be abstracted for the measure category population. An asterisk (*) after the listed measures denotes the mandatory standardized measures that certified organizations must abstract data for. The additional measures that are listed are optional.

Measure Category	Measures
Heart Failure	CCCIP-02*, ACHF-01*, ACHF-02*, ACHF-06*, CCCIP-04, CCCOP-02, ACHFOP-03, ACHFOP-06
MI	CCCIP-01*, CCCIP-03, CCCOP-01, CCCOP-03
PCI/CABG/Valve	CCCIP-03, CCCIP-05, CCCOP-01 (PCI only), CCCOP-03 (PCI only)

*Mandatory standardized measures that certified organizations must abstract.

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 Approach:

- 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 $k \leq N/n$. 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.

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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 CCC must ensure that it has determined a patient population for each measure category listed below and that the sample size per measure category meets the following conditions:

Measure Category	Average Quarterly Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
Heart Failure	≥ 1516	304
	381 - 1515	20% of Patient Population size
	76-380	76
	0 - 75	No sampling; 100% Patient Population required

Measure Category	Average Quarterly Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
MI	≥ 1516	304
	381 - 1515	20% of Patient Population size
	76-380	76
	0 - 75	No sampling; 100% Patient Population required

Measure Category	Average Quarterly Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
PCI	≥ 1516	304
	381 - 1515	20% of Patient Population size
	76-380	76
	0 - 75	No sampling; 100% Patient Population required

Measure Category	Average Quarterly Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
CABG	≥ 1516	304

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	381 - 1515	20% of Patient Population size
	76-380	76
	0 - 75	No sampling; 100% Patient Population required

Measure Category	Average Quarterly Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
Valve	≥ 1516	304
	381 - 1515	20% of Patient Population size
	76-380	76
	0 - 75	No sampling; 100% Patient Population required

Monthly Sampling Hospitals performing monthly sampling for CCC must ensure that it has determined a patient population for each measure category listed below and that the sample size per measure category meets the following conditions:

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

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

Measure Category	Average Monthly Patient Population Size *"N"*	Minimum Required Sample Size *"n"*

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PCI	≥ 506	102
	131 - 505	20% of Patient Population size
	26-130	26
	<26	No sampling; 100% Patient Population required

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

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

Sample Size Examples

- Quarterly sampling:
    - A hospital's CCC patient population size per measure category, during the 2nd quarter, has been:
        - 2nd quarter patient populations
            - Heart Failure-650 patients
            - MI-345 patients
            - PCI-62 patients
            - CABG-80 patients
            - Valve-35 patients
        - The required sample size per measure category for the 2nd quarter, would be:
            - Heart Failure-130 patients (650 patients per quarter during the past quarter x 20%=130)
                - The hospital will abstract the following mandatory measures and if the organization chooses the additional optional measures for these 130 heart failure patients:
                    - CCCIP-02 - mandatory

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                - ACHF-01 - mandatory
                - ACHF-02 - mandatory
                - ACHF-06 - mandatory
                - CCCIP-04 -optional
                - CCCOP-02 - optional
                - ACHFOP-03 – optional
                - ACHFOP-06 - optional
            - MI-76 patients
                - The hospital will abstract the following mandatory measures and if the organization chooses the additional optional measures for these 76 MI patients:
                    - CCCIP-01 - mandatory
                    - CCCIP-03 - optional
                    - CCCOP-01 - optional
                    - CCCOP-03 - optional
            - PCI- 62 patients
                - No sampling, 100% of patient population required if the organization chooses to abstract the following optional measures:
                    - CCCIP-03 - optional
                    - CCCIP-05 - optional
                    - CCCOP-01 - optional
                    - CCCOP-03 - optional
            - CABG-76 patients
                - If the organization chooses, the following optional measures could be abstracted for these 76 CABG patients:
                    - CCCIP-03 - optional
                    - CCCIP-05 - optional
            - Valve-35 patients
                - No sampling, 100% of patient population required if the organization chooses to abstract the following optional measures:
                    - CCCIP-03 - optional
                    - CCCIP-05 - optional

- Monthly sampling:
    - A hospital's CCC patient population size during the month of February, per measure category, has been:
        - February patient populations
            - Heart Failure-400 patients
            - MI-345 patients
            - PCI-80 patients
            - CABG-35 patients
            - Valve-20 patients
        - The required sample size, per measure category, for the February would be:
            - Heart Failure-80 patients (400 February patients x 20%=80)
                - The hospital will abstract the following mandatory measures and if the organization chooses, the additional optional measures for these 80 heart failure patients:

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        - CCCIP-02 - mandatory
        - ACHF-01 - mandatory
        - ACHF-02 - mandatory
        - ACHF-06 - mandatory
        - CCCIP-04 -optional
        - CCCOP-02 - optional
        - ACHFOP-03 – optional
        - ACHFOP-06 - optional
- MI-69 patients (345 February patients x 20%=69)
    - The hospital will abstract the following mandatory measures and if the organization chooses, the additional optional measures for these 69 MI patients:
        - CCCIP-01 - mandatory
        - CCCIP-03 - optional
        - CCCOP-01 - optional
        - CCCOP-03 - optional
- PCI- 26 patients
    - If the organization chooses, the following optional measures could be abstracted for their 26 PCI patients:
        - CCCIP-03 - optional
        - CCCIP-05 - optional
        - CCCOP-01 - optional
        - CCCOP-03 - optional
- CABG-26 patients
    - If the organization chooses, the following optional measures could be abstracted for their 26 PCI patients:
        - CCCIP-03 - optional
        - CCCIP-05 - optional
- Valve-20 patients
    - No sampling, 100% of patient population required, if the organization chooses to abstract the following optional measures could be abstracted for all their valve patients:
        - CCCIP-03 - optional
        - CCCIP-05 - optional

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Measure Information Form

Measure Set: Comprehensive Cardiac Center-Inpatient (CCCIP)

Set Measure ID: CCCIP-01

Performance Measure Name: High-intensity Statin Prescribed at Discharge

Description: Patients who are hospitalized with a diagnosis of an acute myocardial infarction (AMI) and were prescribed a high-intensity statin at hospital discharge.

Rationale: The 2013 ACC/AHA Guidelines on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults recommends that "high-intensity statin therapy should be initiated or continued as first-line therapy in women and men ≤75 years of age who have clinical atherosclerotic cardiovascular disease (ASCVD), unless contraindicated" (individualized treatment for patients over 75 years old is recommended). Despite this Class I, Level A guideline recommendation and that statins have been shown to reduce morbidity and mortality (Jneid et al., 2017), only 23% of AMI patients are discharged on maximal statin therapy (Arnold et al., 2014). Prescribing rates are also low for patients with acute coronary syndromes. A 2010 study found that only 38.3% of these patients are discharged with intensive lipid-lowering therapy (Javed et al., 2014).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients prescribed a high-intensity statin at hospital discharge (i.e. Atorvastatin 40-80mg **OR** Rosuvastatin 20-40mg).

> **Included Populations:** Not applicable
>
> **Excluded Populations:** Not applicable
>
> **Data Elements:**
>
> - *High-intensity Statin at Discharge*

Denominator Statement: Patients who are discharged from the hospital with a diagnosis of an AMI.

> **Included Populations:**
>
> - Patients ≥18 years of age and ≤75 years of age
> - Patients with a *ICD-10-CM Principal Diagnosis Code* for MI as defined in Appendix A, Table 2.3.
>
> **Excluded Populations:**
>
> - Patients less than 18 years of age
> - Patients greater than 75 years of age

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- Patients with a documented *Reason for Not Prescribing a High Intensity Statin*
- Patients who expired
- Patients who left against medical advice (AMA)
- Patients who are discharged to another hospital
- Patients who are discharged to hospice
- Patients who are discharged to a healthcare facility for hospice care
- Patients who have a Length of Stay greater than 120 days
- Patients enrolled in a *Clinical Trial*
- Patients with *Comfort Measures Only* documented
- 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 or Table 2.13)

Data Elements:

- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Date*
- *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*
- *Reason for Not Prescribing a High-Intensity Statin*

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:

- Arnold, S., Kosiborod, M., Tang, F., Zhao, Z., Maddox, T. McCollam, P., et al. (2014). Patterns of Statin Initiation, Intensification, and Maximization Among Patients Hospitalized with an Acute Myocardial Infarc-

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tion. Circulation. 2014 March 25; 129(12): 1303–1309.
- Endorsed by the American Association of Cardiovascular and Pulmonary Rehabilitation, American Society for Preventive Cardiology, American Society of Hypertension, Association of Black Cardiologists, National Lipid Association, Preventive Cardiovascular Nurses Association, and Women Heart: The National Coalition for Women with Heart Disease. (2014). 2013 ACC/AHA Guideline on the Assessment of Cardiovascular Risk: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. Journal of the American College of Cardiology, 63(25 0 0), 2935–2959.
- Javed, U., Deedwania, P., Bhatt, D., Cannon, C., Dai, D., Hernandez, A., et al. (2010). Use of intensive lipid-lowering therapy in patients hospitalized with acute coronary syndrome: An analysis of 65,396 hospitalizations from 344 hospitals participating in Get With The Guidelines (GWTG). Am Heart J.160(6):1130-6, 1136.e1-3
- Jneid, H., Addison, D., Bhatt, D., Fonarow, G., Gokak, S., Grady, K., et. al. (2017). 2017 AHA/ACC Clinical Performance and Quality Measures for Adults With ST-Elevation and Non-ST-Elevation Myocardial Infarction: A Report of the American College of Cardiology/American Heart Association Task Force on Performance Measures. J Am Coll Cardiol. 2017 Oct 17;70(16):2048-2090.

Original Performance Measure Source / Developer: Jneid, H., Addison, D., Bhatt, D., Fonarow, G., Gokak, S., Grady, K. et.al. (2017). 2017 AHA/ACC Clinical Performance and Quality Measures for Adults with ST-Elevation and Non-ST-Elevation Myocardial Infarction: A Report of the American College of Cardiology/American Heart Association Task Force on Performance Measures. J Am Coll Cardiol. Oct 17;70(16):2048-2090.

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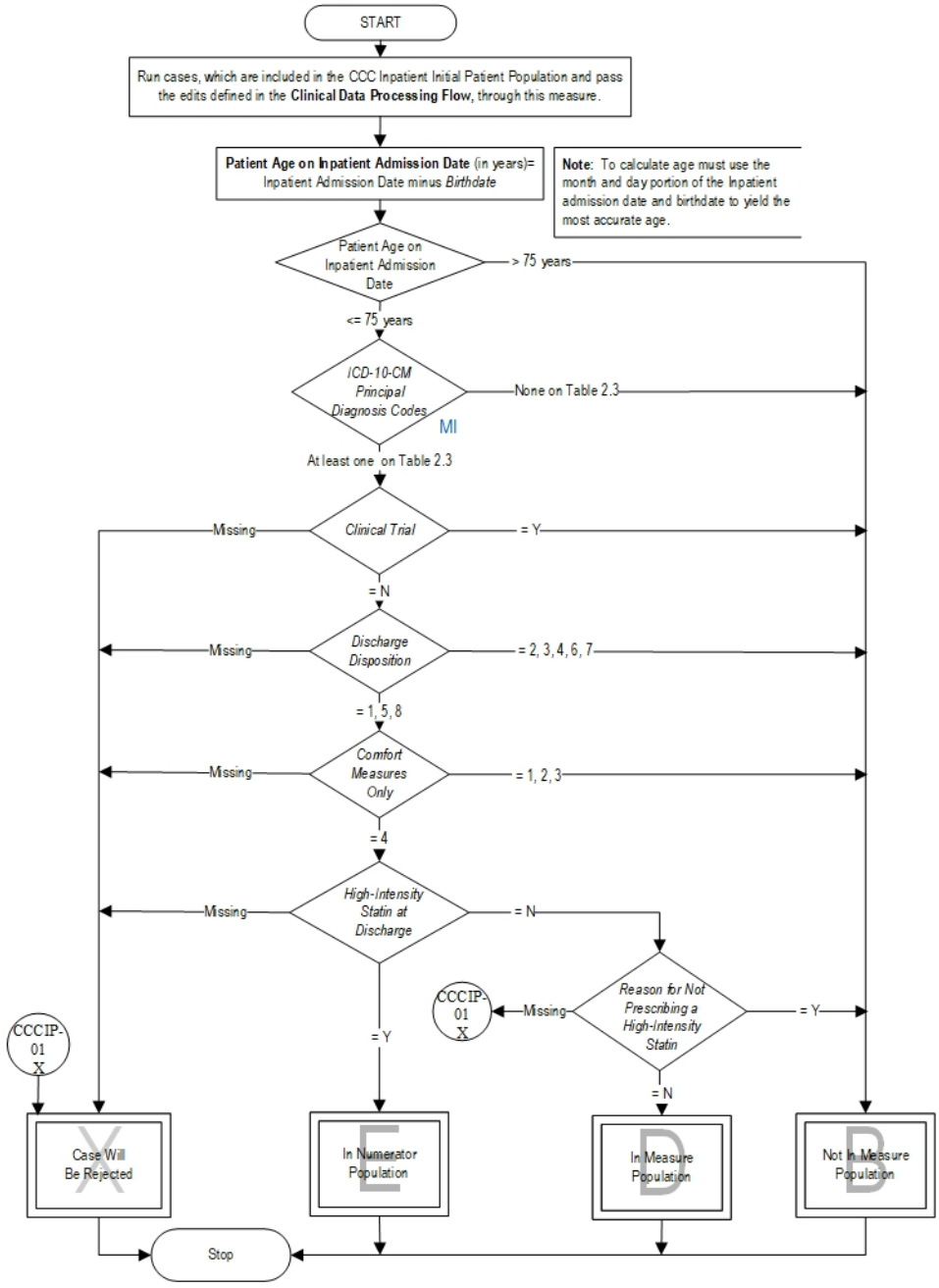
Measure Algorithm:

CCCIP-01: High-intensity Statin Prescribed at Discharge
Numerator: Patients prescribed a high-intensity statin at hospital discharge (i.e. Atorvastatin 40-80mg **OR** Rosuvastatin 20-40mg).
Denominator: Patients who are discharged from the hospital with a diagnosis of an AMI.



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Measure Information Form

Measure Set: Comprehensive Cardiac Center-Inpatient (CCCIP)

Set Measure ID: CCCIP-02

Performance Measure Name: Aldosterone Antagonist Prescribed at Discharge

Description: Patients with a diagnosis of heart failure with a left ventricular ejection fraction (LVSD) ≤35% who were prescribed an aldosterone antagonist at discharge.

Rationale: Use of aldosterone receptor antagonist, in eligible heart failure patients with no documented contraindications, intolerance, or other medical reason(s), is recommended to reduce morbidity and mortality. 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 with 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.

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 (i.e. Aldactone, Aldactazide [Hydrochlorothiazide + Spironolactone], Eplerenone, Inspra, Spironolactone) at hospital discharge.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Aldosterone Receptor Antagonist Prescribed for LVSD at Discharge*

Denominator Statement: Heart failure patients with current or prior documentation of left ventricular ejection fraction (LVSD) ≤35%.

> **Included Populations:**
>
> - An *ICD-10-CM Principal Diagnosis Code* for HF as defined in Appendix A, Table 2.1
> - Documentation of LVSD ≤35%
>
> **Excluded Populations:**

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- Patients less than 18 years of age
- Patients with a documented *Reason for No Aldosterone Receptor Antagonist Prescribed at Discharge*
- Patients who expired
- Patients who left against medical advice Patients who left against medical advice (AMA)
- Patients discharged to another hospital
- Patients discharged to home for hospice care
- Patients discharged to a healthcare facility for hospice care
- Patients who have a Length of Stay greater than 120 days
- Patients with *Comfort Measures Only* documented
- 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 or Table 2.13)

Data Elements:

- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *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 Other Procedure Dates*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*
- *LVSD*
- *Reason for No Aldosterone Receptor Antagonist Prescribed 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:

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- American Heart Association. Get With The Guidelines® Heart Failure Fact Sheet. 2016.
- 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.

Original Performance Measure Source / Developer: American Heart Association. Get With The Guidelines® Heart Failure. 2016.

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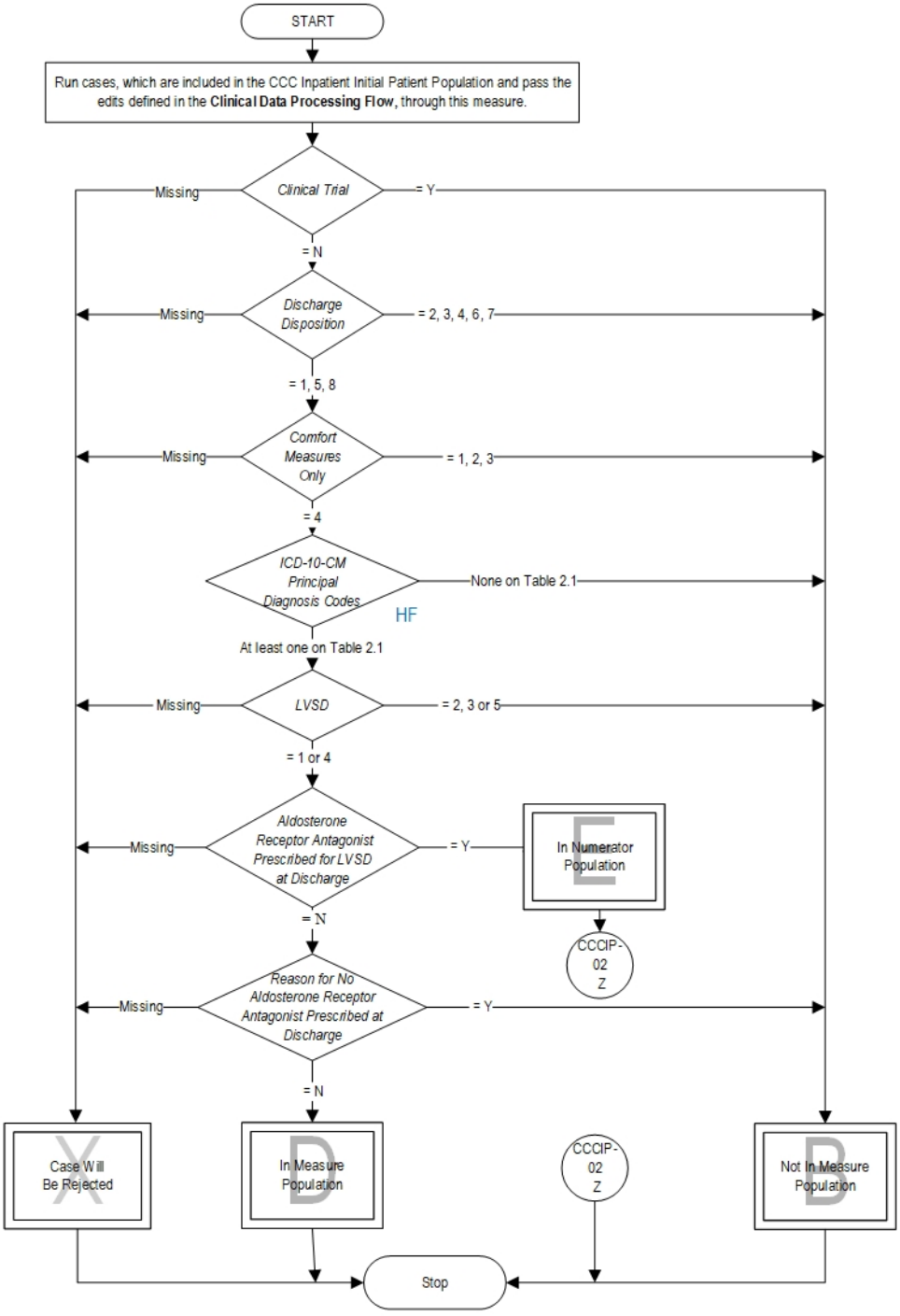
Measure Algorithm:

CCCIP-02: Aldosterone Antagonist Prescribed at Discharge

Numerator: Patients who are prescribed an aldosterone receptor antagonist (i.e. Aldactone, Aldactazide [Hydrochlorothiazide + Spironolactone], Eplerenone, Inspra, Spironolactone) at hospital discharge.

Denominator: Heart failure patients with current or prior documentation of left ventricular ejection fraction (LVSD) ≤35%.



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Measure Information Form

Measure Set: Comprehensive Cardiac Center-Inpatient (CCCIP)

Set Measure ID: CCCIP-03

Performance Measure Name: Cardiac Rehabilitation Referral from an Inpatient Setting

Description: Patients who have had one of the following qualifying events/diagnosis during their current inpatient encounter are to be referred to an outpatient cardiac rehabilitation program. Qualifying events:

- Diagnosis of a myocardial infarction (MI)
- Coronary artery bypass graft (CABG) surgery
- Percutaneous coronary intervention (PCI)
- Cardiac valve repair/replacement

Rationale: Studies have shown that cardiac rehabilitation reduces mortality, disease recurrence, and hospital readmission after a cardiovascular event (Thomas et al., 2018). Cardiac rehabilitation consists of exercise, education, and counseling (American Heart Association, 2018). Guidelines recommend referral to cardiac rehabilitation for certain qualifying cardiovascular conditions (Amsterdam et al., 2014), however, despite these benefits and recommendations, cardiac rehabilitation participation rates are low and range from 20-30% (Ades et al., 2017). In addition, referral to cardiac rehabilitation for patients undergoing PCI has been shown to be as low as 48% (Beatty et al., 2017). Hospitals can increase referral rates by discussing the importance of cardiac rehabilitation with their patients and ensuring outpatient facilities receive the necessary referral (Thomas et al., 2018).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Number of inpatients who have been referred to an outpatient cardiac rehabilitation program, which includes the following:

- Communication between the healthcare provider and the patient of the recommendation to attend an outpatient cardiac rehabilitation program **AND** referral sent to outpatient cardiac rehabilitation program

> **Included Populations:** Not applicable
>
> **Excluded Populations:** Not applicable
>
> **Data Elements:**
>
> - *Communication of Outpatient Referral to Patient*
> - *Referral to Outpatient Cardiac Rehabilitation*

Denominator Statement: Patients who are discharged from the hospital with a qualifying event/diagnosis (i.e. MI, PCI, CABG, valve repair/replacement).

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Included Populations:

- Patients with a *ICD-10-CM Principal Diagnosis Code* for MI as defined in Appendix A, Table 2.3.
- Patients with an *ICD-10-PCS Principal or Other Procedure Code* for PCI as defined in Appendix A, Table 2.4.
- Patients with an *ICD-10-PCS Principal or Other Procedure Code* for CABG as defined in Appendix A, Table 2.5.
- Patients with an *ICD-10-PCS Principal or Other Procedure Code* for valve repair/replacement as defined in Appendix A, Table 2.6.

Excluded Populations:

- Patients less than 18 years of age
- Patients with a documented *Reason for No Referral to Outpatient Cardiac Rehabilitation Program*
- Patients who expired
- Patients who left against medical advice (AMA)
- Patients discharged to another hospital
- Patients discharged to another healthcare facility
- Patients discharged to home for hospice care
- Patients discharged to a healthcare facility for hospice care
- Patients who have a Length of Stay greater than 120 days
- Patients enrolled in a *Clinical Trial*
- Patients with *Comfort Measures Only* documented
- 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 or Table 2.13)

Data Elements:

- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *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 Other Procedure Dates*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*
- *Reason for No Referral to Outpatient Cardiac Rehabilitation Program*

Risk Adjustment: No.

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

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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:

- Ades, P., Keteyian, S., Wright, J., Hamm, L., Lui, K., Newlin, K., et al. (2017). Increasing Cardiac Rehabilitation Participation From 20% to 70%: A Road Map From the Million Hearts Cardiac Rehabilitation Collaborative. Mayo Clin Proc. Feb; 92(2): 234-242.
- American Heart Association. (2018). Cardiac Rehab 101. Retrieved April 27, 2018 at: http://www.heart.org/HEARTORG/Conditions/More/CardiacRehab/What-is-Cardiac-Rehabilitation_UCM_307049_Article.jsp#.WuNs0C7waUl
- Amsterdam EA, Wenger NK, Brindis RG, et al. (2014). AHA/ACC guideline for the management of patients with non-ST-elevation acute coronary syndromes: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. J Am Coll Cardiol. 64:e139–228.
- Beatty, A., Bradley, S., Maynard, C., McCabe, J., (2017). Referral to Cardiac Rehabilitation After Percutaneous Coronary Intervention, Coronary Artery Bypass Surgery, and Valve Surgery Data From the Clinical Outcomes Assessment Program. Circ Cardiovasc Qual Outcomes. 10:e003364.
- Hillis LD, Smith PK, Anderson JL, et al. (2011). 2011 ACCF/AHA guideline for coronary artery bypass graft surgery. a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Developed in collaboration with the American Association for Thoracic Surgery, Society of Cardiovascular Anesthesiologists, and Society of Thoracic Surgeons. J Am Coll Cardiol. 58:e123–210.
- Levine GN, Bates ER, Blankenship JC, et al. (2011). 2011 ACCF/AHA/SCAI guideline for percutaneous coronary intervention: a report of the American College of CardiologyFoundation/American Heart Association Task Force on Practice Guidelines and the Society for Cardiovascular Angiography and Interventions. J Am Coll Cardiol. 58:e44–122.
- O'Gara PT, Kushner FG, Ascheim DD, et al. (2013). ACCF/AHA guideline for the management of ST elevation myocardial infarction: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. J Am Coll Cardiol. 2013;61:e78–140.
- Smith SC Jr., Benjamin EJ, Bonow RO, et al. (2011). AHA/ACCF secondary prevention and risk reduction therapy for patients with coronary and other atherosclerotic vascular disease: 2011 update: a guideline from the American Heart Association and American College of Cardiology Foundation. J Am Coll Cardiol. 58:2432–46.
- Thomas, R., Balady, G., Banka, G., Beckie, T., Chiu, J., Gokak, S. (2018). 2018 ACC/AHA Clinical Performance and Quality Measures for Cardiac Rehabiliation. Circ Cardiovasc Qual Outcomes. 2018 Apr;11(4):e000037.

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Original Performance Measure Source / Developer: Thomas, R., Balady, G., Banka, G., Beckie, T., Chiu, J., Gokak, S. (2018).2018 ACC/AHA Clinical Performance and Quality Measures for Cardiac Rehabiliation. Circ Cardiovasc Qual Outcomes. 2018 Apr;11(4):e000037.

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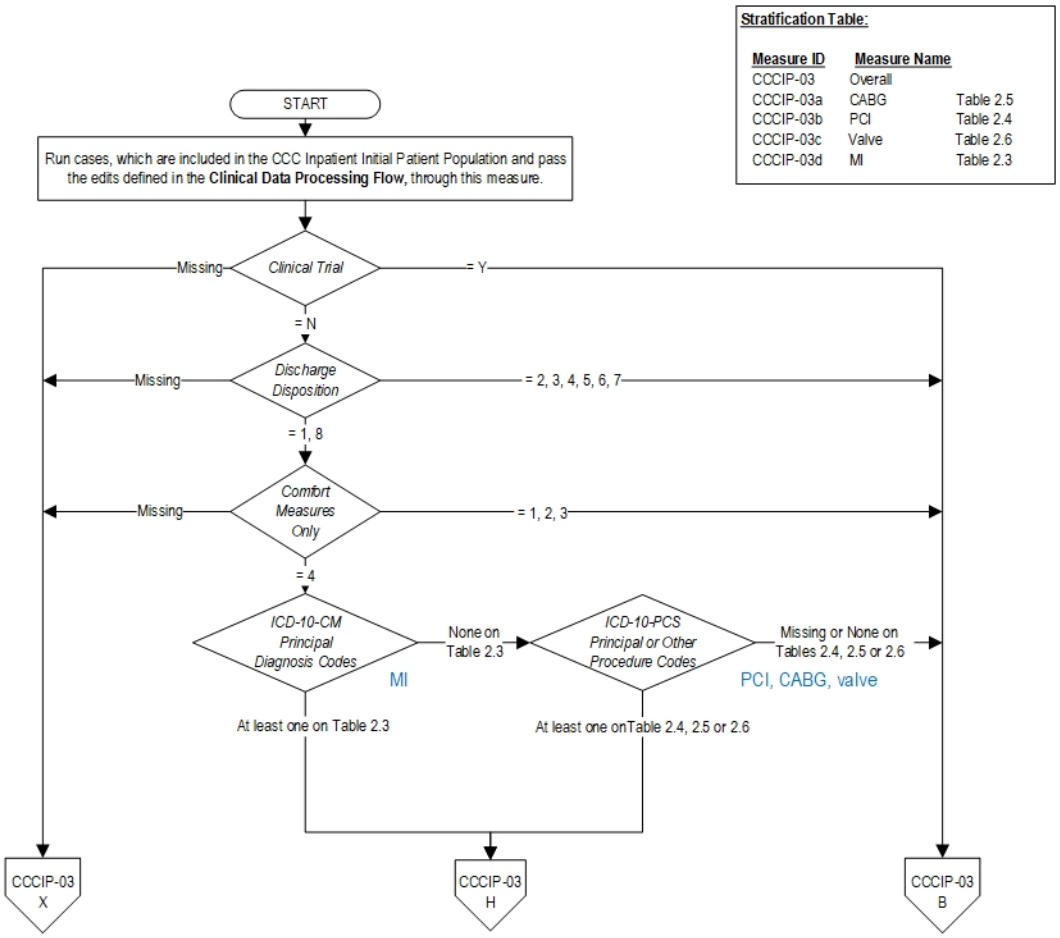
Measure Algorithm:

CCCIP-03: Cardiac Rehabilitation Referral from an Inpatient Setting

Numerator: Number of inpatients who have been referred to an outpatient cardiac rehabilitation program.
Denominator: Patients who are discharged from the hospital with a qualifying event/diagnosis (i.e. MI, PCI, CABG, valve repair/replacement) within the previous 12 months.



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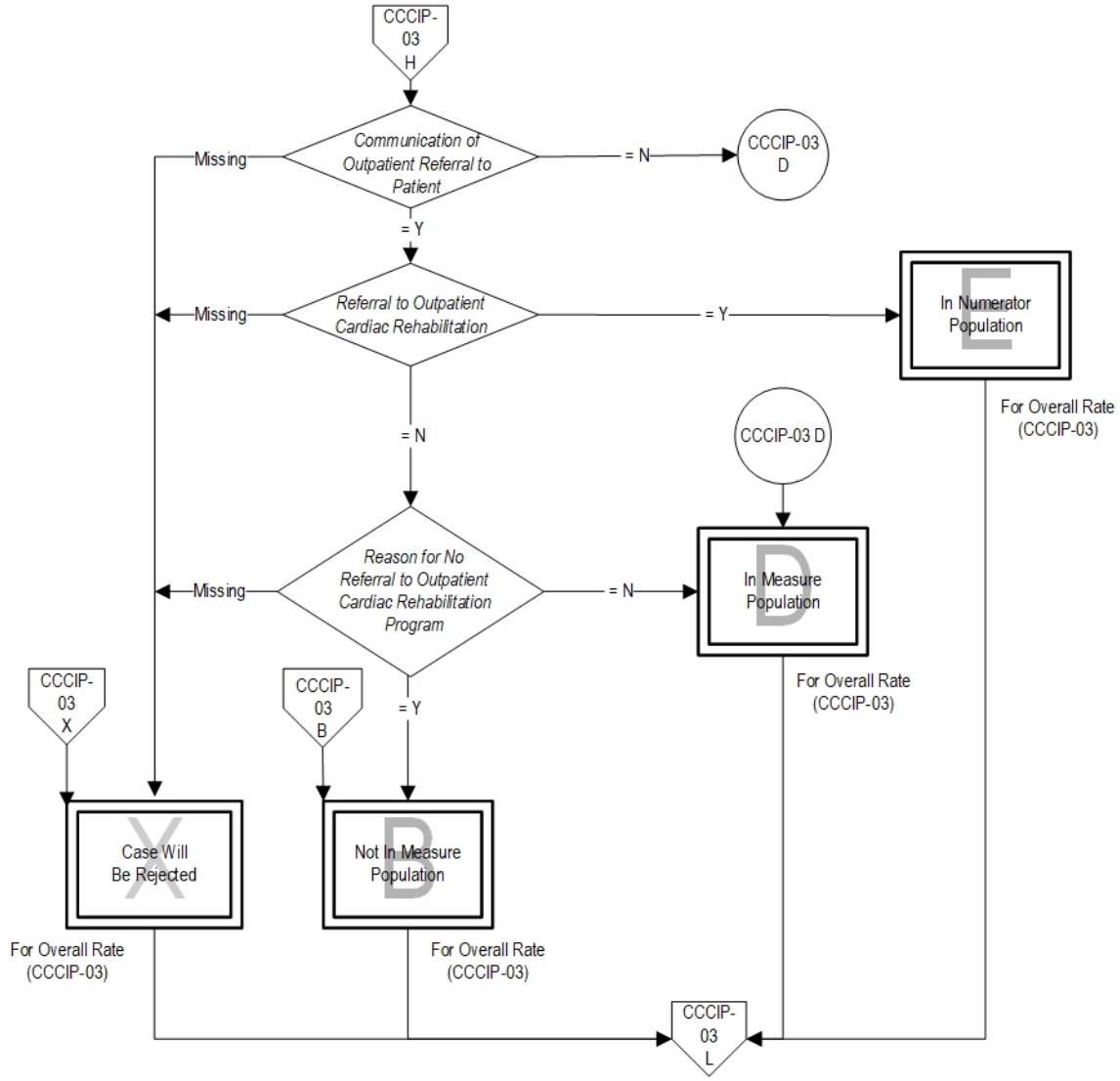

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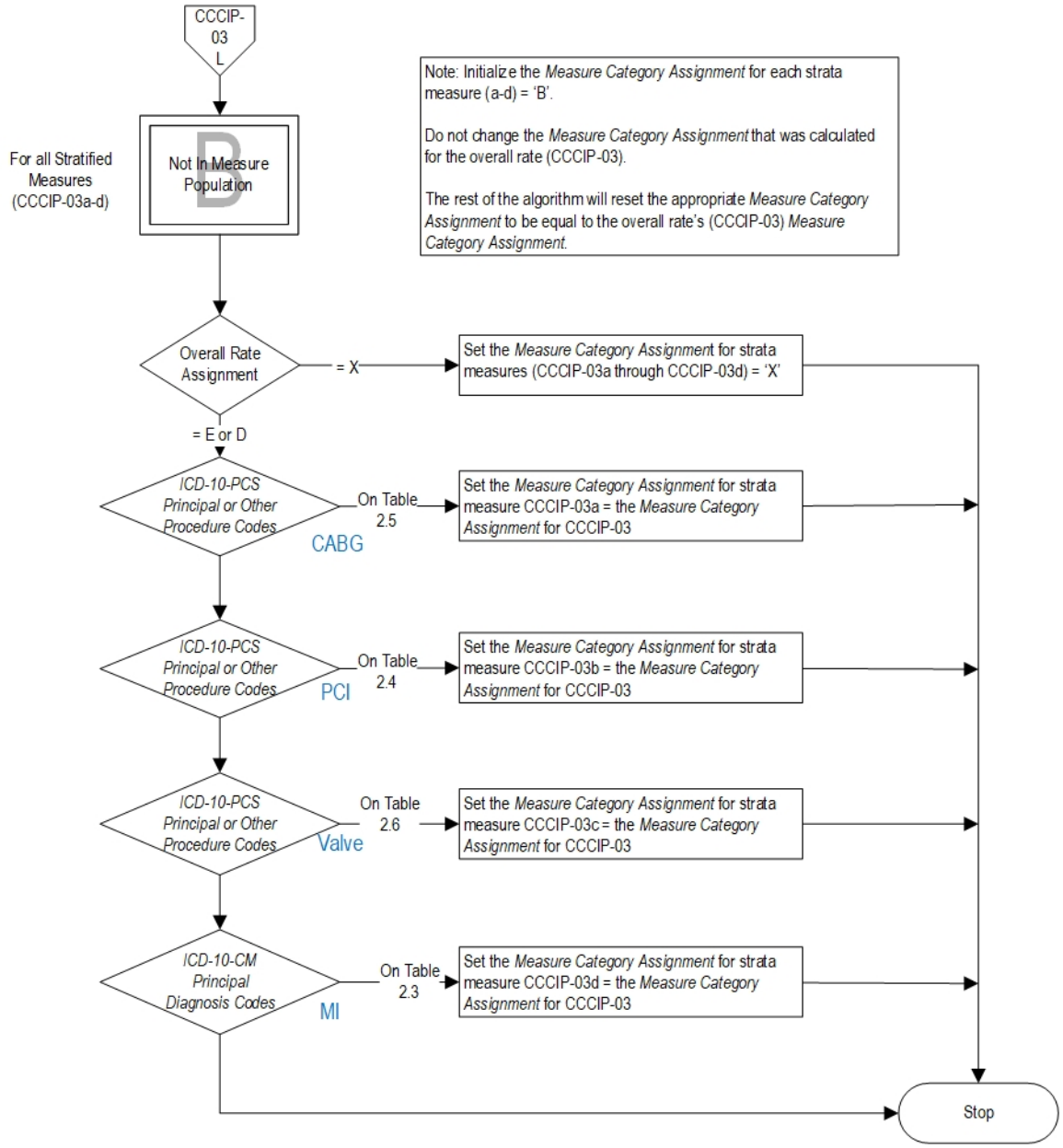

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Measure Information Form

Measure Set: Comprehensive Cardiac Center-Inpatient (CCCIP)

Set Measure ID: CCCIP-04

Performance Measure Name: Cardiac Rehabilitation Referral for Heart Failure Patients with Reduced Ejection Fraction from an Inpatient Setting

Description: Patients with a diagnosis of heart failure with a reduced ejection fraction (HFrEF)of ≤40% who are referred to outpatient cardiac rehabilitation.

Rationale: Studies have shown that cardiac rehabilitation reduces mortality, disease recurrence, and hospital readmission after a cardiovascular event (Thomas et al., 2018). Cardiac rehabilitation consists of exercise, education, and counseling (American Heart Association, 2018). Guidelines recommend referral to cardiac rehabilitation for certain qualifying cardiovascular conditions (Amsterdam et al., 2014), however, despite these benefits and recommendations, cardiac rehabilitation participation rates are low and range from 20-30% (Ades et al., 2017).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Number of inpatients who have been referred to an outpatient cardiac rehabilitation program, which includes the following:

- Communication between the healthcare provider and the patient of the recommendation to attend an outpatient cardiac rehabilitation program **AND** referral sent to outpatient cardiac rehabilitation program

> **Included Populations:** Not applicable
>
> **Excluded Populations:** Not applicable
>
> **Data Elements:**
>
> - *Communication of Outpatient Referral to Patient*
> - *Referral to Outpatient Cardiac Rehabilitation*

Denominator Statement: Patients who are discharged from the hospital with a diagnosis of heart failure with a reduced ejection fraction (HFrEF) ≤40%.

> **Included Populations:**
>
> - An *ICD-10-CM Principal Diagnosis Code* for HF as defined in Appendix A, Table 2.1
> - Documentation of a reduced ejection fraction (EF) ≤40 %

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Excluded Populations:

- Patients less than 18 years of age
- Patients with a documented Reason for *No Referral to Outpatient Cardiac Rehabilitation Program*
- Patients who have participated in or who have completed an outpatient cardiac rehabilitation program within the last 12 months
- Patients who expired
- Patients who left against medical advice (AMA)
- Patients discharged to another hospital
- Patients discharged to another Health Care Facility
- Patients discharged to home for hospice care
- Patients discharged to a healthcare facility for hospice care
- Patients who have a Length of Stay greater than 120 days
- Patients enrolled in a *Clinical Trial*
- Patients with *Comfort Measures Only* documented
- 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 or Table 2.13)

Data Elements:

- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *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 Other Procedure Dates*
- *ICD-10-PCS Principal Procedure Code*
- *ICD-10-PCS Principal Procedure Date*
- *LVSD*
- *Reason for No Referral to Outpatient Cardiac Rehabilitation Program*

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

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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:

- Ades, P., Keteyian, S., Wright, J., Hamm, L., Lui, K., Newlin, K., et al. (2017). Increasing Cardiac Rehabilitation Participation From 20% to 70%: A Road Map From the Million Hearts Cardiac Rehabilitation Collaborative. Mayo Clin Proc. Feb; 92(2): 234-242.
- American Heart Association. (2018). Cardiac Rehab 101. Retrieved April 27, 2018 at: http://www.heart.org/HEARTORG/Conditions/More/CardiacRehab/What-is-Cardiac-Rehabilitation_UCM_307049_Article.jsp#.WuNs0C7waUl
- Amsterdam EA, Wenger NK, Brindis RG, et al. (2014). AHA/ACC guideline for the management of patients with non-ST-elevation acute coronary syndromes: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. J Am Coll Cardiol. 64:e139–228.
- Hillis LD, Smith PK, Anderson JL, et al. (2011). 2011 ACCF/AHA guideline for coronary artery bypass graft surgery. a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Developed in collaboration with the American Association for Thoracic Surgery, Society of Cardiovascular Anesthesiologists, and Society of Thoracic Surgeons. J Am Coll Cardiol. 58:e123–210.
- Levine GN, Bates ER, Blankenship JC, et al. (2011). 2011 ACCF/AHA/SCAI guideline for percutaneous coronary intervention: a report of the American College of CardiologyFoundation/American Heart Association Task Force on Practice Guidelines and the Society for Cardiovascular Angiography and Interventions. J Am Coll Cardiol. 58:e44–122.
- O'Gara PT, Kushner FG, Ascheim DD, et al. (2013). ACCF/AHA guideline for the management of ST elevation myocardial infarction: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. J Am Coll Cardiol. 2013;61:e78–140.
- Smith SC Jr., Benjamin EJ, Bonow RO, et al. (2011). AHA/ACCF secondary prevention and risk reduction therapy for patients with coronary and other atherosclerotic vascular disease: 2011 update: a guideline from the American Heart Association and American College of Cardiology Foundation. J Am Coll Cardiol. 58:2432–46.

Original Performance Measure Source / Developer: Thomas, R., Balady, G., Banka, G., Beckie, T., Chiu, J., Gokak, S. (2018).2018 ACC/AHA Clinical Performance and Quality Measures for Cardiac Rehabiliation. Circ Cardiovasc Qual Outcomes. 2018 Apr;11(4):e000037.

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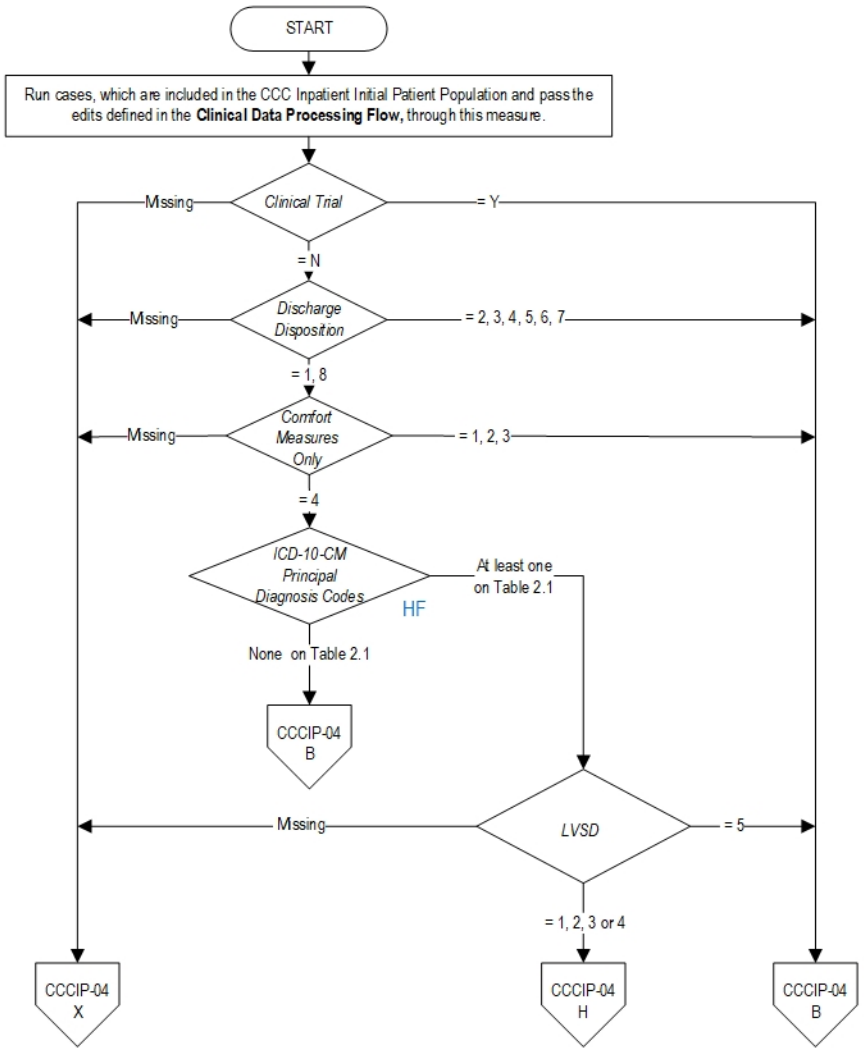
Measure Algorithm:

CCCIP-04: Cardiac Rehabilitation Referral for Heart Failure Patients with Reduced Ejection Fraction from an Inpatient Setting

Numerator: Number of inpatients who have been referred to an outpatient cardiac rehabilitation program.

Denominator: Patients who are discharged from the hospital with a diagnosis of heart failure with a reduced ejection fraction (HFrEF) ≤40%.



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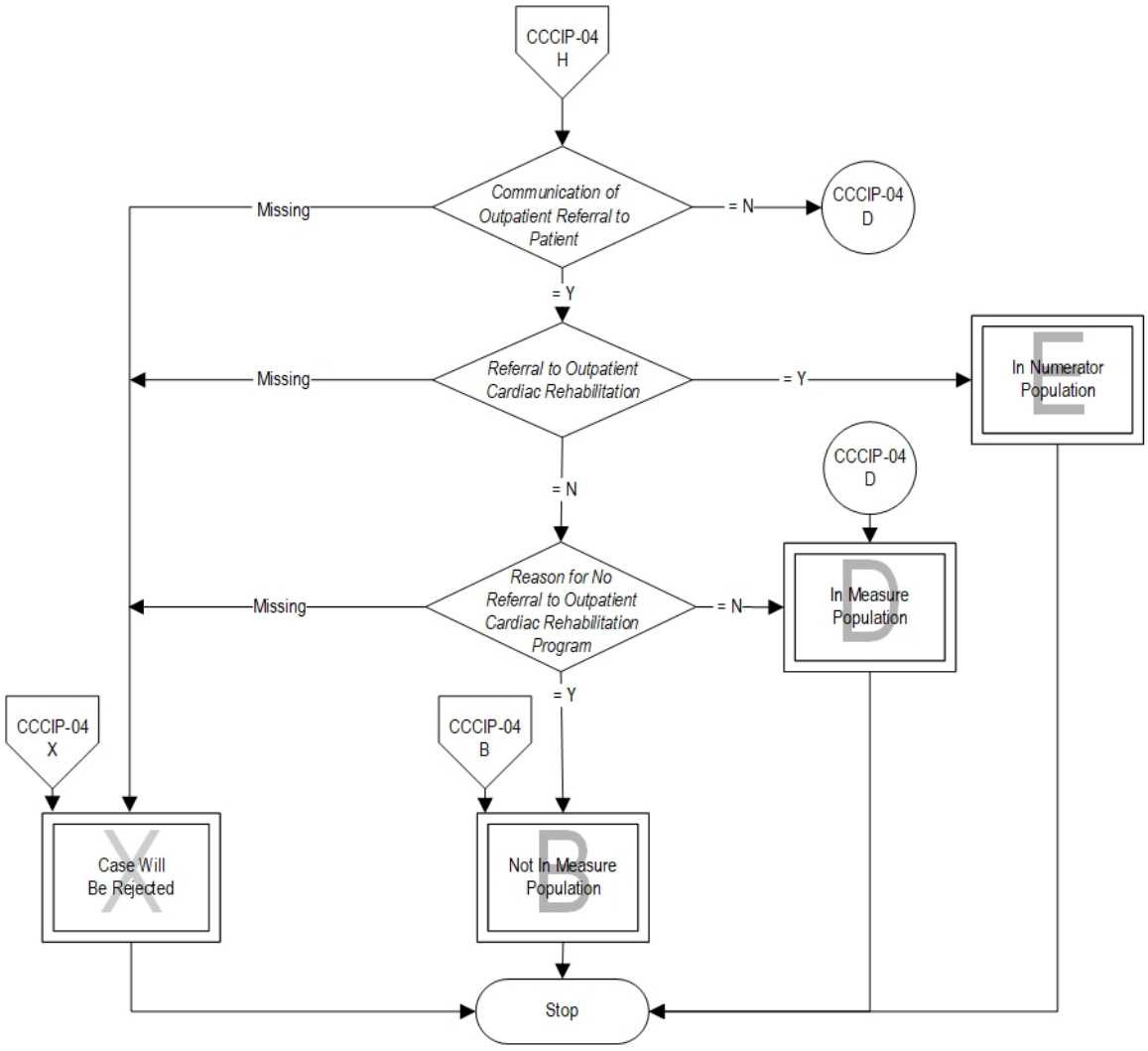

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Measure Information Form

Measure Set: Comprehensive Cardiac Center-Inpatient (CCCIP)

Set Measure ID: CCCIP-05

Performance Measure Name: Cardiac Rehabilitation Enrollment from an Inpatient Setting

Description: Patients with one of the qualifying events/diagnoses who attend at least one (1) cardiac rehabilitation session, within 90 calendar days of hospital discharge. Qualifying events:

- Diagnosis of a myocardial infarction (MI)
- Coronary artery bypass graft (CABG) surgery
- Percutaneous coronary intervention (PCI)
- Cardiac valve repair/replacement

Rationale: Studies have shown that cardiac rehabilitation reduces mortality, disease recurrence, and hospital readmission after a cardiovascular event (Thomas et al., 2018). Cardiac rehabilitation consists of exercise, education, and counseling (American Heart Association, 2018). Guidelines recommend referral to cardiac rehabilitation for certain qualifying cardiovascular conditions (Amsterdam et al., 2014), however, despite these benefits and recommendations, cardiac rehabilitation participation rates are low and range from 20-30% (Ades et al., 2017). In addition, referral to cardiac rehabilitation for patients undergoing PCI has been shown to be as low as 48% (Beatty et al., 2017).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Number of patients who attend at least one (1) cardiac rehabilitation session within 90 calendar days of hospital discharge.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** Not applicable
>
> **Data Elements:**
>
> - *Cardiac Rehabilitation Attendance*
> - *Discharge Date*

Denominator Statement: Patients with a qualifying event/diagnosis who received a referral to outpatient cardiac rehabilitation.

> **Included Populations:**
>
> - Patients with a *ICD-10-CM Principal Diagnosis Code* for MI as defined in Appendix A, Table 2.3.

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- Patients with an *ICD-10-PCS Principal or Other Procedure Code* for PCI as defined in Appendix A, Table 2.4.
- Patients with an *ICD-10-PCS Principal or Other Procedure Code* for CABG as defined in Appendix A, Table 2.5.
- Patients with an *ICD-10-PCS Principal or Other Procedure Code* for valve repair/replacement as defined in Appendix A, Table 2.6.

Excluded Populations:

- Patients less than 18 years of age
- Patients who expired
- Patients who have a Length of Stay greater than 120 days
- 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 or Table 2.13)

Data Elements:

- *Admission Date*
- *Birthdate*
- *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*
- *Reason for No Cardiac Rehabilitation Enrollment*
- *Referral to Outpatient Cardiac Rehabilitation*

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:

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- Ades, P., Keteyian, S., Wright, J., Hamm, L., Lui, K., Newlin, K., et al. (2017). Increasing Cardiac Rehabilitation Participation From 20% to 70%: A Road Map From the Million Hearts Cardiac Rehabilitation Collaborative. Mayo Clin Proc. Feb; 92(2): 234-242.
- American Heart Association. (2018). Cardiac Rehab 101. Retrieved April 27, 2018 at: http://www.heart.org/HEARTORG/Conditions/More/CardiacRehab/What-is-Cardiac-Rehabilitation_UCM_307049_Article.jsp#.WuNs0C7waUl
- Amsterdam EA, Wenger NK, Brindis RG, et al. (2014). AHA/ACC guideline for the management of patients with non-ST-elevation acute coronary syndromes: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. J Am Coll Cardiol. 64:e139–228.
- Beatty, A., Bradley, S., Maynard, C., McCabe, J., (2017). Referral to Cardiac Rehabilitation After Percutaneous Coronary Intervention, Coronary Artery Bypass Surgery, and Valve Surgery Data From the Clinical Outcomes Assessment Program. Circ Cardiovasc Qual Outcomes. 10:e003364.
- Hillis LD, Smith PK, Anderson JL, et al. (2011). 2011 ACCF/AHA guideline for coronary artery bypass graft surgery. a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Developed in collaboration with the American Association for Thoracic Surgery, Society of Cardiovascular Anesthesiologists, and Society of Thoracic Surgeons. J Am Coll Cardiol. 58:e123–210.
- Levine GN, Bates ER, Blankenship JC, et al. (2011). 2011 ACCF/AHA/SCAI guideline for percutaneous coronary intervention: a report of the American College of CardiologyFoundation/American Heart Association Task Force on Practice Guidelines and the Society for Cardiovascular Angiography and Interventions. J Am Coll Cardiol. 58:e44–122.
- O'Gara PT, Kushner FG, Ascheim DD, et al. (2013). ACCF/AHA guideline for the management of ST elevation myocardial infarction: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. J Am Coll Cardiol. 2013;61:e78–140.
- Smith SC Jr., Benjamin EJ, Bonow RO, et al. (2011). AHA/ACCF secondary prevention and risk reduction therapy for patients with coronary and other atherosclerotic vascular disease: 2011 update: a guideline from the American Heart Association and American College of Cardiology Foundation. J Am Coll Cardiol. 58:2432–46.

Original Performance Measure Source / Developer: Thomas, R., Balady, G., Banka, G., Beckie, T., Chiu, J., Gokak, S. (2018). 2018 ACC/AHA Clinical Performance and Quality Measures for Cardiac Rehabiliation. Circ Cardiovasc Qual Outcomes. 2018 Apr;11(4):e000037.

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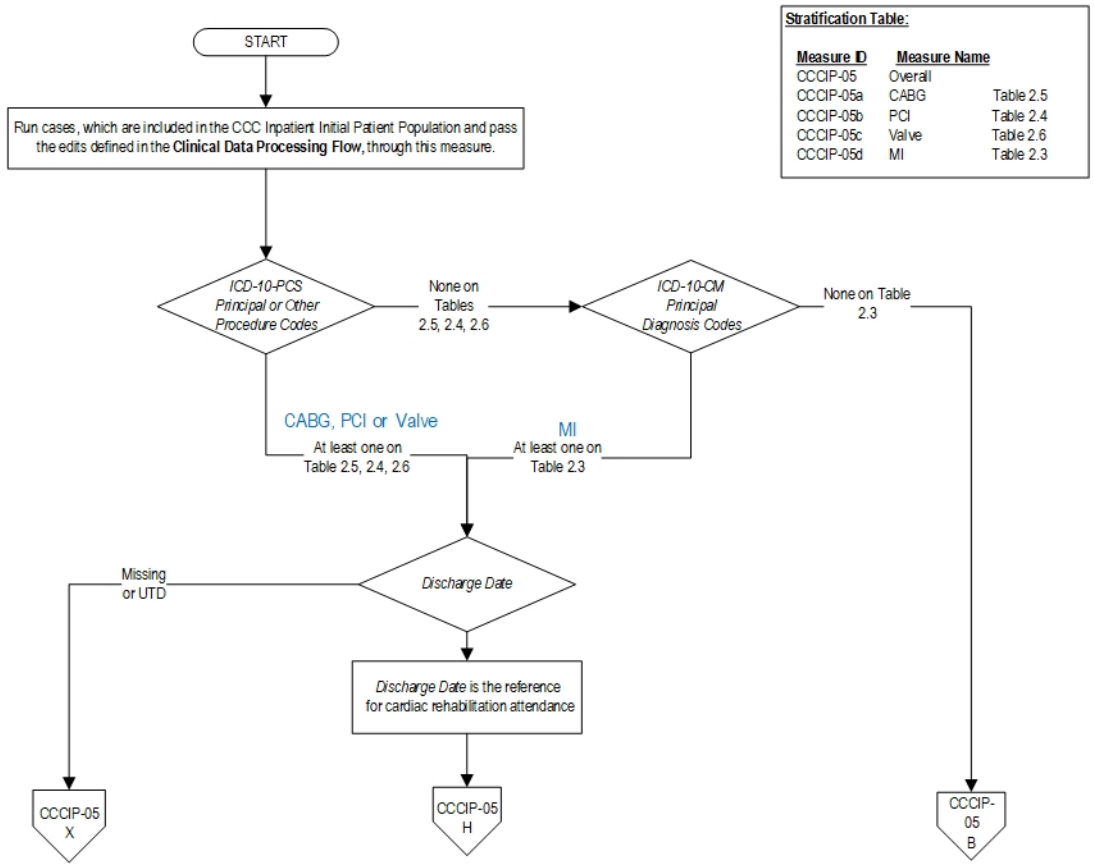
Measure Algorithm:

CCCIP-05: Cardiac Rehabilitation Enrollment from an Inpatient Setting

Numerator: Number of patients who attend at least one (1) cardiac rehabilitation session within 90 calendar days of hospital discharge.

Denominator: Patients with a qualifying event/diagnosis within the previous 12 months, who received a referral to outpatient cardiac rehabilitation.



Stratification Table:

Measure ID	Measure Name	
CCCIP-05	Overall	
CCCIP-05a	CABG	Table 2.5
CCCIP-05b	PCI	Table 2.4
CCCIP-05c	Valve	Table 2.6
CCCIP-05d	MI	Table 2.3

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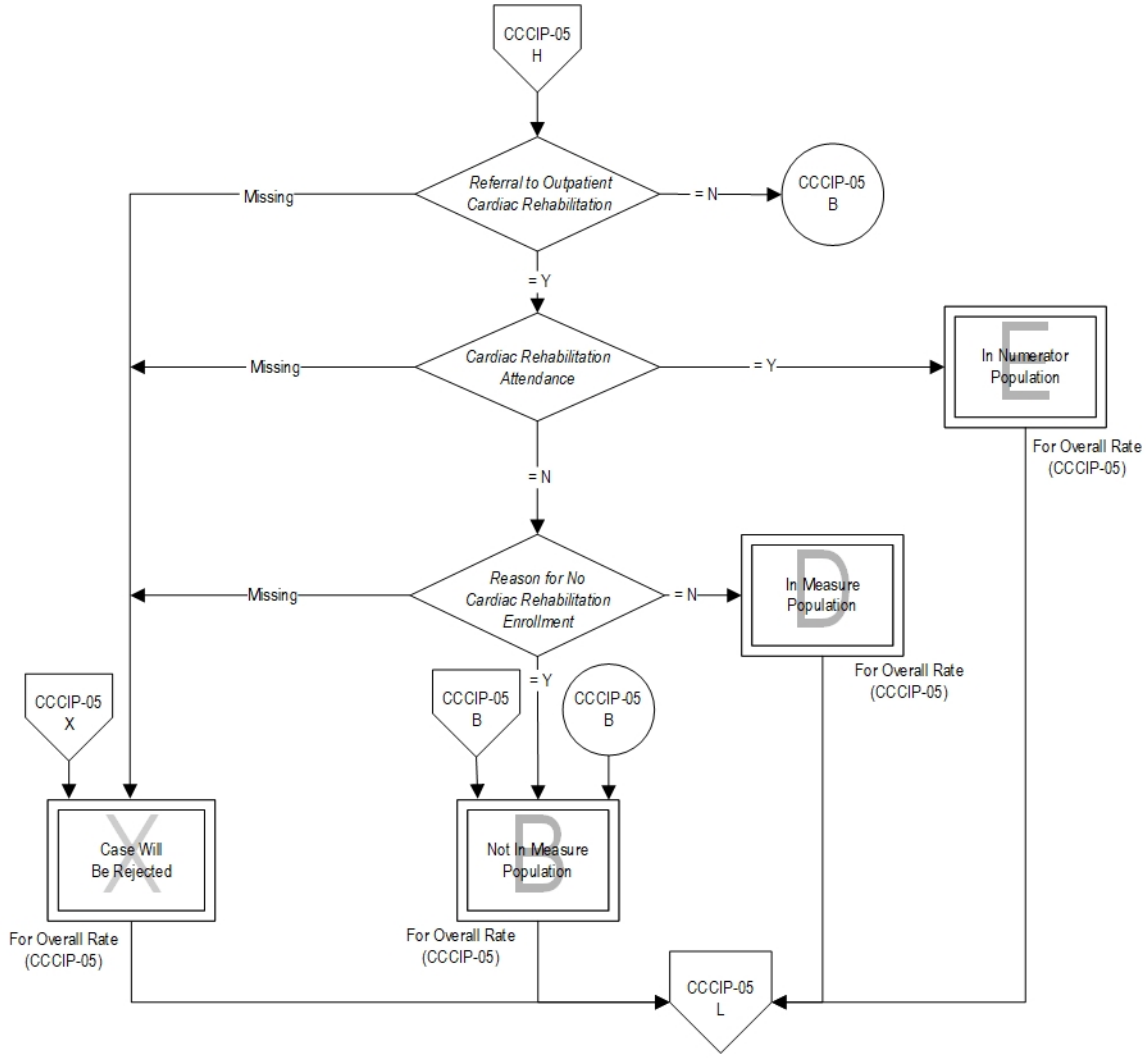

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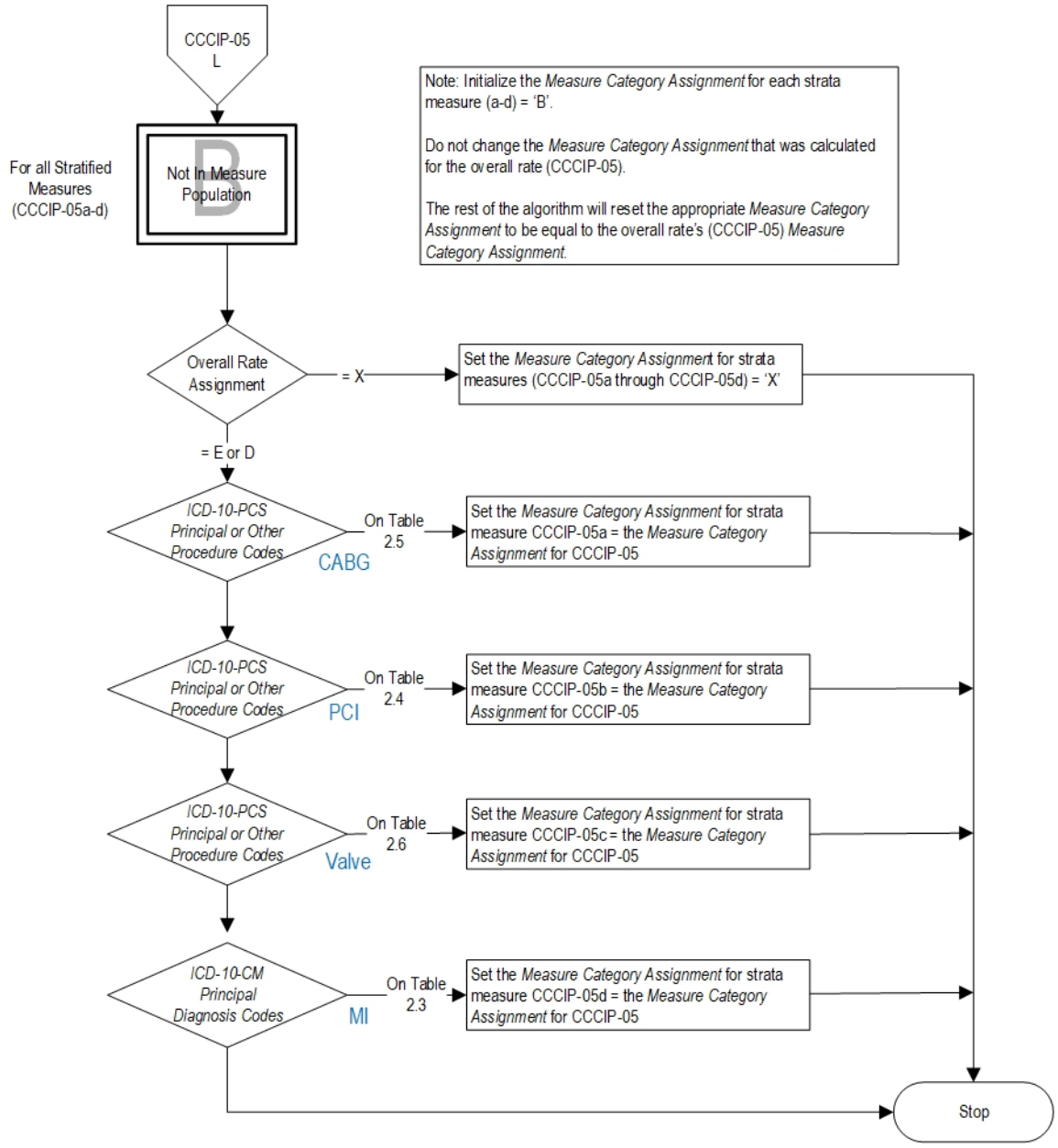

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Comprehensive Cardiac Center-Outpatient (CCCOP)

Set Measures

Set Measure ID	Measure Short Name
CCCOP-01	Cardiac Rehabilitation Referral from an Outpatient Setting
CCCOP-02	Cardiac Rehabilitation Referral for Heart Failure Patients with Reduced Ejection Fraction from an Outpatient Setting
CCCOP-03	Cardiac Rehabilitation Enrollment from an Outpatient Setting

General Data Elements

Element Name	Collected For
Birthdate	All Records,
CPT® Code	All Records,
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
Race	All Records,
Sex	All Records,

Measure Set Specific Data Elements

Element Name	Collected For

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Element Name	Collected For
CPT® Code Procedure Date	CCCOP-01, CCCOP-03
Cardiac Rehabilitation Attendance	CCCOP-03
Clinical Trial	CCCOP-01, CCCOP-02
Comfort Measures Only	CCCOP-01, CCCOP-02
Communication of Outpatient Referral to Patient	CCCOP-01, CCCOP-02
Discharge Code	CCCOP-01, CCCOP-02, CCCOP-03
E/M Code	CCCOP-01, CCCOP-02, CCCOP-03
LVSD	CCCOP-02
Outpatient Encounter Date	CCCOP-01, CCCOP-02, CCCOP-03
Reason for No Cardiac Rehabilitation Enrollment	CCCOP-03
Reason for No Referral to Outpatient Cardiac Rehabilitation Program	CCCOP-01, CCCOP-02, CCCOP-03
Referral to Outpatient Cardiac Rehabilitation	CCCOP-01, CCCOP-02, CCCOP-03

Related Materials

	Document Name	
	Data Dictionary	

Comprehensive Cardiac Center (CCC) Initial Patient Population

Data collection for five new standardized performance measures are required for Comprehensive Cardiac Center (CCC) certification. In addition, a second set of optional measures are available. All currently certified CCC organizations, as well as those seeking initial certification, are required to implement data collection on the five mandatory standardized measures.

The measures chosen for implementation within the CCC certification program address major aspects of cardiac care, within the following 4 domains: cardiac rehabilitation, myocardial infarction (MI), heart failure (HF), and cardiac surgery (coronary artery bypass graft, cardiac valve repair/replacement and percutaneous coronary intervention [PCI]). The measures are separated into mandatory and optional measures and then again by inpatient and outpatient status. The certification program also includes 5 measures that are currently used in The Joint Commission's Advanced Heart Failure Certification program (ACHF-01, ACHF-02, ACHF-06, ACHFOP-03, and ACHFOP-06). Organizations should follow the ACHF and ACHFOP initial patient population algorithm's that are

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posted to The Joint Commission's Measure Specifications Manual to determine the patient population for the heart failure measures.

There are 5 mandatory measures: high-intensity statin, aldosterone antagonist, beta-blockers, post-discharge appointment and post-discharge evaluation that all certified organizations must abstract. The additional 3 inpatient and 5 outpatient measures are optional. It is highly recommended that the all organizations collect the optional measures to assist them with advancing quality of care for the cardiac patients they serve.

All the mandatory measures capture the quality of care provided to myocardial infarction (MI) and heart failure patients. Organizations are required to submit inpatient cases for their heart failure patient population and observation and inpatient cases for their MI patient population for the mandatory measures. If the organization submits data for the optional inpatient measures, submitting observation cases is optional.

In order to assist organizations in determining their patient populations for performance measurement, The Joint Commission has defined outpatient, inpatient, and observation. Patients assigned as outpatients are defined as, a patient who is not hospitalized overnight but who visits a hospital, clinic, or associated facility for diagnosis or treatment. CPT® codes are utilized to bill outpatient cases when the patient undergoes a procedure. Any patient who has outpatient surgery that is billed using a CPT® code should be assigned to the outpatient bucket to determine cases for abstraction.

Patients assigned as inpatient or observation are defined as, a patient who is hospitalized overnight. ICD-10 PCS codes are utilized to bill inpatient and observation cases when the patient undergoes a procedure. Any patient who is listed as an inpatient

Comprehensive Cardiac Center (CCC) Outpatient Initial Patient Population
The population for this outpatient measure set is identified using the following 5 data elements:

- *Birthdate*
- *EM Code*
- *ICD-10-PCS Principal Diagnosis Code*
- *Patients with an HCPCS/CPT® Procedure Code*
- *Outpatient Encounter Date*

Patients seen in the outpatient setting are included in the outpatient initial patient population if they have: Patient Age (Outpatient Encounter Date — Birthdate) ≥18 years old and an E/M Code on Appendix A, Table 2.0 for a hospital outpatient encounter.

AND

Subpopulation Medial - heart failure and myocardial infarction identified by:

- ICD-10-CM Principal Diagnosis Code as defined in (HF) Appendix A, Table 2.1, or (MI) Appendix A, Table 2.3

Surgical -PCI, ICD identified by:

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- HCPCS/CPT® code defined in Appendix A, Table 2.11 (PCI)

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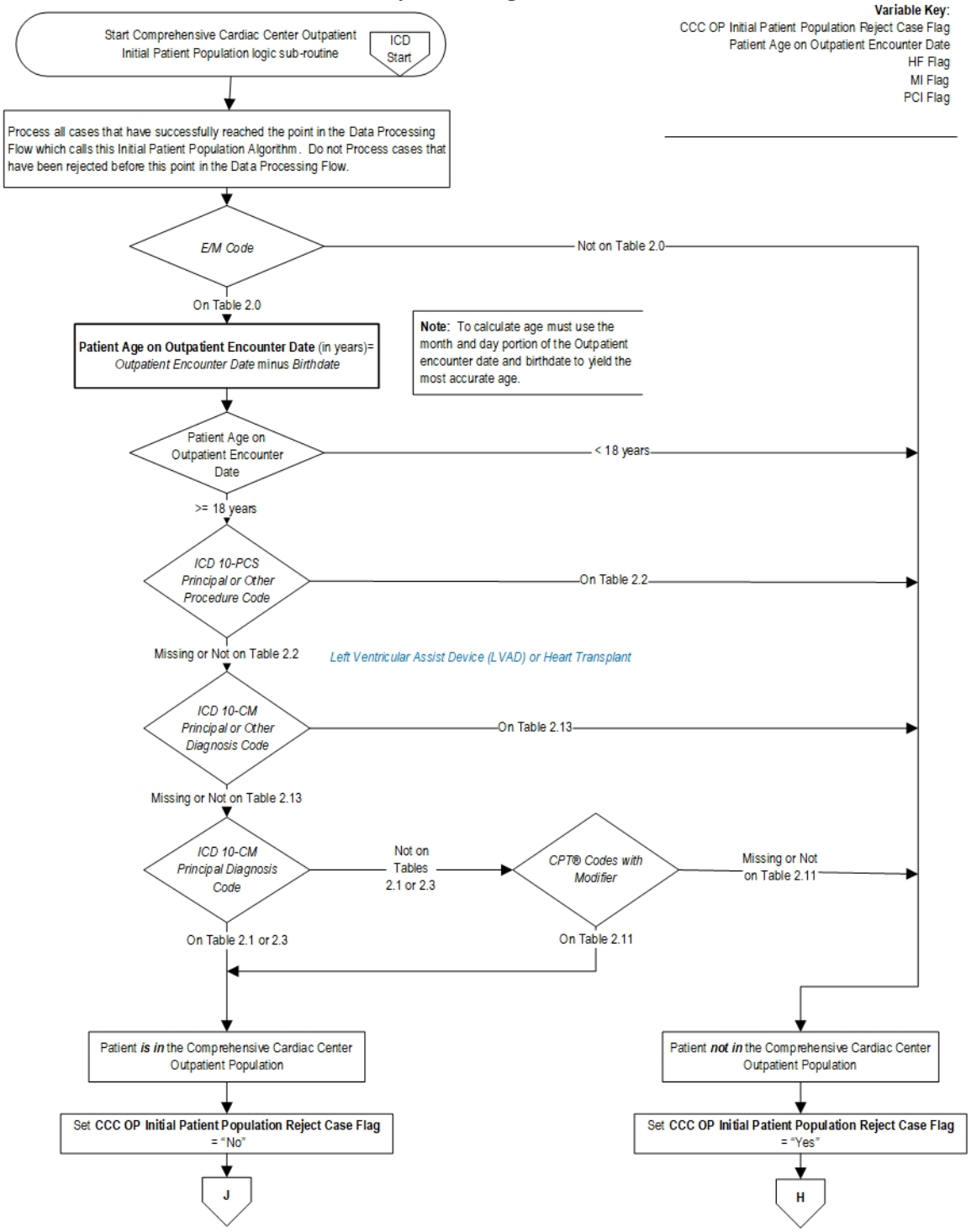
Comprehensive Cardiac Center Outpatient Initial Patient Population Algorithm



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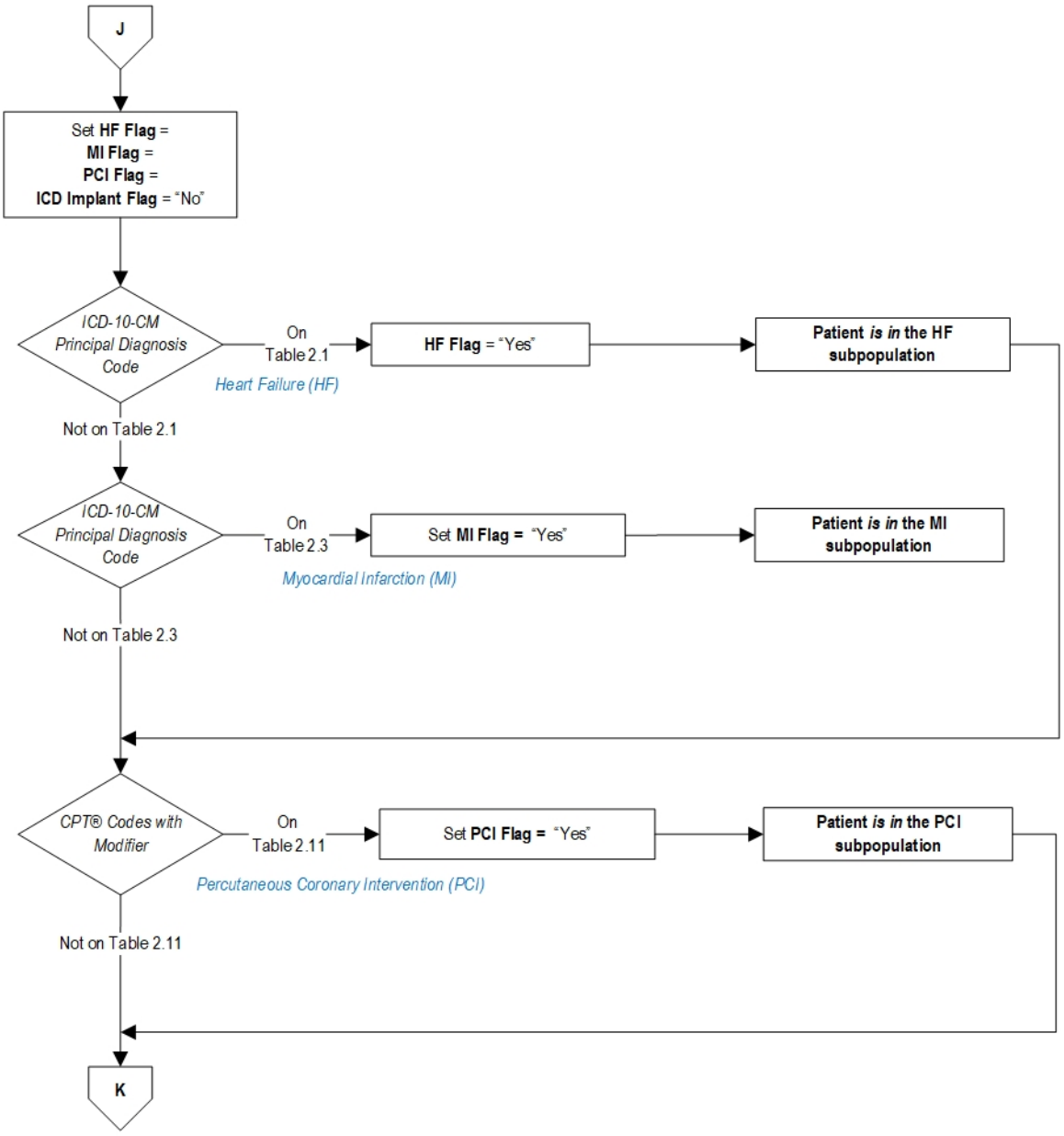

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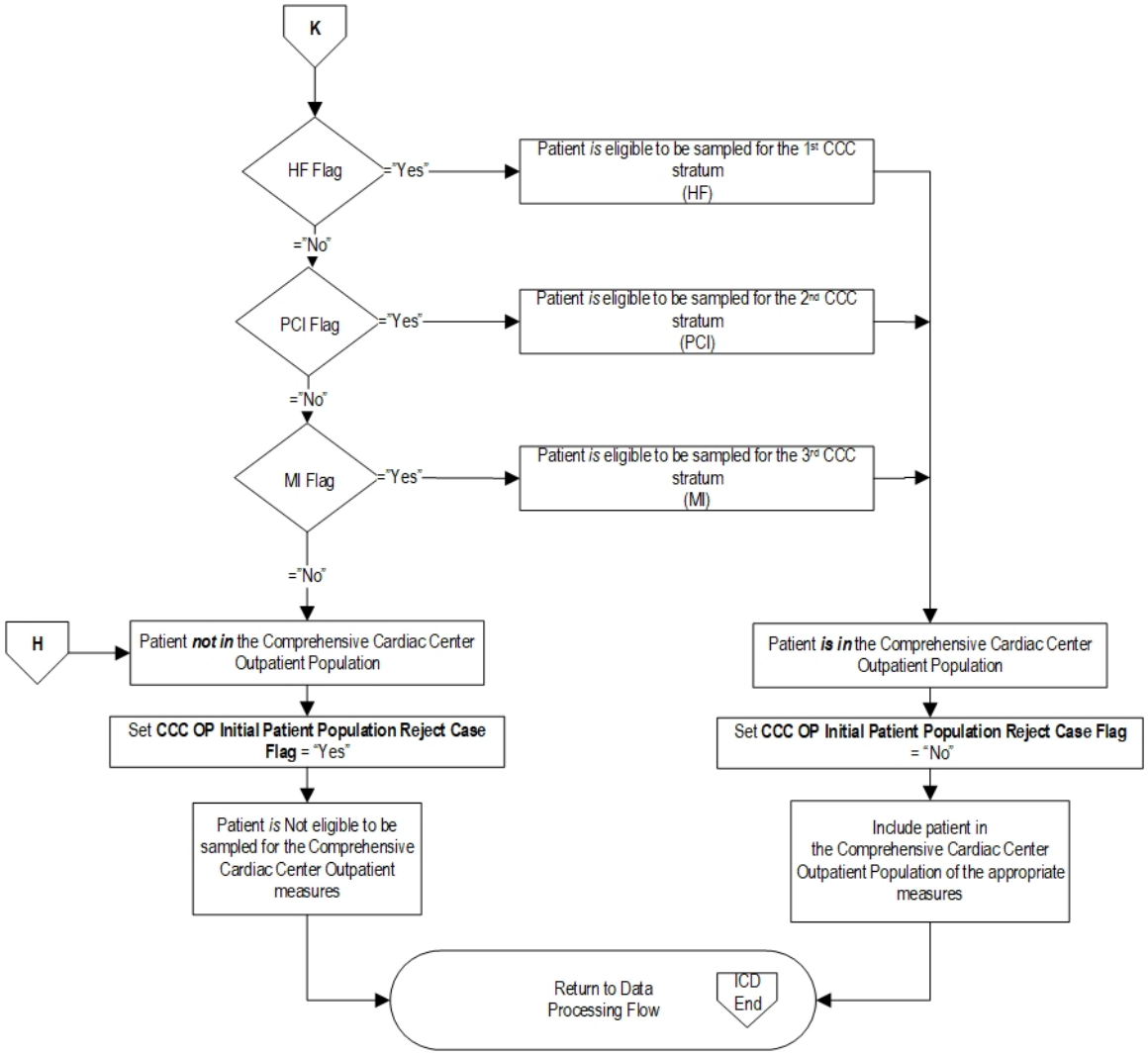

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CCC Sample Size Requirements

Hospitals that choose to sample have the option of sampling quarterly or monthly. A hospital may choose to use a larger sample size than is required. Hospitals whose patient population size is less than the minimum number of cases per quarter for the measure set cannot sample.

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.

Sample sizes are based on the hospital's patient population for each measure category. Once the patient population for each measure category is determined the coinciding measures should be abstracted for the measure category population. An asterisk (*) after the listed measures denotes the mandatory standardized measures that certified organizations must abstract data for. The additional measures that are listed are optional.

Measure Category	Measures
Heart Failure	CCCIP-02*, ACHF-01*, ACHF-02*, ACHF-06*, CCCIP-04, CCCOP-02, ACHFOP-03, ACHFOP-06
MI	CCCIP-01*, CCCIP-03, CCCOP-01, CCCOP-03
PCI/CABG/Valve	CCCIP-03, CCCIP-05, CCCOP-01 (PCI only), CCCOP-03 (PCI only)

*Mandatory standardized measures that certified organizations must abstract.

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 Approach:

- 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 $k \leq N/n$. 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.

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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 CCC must ensure that it has determined a patient population for each measure category listed below and that the sample size per measure category meets the following conditions:

Measure Category	Average Quarterly Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
Heart Failure	≥ 1516	304
	381 - 1515	20% of Patient Population size
	76-380	76
	0 - 75	No sampling; 100% Patient Population required

Measure Category	Average Quarterly Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
MI	≥ 1516	304
	381 - 1515	20% of Patient Population size
	76-380	76
	0 - 75	No sampling; 100% Patient Population required

Measure Category	Average Quarterly Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
PCI	≥ 1516	304
	381 - 1515	20% of Patient Population size
	76-380	76
	0 - 75	No sampling; 100% Patient Population required

Measure Category	Average Quarterly Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
CABG	≥ 1516	304

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	381 - 1515	20% of Patient Population size
	76-380	76
	0 - 75	No sampling; 100% Patient Population required

Measure Category	Average Quarterly Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
Valve	≥ 1516	304
	381 - 1515	20% of Patient Population size
	76-380	76
	0 - 75	No sampling; 100% Patient Population required

Monthly Sampling Hospitals performing monthly sampling for CCC must ensure that it has determined a patient population for each measure category listed below and that the sample size per measure category meets the following conditions:

Measure Category	Average Quarterly Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
Heart Failure	≥ 506	102
	131 - 505	20% of Patient Population size
	26-130	26
	<26	No sampling; 100% Patient Population required

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

Measure Category	Average Quarterly Patient Population Size *"N"*	Minimum Required Sample Size *"n"*

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PCI	≥ 506	102
	131 - 505	20% of Patient Population size
	26-130	26
	<26	No sampling; 100% Patient Population required

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

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

Sample Size Examples

- Quarterly sampling:
    - A hospital's CCC patient population size per measure category, during the 2nd quarter, has been:
        - 2nd quarter patient populations
            - Heart Failure-650 patients
            - MI-345 patients
            - PCI-62 patients
            - CABG-80 patients
            - Valve-35 patients
        - The required sample size per measure category for the 2nd quarter, would be:
            - Heart Failure-130 patients (650 patients per quarter during the past quarter x 20%=130)
                - The hospital will abstract the following mandatory measures and if the organization chooses the additional optional measures for these 130 heart failure patients:
                    - CCCIP-02 - mandatory

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                - ACHF-01 - mandatory
                - ACHF-02 - mandatory
                - ACHF-06 - mandatory
                - CCCIP-04 -optional
                - CCCOP-02 - optional
                - ACHFOP-03 – optional
                - ACHFOP-06 - optional
            - MI-76 patients
                - The hospital will abstract the following mandatory measures and if the organization chooses the additional optional measures for these 76 MI patients:
                    - CCCIP-01 - mandatory
                    - CCCIP-03 - optional
                    - CCCOP-01 - optional
                    - CCCOP-03 - optional
            - PCI- 62 patients
                - No sampling, 100% of patient population required if the organization chooses to abstract the following optional measures:
                    - CCCIP-03 - optional
                    - CCCIP-05 - optional
                    - CCCOP-01 - optional
                    - CCCOP-03 - optional
            - CABG-76 patients
                - If the organization chooses, the following optional measures could be abstracted for these 76 CABG patients:
                    - CCCIP-03 - optional
                    - CCCIP-05 - optional
            - Valve-35 patients
                - No sampling, 100% of patient population required if the organization chooses to abstract the following optional measures:
                    - CCCIP-03 - optional
                    - CCCIP-05 - optional

- Monthly sampling:
    - A hospital's CCC patient population size during the month of February, per measure category, has been:
        - February patient populations
            - Heart Failure-400 patients
            - MI-345 patients
            - PCI-80 patients
            - CABG-35 patients
            - Valve-20 patients
        - The required sample size, per measure category, for the February would be:
            - Heart Failure-80 patients (400 February patients x 20%=80)
                - The hospital will abstract the following mandatory measures and if the organization chooses, the additional optional measures for these 80 heart failure patients:

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        - CCCIP-02 - mandatory
        - ACHF-01 - mandatory
        - ACHF-02 - mandatory
        - ACHF-06 - mandatory
        - CCCIP-04 -optional
        - CCCOP-02 - optional
        - ACHFOP-03 – optional
        - ACHFOP-06 - optional
- MI-69 patients (345 February patients x 20%=69)
    - The hospital will abstract the following mandatory measures and if the organization chooses, the additional optional measures for these 69 MI patients:
        - CCCIP-01 - mandatory
        - CCCIP-03 - optional
        - CCCOP-01 - optional
        - CCCOP-03 - optional
- PCI- 26 patients
    - If the organization chooses, the following optional measures could be abstracted for their 26 PCI patients:
        - CCCIP-03 - optional
        - CCCIP-05 - optional
        - CCCOP-01 - optional
        - CCCOP-03 - optional
- CABG-26 patients
    - If the organization chooses, the following optional measures could be abstracted for their 26 PCI patients:
        - CCCIP-03 - optional
        - CCCIP-05 - optional
- Valve-20 patients
    - No sampling, 100% of patient population required, if the organization chooses to abstract the following optional measures could be abstracted for all their valve patients:
        - CCCIP-03 - optional
        - CCCIP-05 - optional

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Measure Information Form

Measure Set: Comprehensive Cardiac Center-Outpatient (CCCOP)

Set Measure ID: CCCOP-01

Performance Measure Name: Cardiac Rehabilitation Referral from an Outpatient Setting

Description: Patients evaluated in an outpatient setting, who have had one of the following qualifying events/diagnosis are to be referred to an outpatient cardiac rehabilitation program. Qualifying events:

- Diagnosis of myocardial infarction (MI)
- Percutaneous coronary intervention (PCI)

Rationale: Studies have shown that cardiac rehabilitation reduces mortality, disease recurrence, and hospital readmission after a cardiovascular event (Thomas et al., 2018). Cardiac rehabilitation consists of exercise, education, and counseling (American Heart Association, 2018). Guidelines recommend referral to cardiac rehabilitation for certain qualifying cardiovascular conditions (Amsterdam et al., 2014), however, despite these benefits and recommendations, cardiac rehabilitation participation rates are low and range from 20-30% (Ades et al., 2017). In addition, referral to cardiac rehabilitation for patients undergoing PCI has been shown to be as low as 48% (Beatty et al., 2017).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Number of outpatients who have been referred to an outpatient cardiac rehabilitation program, which includes the following:

- Communication between the healthcare provider and the patient of the recommendation to attend an outpatient cardiac rehabilitation program **AND** referral sent to outpatient cardiac rehabilitation program.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** Not applicable
>
> **Data Elements:**
>
> - *Communication of Outpatient Referral to Patient*
> - *Referral to Outpatient Cardiac Rehabilitation*

Denominator Statement: Patients with a qualifying event/diagnosis who are seen in the outpatient setting.

> **Included Populations:**
>
> - *E/M Code* for hospital outpatient encounter as defined in OP Appendix A, OP Table 2.0

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- Patients with a *ICD-10-CM Principal Diagnosis Code* for MI as defined in Appendix A, Table 2.3.
- Patients with a *CPT® code* for PCI as defined in Appendix A, Table 2.11.
- Patients discharged to home or unable to determine discharge code

Excluded Populations:

- Patients less than 18 years of age
- Patients with a documented *Reason for No Referral to Outpatient Cardiac Rehabilitation Program*
- Patients enrolled in a *Clinical Trial*
- Patients with *Comfort Measures Only* documented
- Patients discharged to home for hospice care
- Patient discharged to an acute care facility
- Patients discharged to another health care facility
- Patients who expire
- Patients who left AMA
- 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 or Table 2.13)

Data Elements:

- *Birthdate*
- *CPT® Code*
- *CPT® Code Procedure Date*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Code*
- *E/M Code*
- *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*
- *Outpatient Encounter Date*
- *Reason for No Referral to Outpatient Cardiac Rehabilitation Program*

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

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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:

- Ades, P., Keteyian, S., Wright, J., Hamm, L., Lui, K., Newlin, K., et al. (2017). Increasing Cardiac Rehabilitation Participation From 20% to 70%: A Road Map From the Million Hearts Cardiac Rehabilitation Collaborative. Mayo Clin Proc. Feb; 92(2): 234-242.
- American Heart Association. (2018). Cardiac Rehab 101. Retrieved April 27, 2018 at: http://www.heart.org/HEARTORG/Conditions/More/CardiacRehab/What-is-Cardiac-Rehabilitation_UCM_307049_Article.jsp#.WuNs0C7waUl
- Amsterdam EA, Wenger NK, Brindis RG, et al. (2014). AHA/ACC guideline for the management of patients with non-ST-elevation acute coronary syndromes: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. J Am Coll Cardiol. 64:e139–228.
- Beatty, A., Bradley, S., Maynard, C., McCabe, J., (2017). Referral to Cardiac Rehabilitation After Percutaneous Coronary Intervention, Coronary Artery Bypass Surgery, and Valve Surgery Data From the Clinical Outcomes Assessment Program. Circ Cardiovasc Qual Outcomes. 10:e003364.
- Hillis LD, Smith PK, Anderson JL, et al. (2011). 2011 ACCF/AHA guideline for coronary artery bypass graft surgery. a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Developed in collaboration with the American Association for Thoracic Surgery, Society of Cardiovascular Anesthesiologists, and Society of Thoracic Surgeons. J Am Coll Cardiol. 58:e123–210.
- Levine GN, Bates ER, Blankenship JC, et al. (2011). 2011 ACCF/AHA/SCAI guideline for percutaneous coronary intervention: a report of the American College of CardiologyFoundation/American Heart Association Task Force on Practice Guidelines and the Society for Cardiovascular Angiography and Interventions. J Am Coll Cardiol. 58:e44–122.
- O'Gara PT, Kushner FG, Ascheim DD, et al. (2013). ACCF/AHA guideline for the management of ST elevation myocardial infarction: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. J Am Coll Cardiol. 2013;61:e78–140.
- Smith SC Jr., Benjamin EJ, Bonow RO, et al. (2011). AHA/ACCF secondary prevention and risk reduction therapy for patients with coronary and other atherosclerotic vascular disease: 2011 update: a guideline from the American Heart Association and American College of Cardiology Foundation. J Am Coll Cardiol. 58:2432–46.

Original Performance Measure Source / Developer: Thomas, R., Balady, G., Banka, G., Beckie, T., Chiu, J., Gokak, S. (2018). 2018 ACC/AHA Clinical Performance and Quality Measures for Cardiac Rehabiliation. Circ Cardiovasc Qual Outcomes. 2018 Apr;11(4):e000037.

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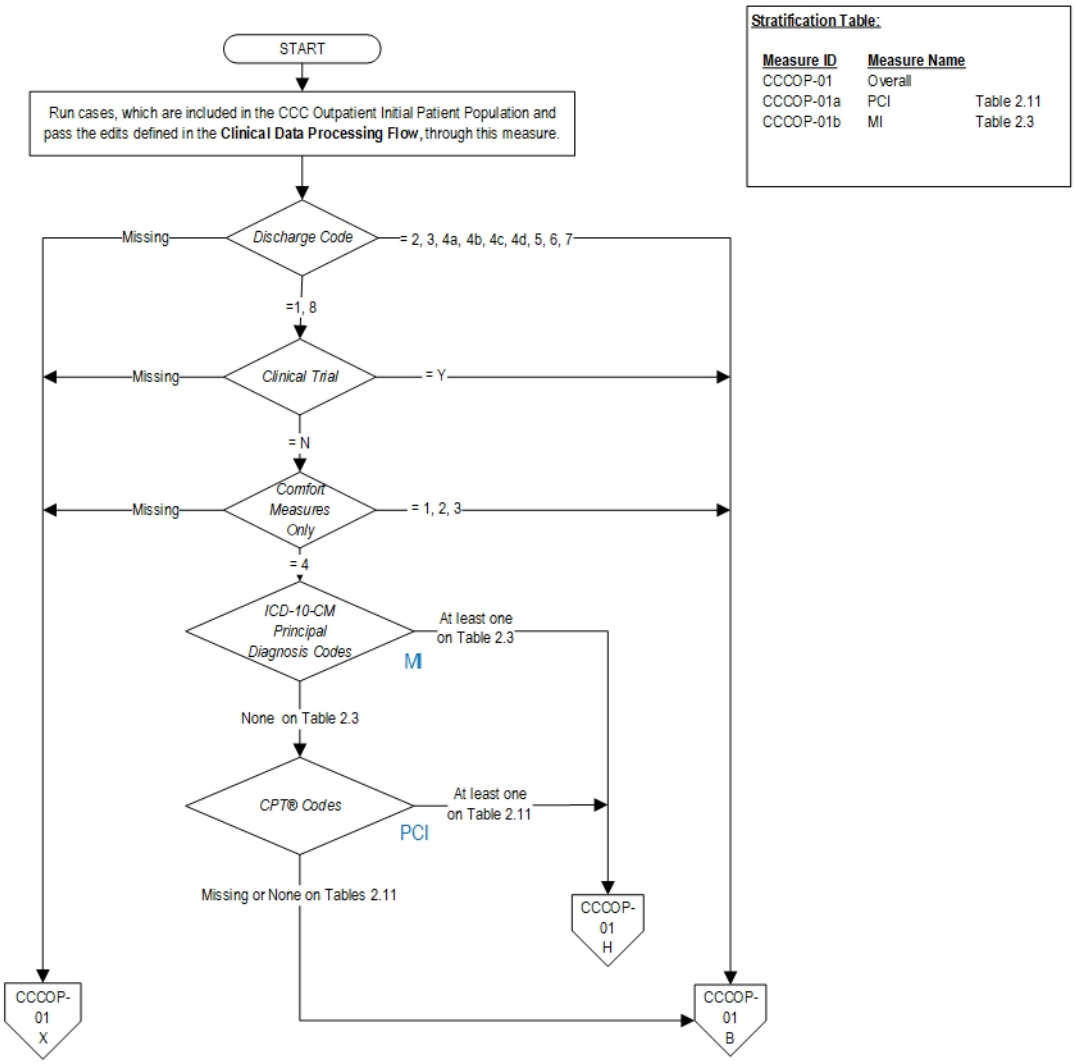
Measure Algorithm:

CCCOP–01: Cardiac Rehabilitation Referral from an Outpatient Setting

Numerator: Number of inpatients who have been referred to an outpatient cardiac rehabilitation program.

Denominator: Patients with a qualifying event/diagnosis (i.e. MI, PCI) within the previous 12 months who are seen in an outpatient setting..



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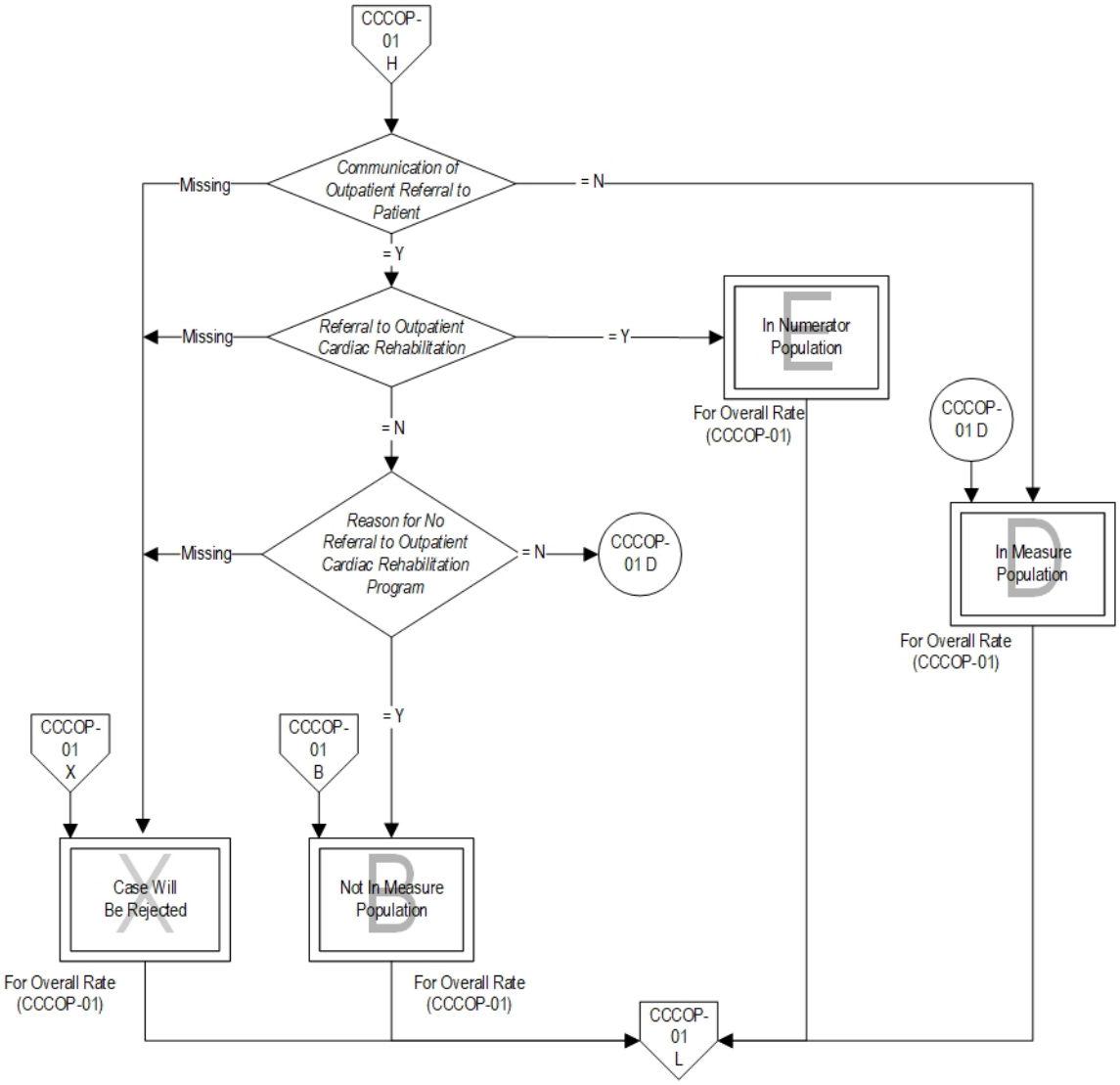

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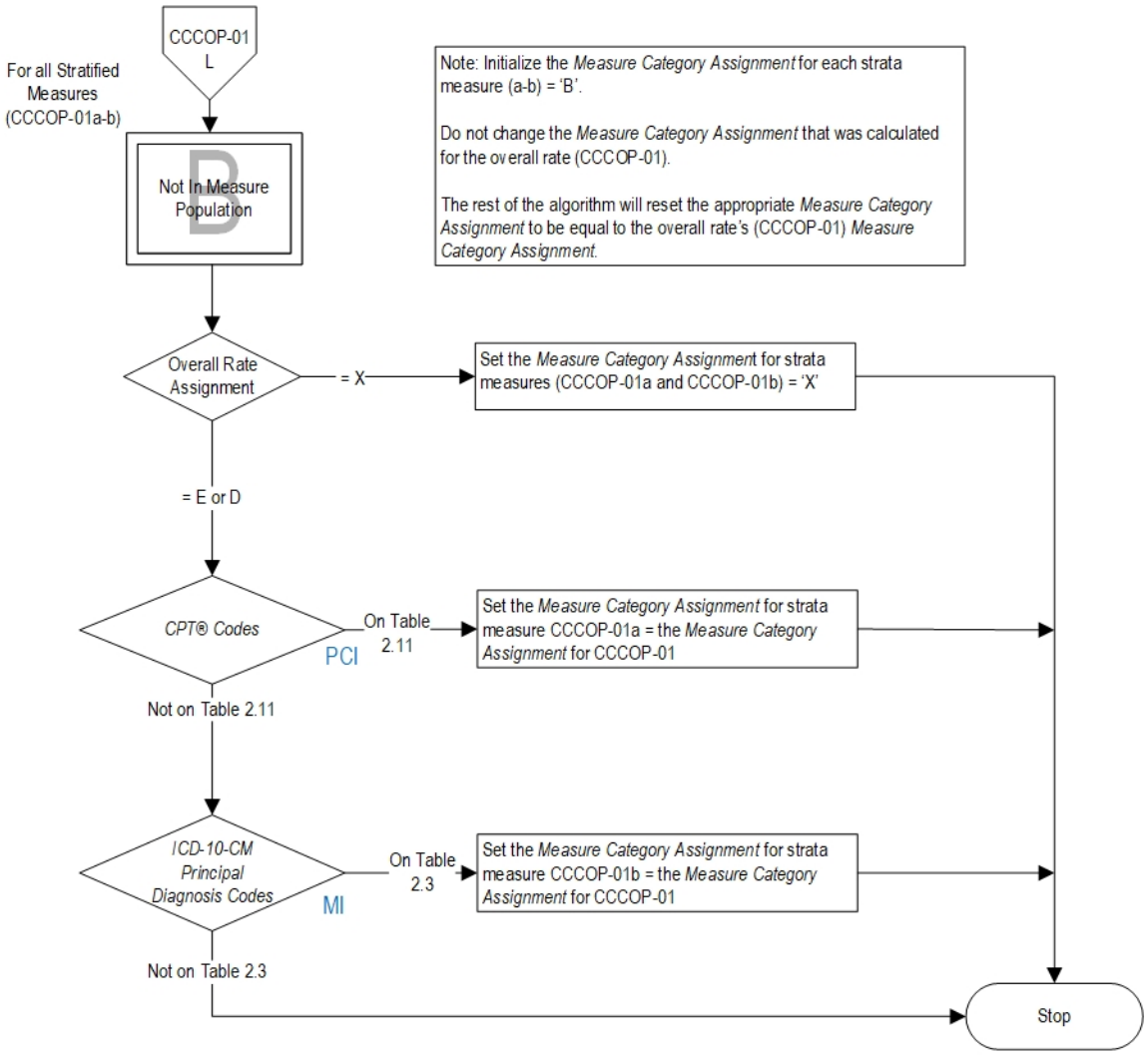

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Measure Information Form

Measure Set: Comprehensive Cardiac Center-Outpatient (CCCOP)

Set Measure ID: CCCOP-02

Performance Measure Name: Cardiac Rehabilitation Referral for Heart Failure Patients with Reduced Ejection Fraction from an Outpatient Setting

Description: Outpatients with a diagnosis of heart failure with a reduced ejection fraction (HFrEF) of ≤40% who are referred to outpatient cardiac rehabilitation.

Rationale: Studies have shown that cardiac rehabilitation reduces mortality, disease recurrence, and hospital readmission after a cardiovascular event (Thomas et al., 2018). Cardiac rehabilitation consists of exercise, education, and counseling (American Heart Association, 2018). Guidelines recommend referral to cardiac rehabilitation for certain qualifying cardiovascular conditions (Amsterdam et al., 2014), however, despite these benefits and recommendations, cardiac rehabilitation participation rates are low and range from 20-30% (Ades et al., 2017).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Number of outpatients who have been referred to an outpatient cardiac rehabilitation program which includes the following:

- Communication between the healthcare provider and the patient of the recommendation to attend an outpatient cardiac rehabilitation program **AND** referral sent to outpatient cardiac rehabilitation program.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** Not applicable
>
> **Data Elements:**
>
> - *Communication of Outpatient Referral to Patient*
> - *Referral to Outpatient Cardiac Rehabilitation*

Denominator Statement: Outpatients with a diagnosis of heart failure with a reduced ejection fraction (HFrEF) of ≤40 %.

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

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- Patients discharged to home or unable to determine discharge code

Excluded Populations:

- Patients less than 18 years of age
- Patients with a documented Reason for *No Referral to Outpatient Cardiac Rehabilitation Program*
- Patients enrolled in a *Clinical Trial*
- Patients with *Comfort Measures Only* documented
- Patients discharged to home for hospice care
- Patient discharged to an acute care facility
- Patients discharged to another health care facility
- Patients who expire
- Patients who left AMA
- 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 or Table 2.13)

Data Elements:

- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Code*
- *E/M Code*
- *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*
- *LVSD*
- *Outpatient Encounter Date*
- *Reason for No Referral to Outpatient Cardiac Rehabilitation Program*

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.

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

Selected References:

- Ades, P., Keteyian, S., Wright, J., Hamm, L., Lui, K., Newlin, K., et al. (2017). Increasing Cardiac Rehabilitation Participation From 20% to 70%: A Road Map From the Million Hearts Cardiac Rehabilitation Collaborative. Mayo Clin Proc. Feb; 92(2): 234-242.
- American Heart Association. (2018). Cardiac Rehab 101. Retrieved April 27, 2018 at: http://www.heart.org/HEARTORG/Conditions/More/CardiacRehab/What-is-Cardiac-Rehabilitation_UCM_307049_Article.jsp#.WuNs0C7waUl
- Amsterdam EA, Wenger NK, Brindis RG, et al. (2014). AHA/ACC guideline for the management of patients with non-ST-elevation acute coronary syndromes: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. J Am Coll Cardiol. 64:e139–228.
- Hillis LD, Smith PK, Anderson JL, et al. (2011). 2011 ACCF/AHA guideline for coronary artery bypass graft surgery. a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Developed in collaboration with the American Association for Thoracic Surgery, Society of Cardiovascular Anesthesiologists, and Society of Thoracic Surgeons. J Am Coll Cardiol. 58:e123–210.
- Levine GN, Bates ER, Blankenship JC, et al. (2011). 2011 ACCF/AHA/SCAI guideline for percutaneous coronary intervention: a report of the American College of CardiologyFoundation/American Heart Association Task Force on Practice Guidelines and the Society for Cardiovascular Angiography and Interventions. J Am Coll Cardiol. 58:e44–122.
- O'Gara PT, Kushner FG, Ascheim DD, et al. (2013). ACCF/AHA guideline for the management of ST elevation myocardial infarction: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. J Am Coll Cardiol. 2013;61:e78–140.
- Smith SC Jr., Benjamin EJ, Bonow RO, et al. (2011). AHA/ACCF secondary prevention and risk reduction therapy for patients with coronary and other atherosclerotic vascular disease: 2011 update: a guideline from the American Heart Association and American College of Cardiology Foundation. J Am Coll Cardiol. 58:2432–46.

Original Performance Measure Source / Developer: Thomas, R., Balady, G., Banka, G., Beckie, T., Chiu, J., Gokak, S. (2018). 2018 ACC/AHA Clinical Performance and Quality Measures for Cardiac Rehabiliation. Circ Cardiovasc Qual Outcomes. 2018 Apr;11(4):e000037.

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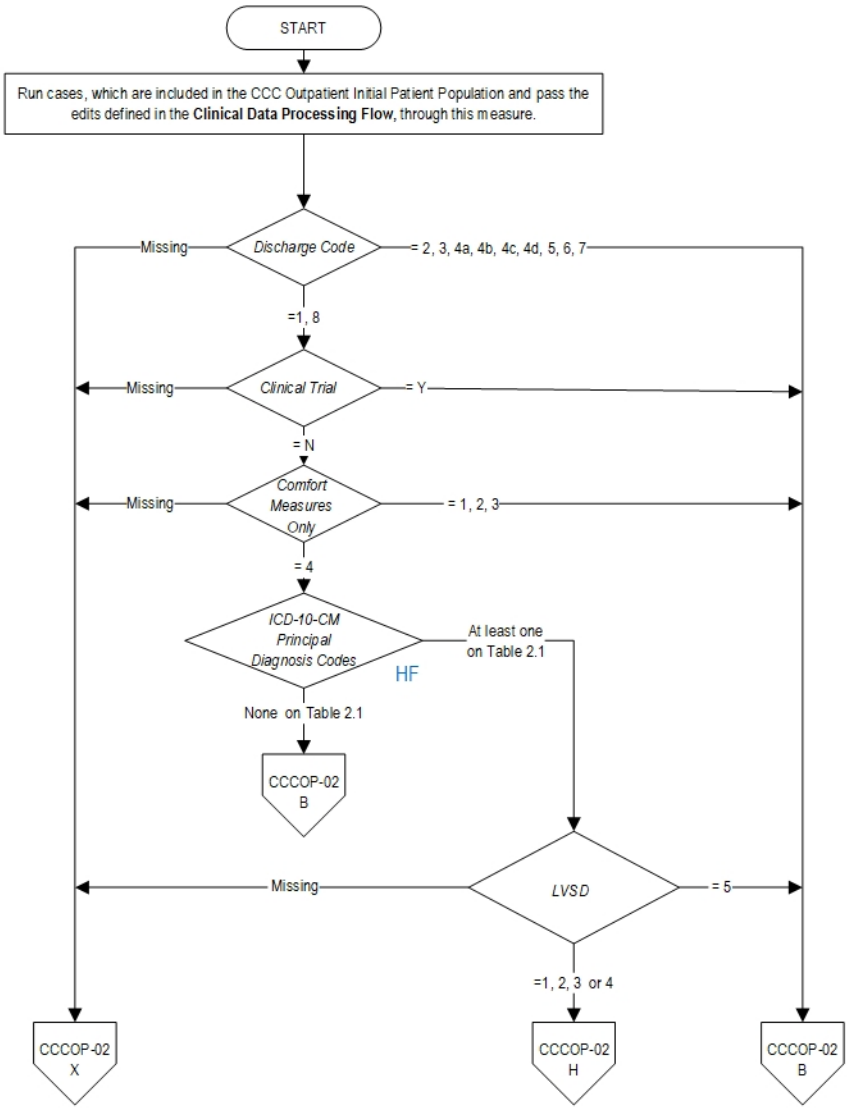
Measure Algorithm:

CCCOP–02: Cardiac Rehabilitation Referral for Heart Failure Patients with Reduced Ejection Fraction from an Outpatient Setting

Numerator: Number of inpatients who have been referred to an outpatient cardiac rehabilitation program.
Denominator: Outpatients with a diagnosis of heart failure with a reduced ejection fraction (HFrEF) of ≤40 %.



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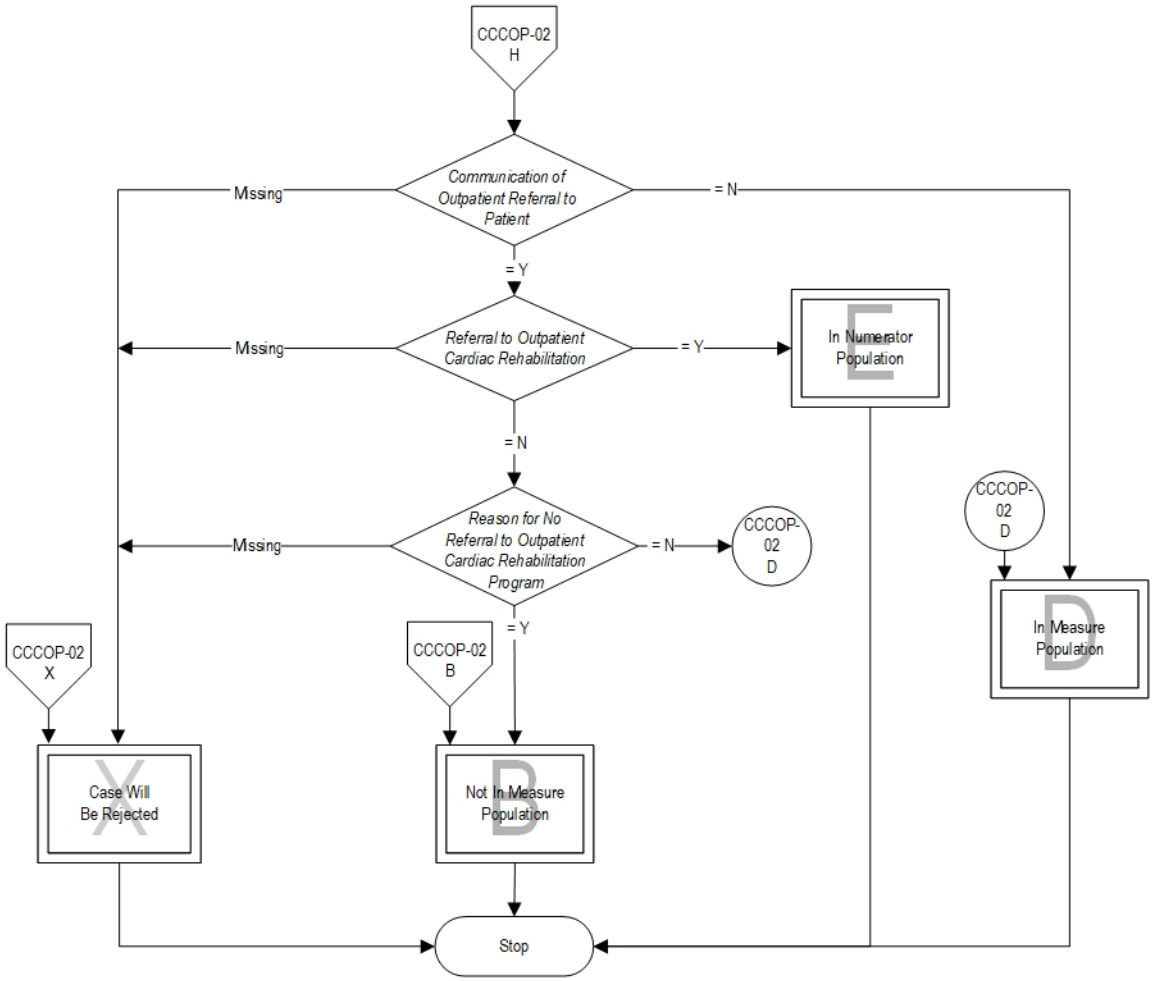

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Measure Information Form

Measure Set: Comprehensive Cardiac Center-Outpatient (CCCOP)

Set Measure ID: CCCOP-03

Performance Measure Name: Cardiac Rehabilitation Enrollment from an Outpatient Setting

Description: Patients with one of the qualifying events/diagnoses who attend at least one (1) cardiac rehabilitation session, within 90 calendar days of an outpatient procedure or office visit. Qualifying events:

- Diagnosis of a myocardial infarction (MI)
- Percutaneous coronary intervention (PCI)

Rationale: Studies have shown that cardiac rehabilitation reduces mortality, disease recurrence, and hospital readmission after a cardiovascular event (Thomas et al., 2018). Cardiac rehabilitation consists of exercise, education, and counseling (American Heart Association, 2018). Guidelines recommend referral to cardiac rehabilitation for certain qualifying cardiovascular conditions (Amsterdam et al., 2014), however, despite these benefits and recommendations, cardiac rehabilitation participation rates are low and range from 20-30% (Ades et al., 2017). In addition, referral to cardiac rehabilitation for patients undergoing PCI has been shown to be as low as 48% (Beatty et al., 2017).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Number of patients who attend at least one (1) cardiac rehabilitation session within 90 calendar days of the date of a qualifying outpatient procedure or office visit.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** Not applicable
>
> **Data Elements:**
>
> - *Cardiac Rehabilitation Attendance*
> - *Outpatient Encounter Date*

Denominator Statement: Patients with a qualifying event/diagnosis who received a referral to outpatient cardiac rehabilitation.

> **Included Populations:**
>
> - E/M Code for hospital outpatient encounter as defined in OP Appendex A, OP Table 2.0
> - Patients with a *ICD-10-CM Principal Diagnosis Code* for MI as defined in Appendix A, Table 2.3.
> - Patients with a *CPT® Code* for PCI as defined in Appendix A, Table 2.11.

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Excluded Populations:

- Patients less than 18 years of age
- Patients who expired
- 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 or Table 2.13)

Data Elements:

- *Birthdate*
- *CPT® Code*
- *CPT® Code Procedure Date*
- *E/M Code*
- *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*
- *Outpatient Encounter Date*
- *Reason for No Cardiac Rehabilitation Enrollment*
- *Referral to Outpatient Cardiac Rehabilitation*

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:

- Ades, P., Keteyian, S., Wright, J., Hamm, L., Lui, K., Newlin, K., et al. (2017). Increasing Cardiac Rehabilitation Participation From 20% to 70%: A Road Map From the Million Hearts Cardiac Rehabilitation Collaborative. Mayo Clin Proc. Feb; 92(2): 234-242.
- American Heart Association. (2018). Cardiac Rehab 101. Retrieved April 27, 2018 at: http://www.heart.org/HEARTORG/Conditions/More/CardiacRehab/What-is-Cardiac-Rehabilitation_UCM_307049_Article.jsp#.WuNs0C7waUl

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- Amsterdam EA, Wenger NK, Brindis RG, et al. (2014). AHA/ACC guideline for the management of patients with non-ST-elevation acute coronary syndromes: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. J Am Coll Cardiol. 64:e139–228.
- Beatty, A., Bradley, S., Maynard, C., McCabe, J., (2017). Referral to Cardiac Rehabilitation After Percutaneous Coronary Intervention, Coronary Artery Bypass Surgery, and Valve Surgery Data From the Clinical Outcomes Assessment Program. Circ Cardiovasc Qual Outcomes. 10:e003364.
- Hillis LD, Smith PK, Anderson JL, et al. (2011). 2011 ACCF/AHA guideline for coronary artery bypass graft surgery. a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Developed in collaboration with the American Association for Thoracic Surgery, Society of Cardiovascular Anesthesiologists, and Society of Thoracic Surgeons. J Am Coll Cardiol. 58:e123–210.
- Levine GN, Bates ER, Blankenship JC, et al. (2011). 2011 ACCF/AHA/SCAI guideline for percutaneous coronary intervention: a report of the American College of CardiologyFoundation/American Heart Association Task Force on Practice Guidelines and the Society for Cardiovascular Angiography and Interventions. J Am Coll Cardiol. 58:e44–122.
- O'Gara PT, Kushner FG, Ascheim DD, et al. (2013). ACCF/AHA guideline for the management of ST elevation myocardial infarction: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. J Am Coll Cardiol. 2013;61:e78–140.
- Smith SC Jr., Benjamin EJ, Bonow RO, et al. (2011). AHA/ACCF secondary prevention and risk reduction therapy for patients with coronary and other atherosclerotic vascular disease: 2011 update: a guideline from the American Heart Association and American College of Cardiology Foundation. J Am Coll Cardiol. 58:2432–46.

Original Performance Measure Source / Developer: Thomas, R., Balady, G., Banka, G., Beckie, T., Chiu, J., Gokak, S. (2018). 2018 ACC/AHA Clinical Performance and Quality Measures for Cardiac Rehabiliation. Circ Cardiovasc Qual Outcomes. 2018 Apr;11(4):e000037.

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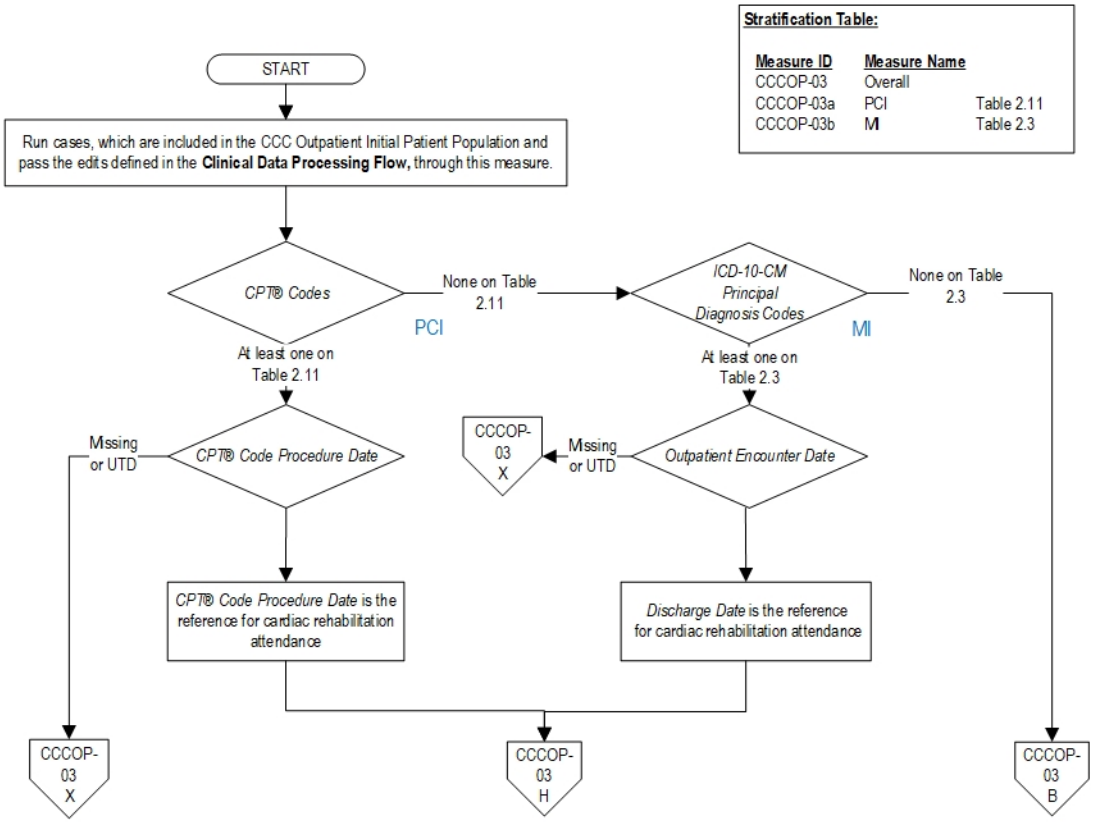
Measure Algorithm:

CCCOP–03: Cardiac Rehabilitation Enrollment from an Outpatient Setting

Numerator: Number of patients who attend at least one (1) cardiac rehabilitation session within 90 calendar days of an outpatient procedure or office visit.

Denominator: Patients with a qualifying event/diagnosis within the previous 12 months, who received a referral to outpatient cardiac rehabilitation.



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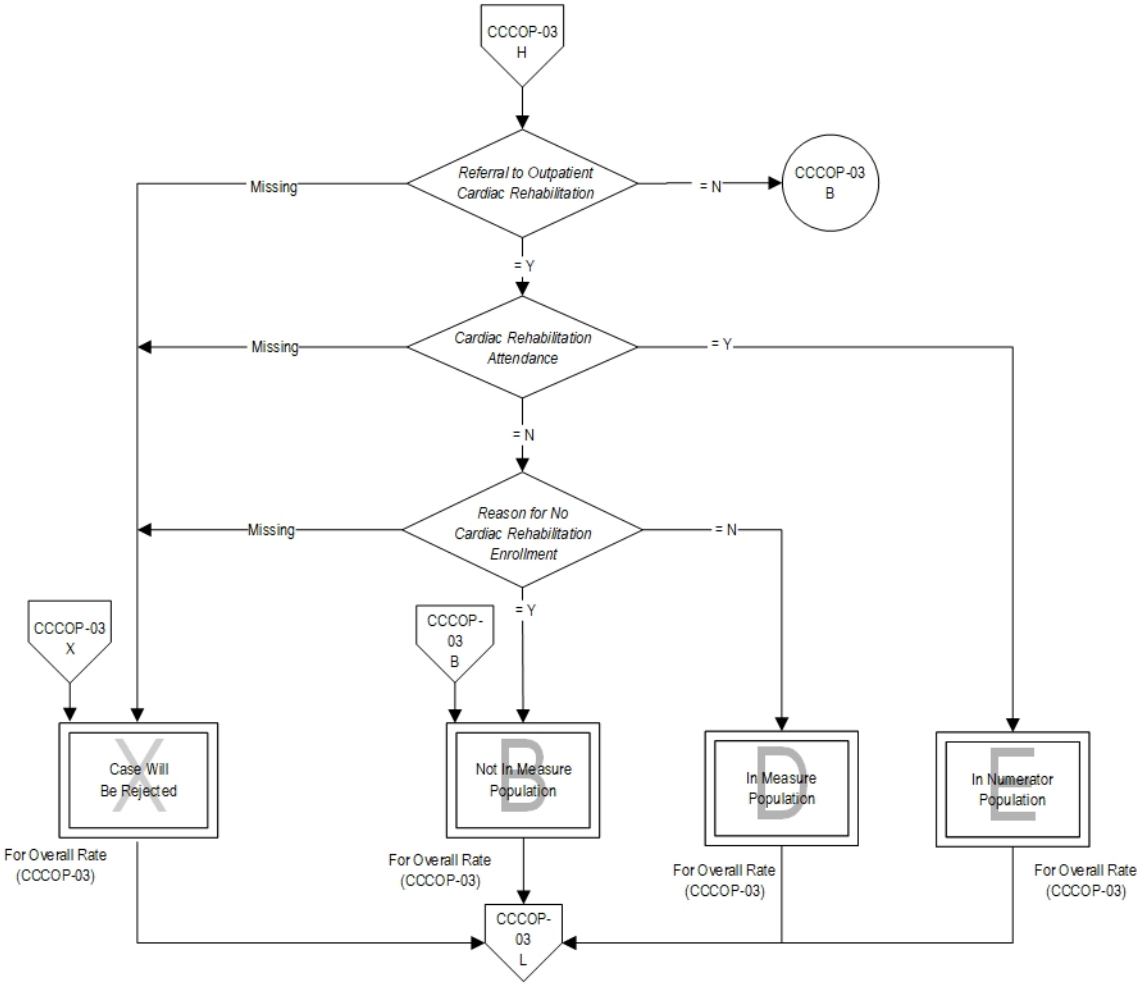

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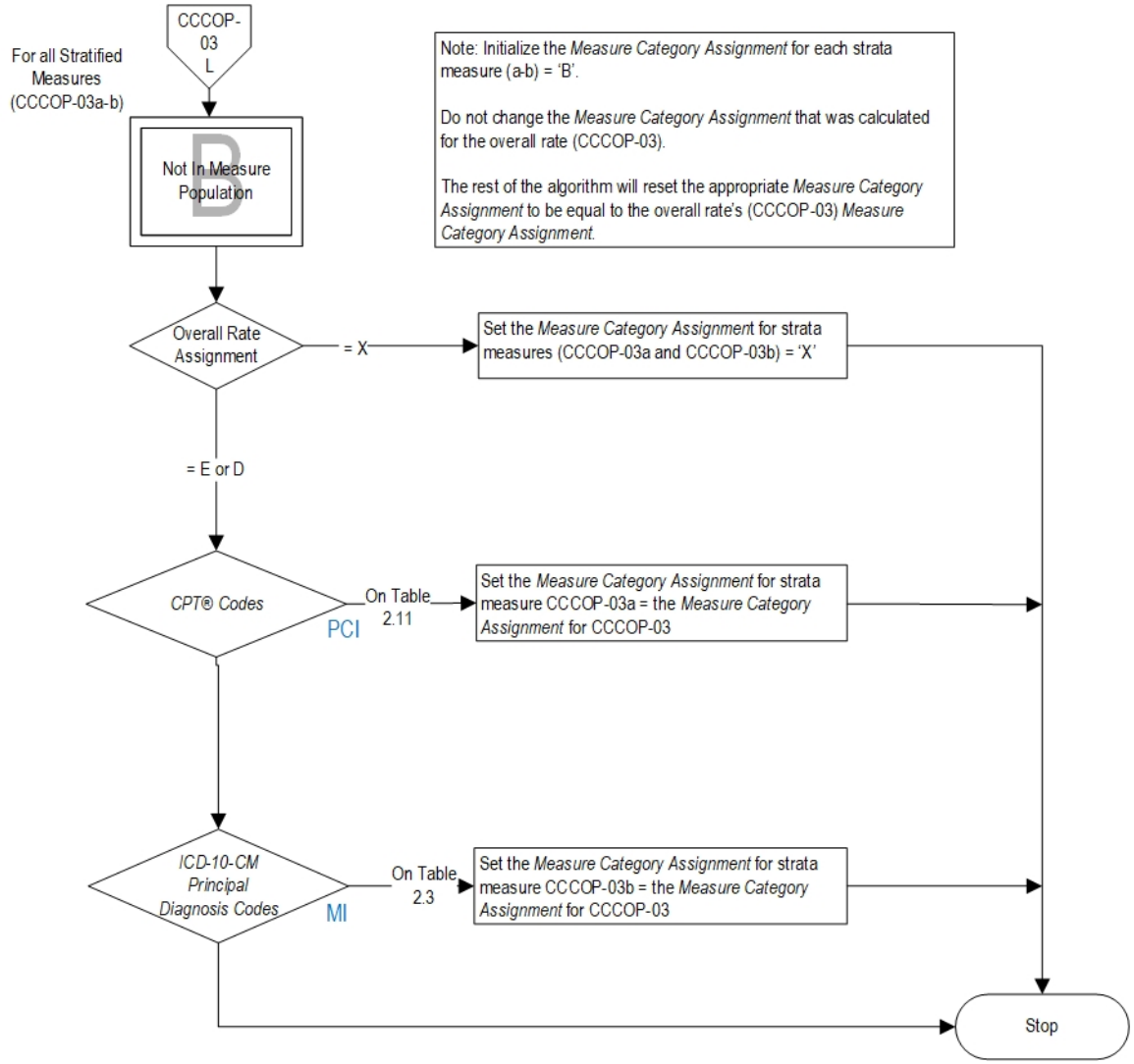

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Comprehensive Stroke (CSTK)

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 (Overall Rate)
CSTK-10	Modified Rankin Score (mRS at 90 Days: Favorable Outcome)
CSTK-11	Rate of Rapid Effective Reperfusion From Hospital Arrival
CSTK-12	Rate of Rapid Effective Reperfusion From Skin Puncture

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 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

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Element Name	Collected For
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, Used in calculation of the Joint Commission's aggregate data.
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

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
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
Discharge Disposition	CSTK-02, CSTK-10
Discharge Time	CSTK-01, CSTK-03, CSTK-06

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Element Name	Collected For
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
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, CSTK-10
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

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Element Name	Collected For
Initial ICH Score Date	CSTK-03
Initial ICH Score Performed	CSTK-03
Initial ICH Score Time	CSTK-03
Initial NIHSS Less Than 6	CSTK-09, CSTK-11
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
Mode of Arrival	CSTK-09
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
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

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Element Name	Collected For
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
Acknowledgement
Appendix A
Appendix C
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
Joint Commission Clinical Data Processing Flow
Joint Commission National Quality Measures Data Processing
Missing and Invalid Data
Sampling
Table of Contents
Using the The Joint Commission's National Measure Specifications Manual

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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 (e.g., 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 (e.g., 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:

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- 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 sub-population 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 (e.g., a hospital has 80 cases for the quarter and must select a sample of 75 cases), the hospital may choose to use all cases.

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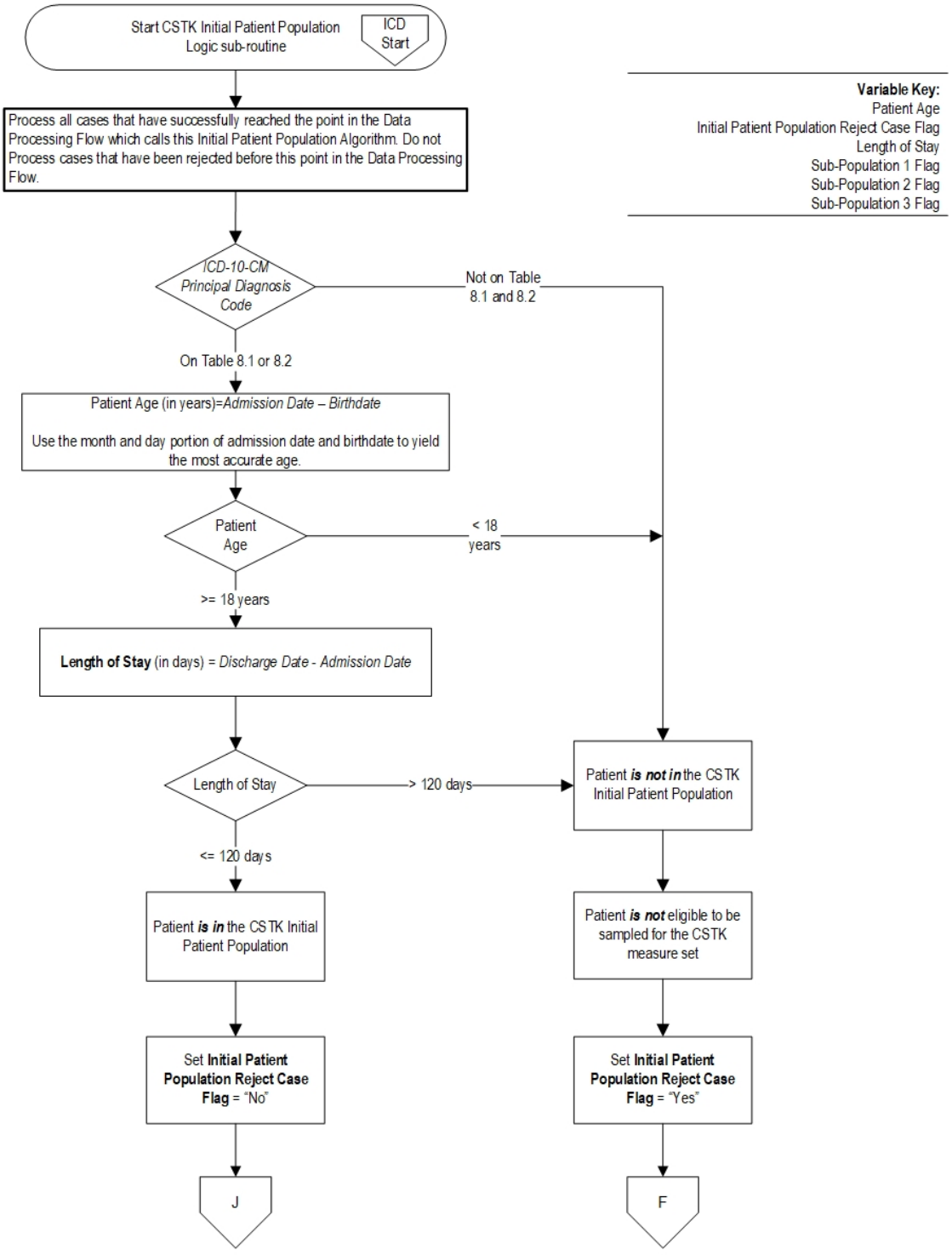
CSTK Initial Patient Population Algorithm



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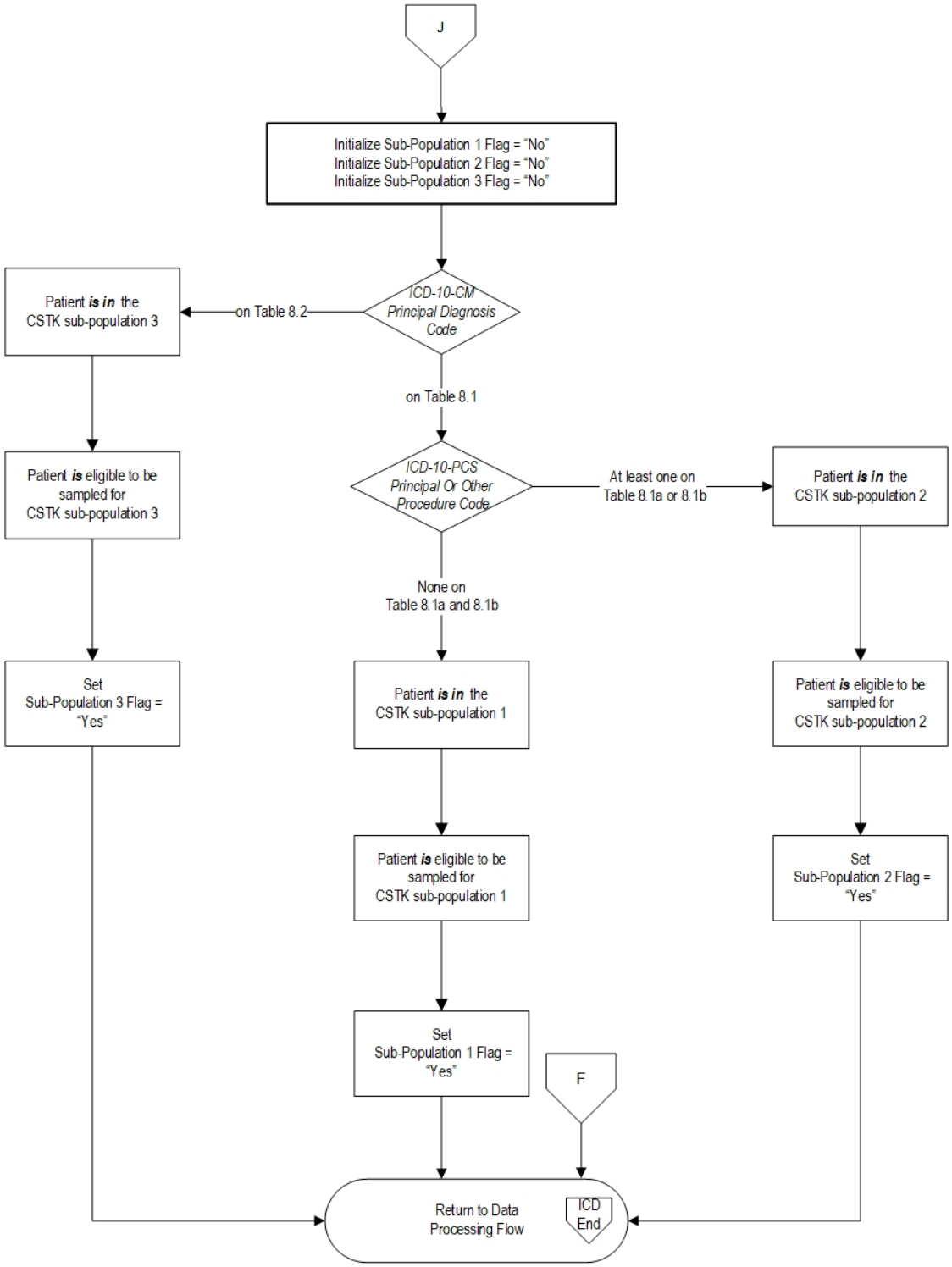

CSTK Sample Size Requirements

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.

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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

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(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

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Average Monthly Initial Patient Population Size *"N"*	Minimum Required Sample Size *"n"*
≤ 14	No sampling; 100% Patient Population required
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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

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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.

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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.

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- 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.

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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*

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- *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*
- *Discharge Date*
- *Discharge Time*
- *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.

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

Selected References:

- 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.
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- 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.
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- Powers WJ, Rabinstein AA, Ackerson T, Adeoye OM, Bambakidis NC, Becker K, Biller J, et al. Guidelines for the Early Management of Patients with Acute Ischemic Stroke: 2019 Update to the 2018 Guidelines for the Early Management of Acute Ischemic Stroke. A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association. *Stroke*. 2019 Dec;50(12):e344-e418.

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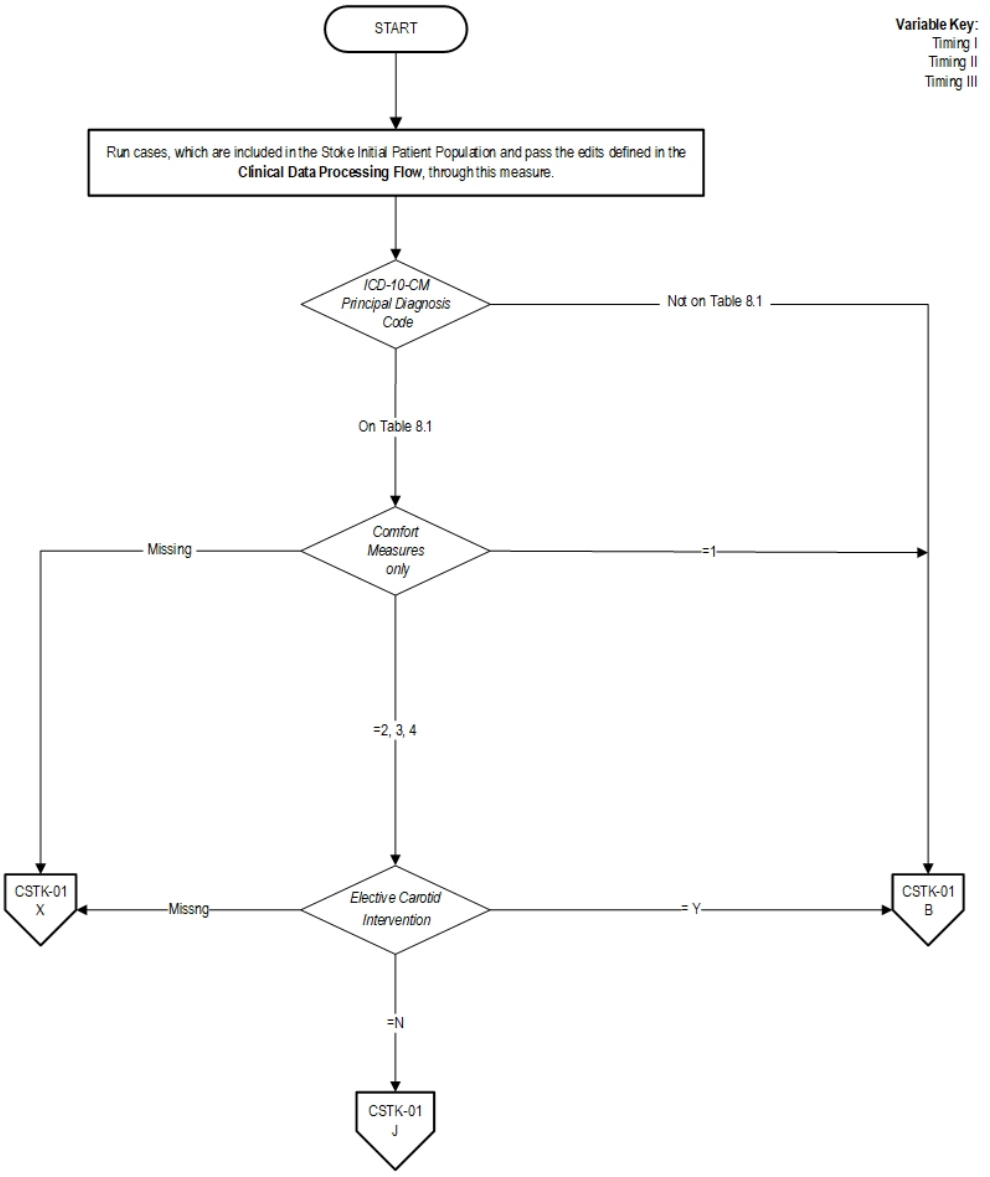
Measure Algorithm:

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



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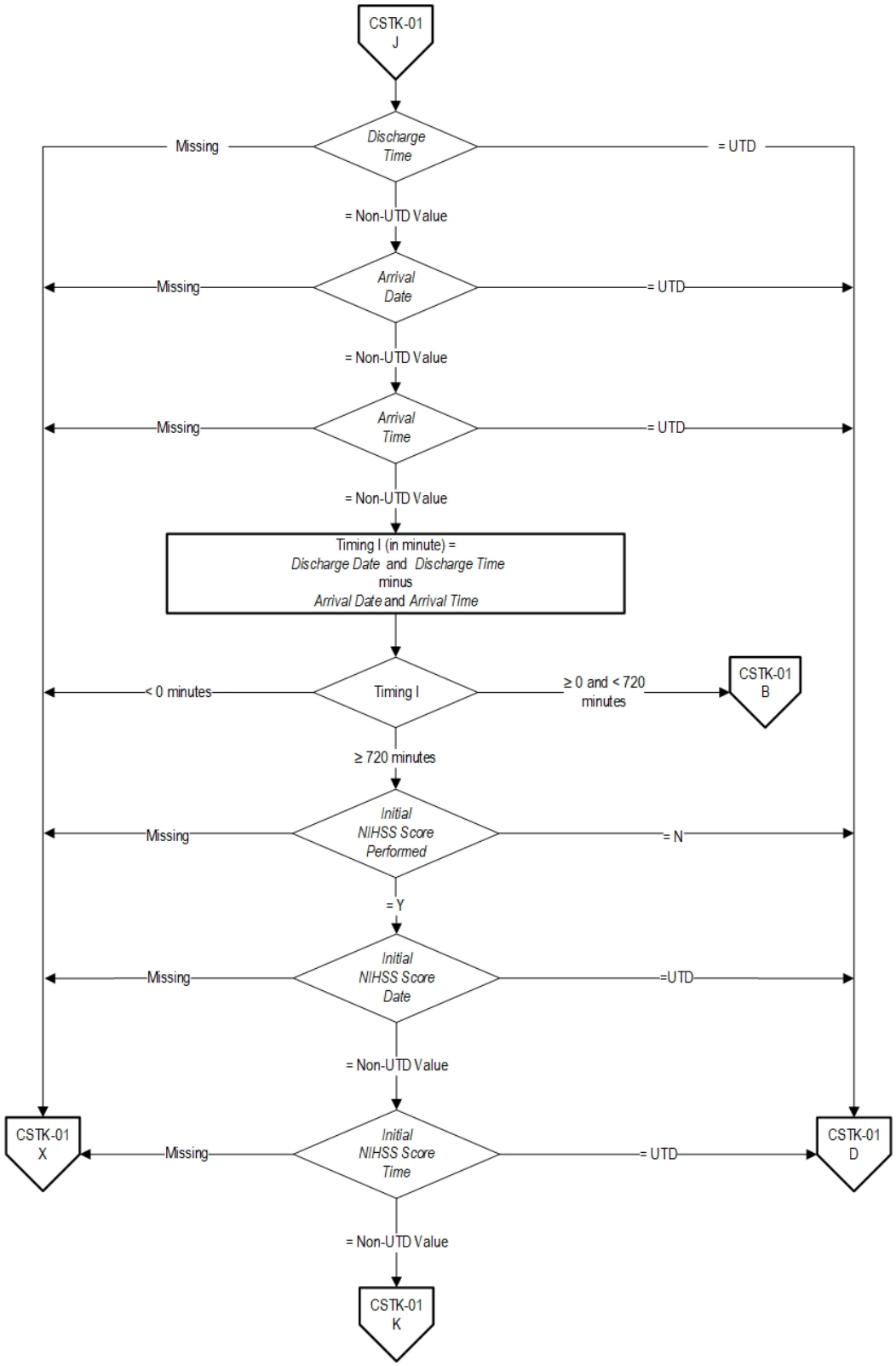

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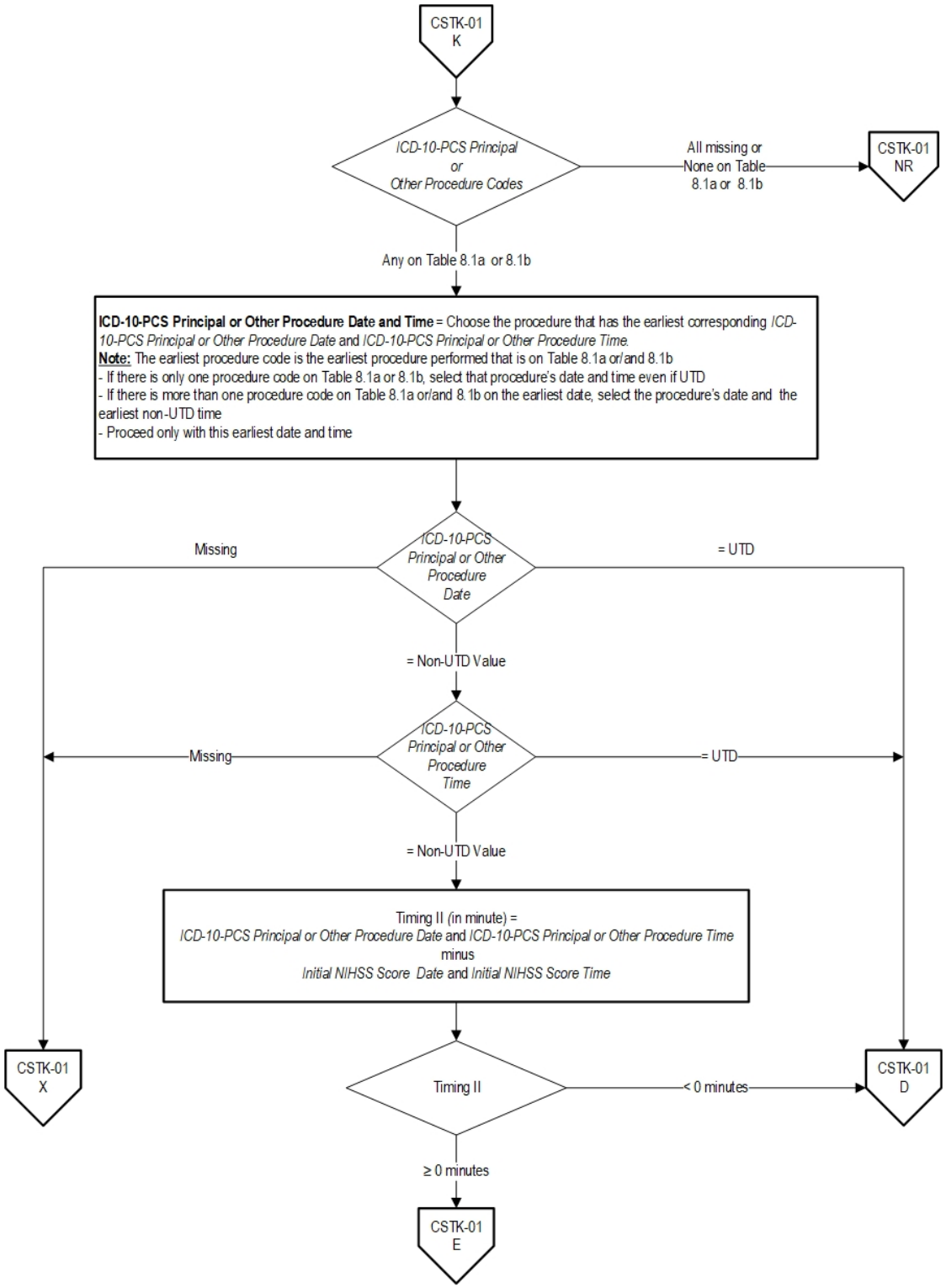

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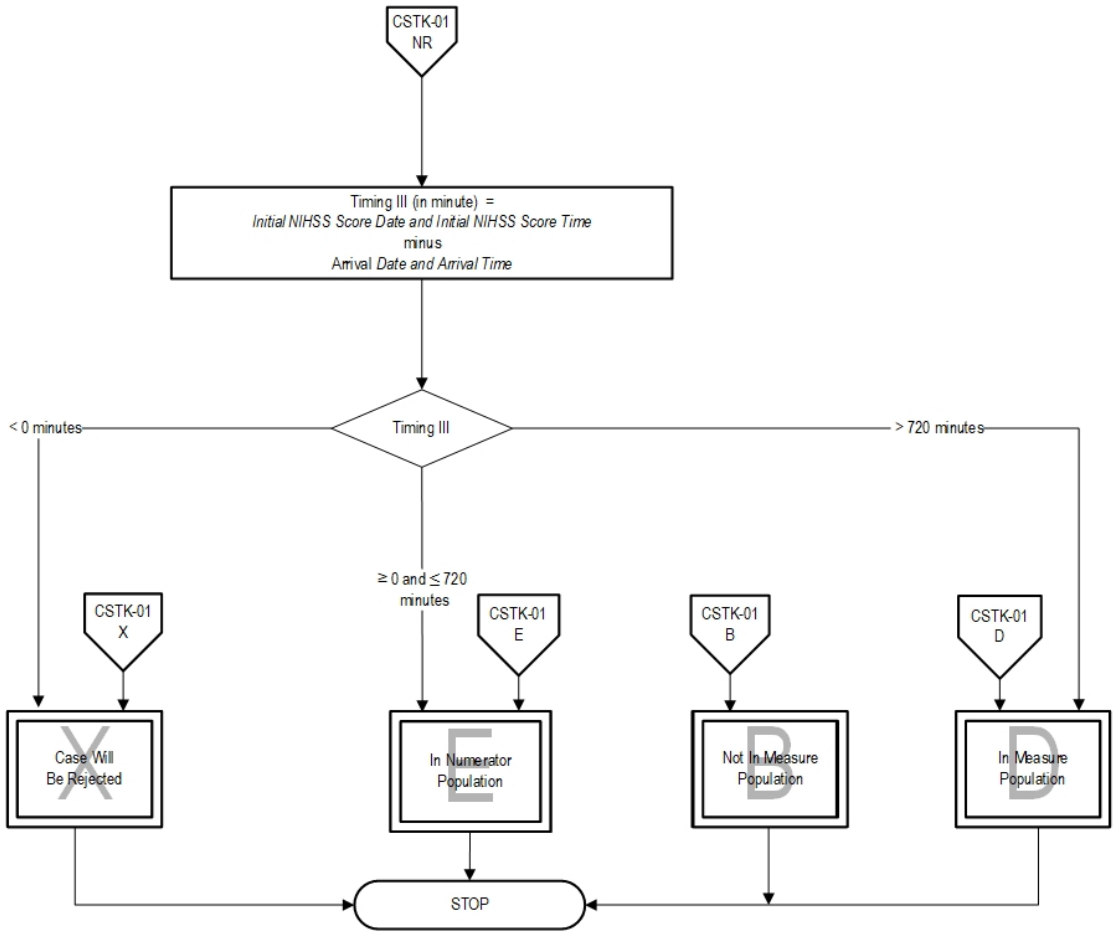

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Measure Information Form

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**

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- 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:

- 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 Ra-

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diology 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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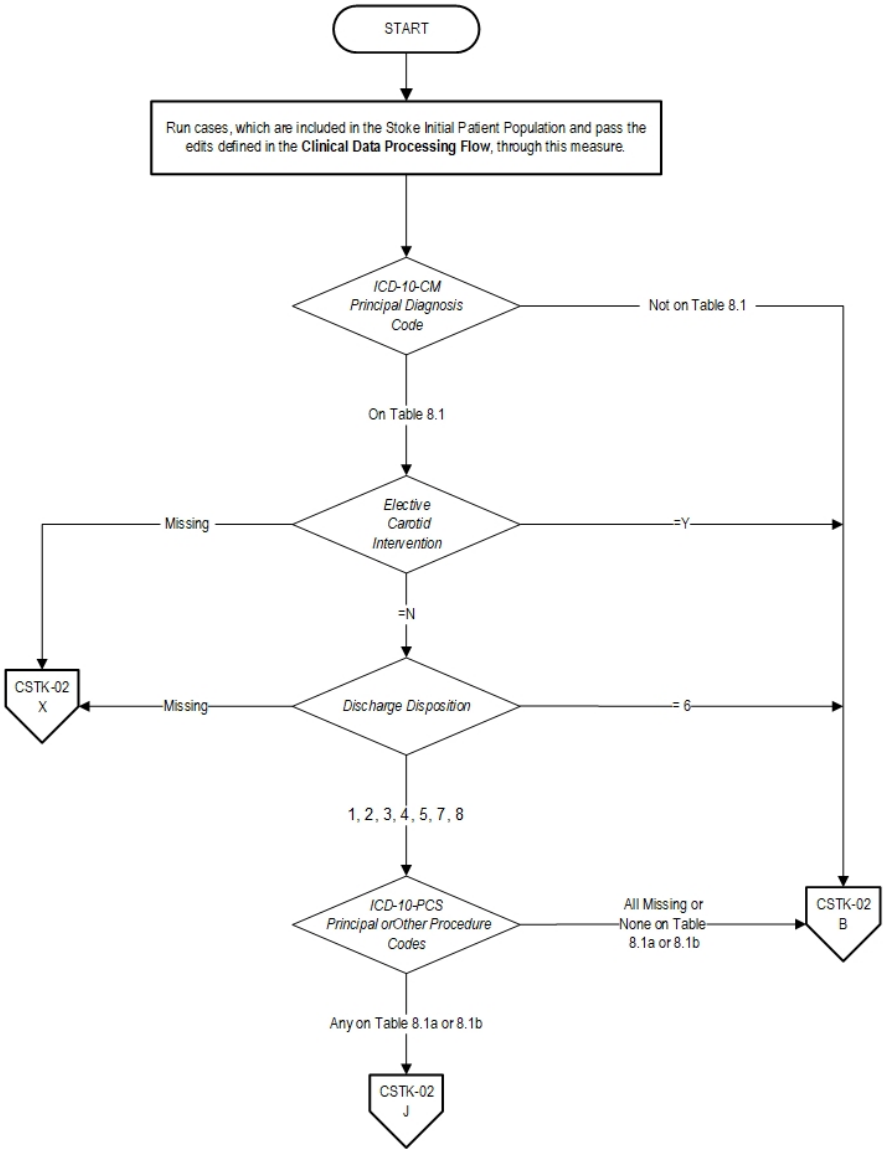
Measure Algorithm:

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



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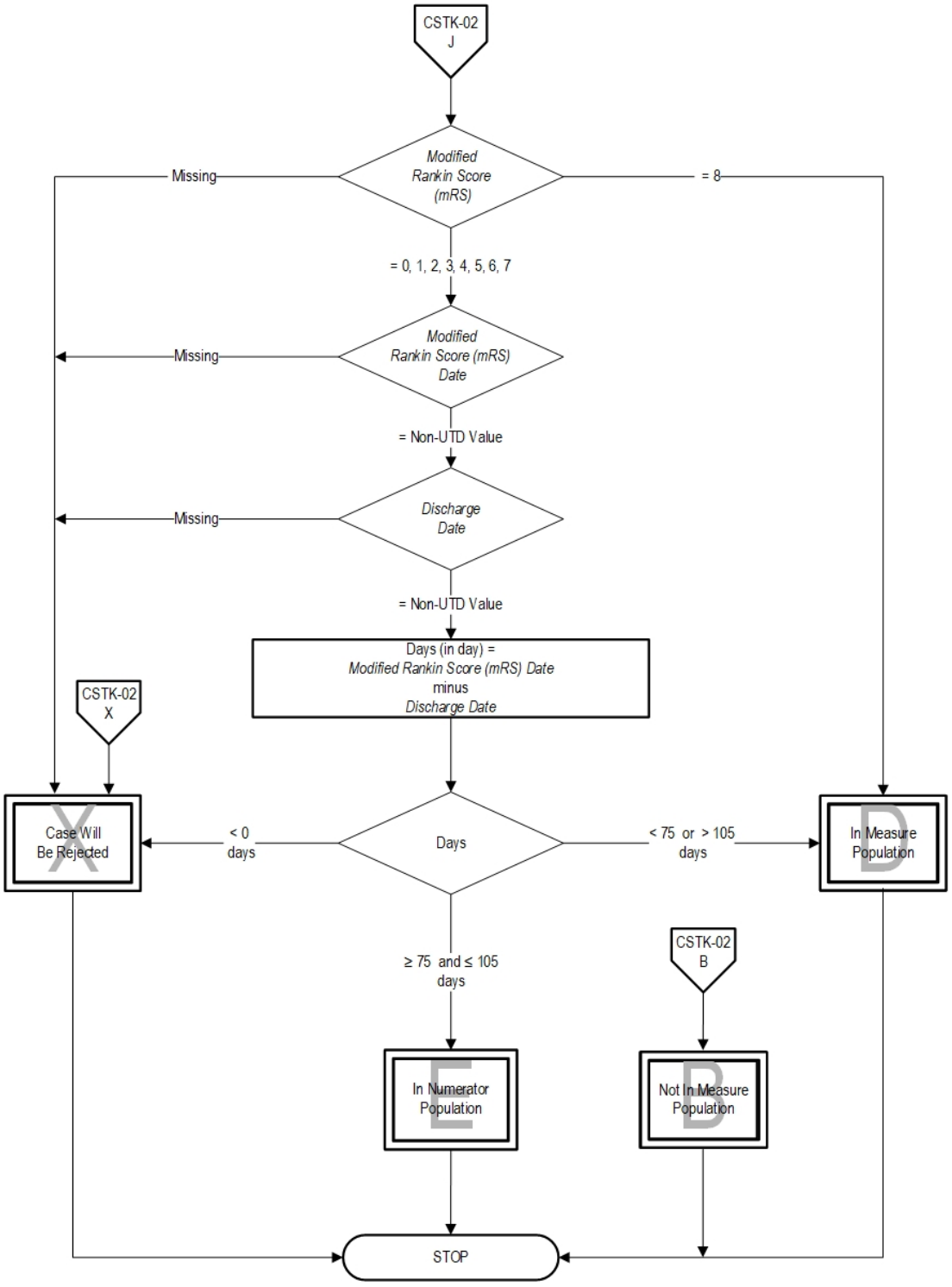

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Measure Information Form

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

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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
Initial Hunt and Hess Scale Date	Initial Hunt and Hess Scale Date	Initial ICH Score Date

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CSTK-03	CSTK-03a	CSTK-03b
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 traumatic brain injury (TBI), unruptured arteriovenous malformation (AVM), non-traumatic subdural hematoma, or hemorrhage due to malignant brain neoplasm (*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*
> - *Discharge Date*
> - *Discharge Time*
> - *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.

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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:

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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

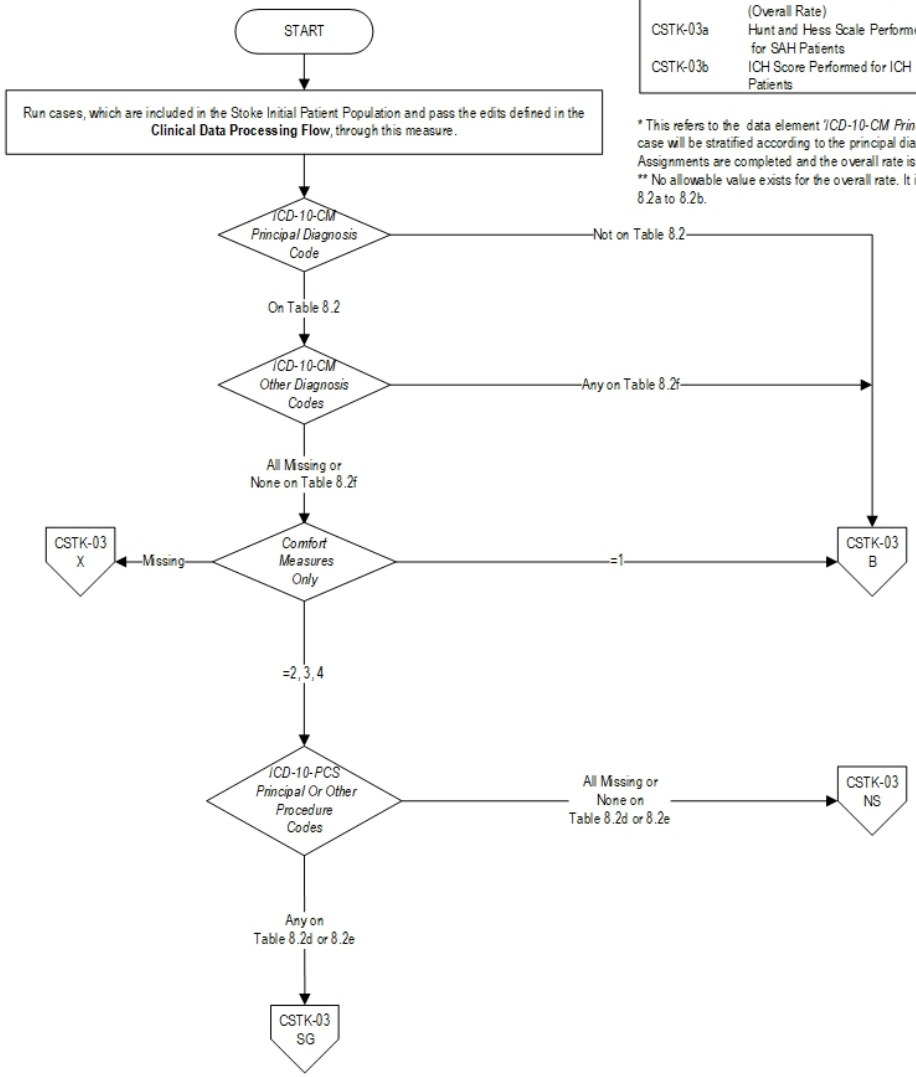
Denominator Statement: SAH and ICH stroke patients

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.



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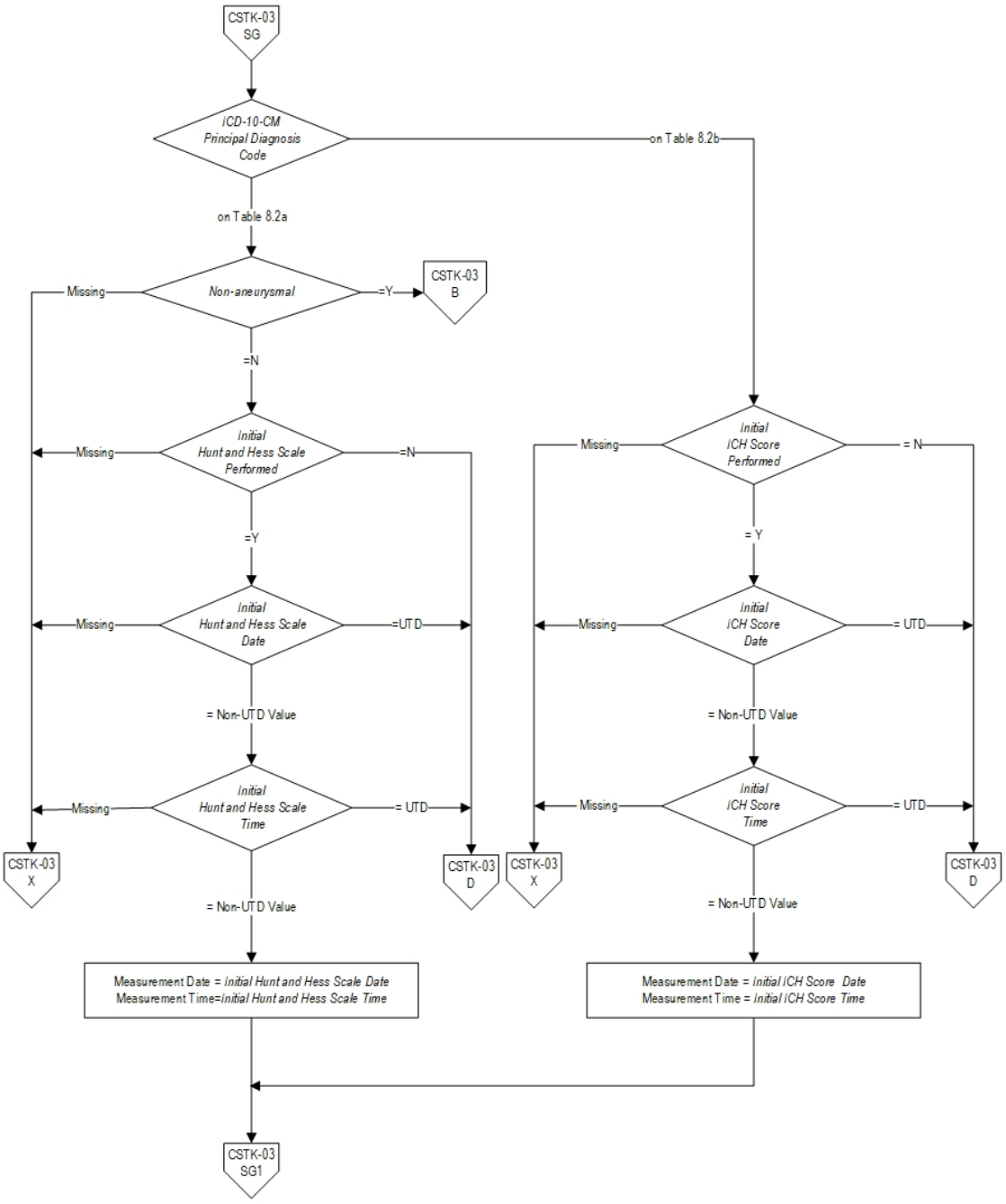

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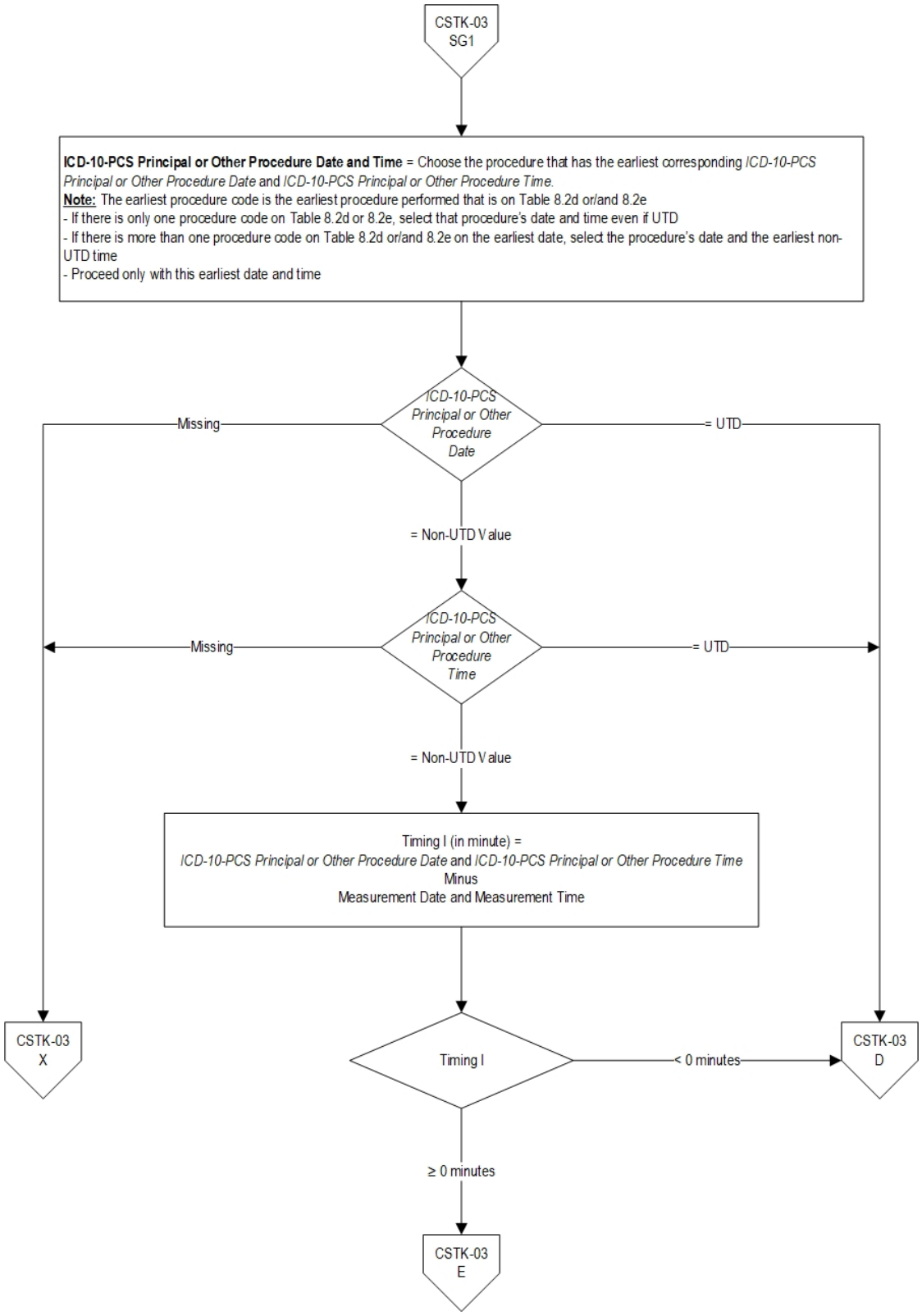

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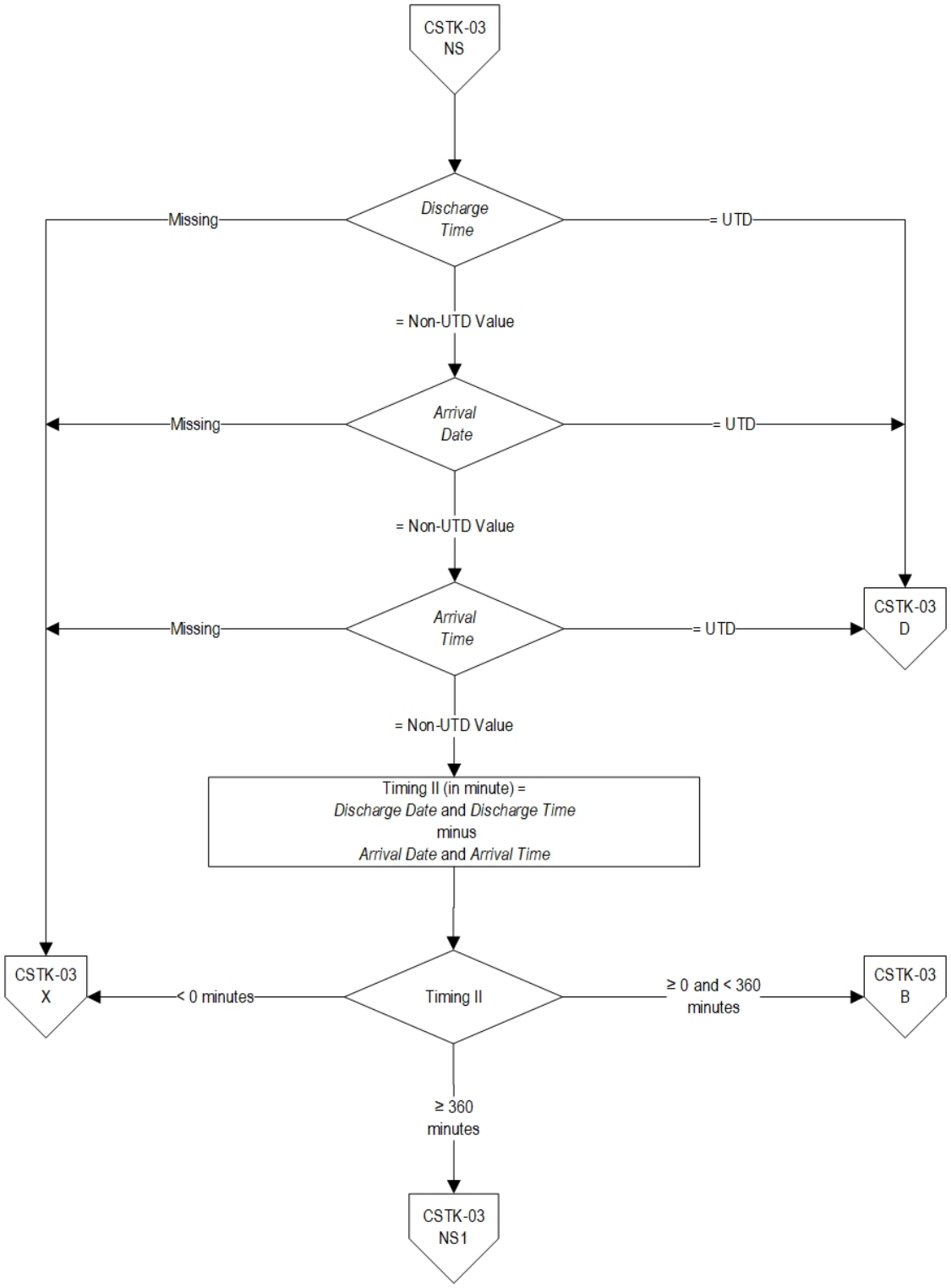

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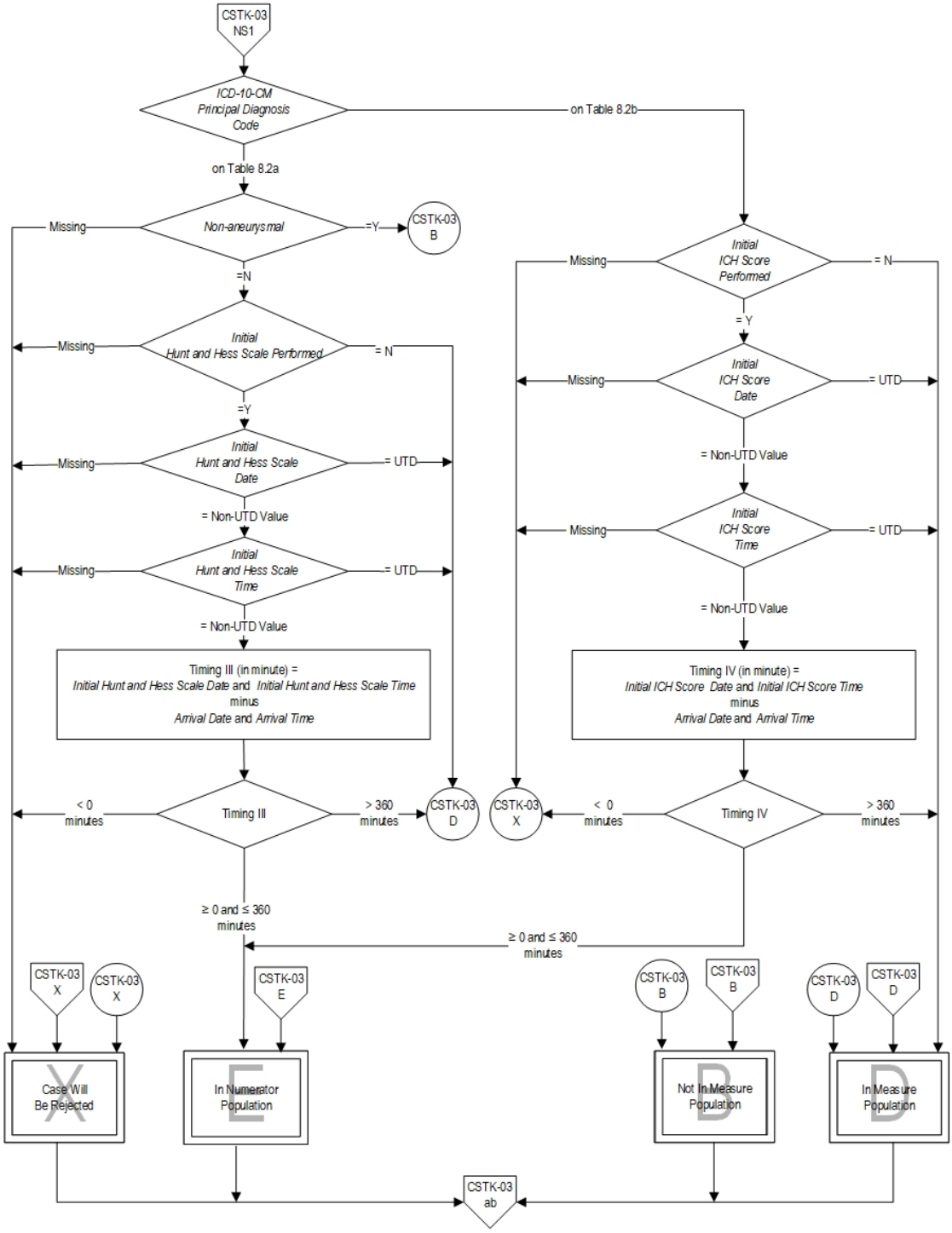

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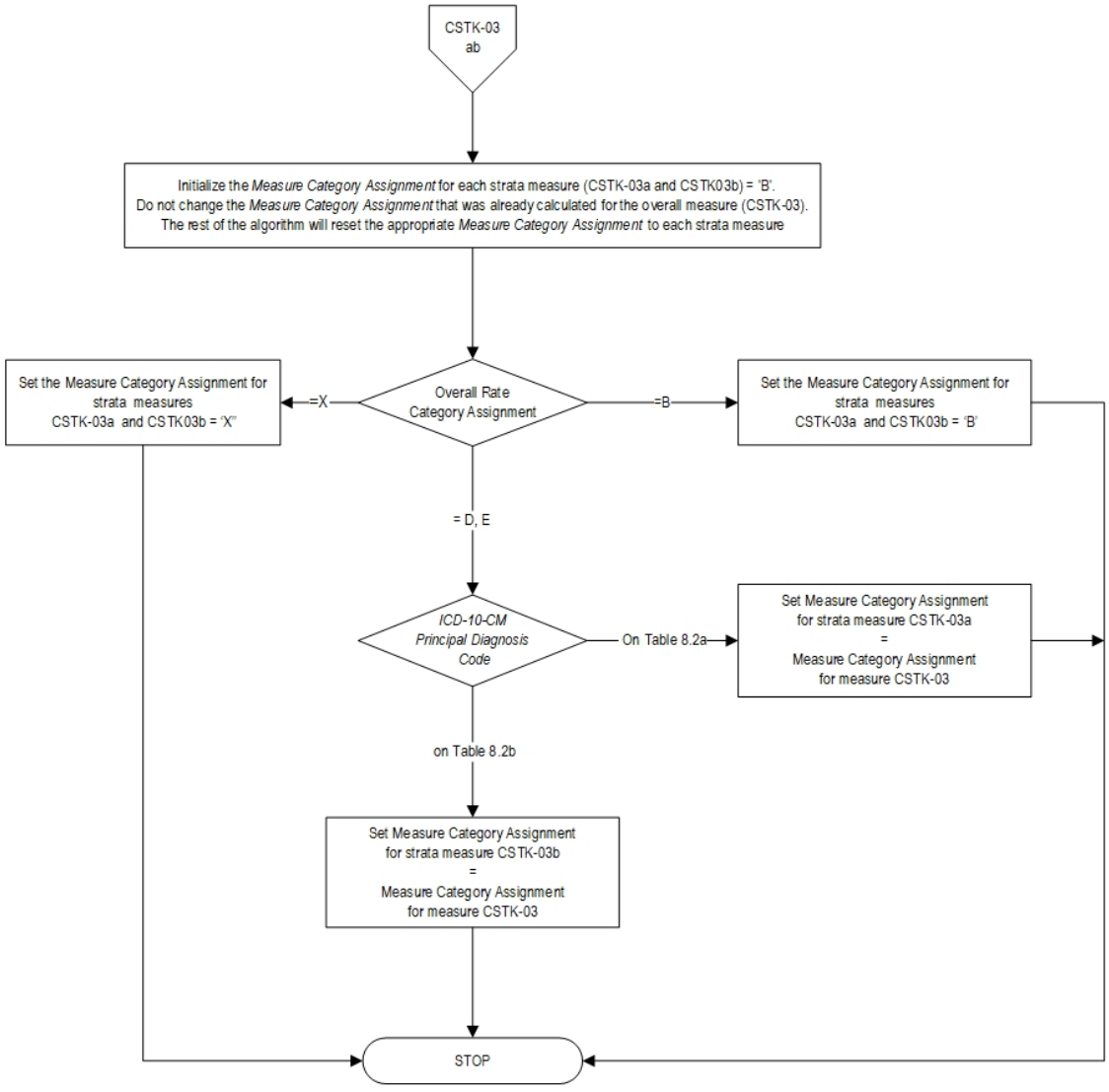

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Measure Information Form

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 as defined in Appendix A, Table 8.2c for ICD-10 codes,

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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:

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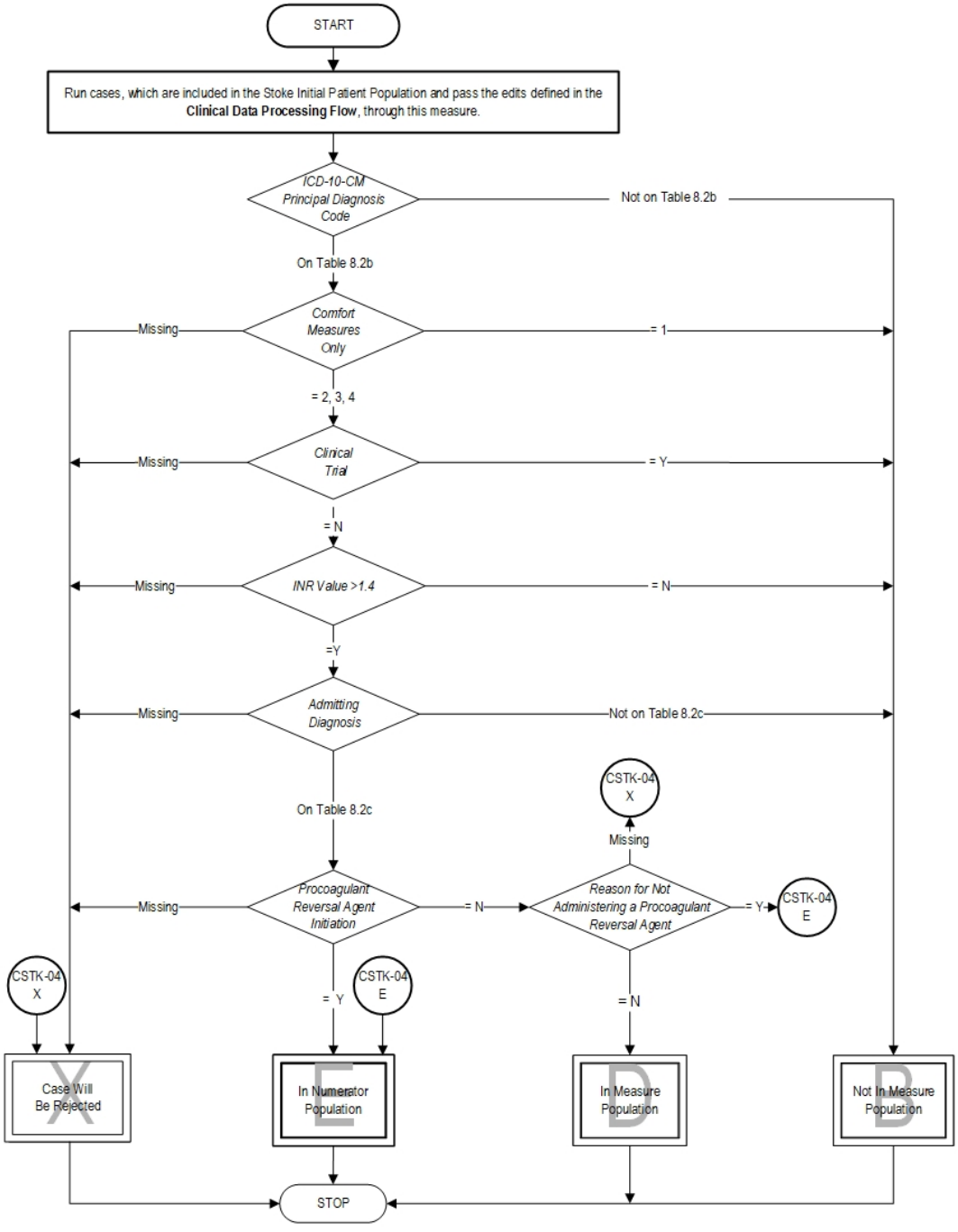
Measure Algorithm:

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



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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

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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*

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- *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,

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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: Suspended. This section has been moved to the ORYX Risk Adjustment Guide. The guide is available to the public on the Joint Commission's website.

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

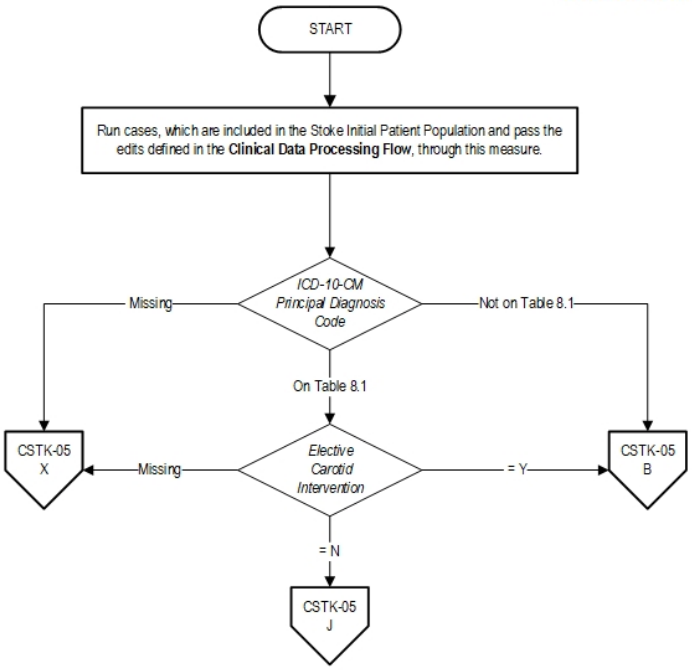
Denominator Statement: Ischemic stroke patients treated with IV or IA Alteplase therapy or who undergo a mechanical endovascular reperfusion therapy

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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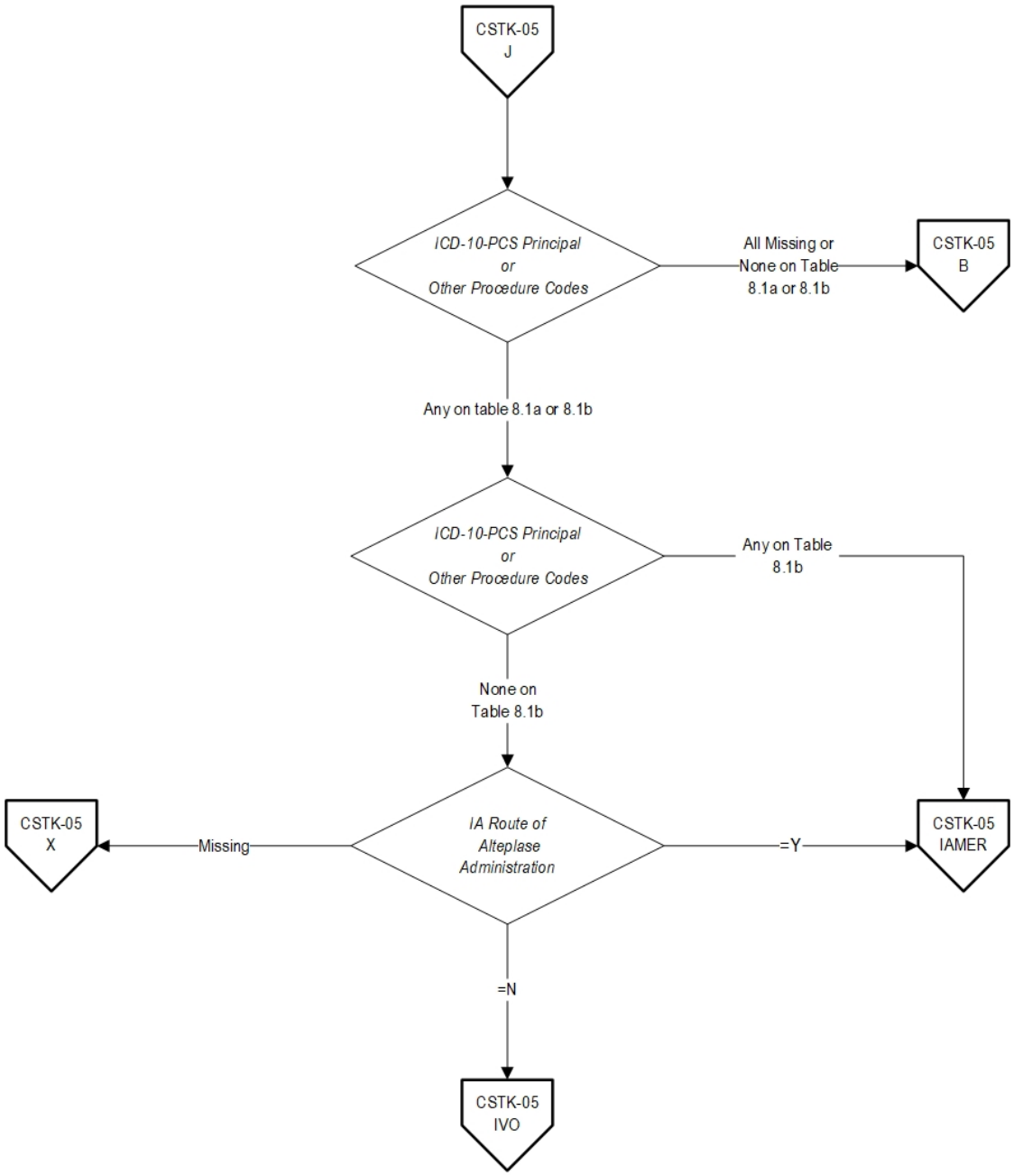

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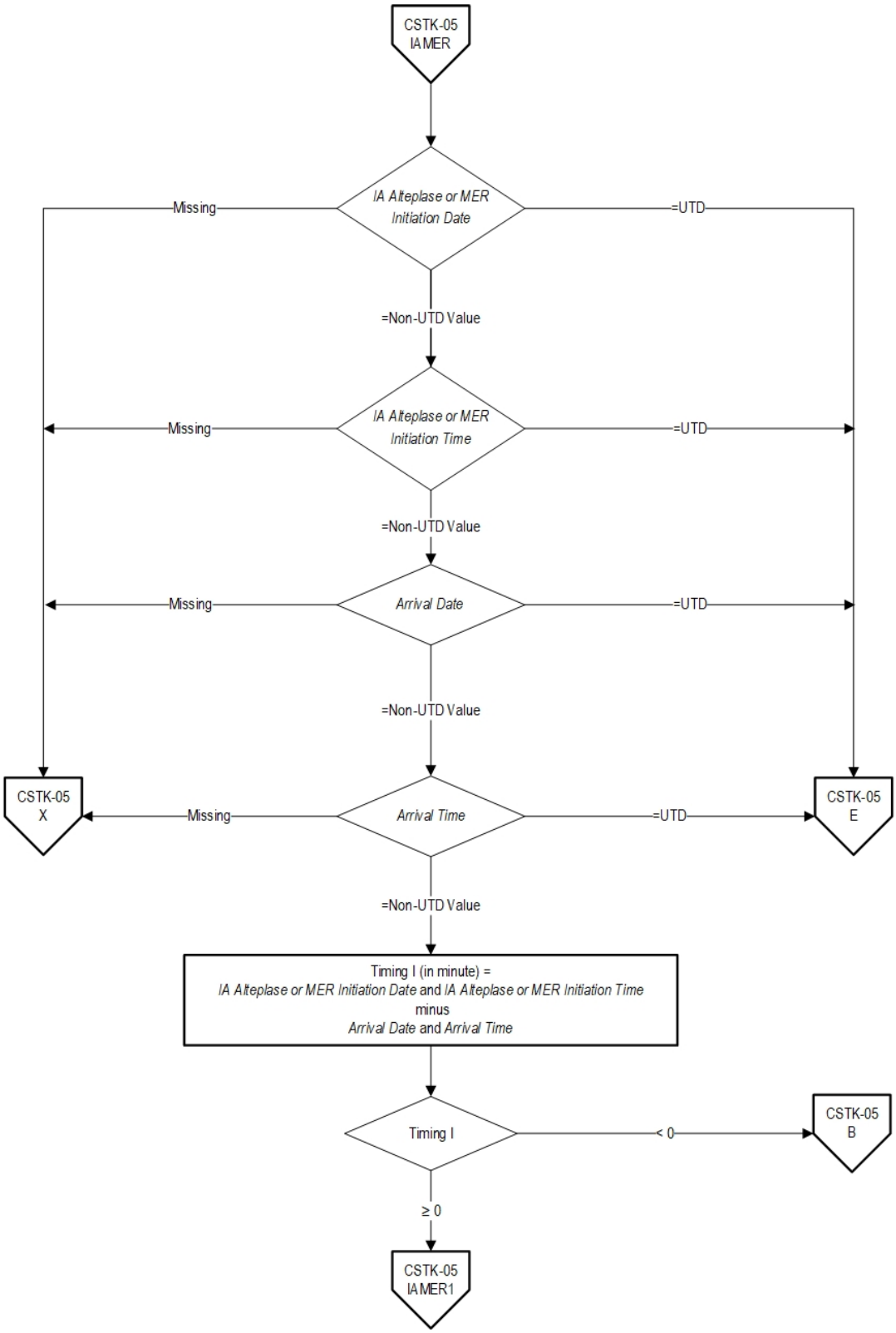

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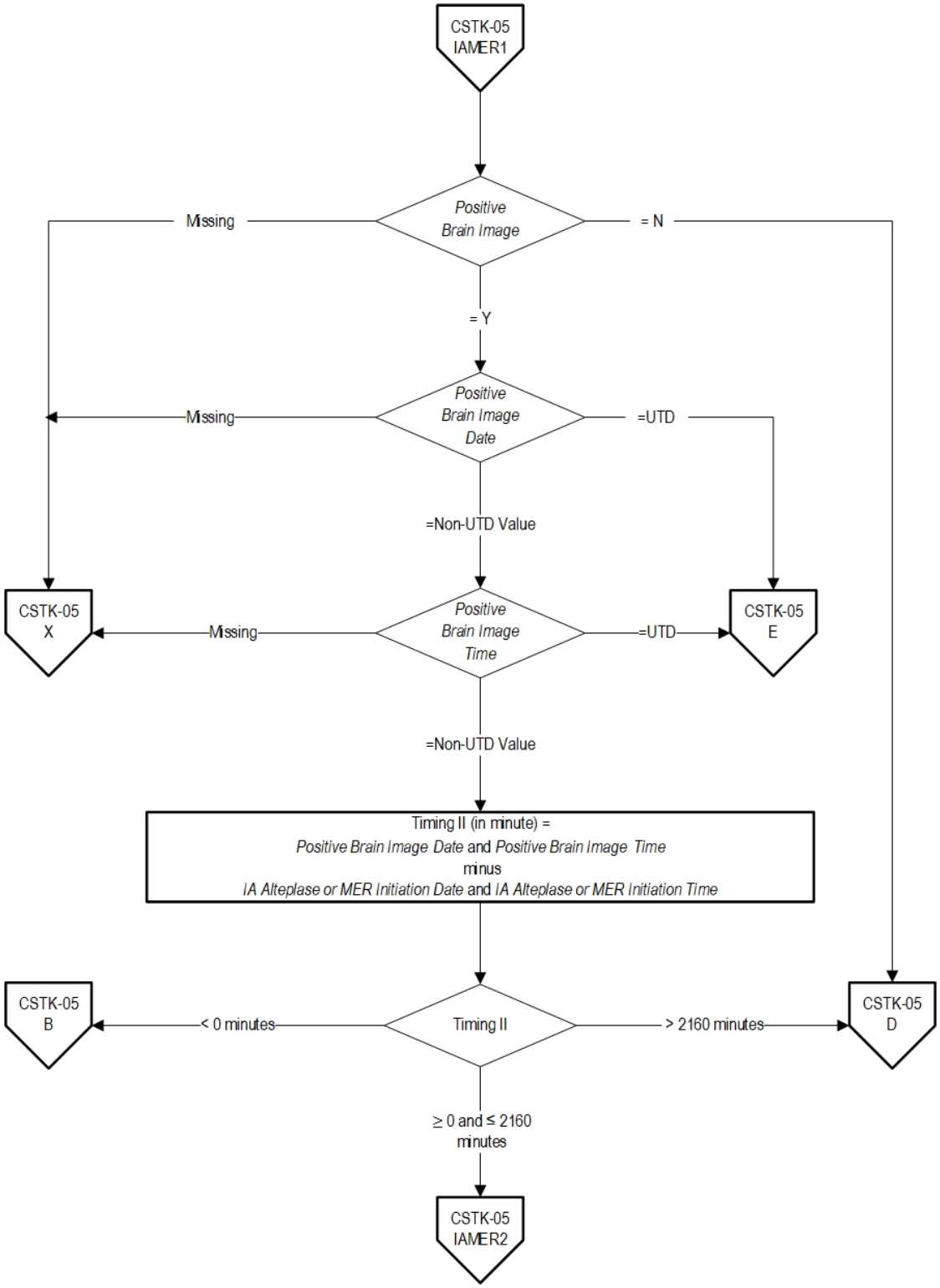

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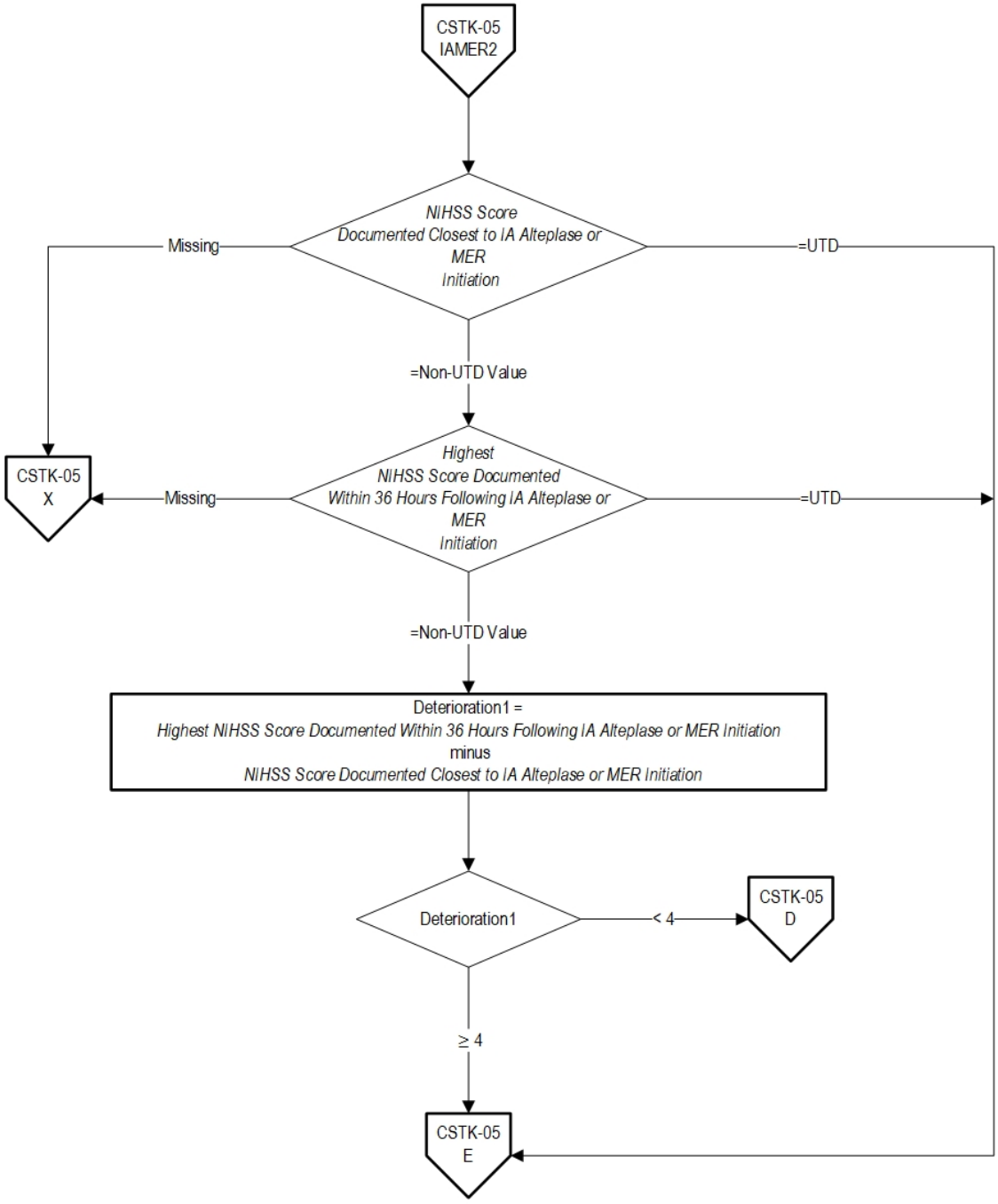

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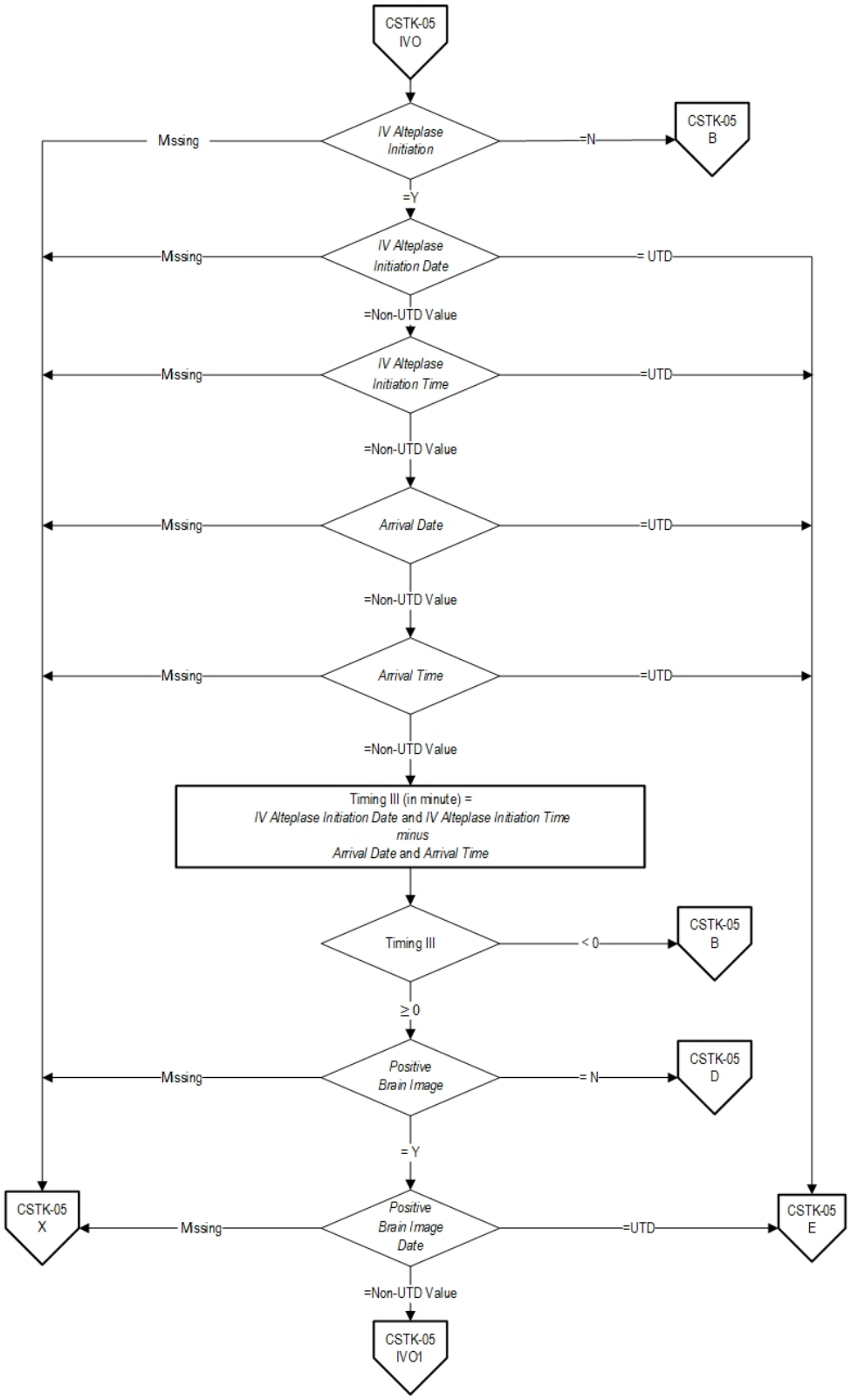

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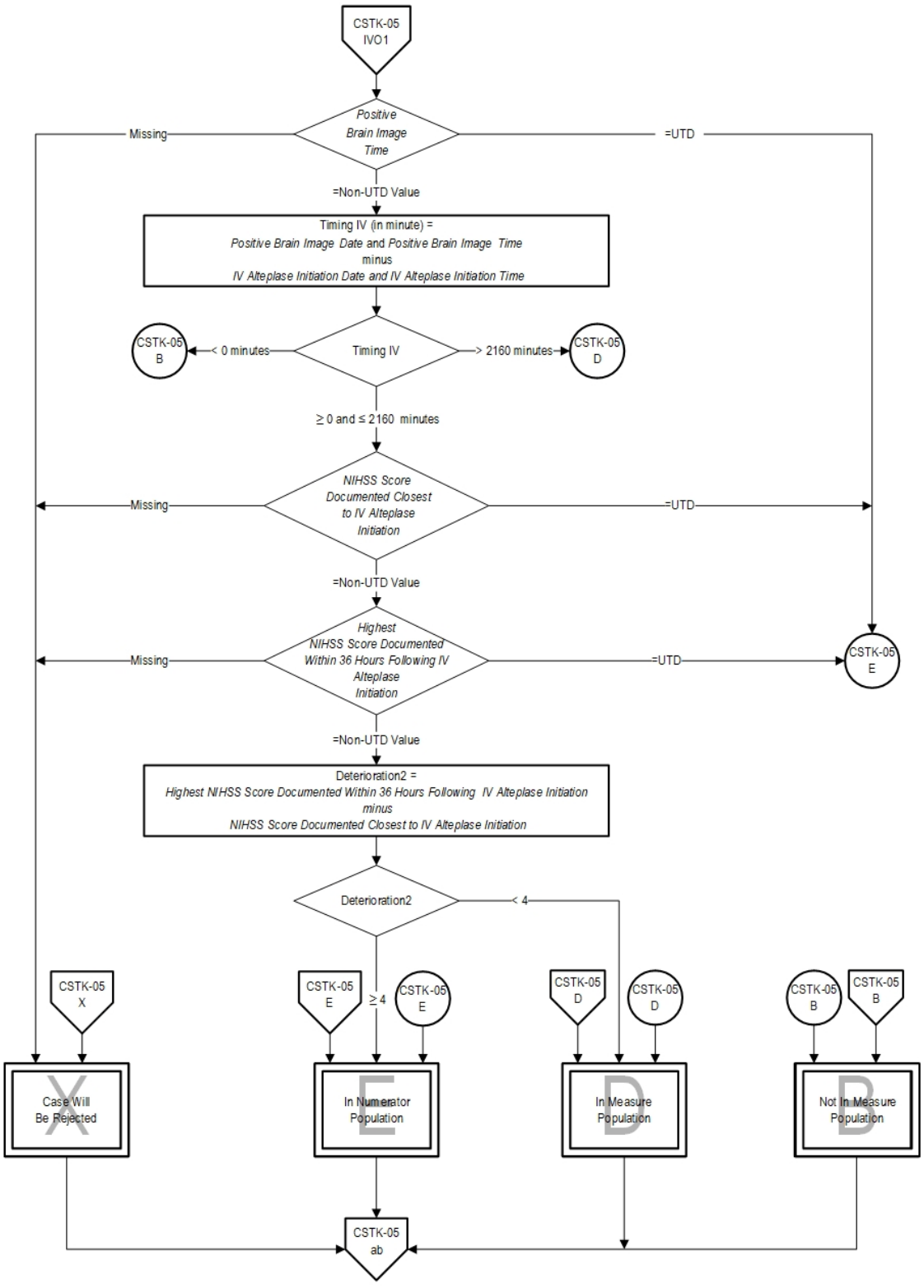

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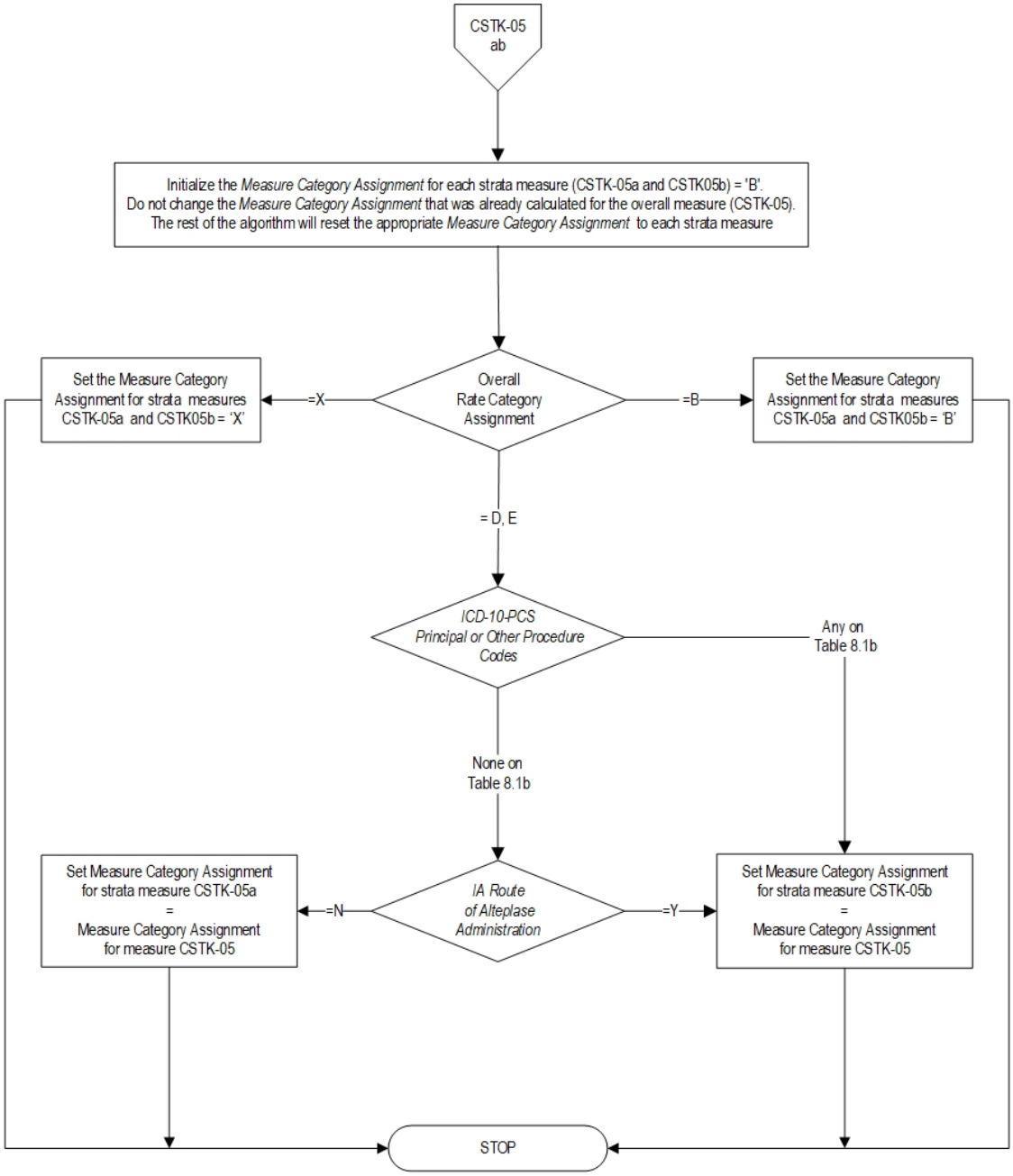

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Measure Information Form

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:**

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- 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.

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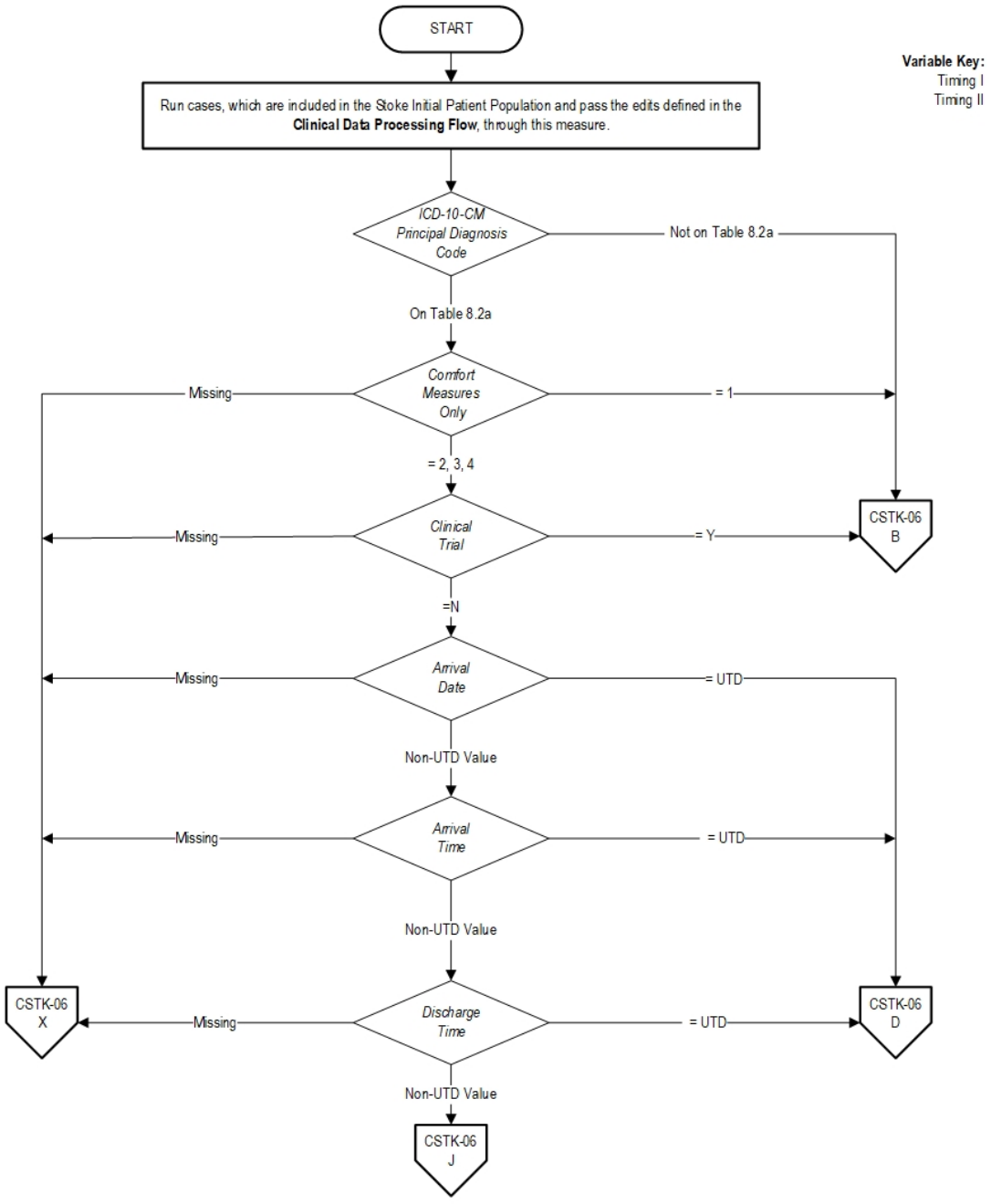
Measure Algorithm:

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



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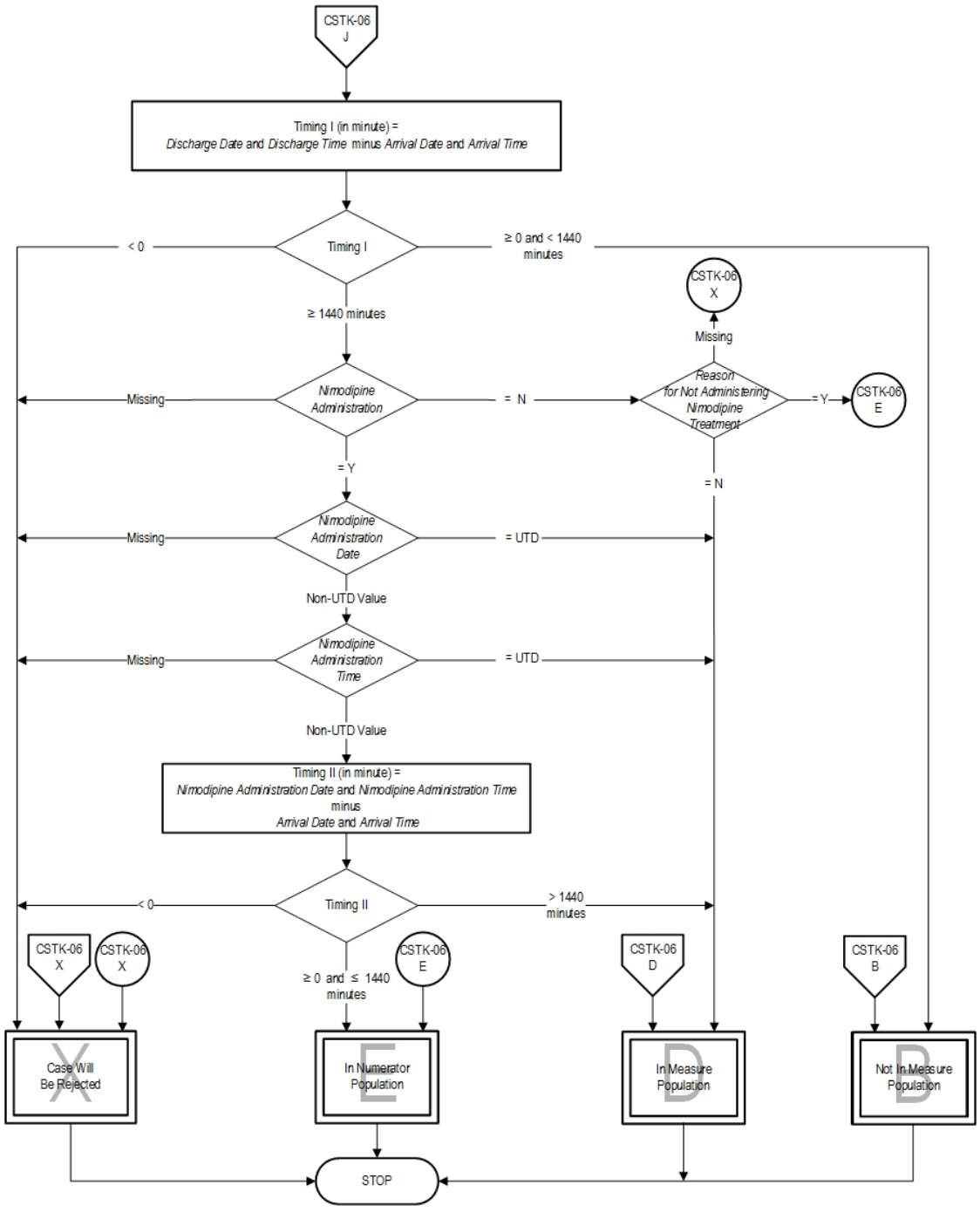

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Measure Information Form

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**

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- 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 .

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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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9. Khatari P, Hill MD, Palesch YY, et. al. Methodology of the Interventional Manaagement of Stroke III Trial. *Int J Stroke.* 2008;3:130-137.

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2009;40:2761-2768.

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 Skin Puncture

Continuous Variable Statement: Time (in minutes) from hospital arrival to skin puncture in patients with acute ischemic stroke who undergo endovascular treatment.

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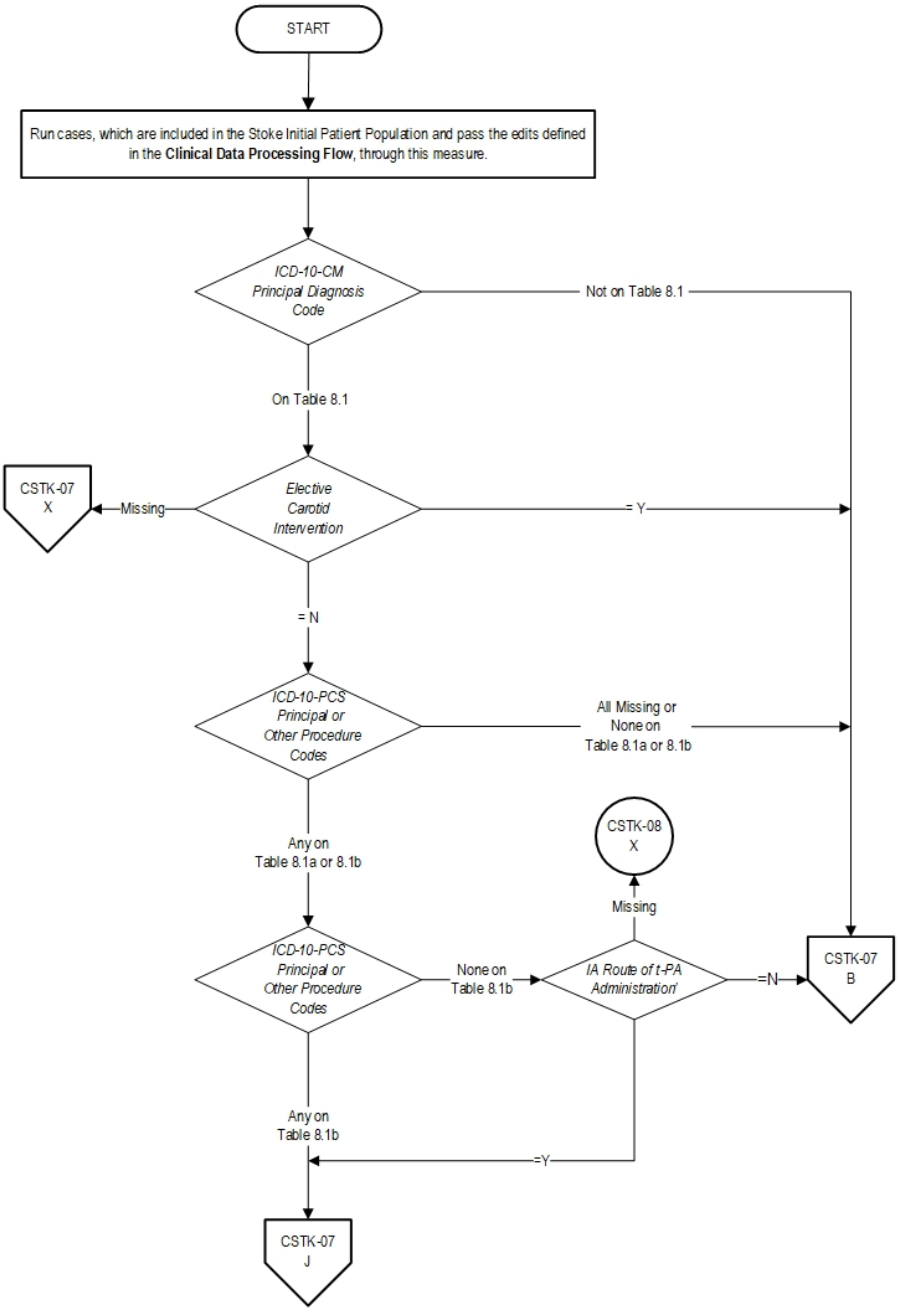

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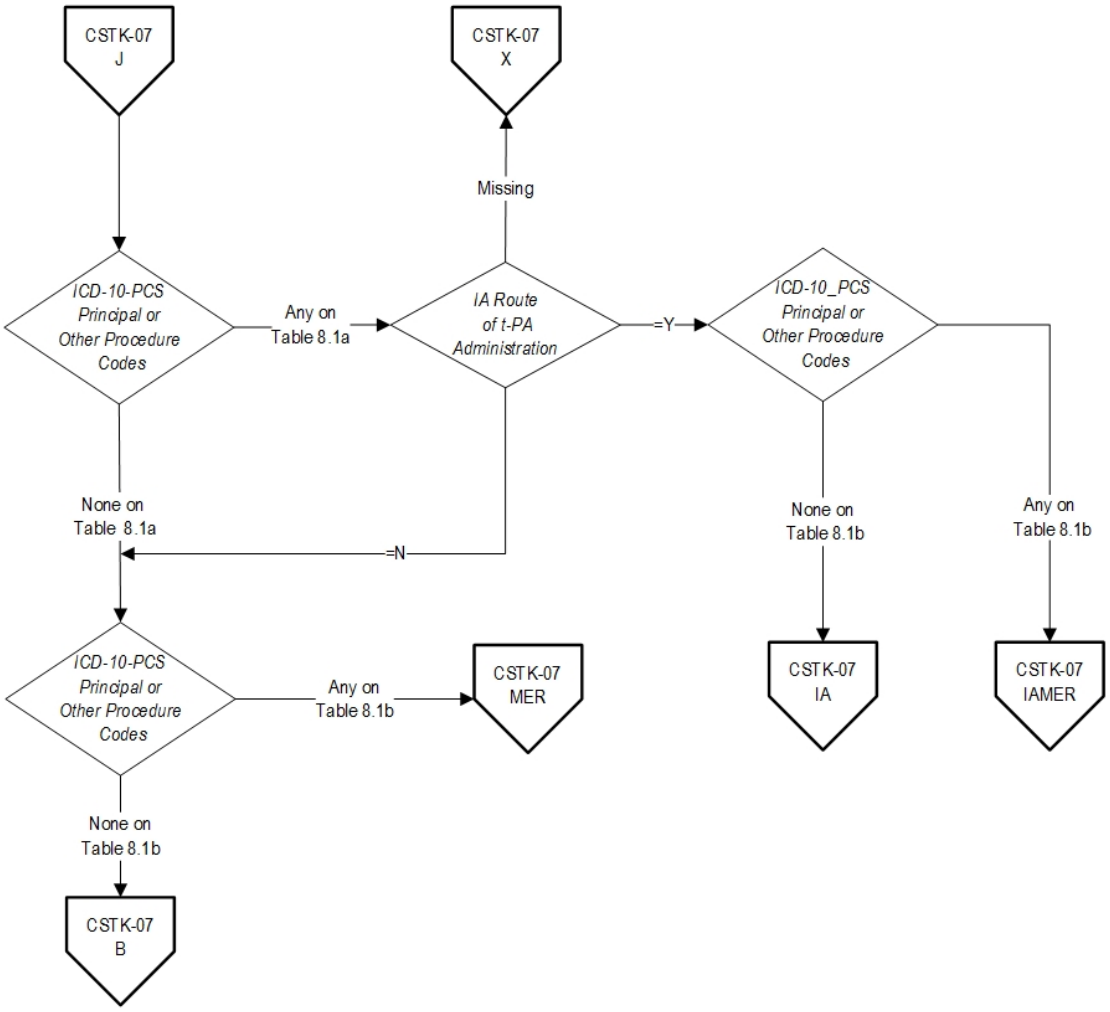

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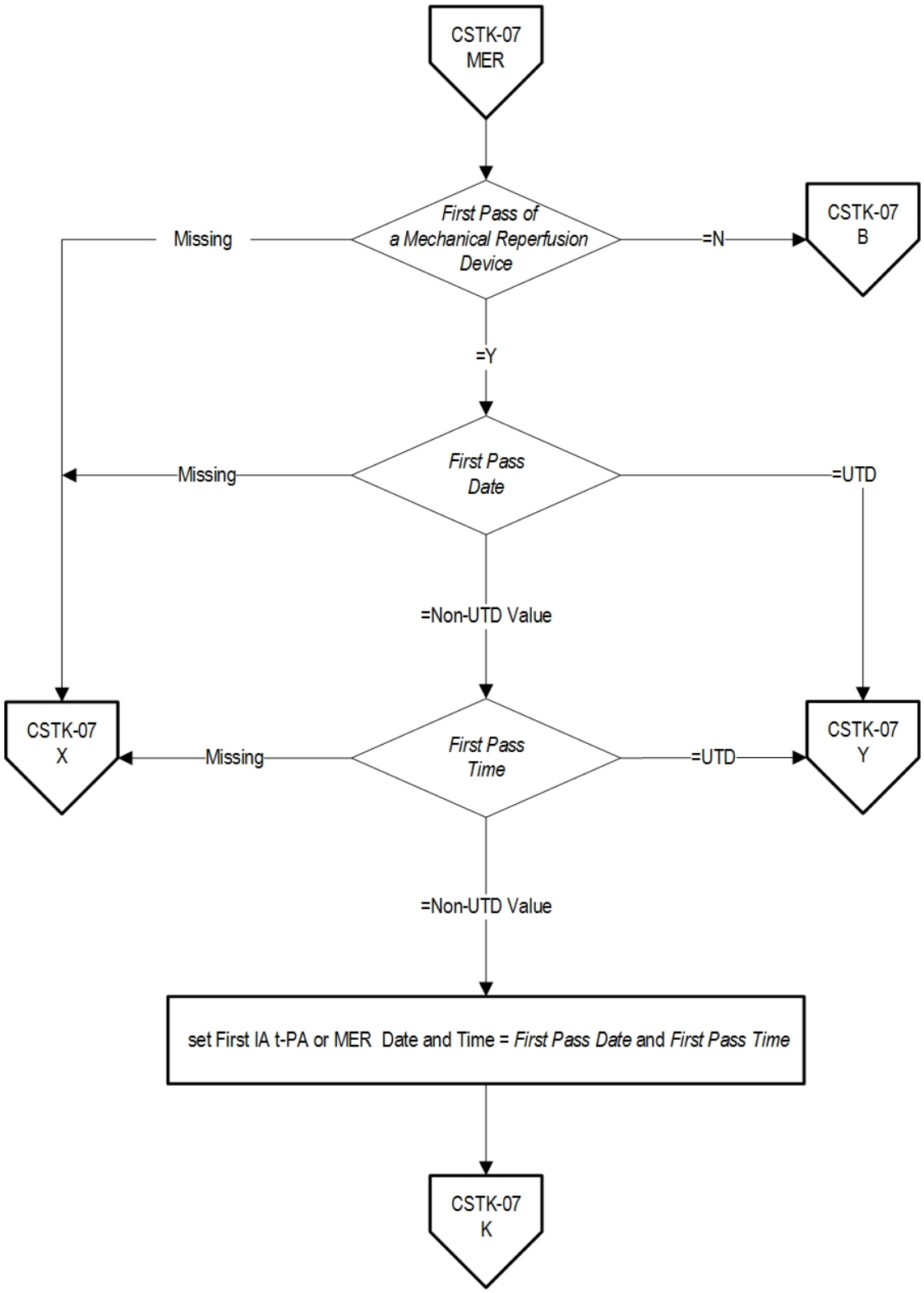

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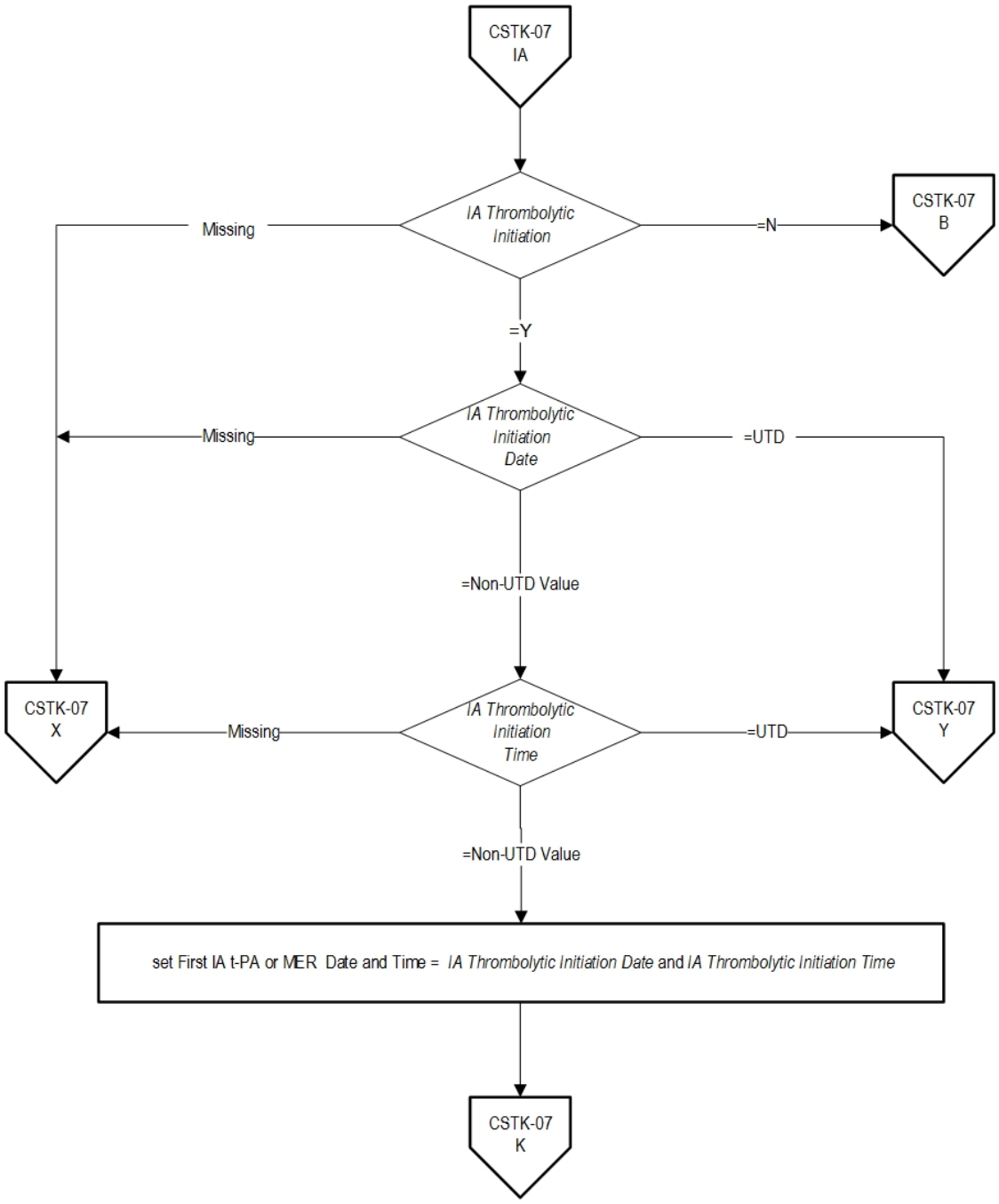

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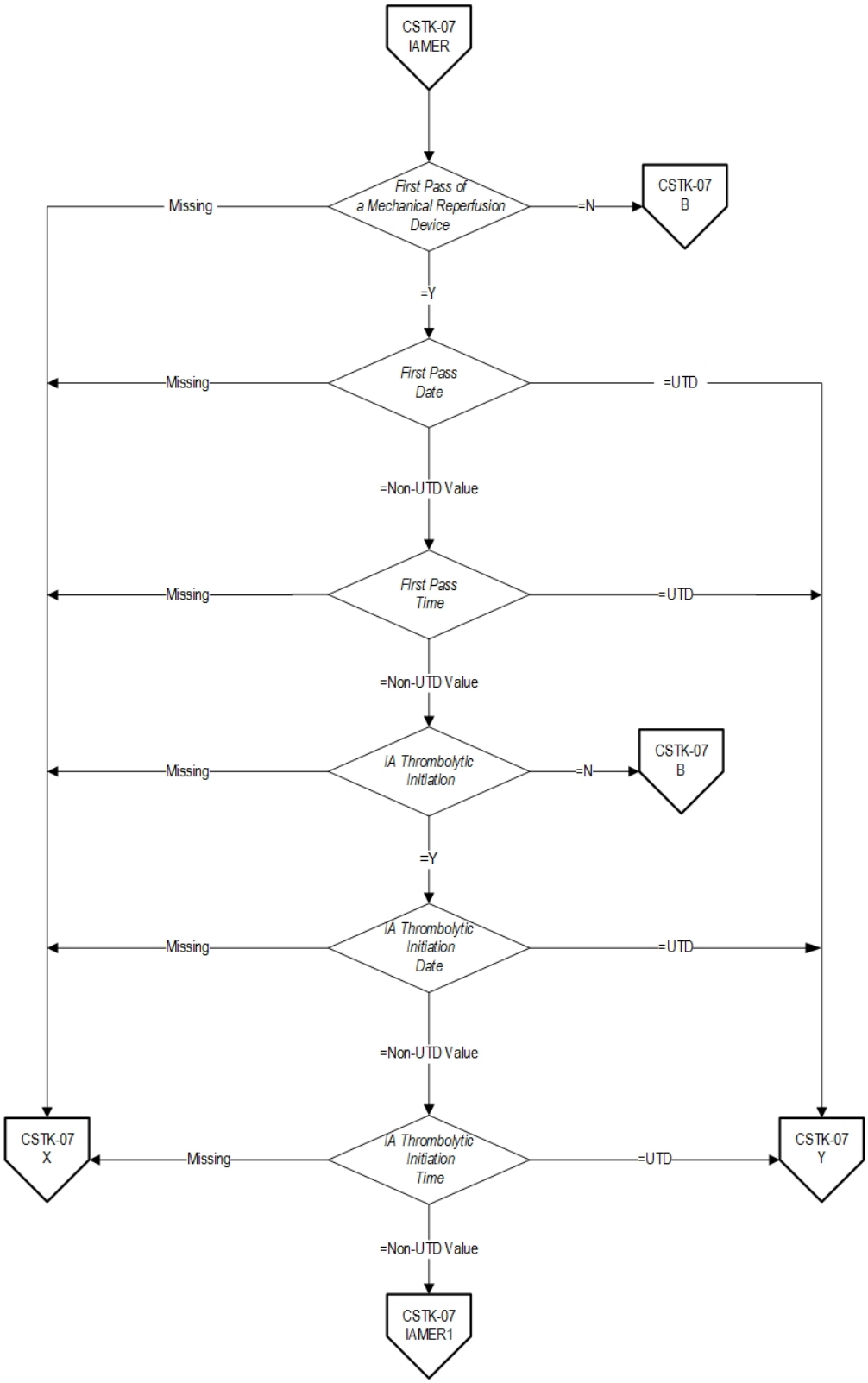

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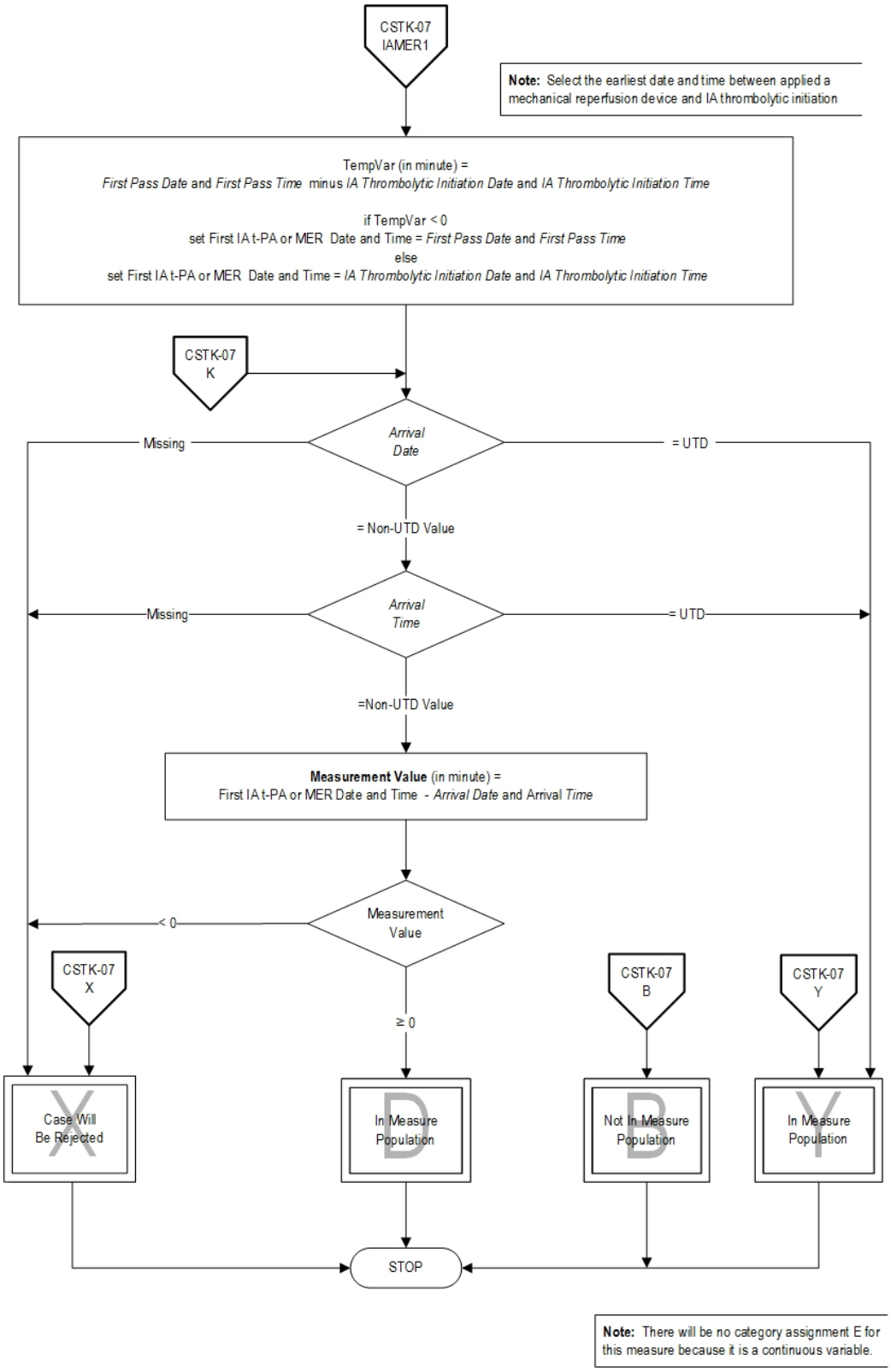

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Measure Information Form

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 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.

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 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,

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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*

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*

Risk Adjustment: Suspended. This section has been moved to the ORYX Risk Adjustment Guide. The guide is available to the public on the Joint Commission's website.

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:

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for the Early Management of Acute Ischemic Stroke. A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association. *Stroke*. 2019 Dec;50(12):e344-e418.

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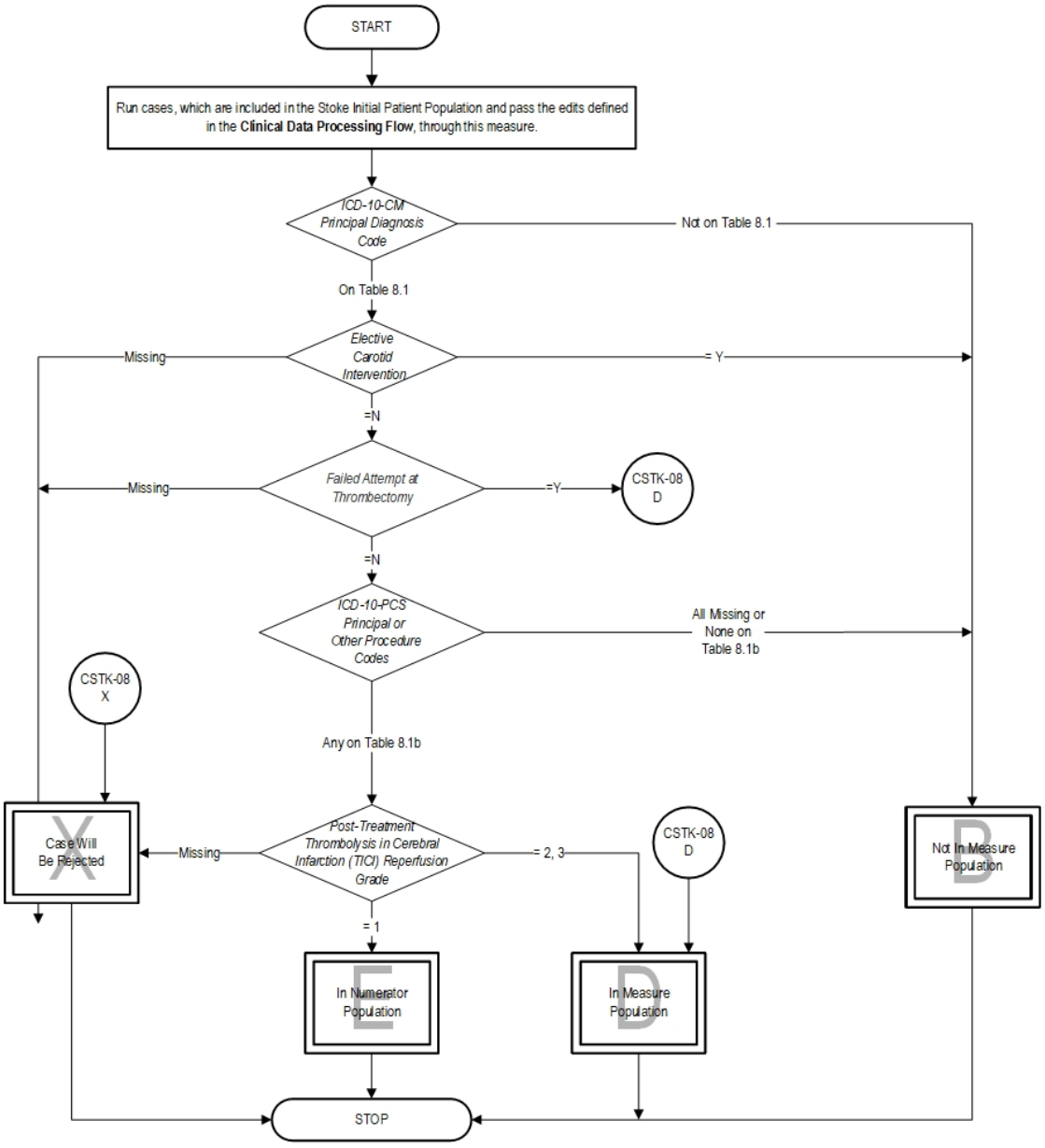
Measure Algorithm:

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 mechanical endovascular reperfusion therapy



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Measure Information Form

Measure Set: Comprehensive Stroke (CSTK)

Set Measure ID: CSTK-09

Set Measure ID	Performance Measure Name
CSTK-09a	Time (in minutes) from hospital arrival to skin puncture in patients with acute ischemic stroke who are transferred from another hospital and undergo endovascular treatment
CSTK-09b	Time (in minutes) from hospital arrival to skin puncture in patients with acute ischemic stroke who present directly to your hospital and undergo endovascular treatment

Performance Measure Name: Arrival Time to Skin Puncture (Overall Rate)

Description:

CSTK-09 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) of acute ischemic stroke.

CSTK-09a 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) of acute ischemic stroke in patients who are transferred from another hospital.

CSTK-09b 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) of acute ischemic stroke in patients who present directly to your hospital, **OR** mode of arrival not documented.

The CSTK-09 measure is reported as an overall rate (i.e., median time in minutes) which includes ischemic stroke patients who undergo EVT. CSTK-09a and CSTK-09b are subsets of the overall rate, and stratified by the mode of patient arrival to the hospital.

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 mechanical retrieval devices is also recommended 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).

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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. Five randomized clinical trials (RCTs) published in 2015 demonstrated the benefit of timely endovascular therapy in select patients with acute ischemic stroke due to large vessel occlusion (Jahan R et al., 2019).

American Heart Association Get With The Guidelines® (GWTG) sets a goal for Door-To-Puncture (DTP) Time within 90 minutes. Recent studies have reported that shorter DTP times may be achieved. Jahan and colleagues studied the time-benefit relationship in a large cohort of 6756 acute ischemic stroke patients from the GWTG clinical registry who underwent endovascular therapy within 8 hours of symptom onset. Findings from this study suggest that national quality target DTP times could be within 75 minutes for patients arriving directly to the hospital via emergency medical services (EMS) and within 45 minutes for patients transferred from another acute care hospital.

Type Of Measure: Process

Improvement Noted As: Decrease in the median value

Continuous Variable Statement:

CSTK-09 Time (in minutes) from hospital arrival to skin puncture in patients with acute ischemic stroke who undergo endovascular treatment.

CSTK-09a Time (in minutes) from hospital arrival to skin puncture in patients with acute ischemic stroke who are transferred from another hospital and undergo endovascular treatment.

CSTK-09b Time (in minutes) from hospital arrival to skin puncture in patients with acute ischemic stroke who present directly to your hospital and undergo endovascular treatment, **OR** mode of arrival not documented.

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).

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 an *Initial NIHSS Less Than 6*

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- 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*
- *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*
- *Initial NIHSS Less Than 6*
- *Mode of Arrival*
- *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:

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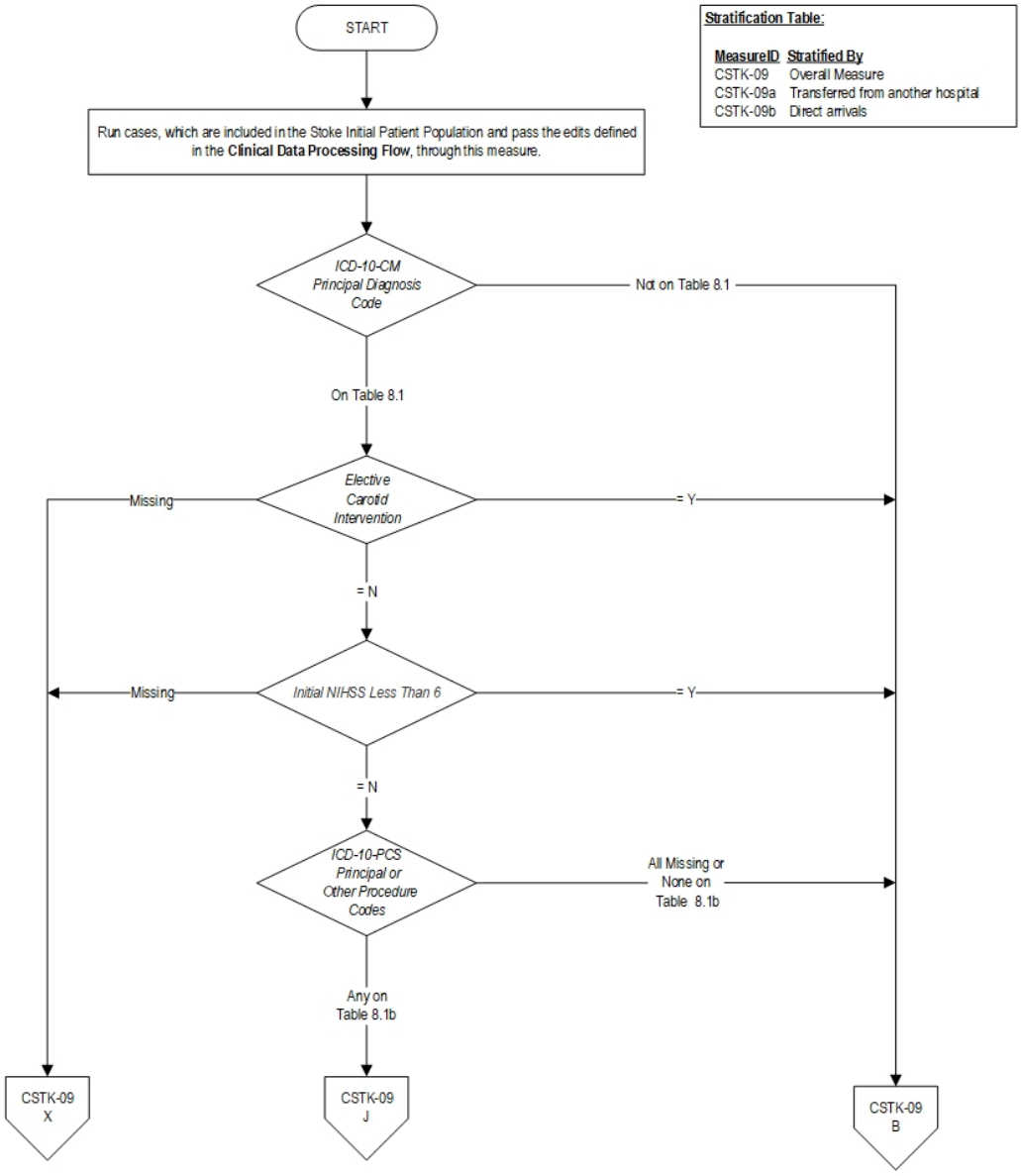
Measure Algorithm:

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.



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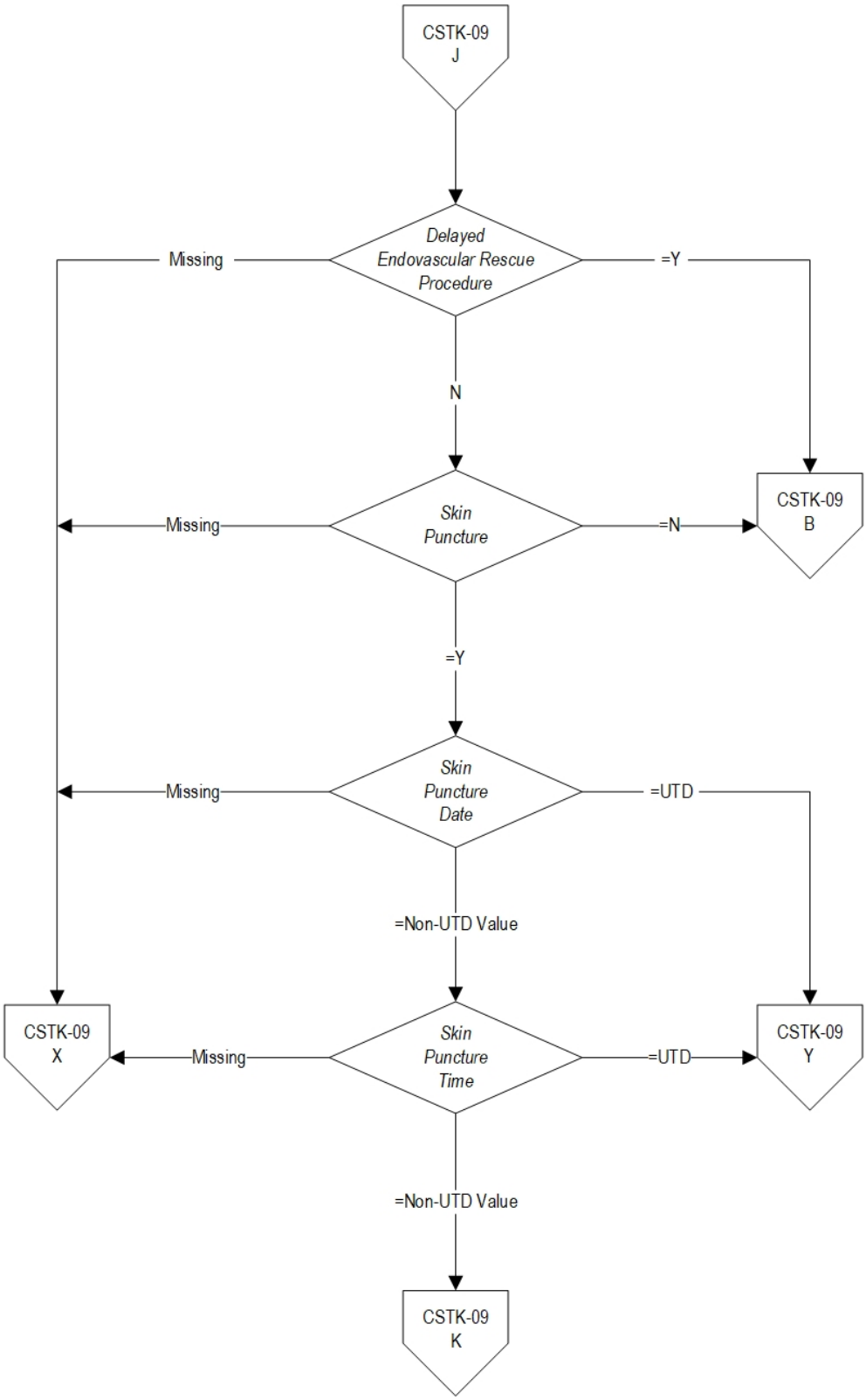

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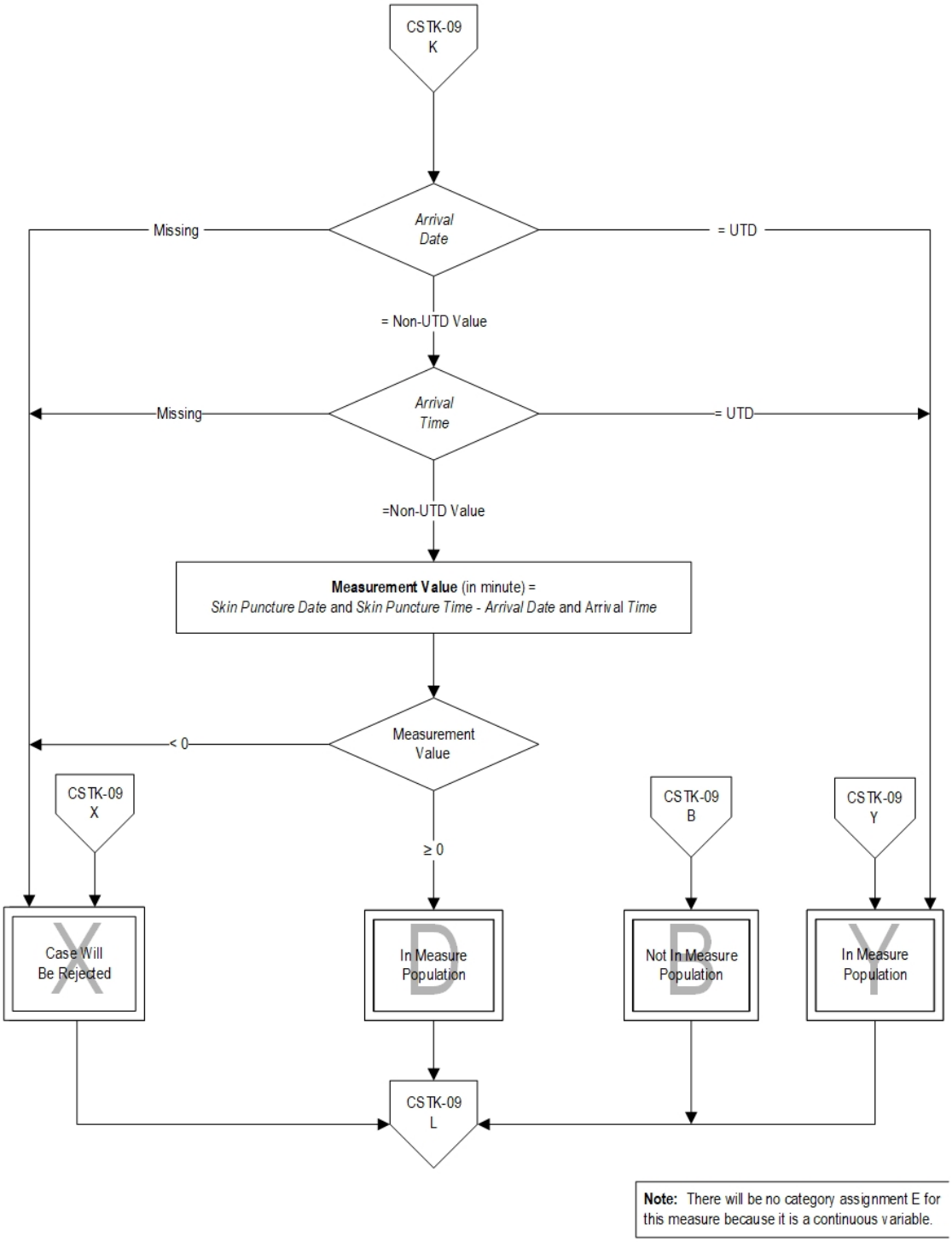

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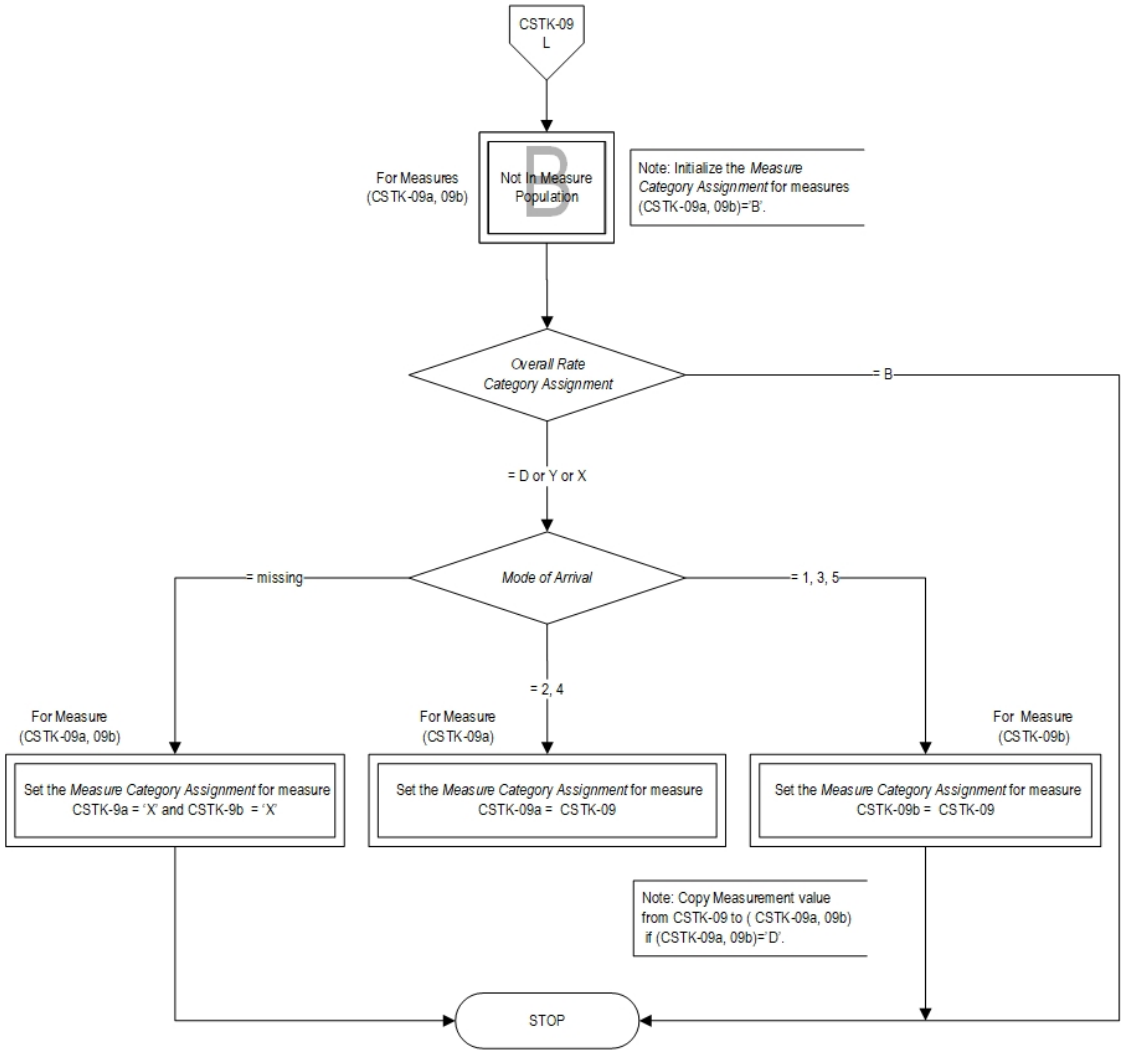

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Measure Information Form

Measure Set: Comprehensive Stroke (CSTK)

Set Measure ID: CSTK-10

Set Measure ID	Performance Measure Name
CSTK-10	Modified Rankin Score (mRS) at 90 Days: Favorable Outcome (Overall Rate)
CSTK-10a	Functional Status Prior to Stroke-Independent: IV Alteplase Only
CSTK-10b	Functional Status Prior to Stroke-Dependent: IV Alteplase Only
CSTK-10c	Functional Status Prior to Stroke-Independent: MER Therapy
CSTK-10d	Functional Status Prior to Stroke-Dependent: MER Therapy

Performance Measure Name: Modified Rankin Score (mRS at 90 Days: Favorable Outcome)

Description: Ischemic stroke patients treated with intra-venous (IV) alteplase 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)

CSTK-10 All ischemic stroke patients treated with intra-venous (IV) alteplase 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)

CSTK-10a Ischemic stroke patients treated with intra-venous (IV) alteplase only and have a mRS 0, 1, or 2 documented prior to the stroke; **OR** no mRS documented prior to the stroke

CSTK-10b Ischemic stroke patients treated with intra-venous (IV) alteplase only and have a mRS 3, 4, or 5 documented prior to the stroke

CSTK-10c Ischemic stroke patients treated with mechanical endovascular reperfusion therapy with or without IV/IA alteplase therapy and have a mRS 0, 1, or 2 documented prior to the stroke; **OR** no mRS documented prior to the stroke

CSTK-10d Ischemic stroke patients treated with mechanical endovascular reperfusion therapy with or without IV/IA alteplase therapy and have a mRS 3, 4, or 5 documented prior to the stroke

The CSTK-10 measure is reported as an overall rate which includes ischemic stroke patients treated with intravenous (IV) alteplase only or who undergo mechanical endovascular reperfusion therapy with or without IV/IA alteplase therapy and have a mRS less than or equal to 2 at 90 days (>/=75 days and </=105 days); CSTK-10a, CSTK-10b, CSTK-10c, and CSTK-10d are subsets of the overall rate, stratified by mRS prior to the stroke and type of reperfusion therapy.

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

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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:
CSTK-10: Ischemic stroke patients with a mRS less than or equal to 2 at 90 days (≥75 days and ≤105 days)

CSTK-10a: Ischemic stroke patients with a mRS less than or equal to 2 at 90 days (≥75 days and ≤105 days) and a mRS 0, 1, or 2 documented prior to the stroke; **OR** no mRS documented prior to the stroke

CSTK-10b: Ischemic stroke patients with a mRS less than or equal to 2 at 90 days (≥75 days and ≤105 days) and a mRS 3, 4, or 5 documented prior to the stroke

CSTK-10c: Ischemic stroke patients with a mRS less than or equal to 2 at 90 days (≥75 days and ≤105 days) and a mRS 0, 1, or 2 documented prior to the stroke; **OR** no mRS documented prior to the stroke

CSTK-10d: Ischemic stroke patients with a mRS less than or equal to 2 at 90 days (≥75 days and ≤105 days) and a mRS 3, 4, or 5 documented prior to the stroke

> **Included Populations:** As above
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Modified Rankin Score (mRS)*
> - *Modified Rankin Score (mRS) Date*
> - *Pre-Stroke Modified Rankin Score (mRS)*

Denominator Statement:
CSTK-10: Ischemic stroke patients treated with IV alteplase therapy or who undergo mechanical endovascular reperfusion therapy

CSTK-10a: Ischemic stroke patients treated with IV alteplase only

CSTK-10b: Ischemic stroke patients treated with IV alteplase only

CSTK-10c: Ischemic stroke patients treated with mechanical endovascular reperfusion therapy with or without IV/IA alteplase therapy

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CSTK-10d: Ischemic stroke patients treated with mechanical endovascular reperfusion therapy with or without IV/IA alteplase 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 IV 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*
> - *IV Alteplase Initiation*

Risk Adjustment: Suspended. This section has been moved to the ORYX Risk Adjustment Guide. The guide is available to the public on the Joint Commission's website.

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.

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

Selected References:

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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.

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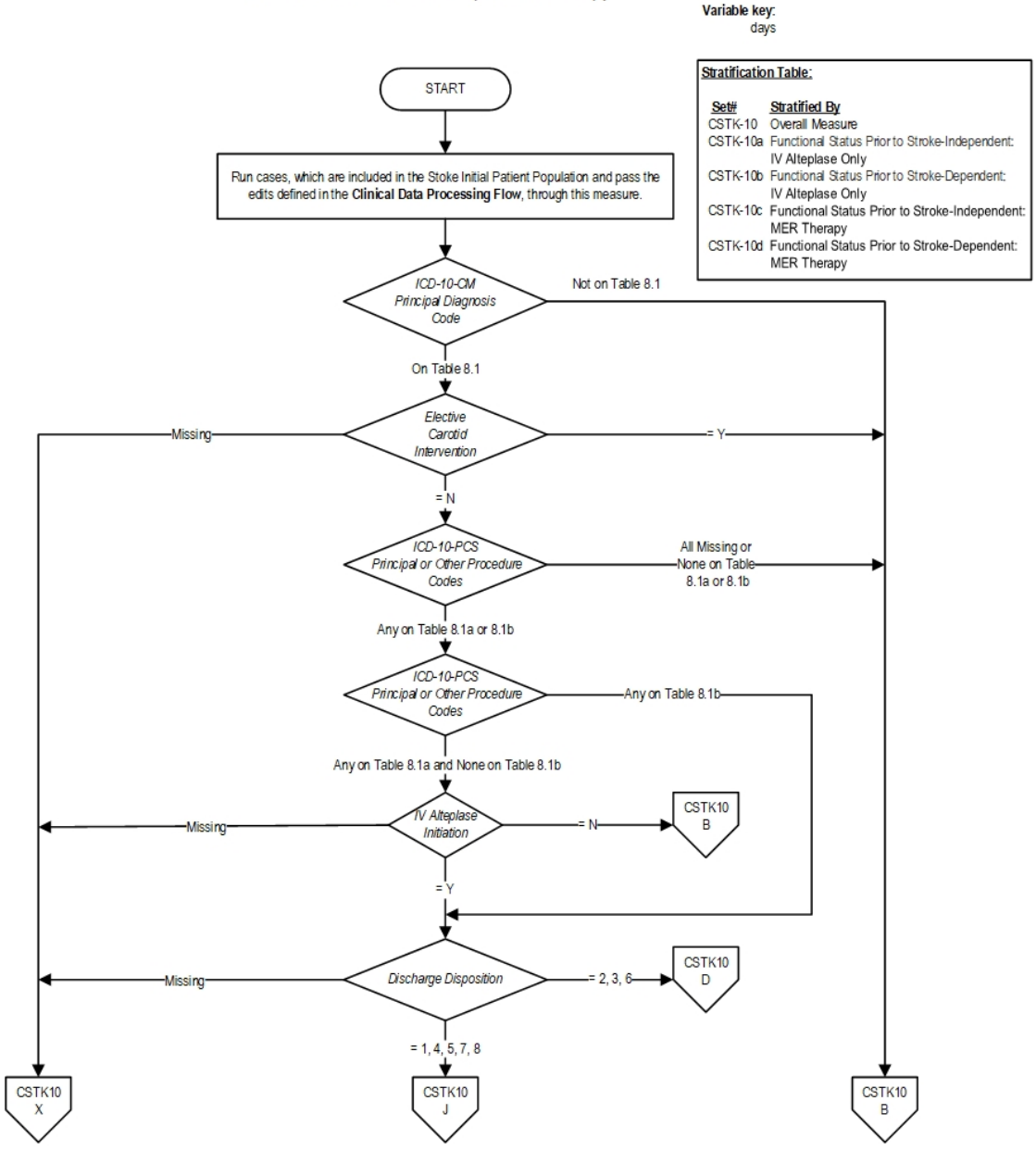
Measure Algorithm:

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 alteplase therapy or who undergo mechanical endovascular reperfusion therapy



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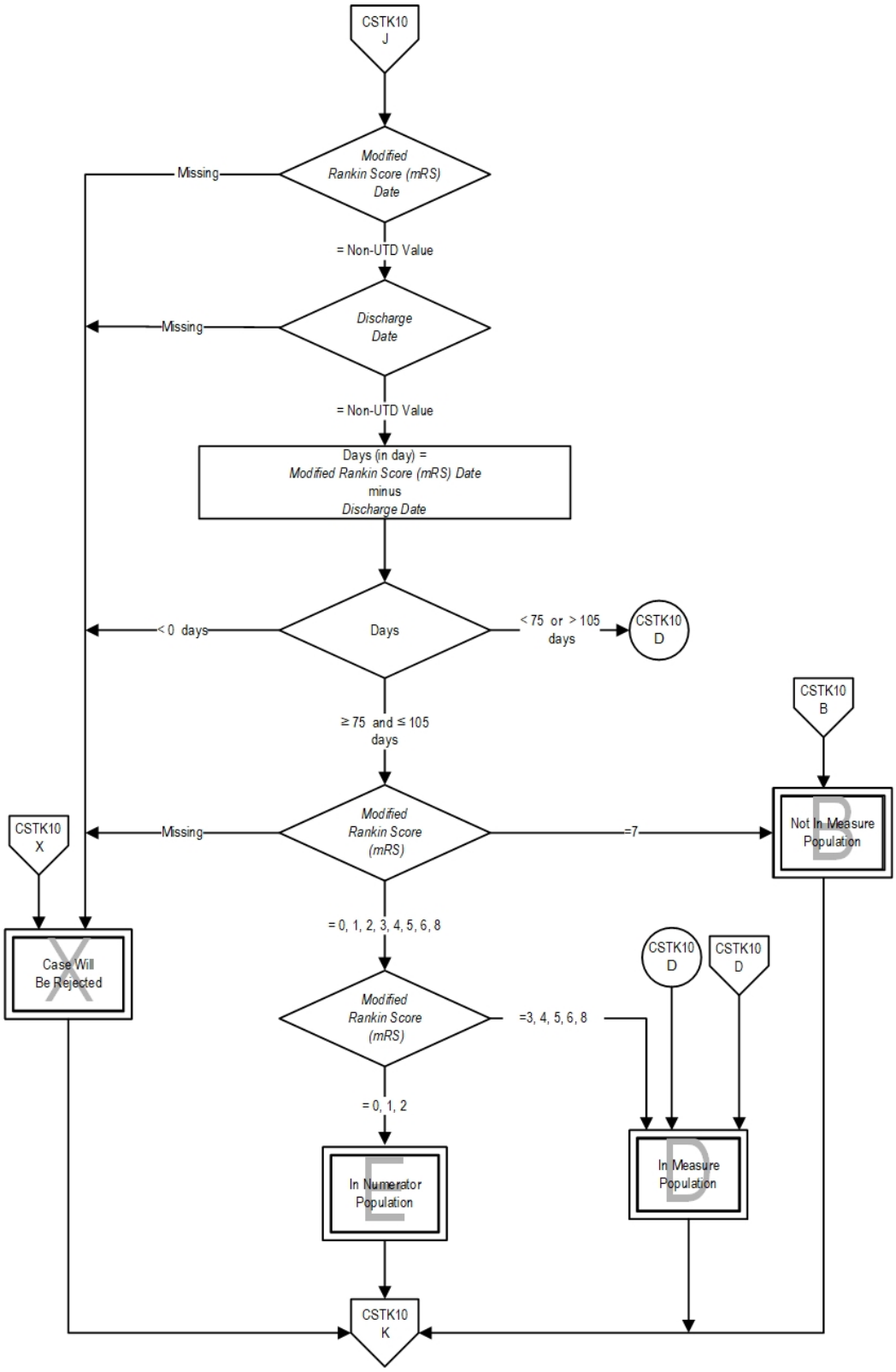

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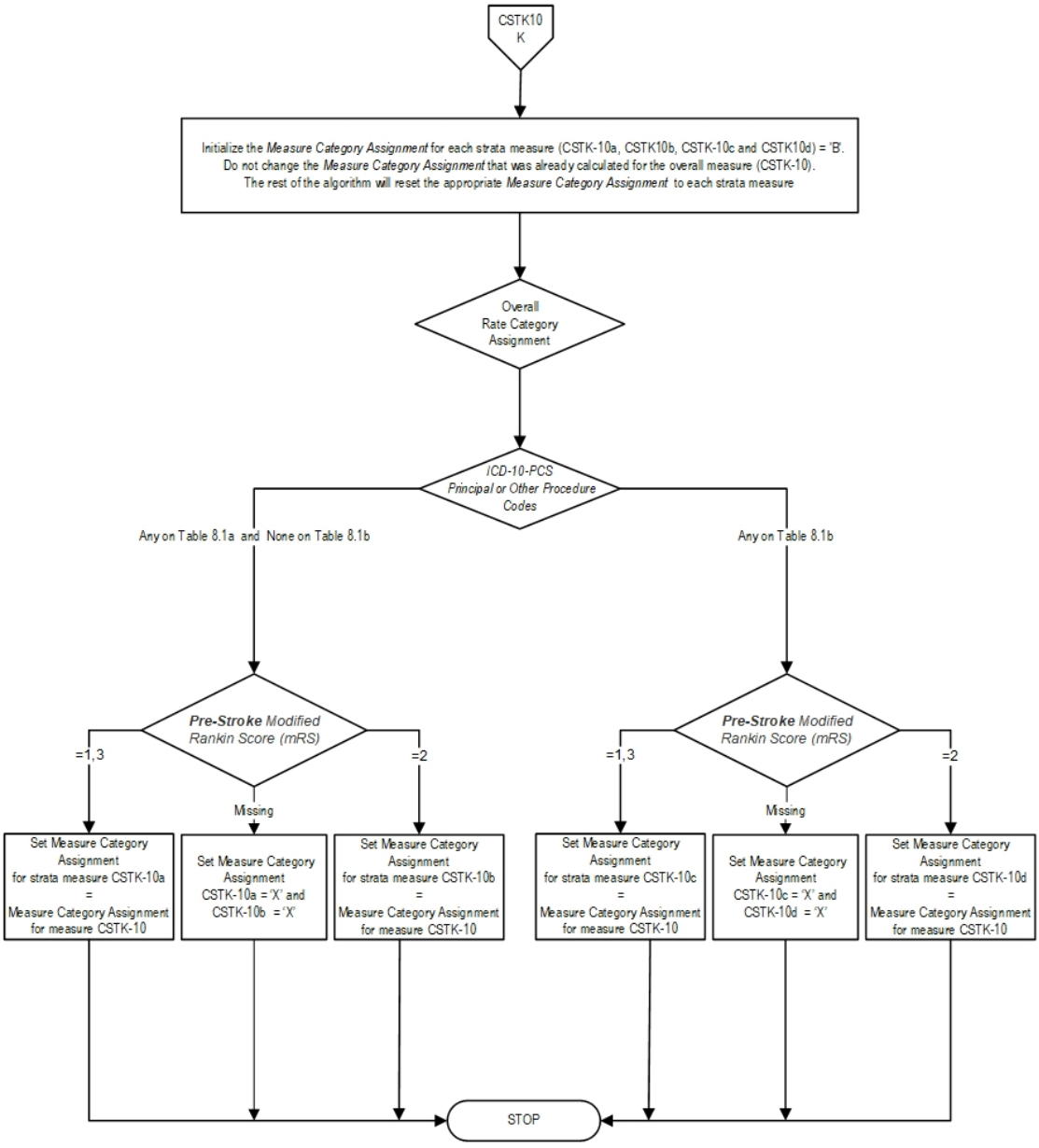

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Measure Information Form

Measure Set: Comprehensive Stroke (CSTK)

Set Measure ID: CSTK-11

Performance Measure Name: Rate of Rapid Effective Reperfusion From Hospital Arrival

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

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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 an *Initial NIHSS Less Than 6*
- 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*

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- *Initial NIHSS Less Than 6*
- *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:

- 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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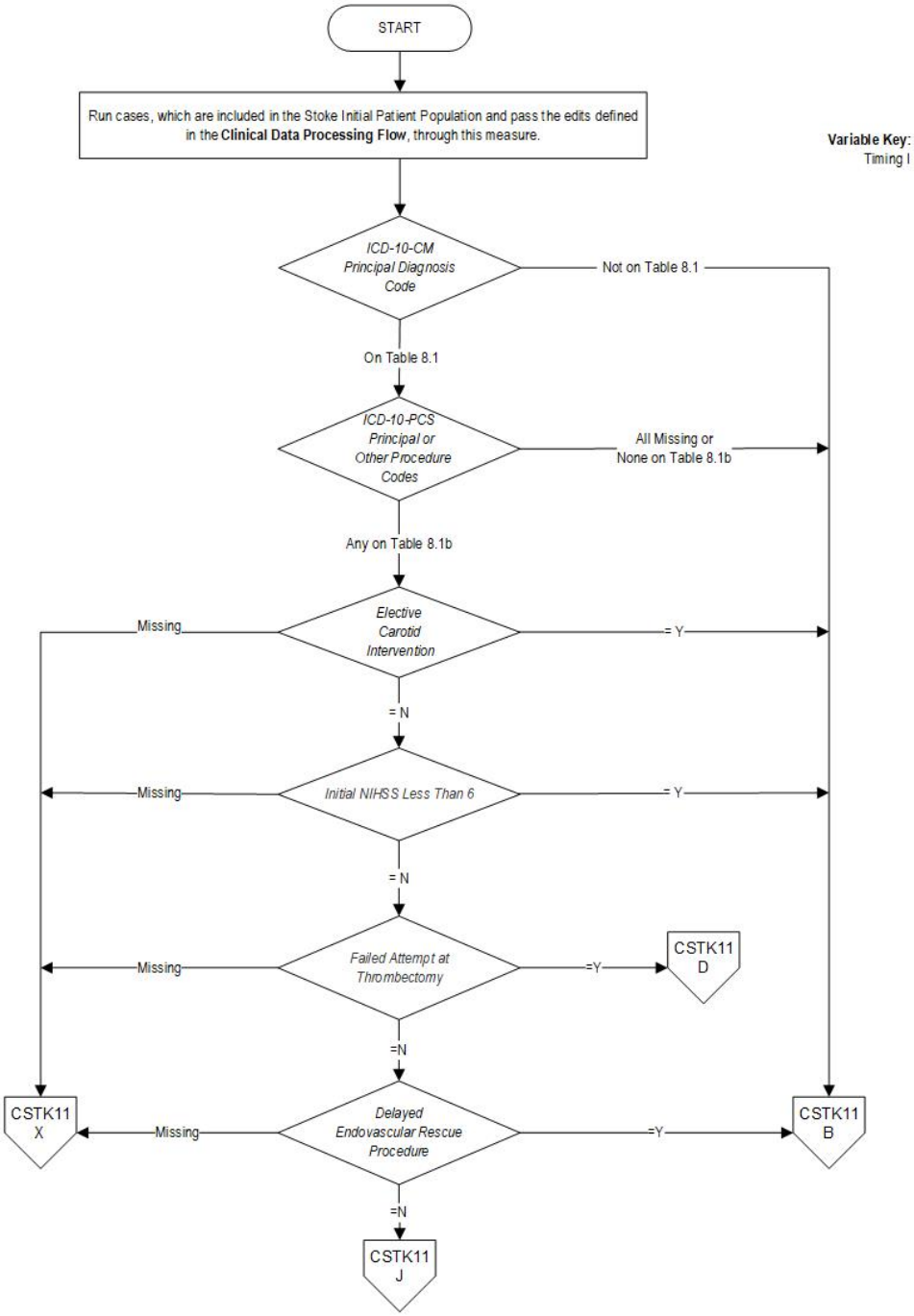
Measure Algorithm:

CSTK-11: Rate of Rapid Effective Reperfusion From Hospital Arrival

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)



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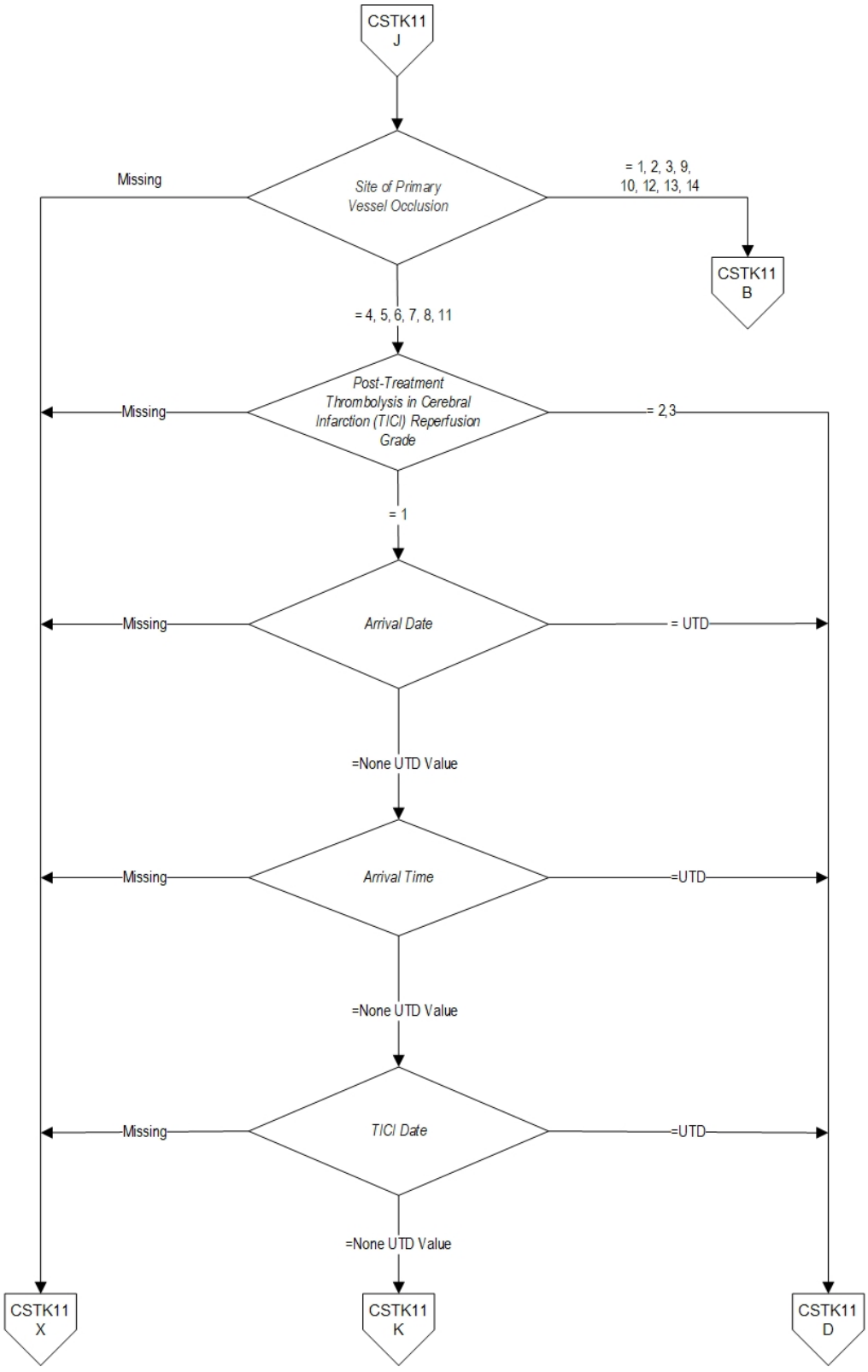

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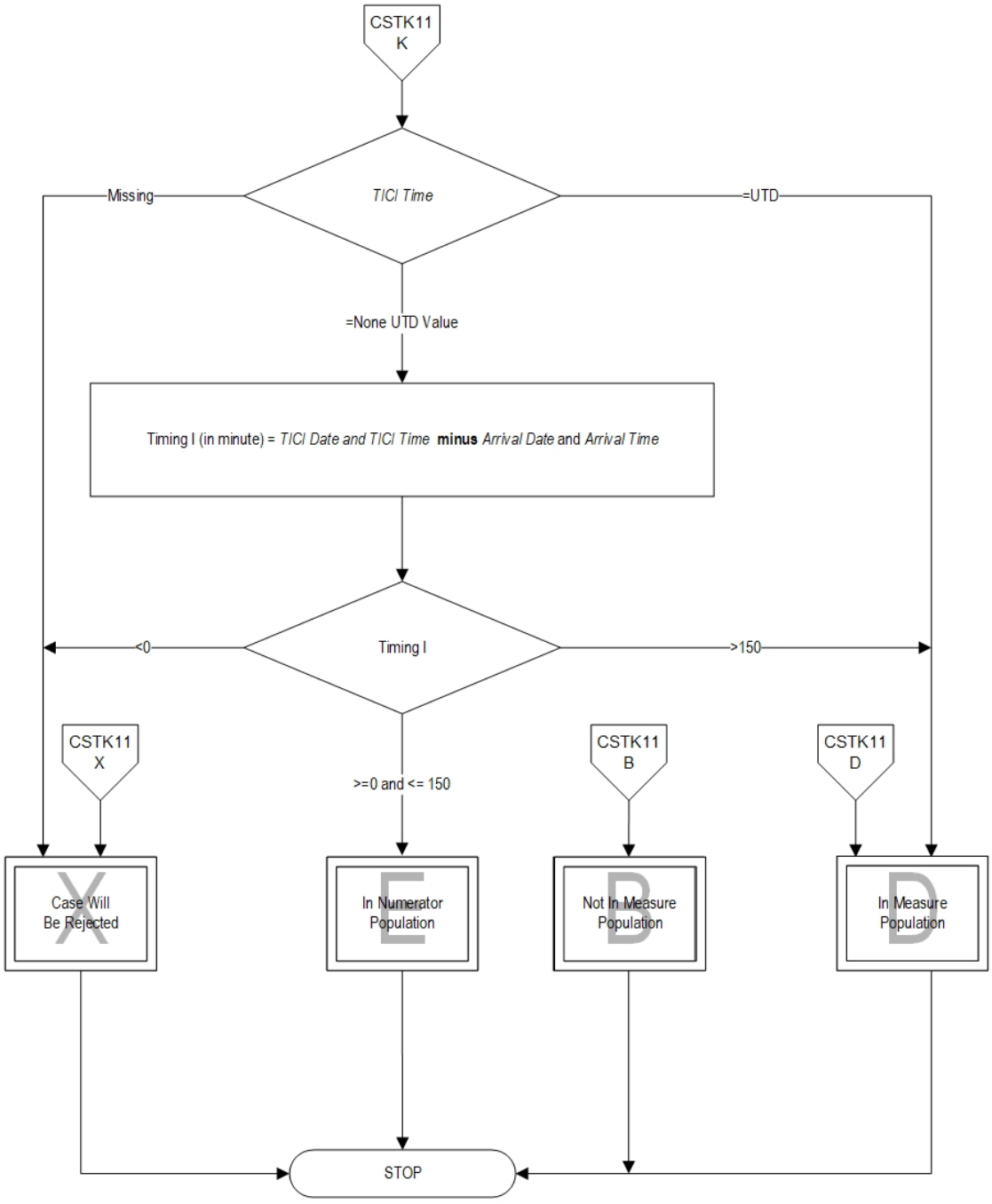

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Measure Information Form

Measure Set: Comprehensive Stroke (CSTK)

Set Measure ID: CSTK-12

Performance Measure Name: Rate of Rapid Effective Reperfusion From Skin Puncture

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

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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.

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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:

- 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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- 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.

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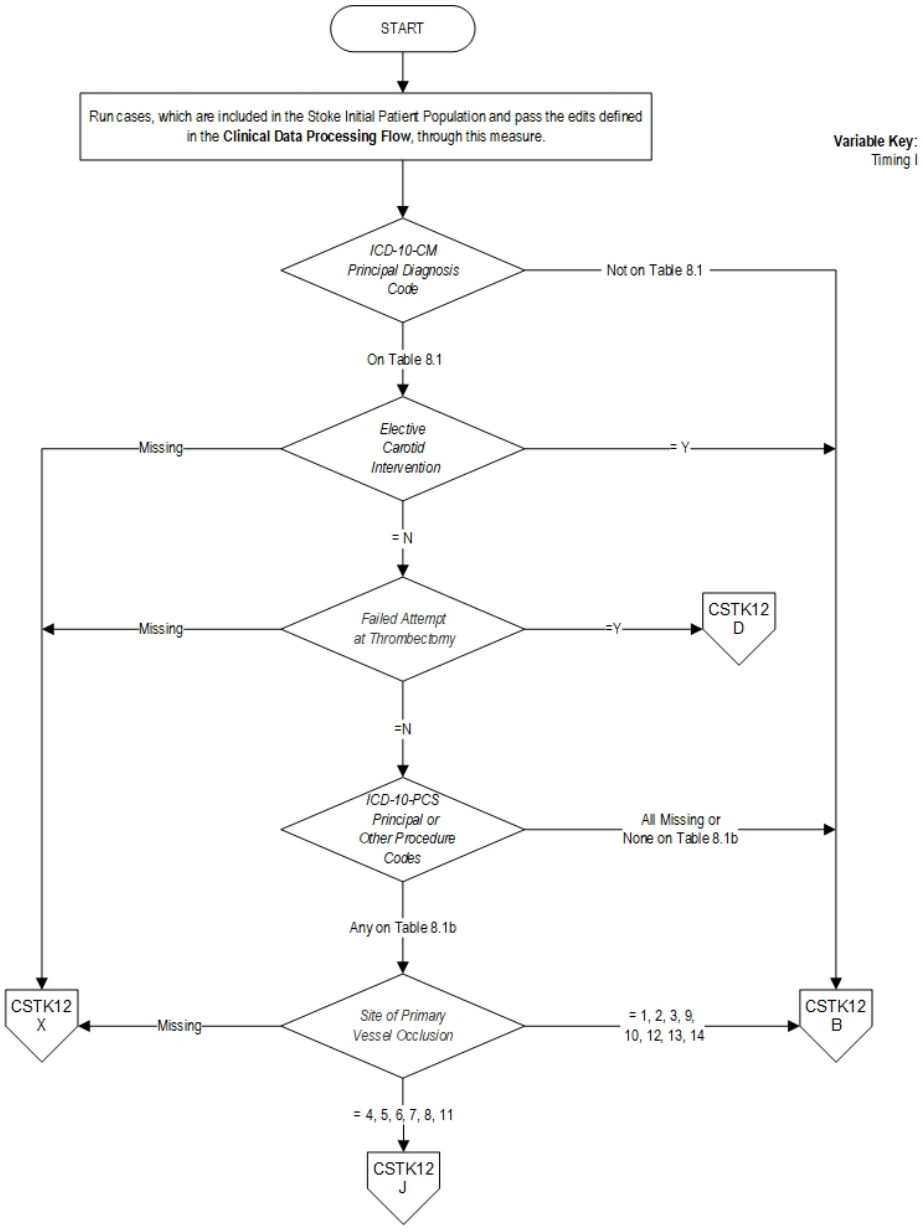
Measure Algorithm:

CSTK-12: Rate of Rapid Effective Reperfusion From Skin Puncture

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)



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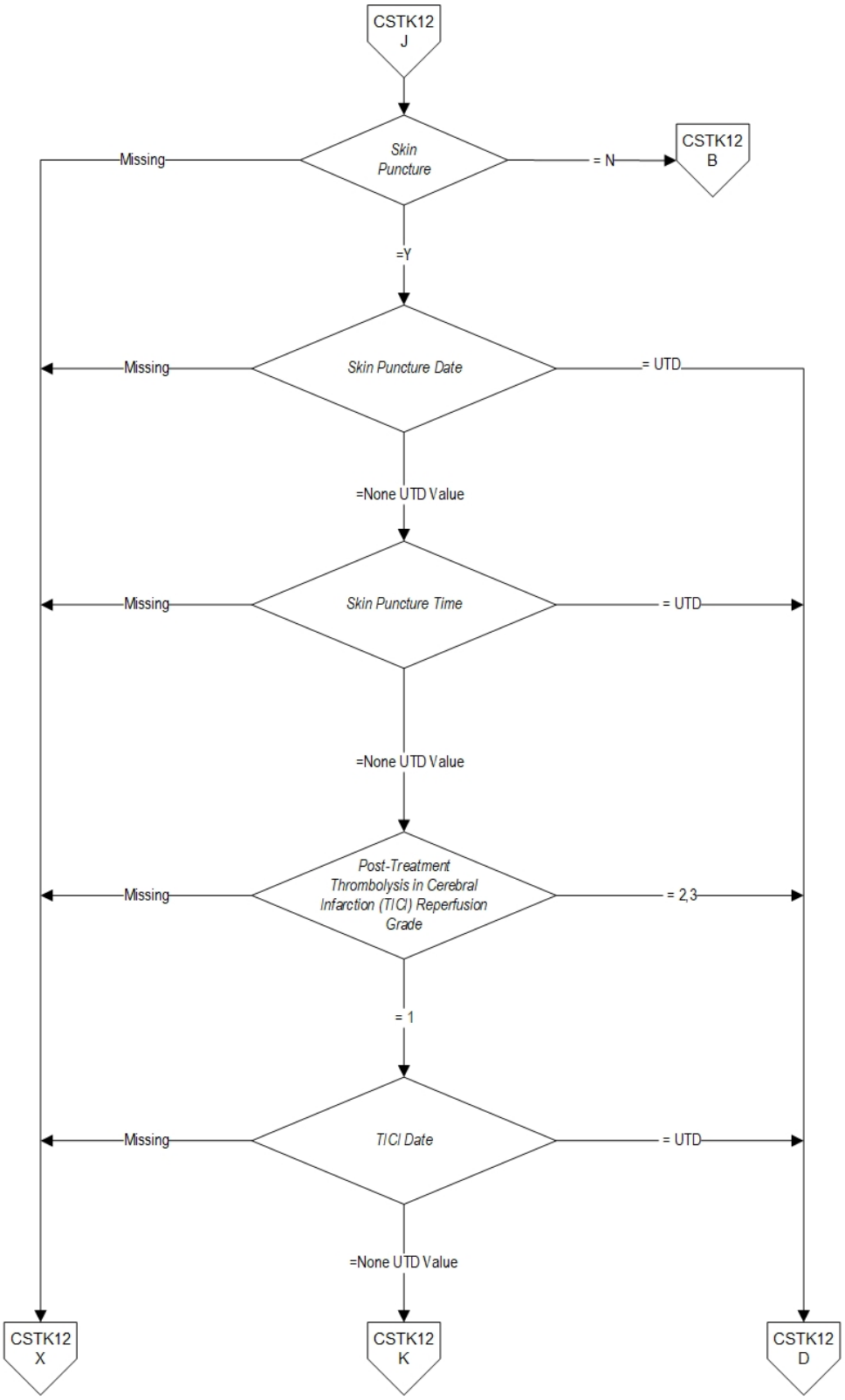

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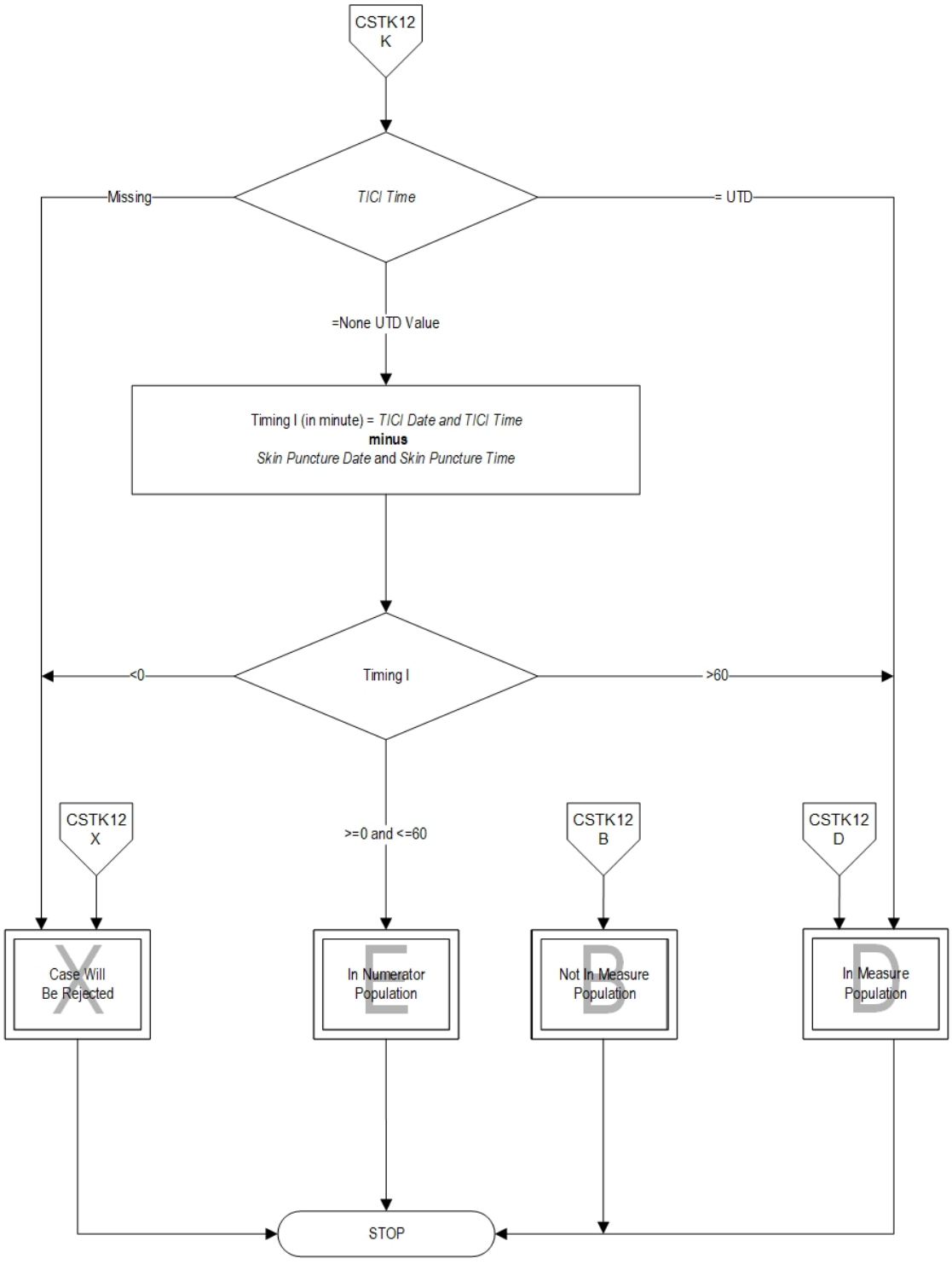

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Palliative Care (PAL)

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

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Element Name	Collected For
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
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:

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- 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

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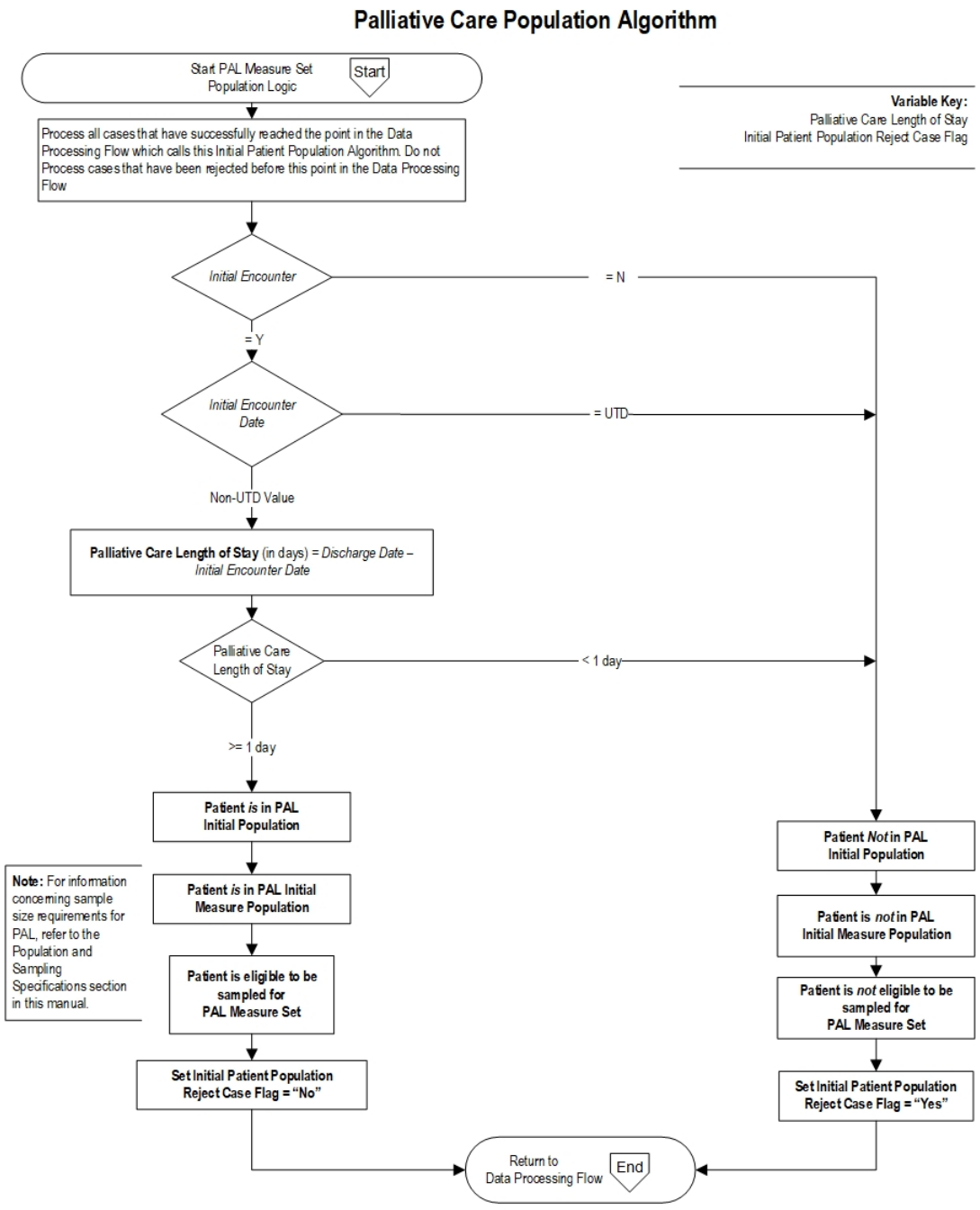
Initial Patient Population Algorithm



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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

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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:**

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- *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-

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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

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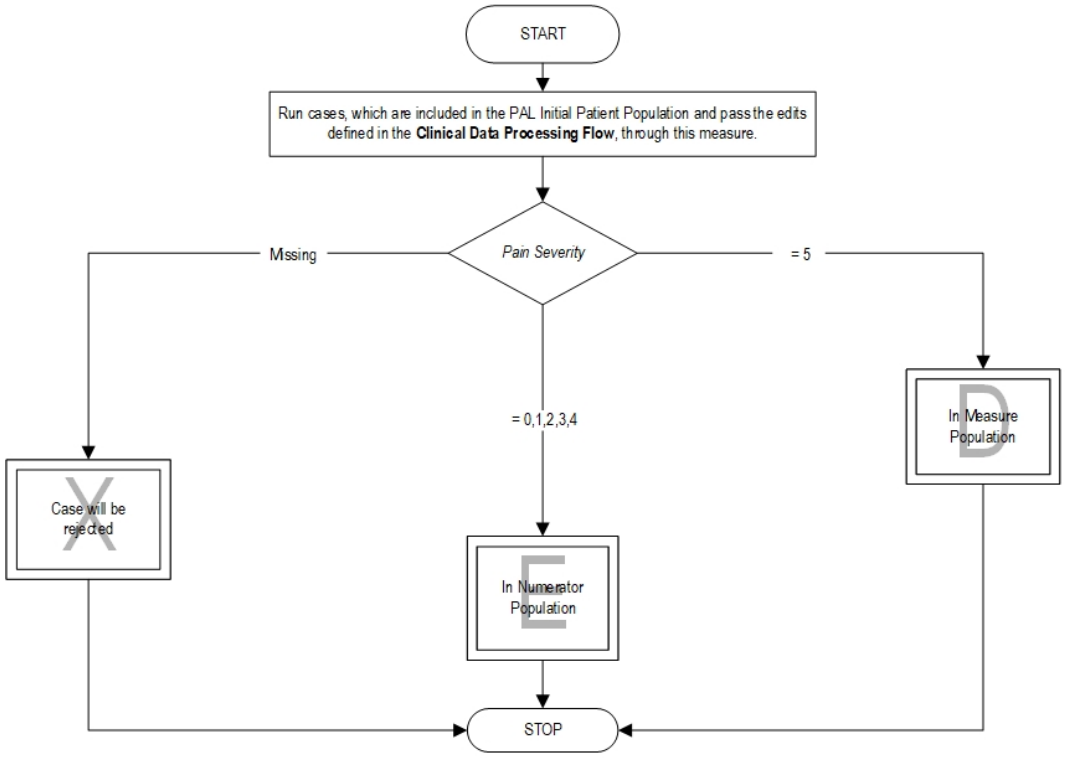
Measure Algorithm:

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.



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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

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> **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:

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- 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

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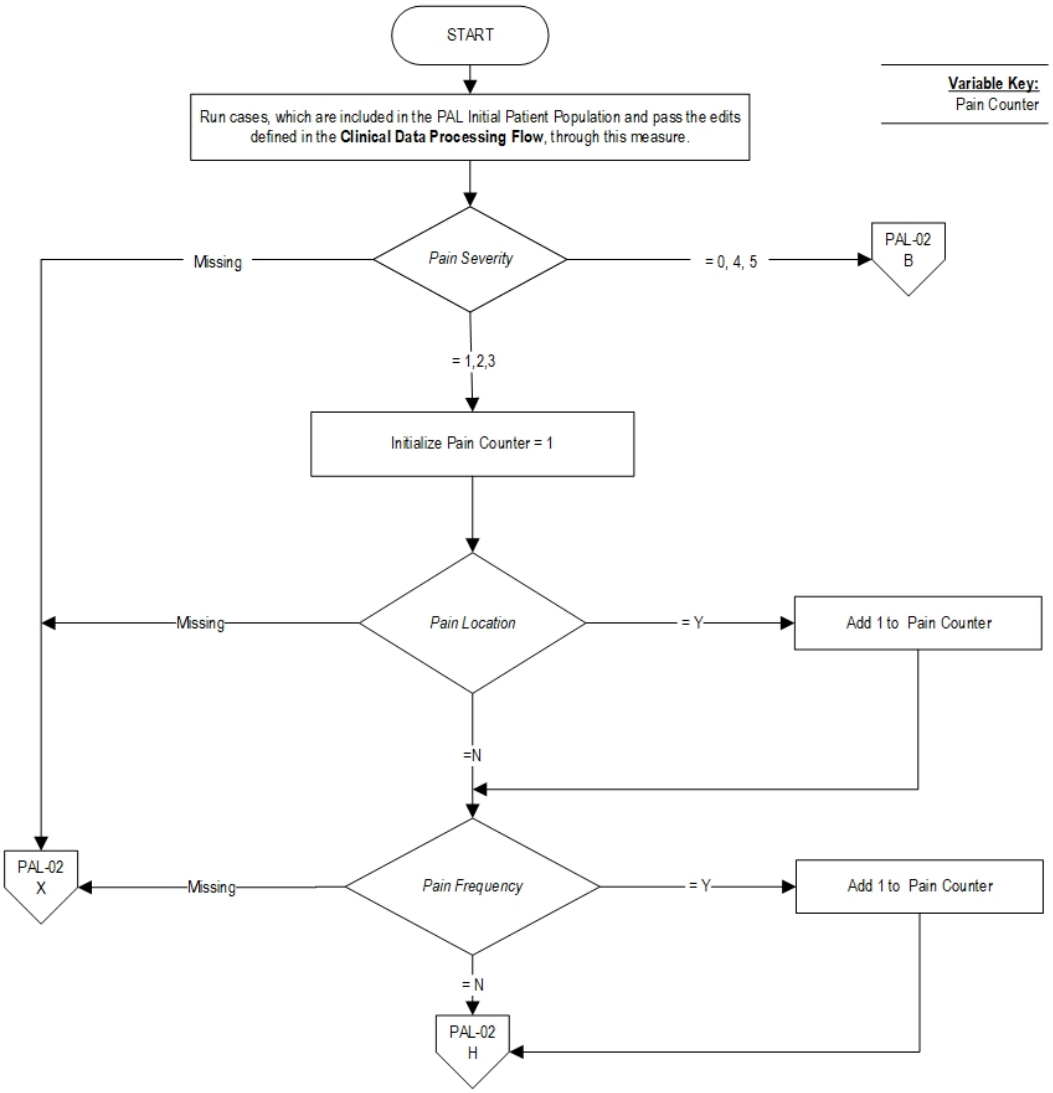
Measure Algorithm:

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.



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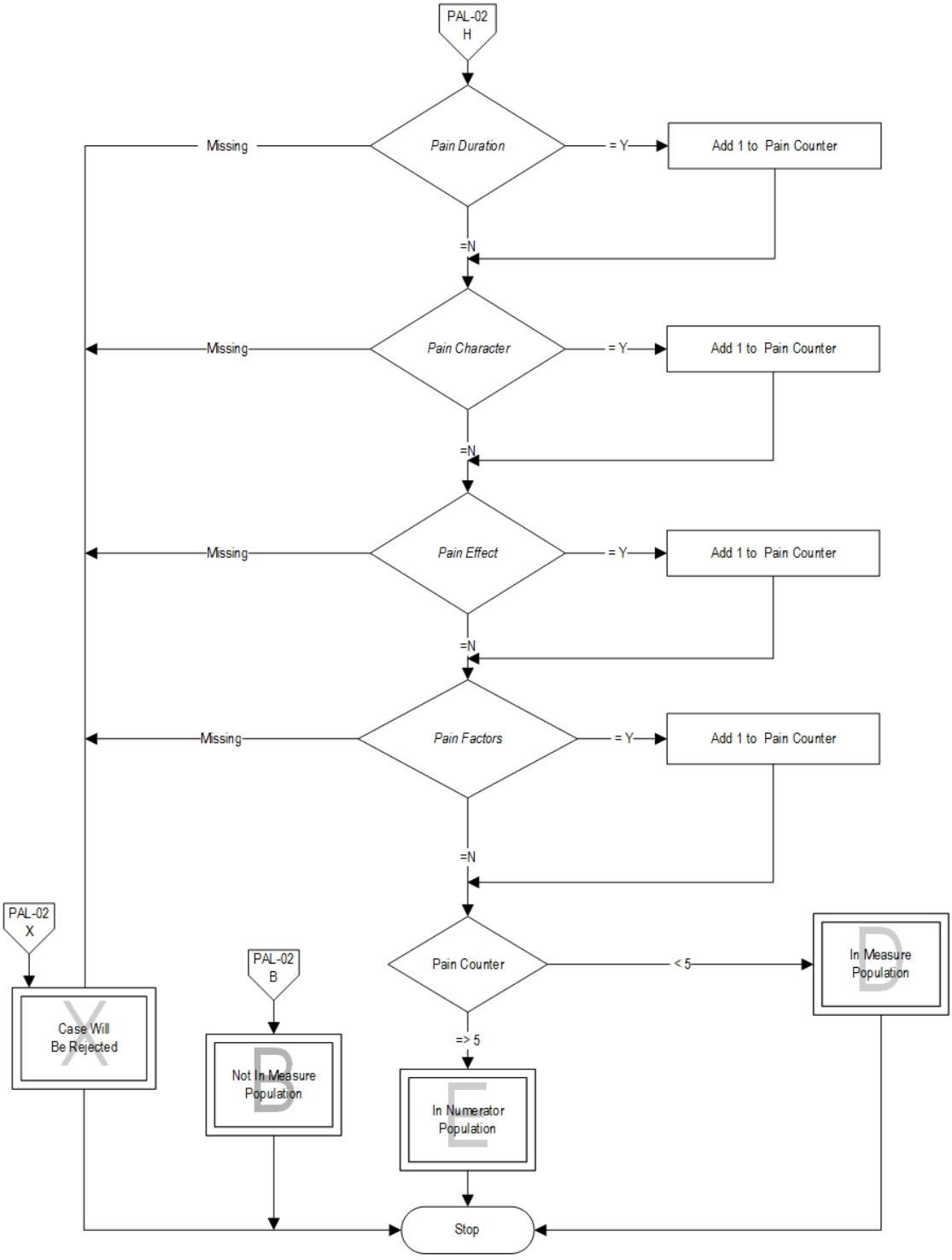

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Measure Information Form

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

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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

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- 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

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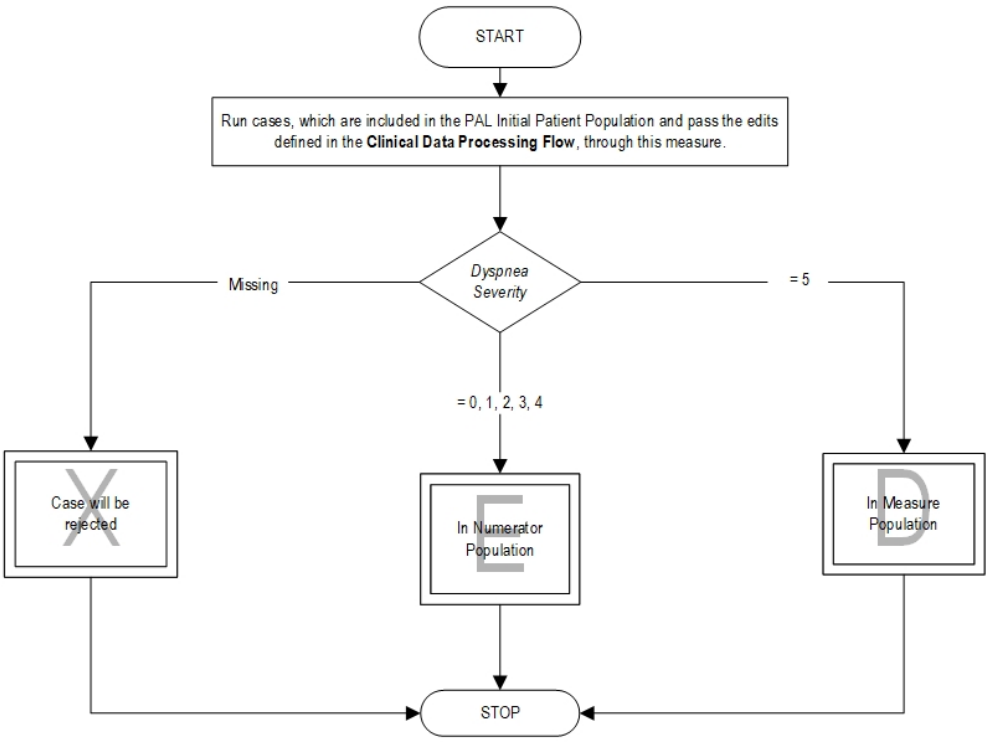
Measure Algorithm:

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.



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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:**

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- *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

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- 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

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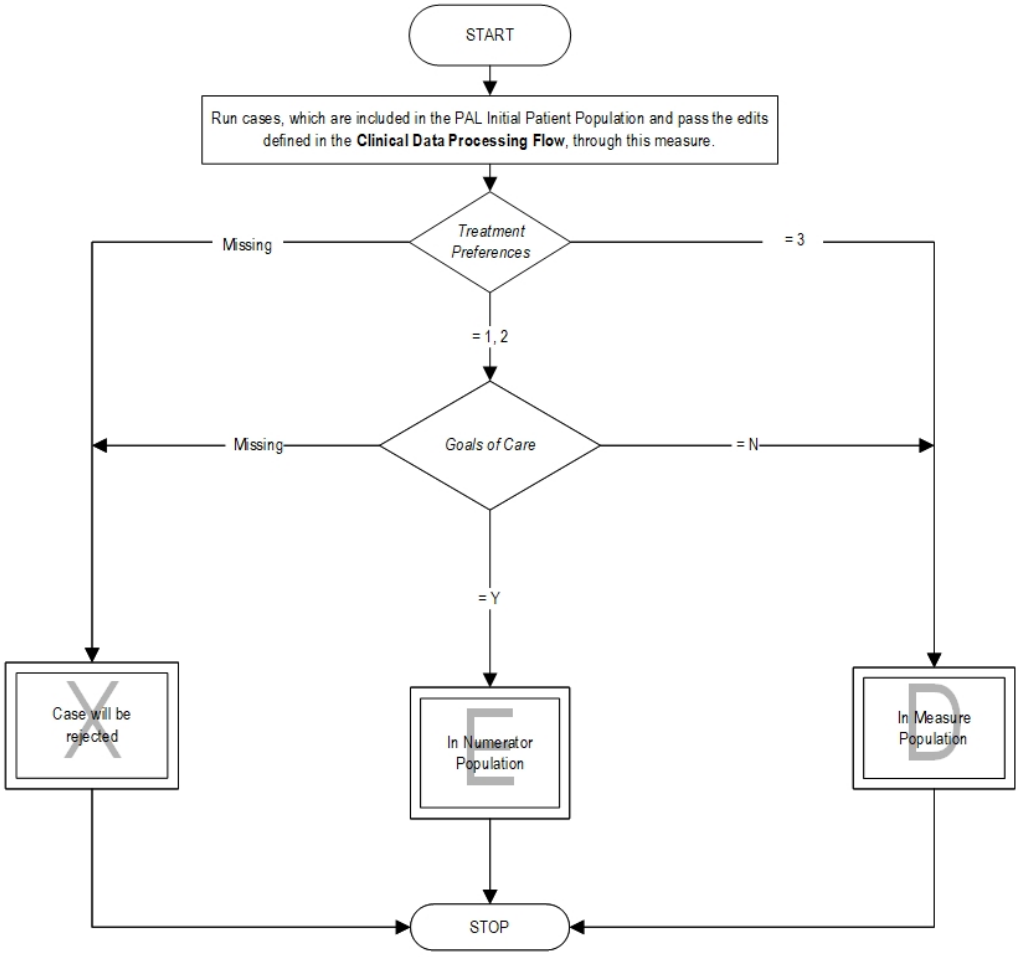
Measure Algorithm:

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.



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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

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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:

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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

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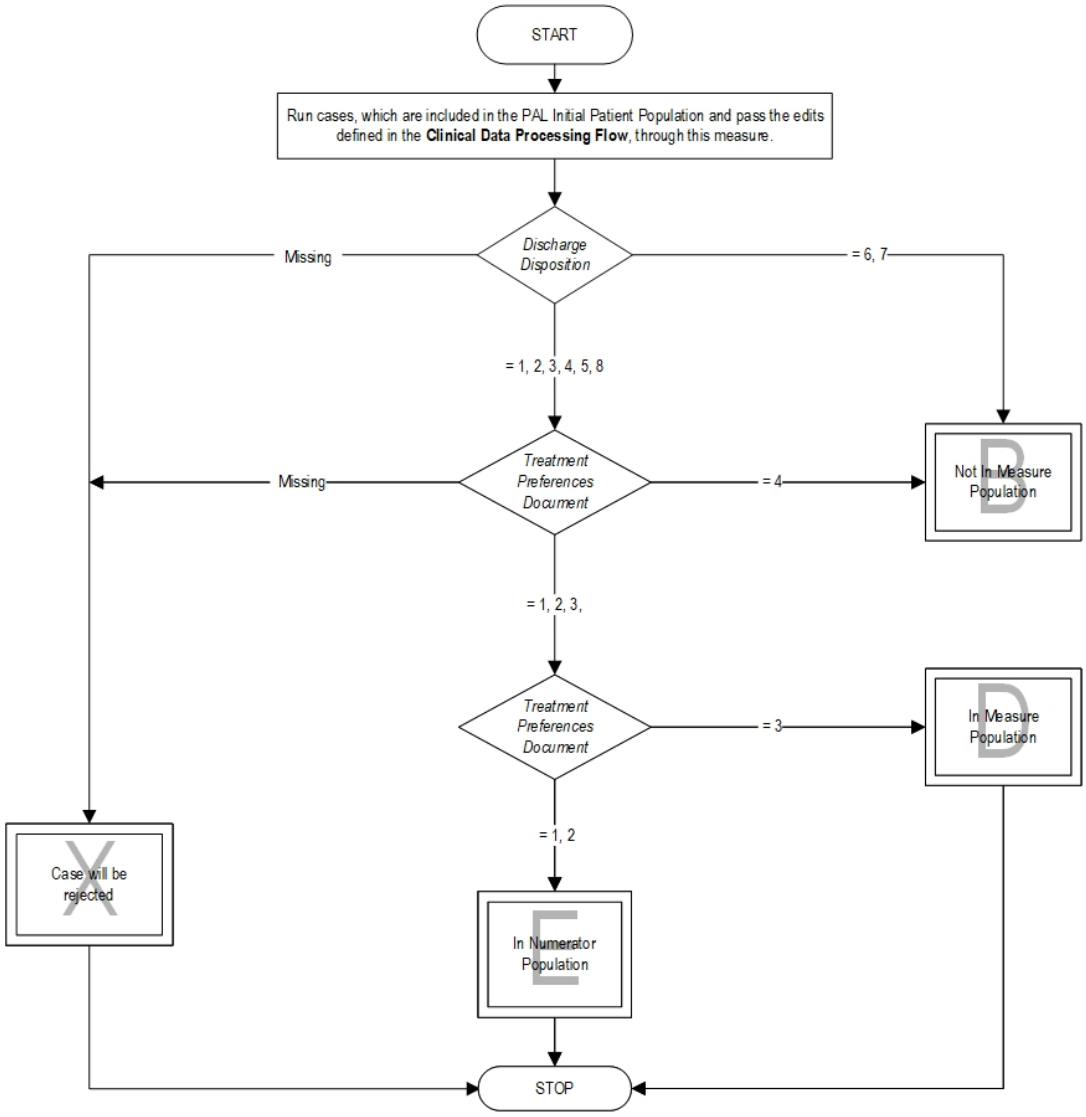
Measure Algorithm:

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.



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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
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

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Element Name	Collected For
Measure Category Assignment	All Records, Calculation, Used in calculation of the Joint Commission's aggregate data.
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

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

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Element Name	Collected For
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
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

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	Document Name	
	Acknowledgement	
	Appendix A	
	Appendix C	
	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	
	Joint Commission Clinical Data Processing Flow	
	Joint Commission National Quality Measures Data Processing	
	Missing and Invalid Data	
	Sampling	
	Table of Contents	
	Using the The Joint Commission's National Measure Specifications Manual	

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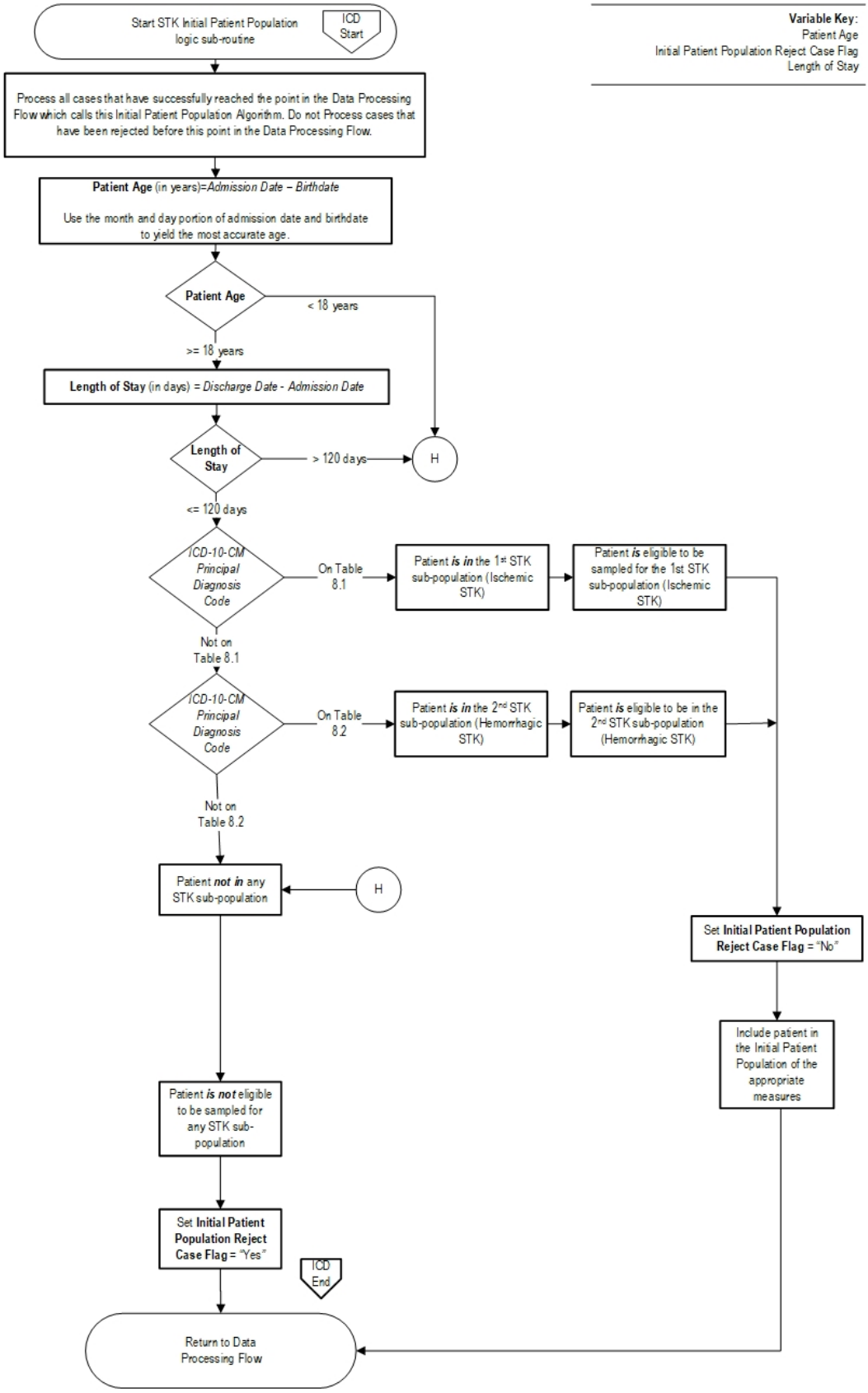
Initial Patient Population Algorithm



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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 Clinical Data Processing Flow which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Clinical Data Processing Flow.
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 Clinical Data Processing Flow in the Data Processing 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 Clinical Data Processing Flow in the Data Processing 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 Clinical Data Processing Flow in the Data Processing 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 Clinical Data Processing Flow in the Data Processing 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. Regardless of the option used, hospital samples

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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.

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	Patient level data must be processed in order to submit your aggregate data. Submission of aggregate data is still required. The required quarterly sample size would be 100% of the patient population or 5 cases for the quarter

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:

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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	Patient level data must be processed in order to submit your aggregate data. Submission of aggregate data is still required. The required quarterly sample size would be 100% of the patient population or 5 cases for the quarter

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

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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.
  - 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.

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    - 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. 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.

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.

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****NQF-ENDORSED VOLUNTARY CONSENSUS STANDARDS FOR HOSPITAL CARE****

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:**

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- 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:

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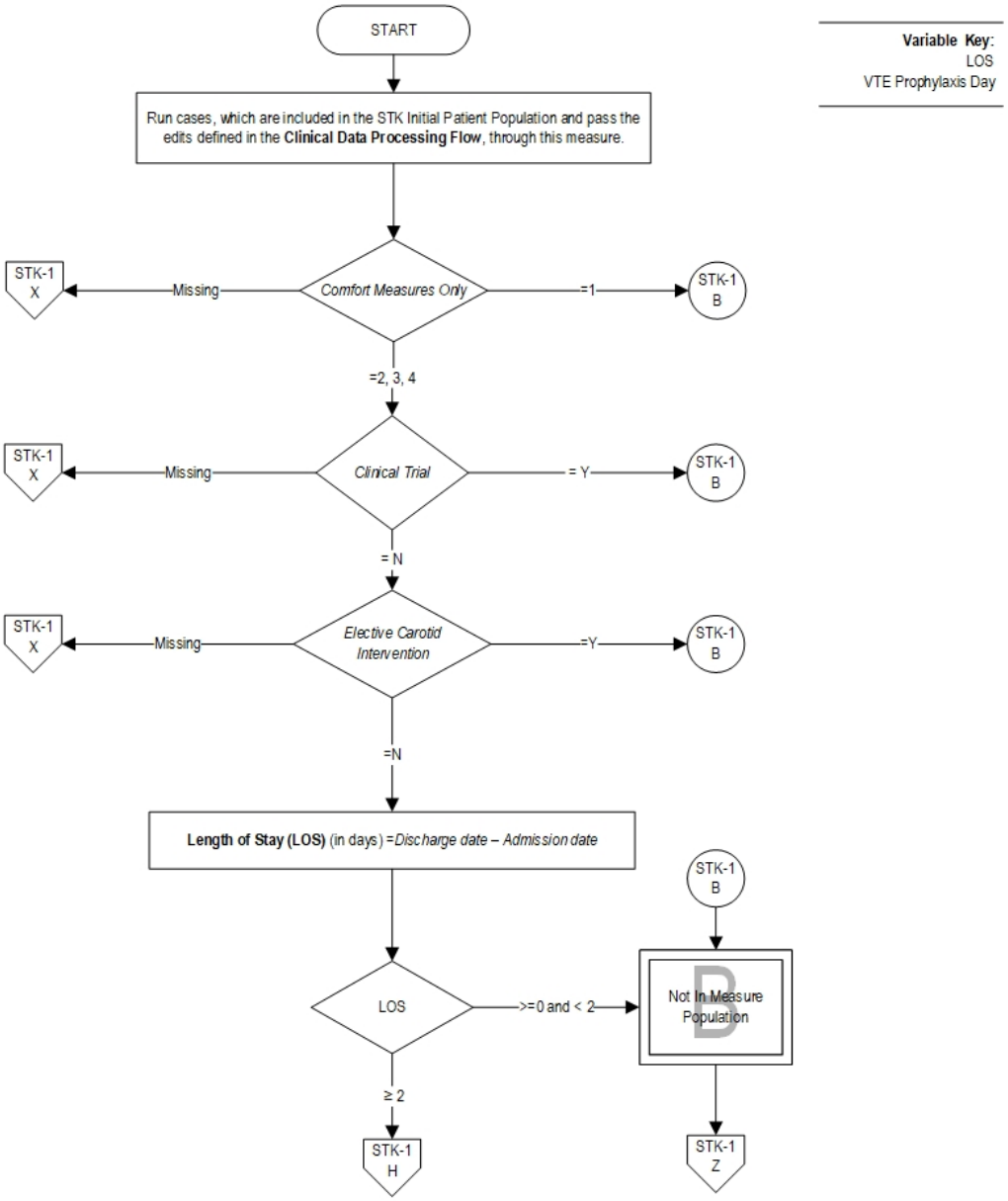
Measure Algorithm:

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



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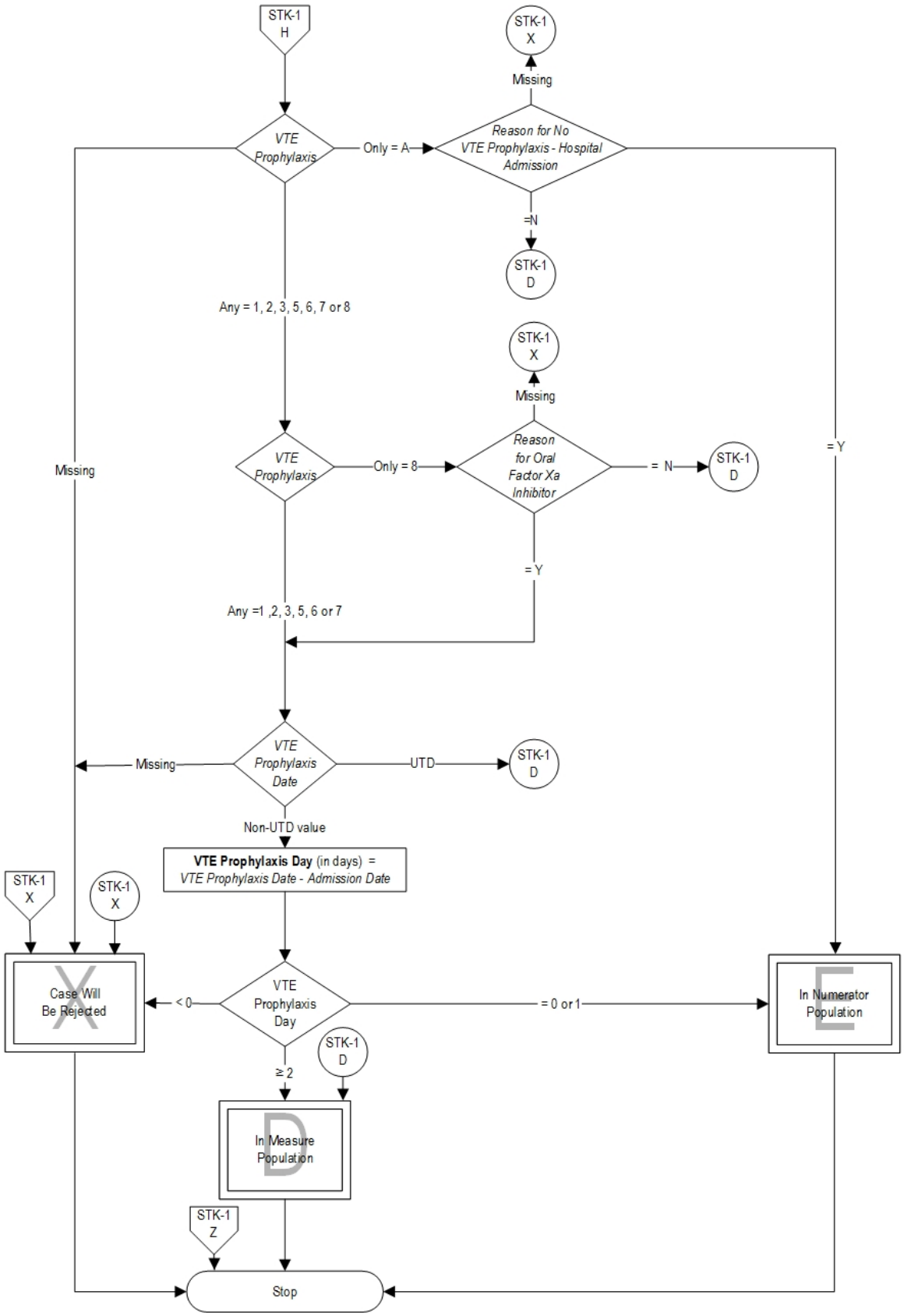

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****NQF-ENDORSED VOLUNTARY CONSENSUS STANDARDS FOR HOSPITAL CARE****

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.

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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*
- *Comfort Measures Only*
- *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.

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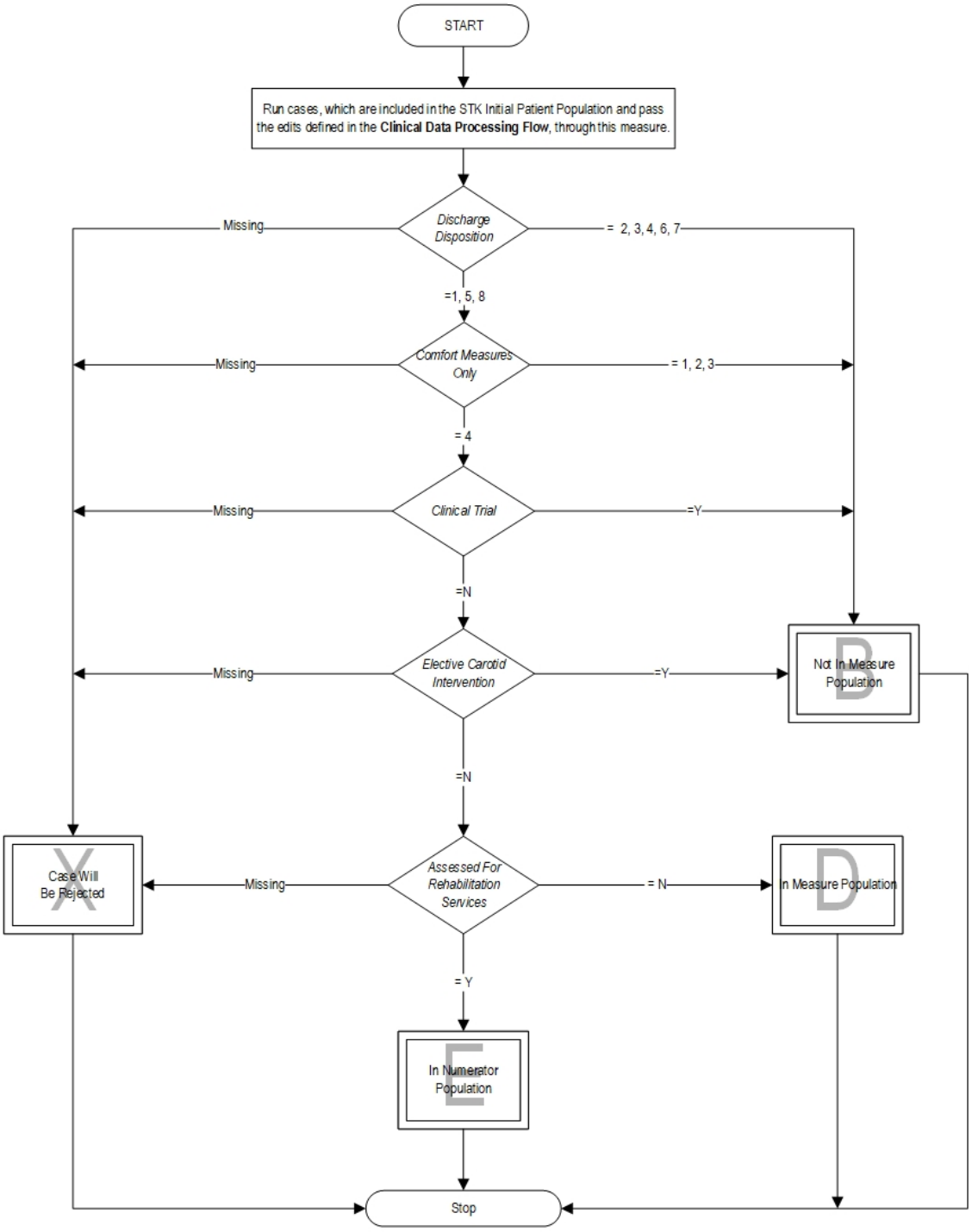
Measure Algorithm:

STK - 10: Assessed for Rehabilitation

Numerator: Ischemic or hemorrhagic stroke patients assessed for or who received rehabilitation services.
Denominator: Ischemic or hemorrhagic stroke patients.



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****NQF-ENDORSED VOLUNTARY CONSENSUS STANDARDS FOR HOSPITAL CARE****

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.

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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.

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

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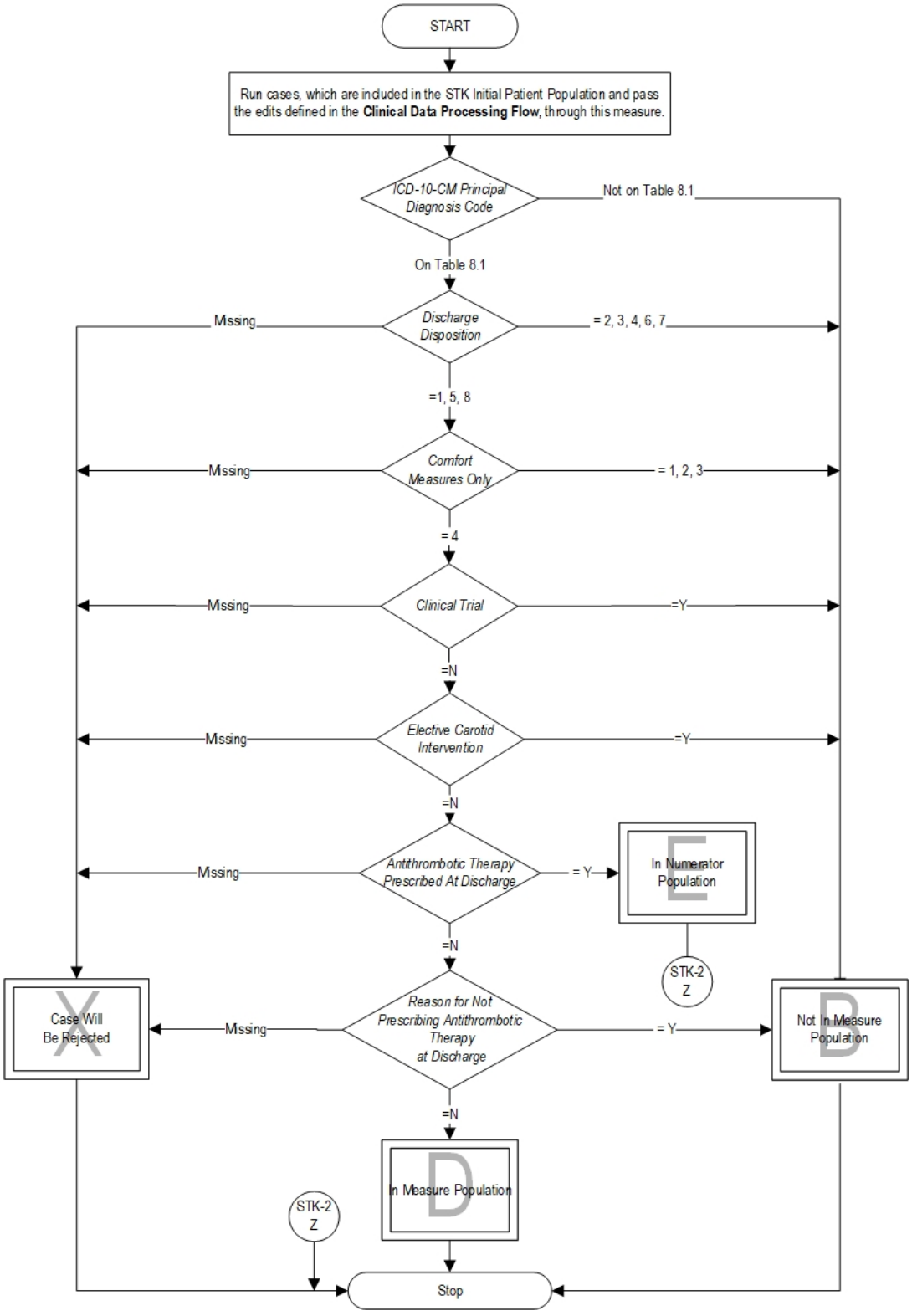
Measure Algorithm:

STK-2: Discharged on Antithrombotic Therapy

Numerator: Ischemic stroke patients prescribed antithrombotic therapy at hospital discharge

Denominator: Ischemic stroke patients.



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****NQF-ENDORSED VOLUNTARY CONSENSUS STANDARDS FOR HOSPITAL CARE****

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*

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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.

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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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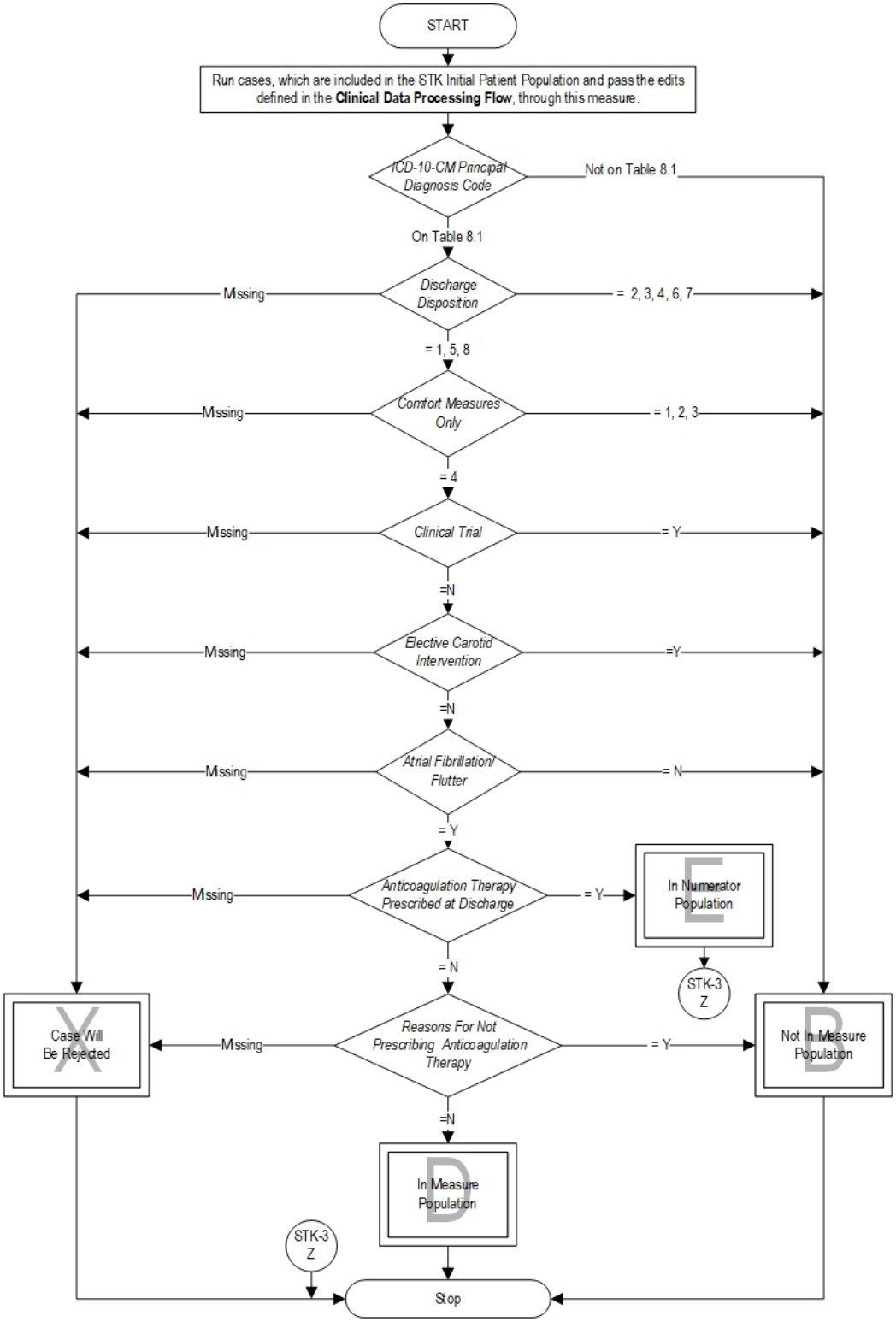
Measure Algorithm:

STK-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.



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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 (Class I, Level of Evidence A, American Heart Association/American Stroke Association (AHA/ASA), 2019). 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 r-tPA (alteplase) 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, despite the removal of many previous contraindications and warnings for alteplase therapy in recent years. Updated recommendations from the AHA/ASA in 2019 identify tenecteplase as a reasonable alternative to alteplase in acute ischemic stroke patients with minor neurological impairment and no major intracranial occlusion (0.4-mg/kg single IV bolus), or who are also eligible to undergo mechanical thrombectomy (0.25 -mg/kg single IV bolus, maximum 25 mg). Clinical evidence at this time is unclear whether tenecteplase is as effective as or more effective than alteplase (Class IIb, Level of Evidence BR). The administration of IV tenecteplase for ischemic stroke within or beyond 3 hours of stroke symptom onset has not been FDA approved.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

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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*

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- *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: 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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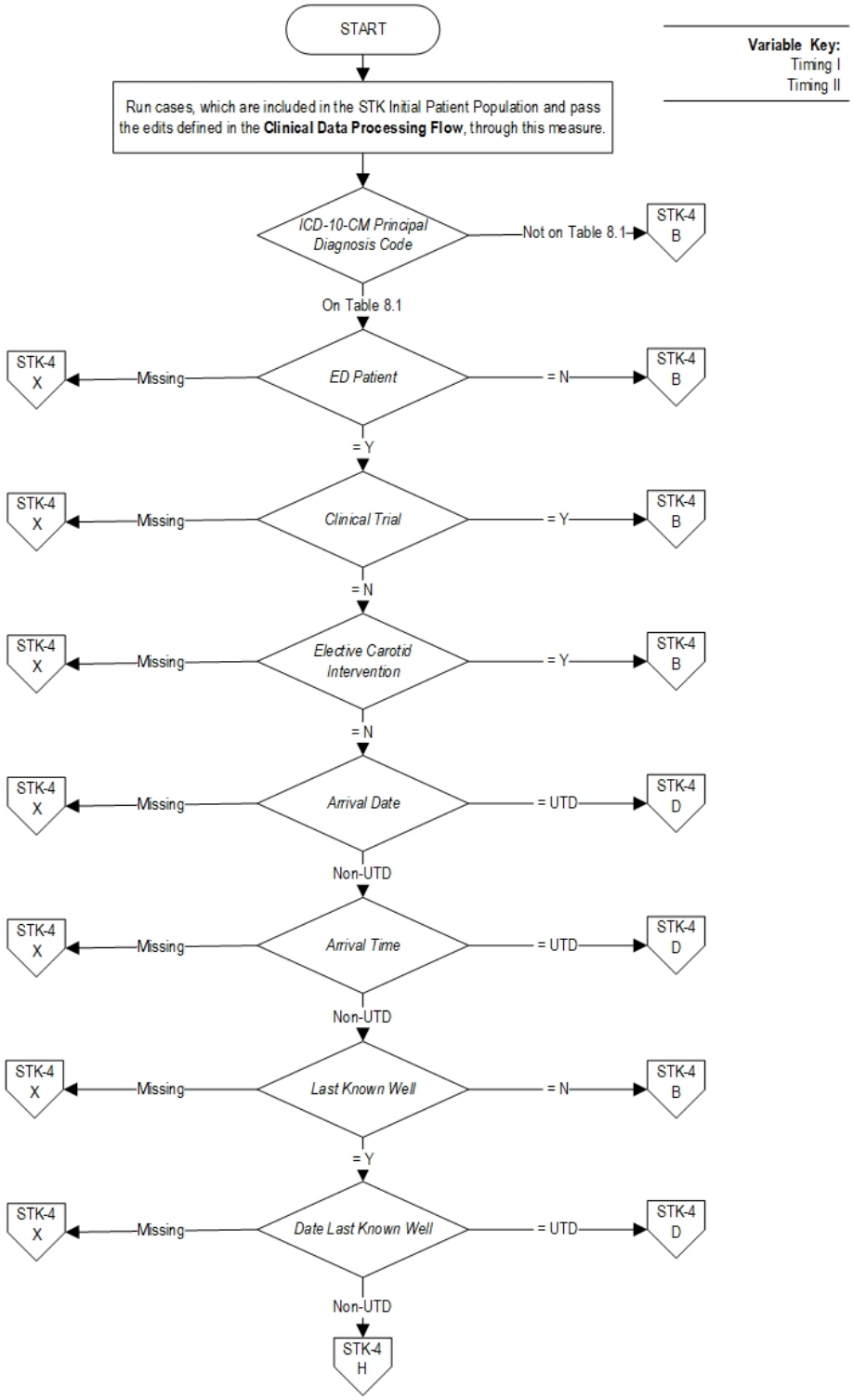
Measure Algorithm:

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.



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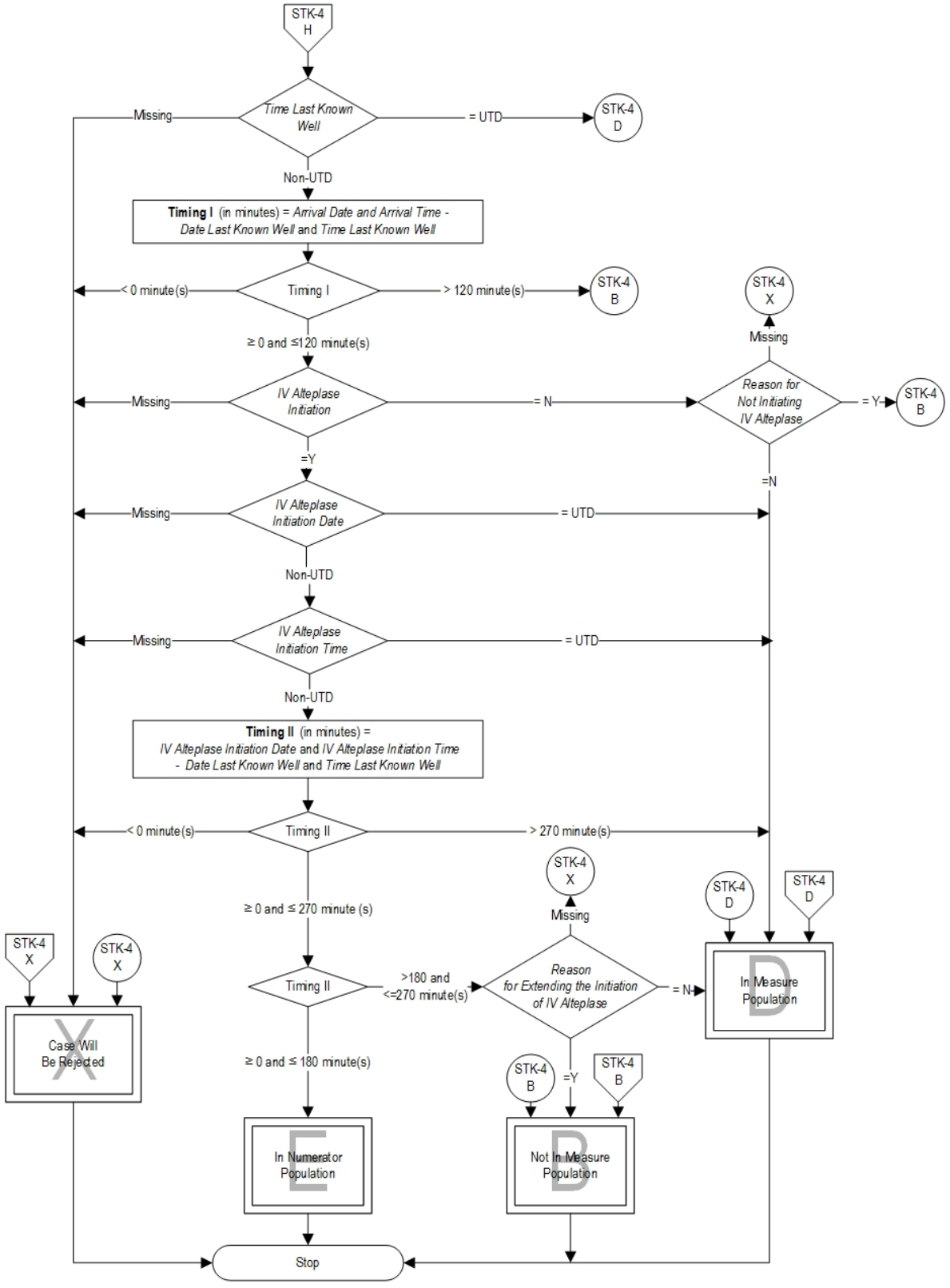

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****NQF-ENDORSED VOLUNTARY CONSENSUS STANDARDS FOR HOSPITAL CARE****

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

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- 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.

Selected References:

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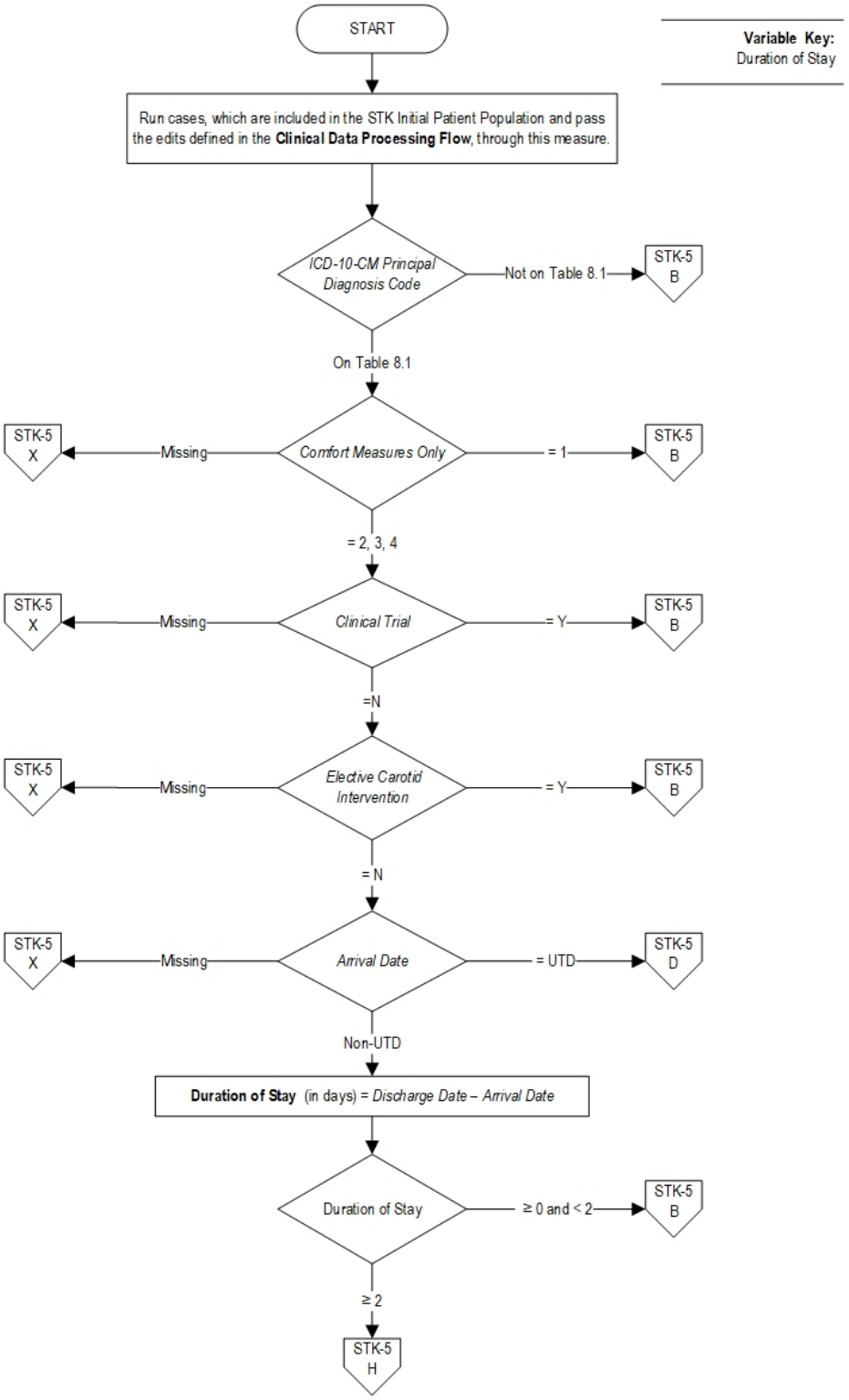
Measure Algorithm:

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.



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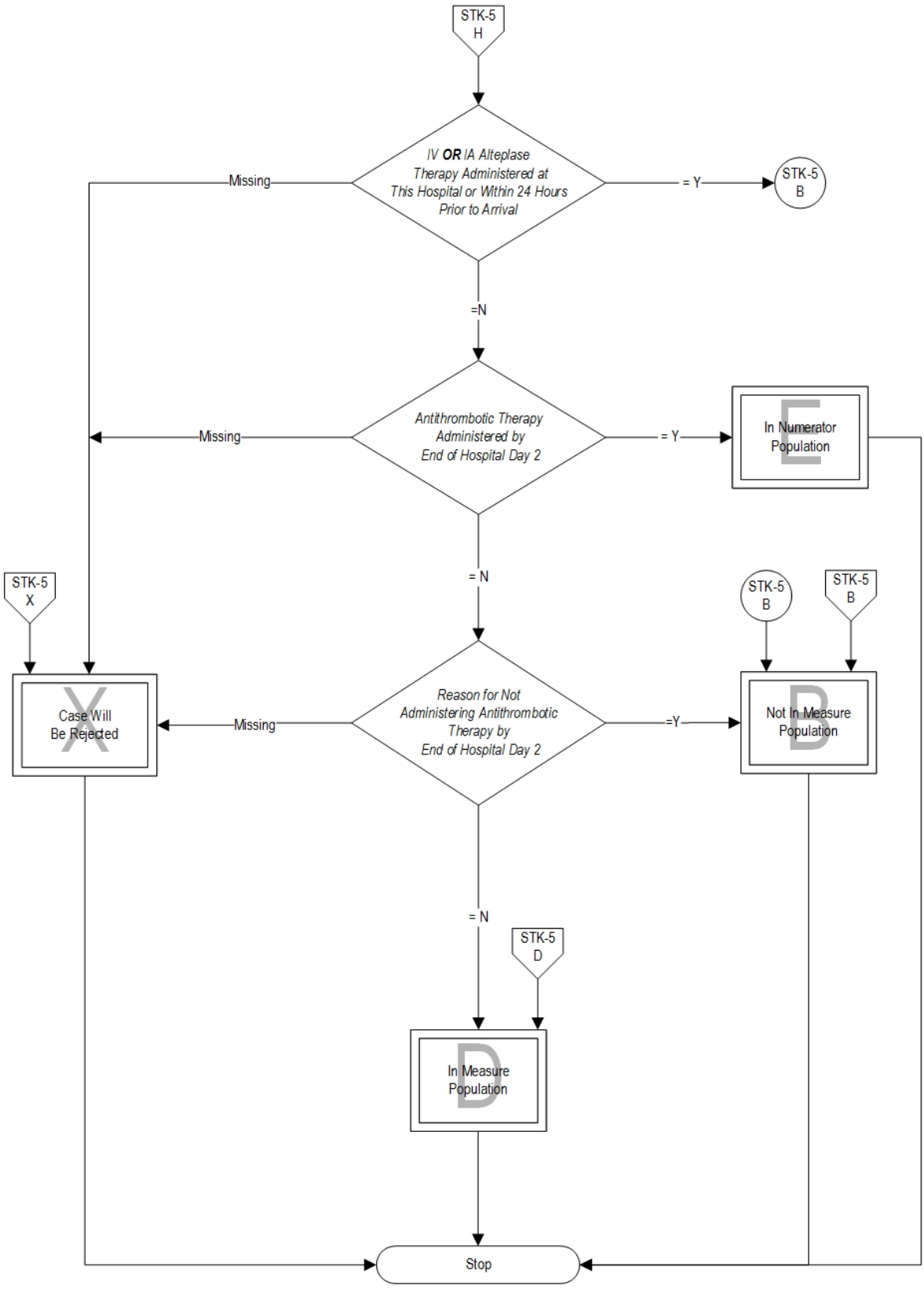

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****NQF-ENDORSED VOLUNTARY CONSENSUS STANDARDS FOR HOSPITAL CARE****

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:**

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- 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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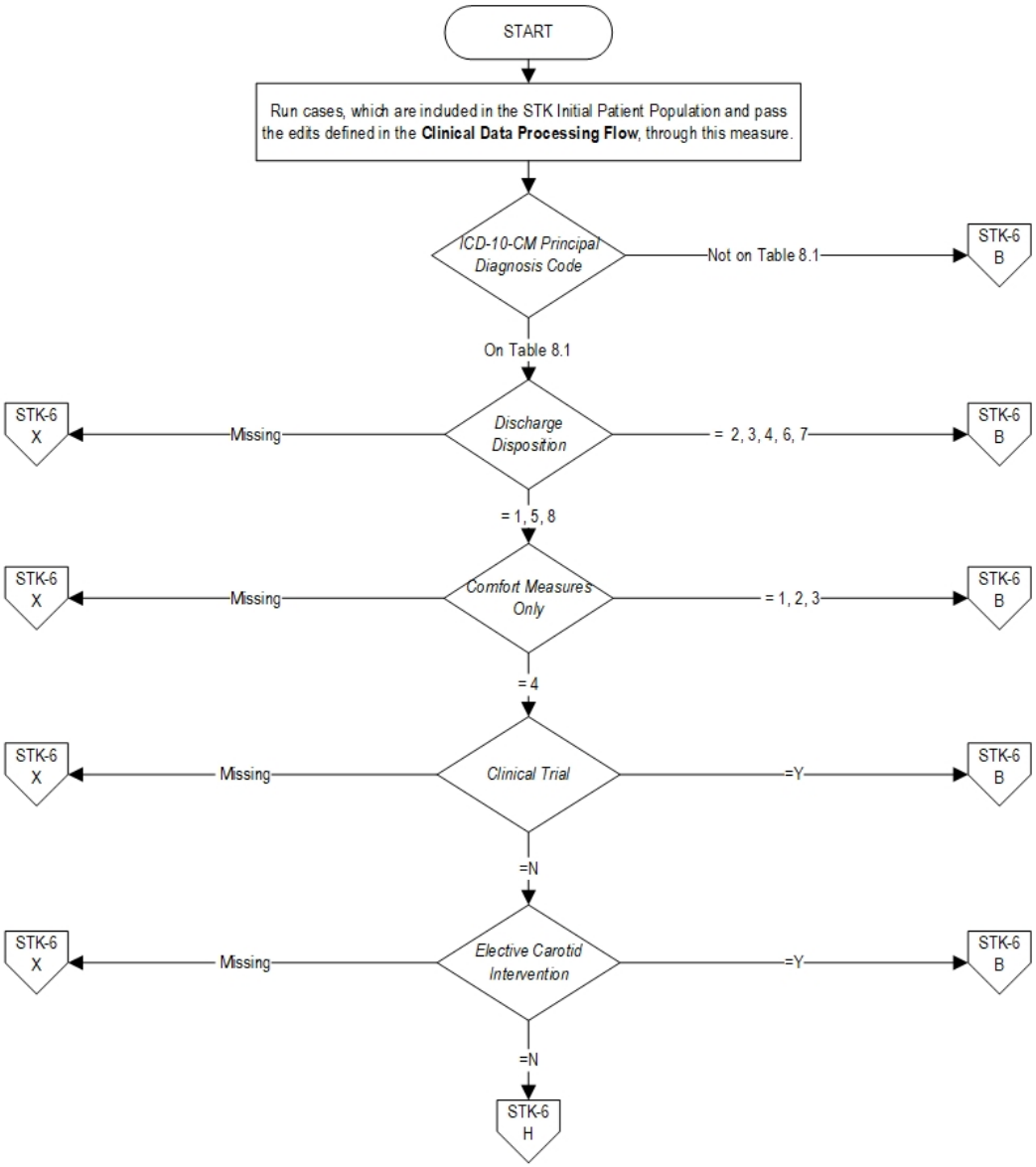
Measure Algorithm:

STK - 6: Discharged on Statin Medication

Numerator: Ischemic stroke patients prescribed statin medication at hospital discharge.

Denominator: Ischemic stroke patients.



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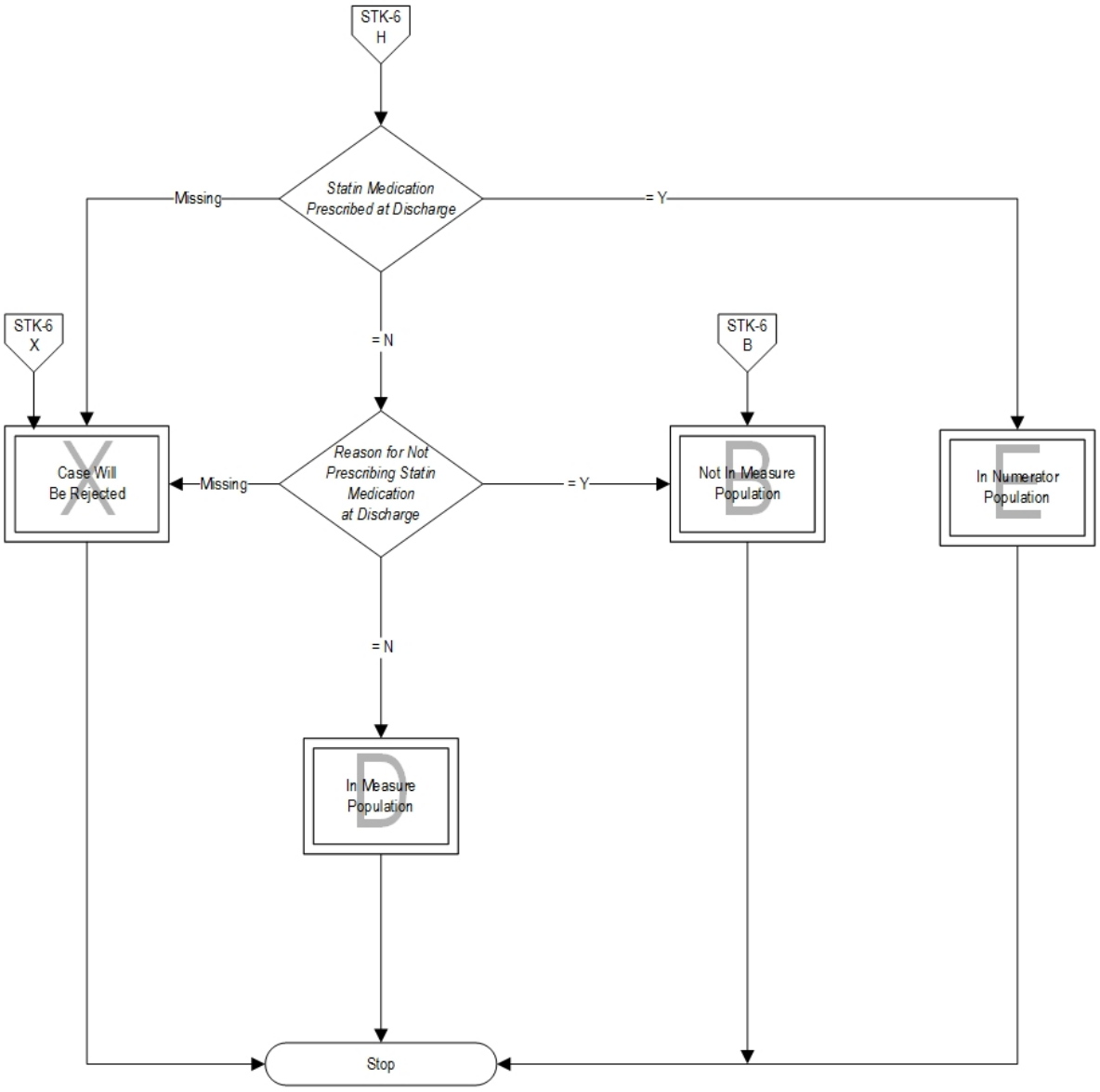

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Measure Information Form

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*

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- *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*
- *Comfort Measures Only*
- *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.

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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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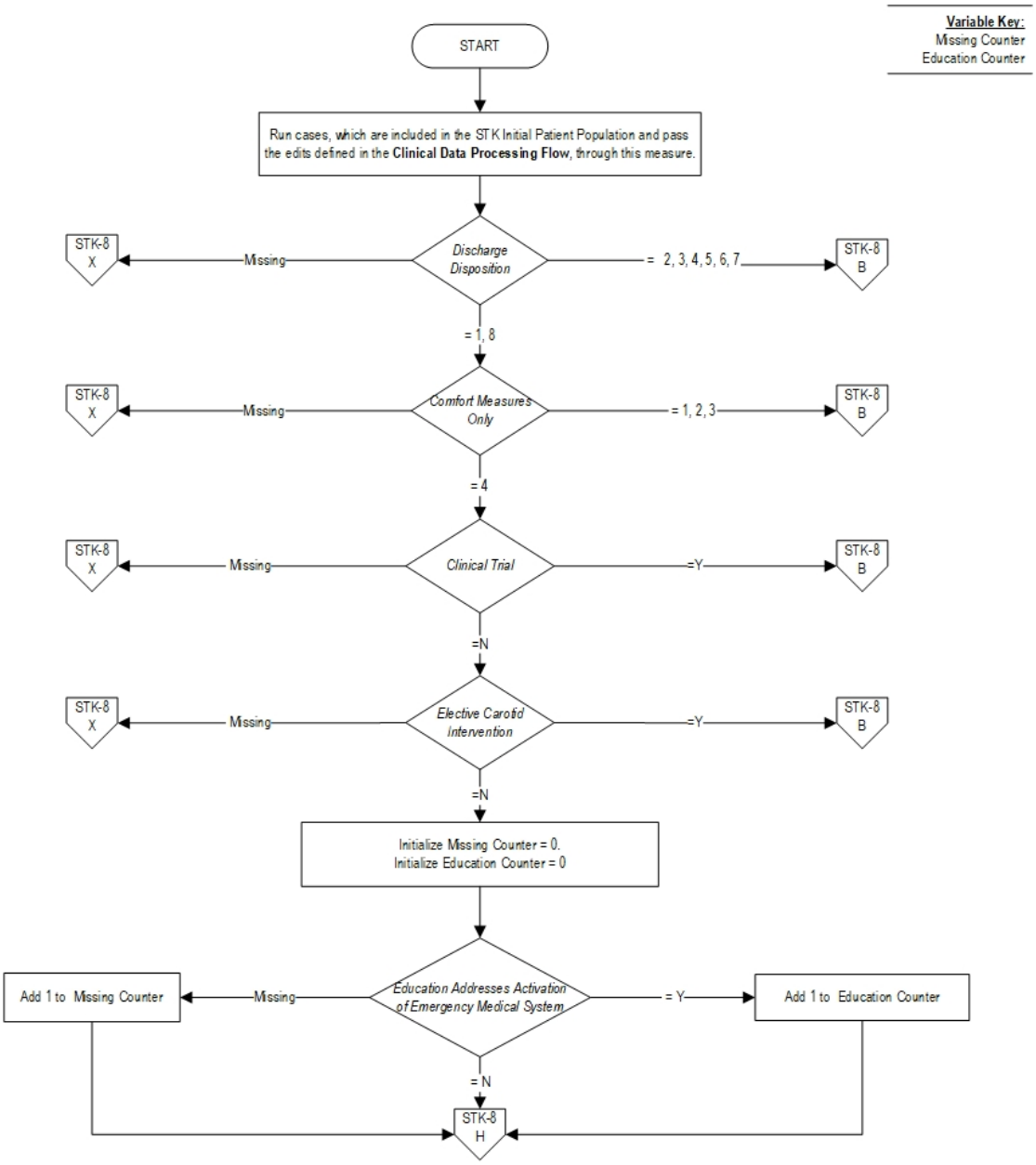
Measure Algorithm:

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.



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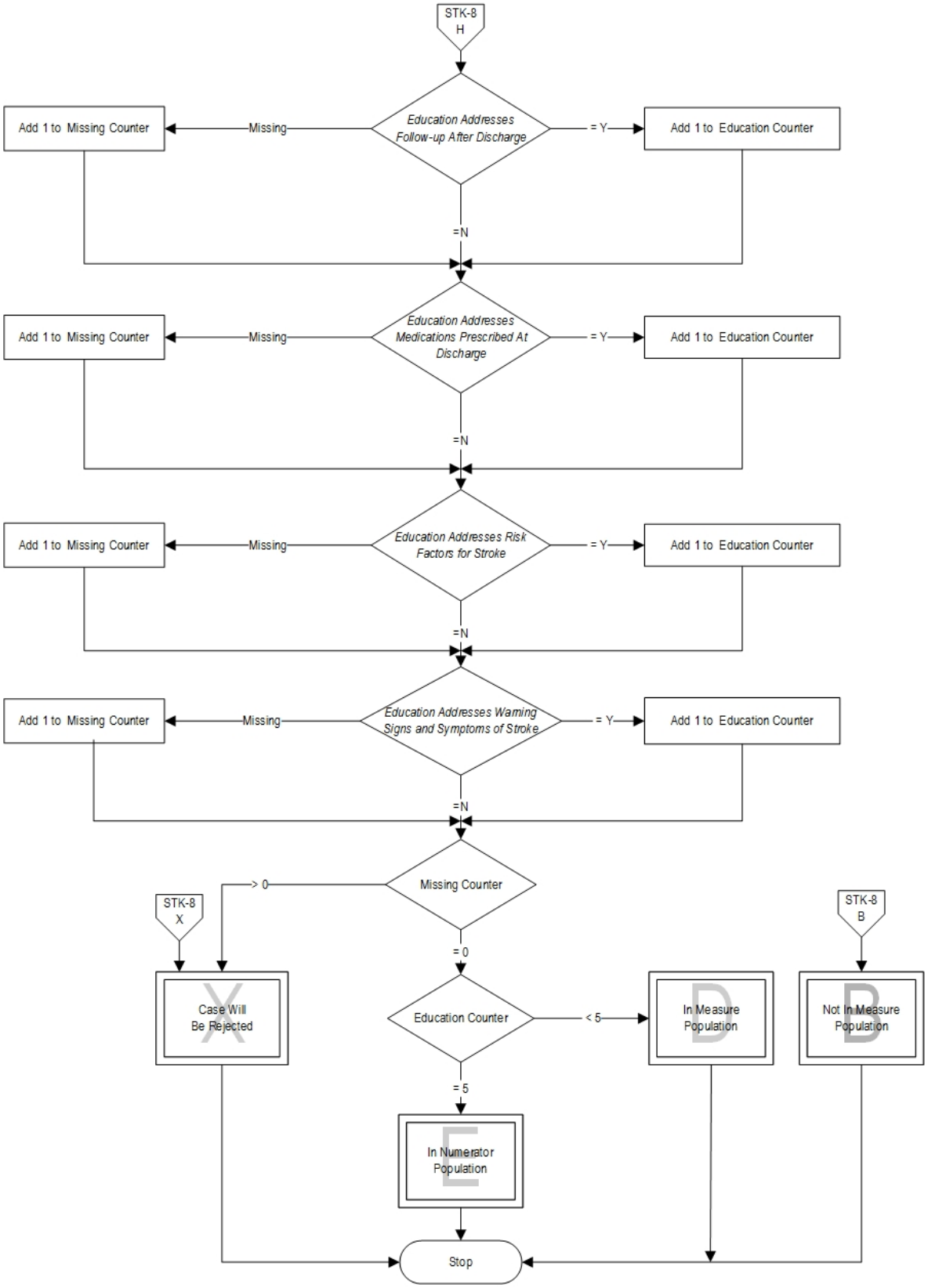

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Stroke Outpatient (STK-OP)

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
Measure Category Assignment	All Records, Calculation, Used in calculation of the Joint Commission's aggregate data.
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

Measure Set Specific Data Elements

Element Name	Collected For
Arrival Time	STK-OP-1

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Element Name	Collected For
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
MER Eligibility	STK-OP-1
Outpatient Encounter Date	STK-OP-1
Suspected Large Vessel Occlusion (LVO)	STK-OP-1

Related Materials

Document Name
Acknowledgement
Appendix A
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
Joint Commission Clinical Data Processing Flow
Joint Commission National Quality Measures Data Processing
Missing and Invalid Data
Sampling
Table of Contents
Using the The Joint Commission's National Measure Specifications Manual

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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.

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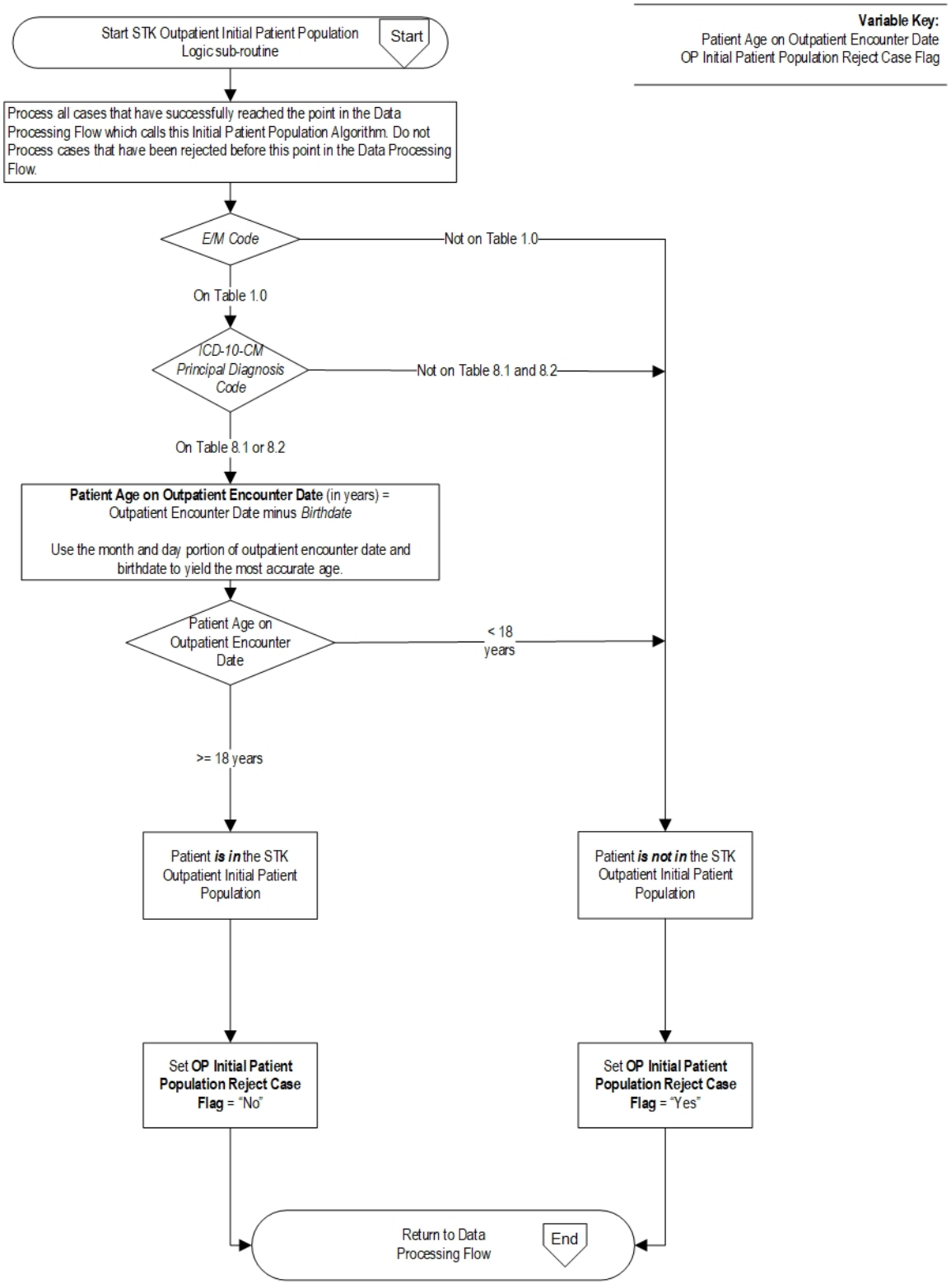
Stroke Outpatient (STK-OP) Initial Patient Population Algorithm



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Measure Information Form

Measure Set: Stroke Outpatient (STK-OP)

Set Measure ID: STK-OP-1

Set Measure ID	Performance Measure Name
STK-OP-1a	Overall Rate (Not Reported)
STK-OP-1b	Hemorrhagic Stroke
STK-OP-1c	Ischemic Stroke; IV Alteplase Prior to Transfer (Drip and Ship) **RETIRED 7/1/2021**
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-1g	Ischemic Stroke; IV Alteplase Prior to Transfer, LVO and MER Eligible
STK-OP-1h	Ischemic Stroke; IV Alteplase Prior to Transfer, LVO and NOT MER Eligible
STK-OP-1i	Ischemic Stroke; IV Alteplase Prior to Transfer, No LVO

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).

In 2013, The Brain Attack Coalition recommended that stroke transfers occur within 2 hours of patient arrival at the referring stroke center (Alberts, 2013). Since that time, faster door-in-door-out (DIDO) times have been reported for specific groups of stroke patients. For hospitals without an on-site mechanical thrombectomy (MT) service, shorter door-in-door-out (DIDO) times should be the goal. Choi and colleagues recently reported a median DIDO time of 86 minutes (IQR, 65–111) for acute ischemic stroke patients transferred out for potential MT. During working hours (0800–1700 hours), a median DIDO time of 59 minutes (IQR, 51–80) was achieved (Choi, 2019). Prolonged transfer times may result in worse outcomes for MT-eligible patients with evolving large vessel

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occlusion (ELVO) who are without successful reperfusion. Higher NIHSS scores have been noted at discharge and 90 days (McTaggert, 2018).

Reducing the time stroke patients remain in the emergency department (ED) can improve access to a higher-level of stroke care, 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-1d Time (in minutes) from ED arrival to transfer of an ischemic stroke patient (no IV alteplase given 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 alteplase 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 alteplase given prior to transfer, no LVO) to another hospital

STK-OP-1g Time (in minutes) from ED arrival to transfer of an ischemic stroke patient (IV alteplase prior to transfer (drip and ship), LVO and MER eligible) to another hospital

STK-OP-1h Time (in minutes) from ED arrival to transfer of an ischemic stroke patient (IV alteplase prior to transfer (drip and ship), LVO and NOT MER eligible) to another hospital

STK-OP-1i Time (in minutes) from ED arrival to transfer of an ischemic stroke patient (IV alteplase prior to transfer (drip and ship), 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

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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*
- *MER Eligibility*
- *Outpatient Encounter Date*
- *Suspected Large Vessel Occlusion (LVO)*

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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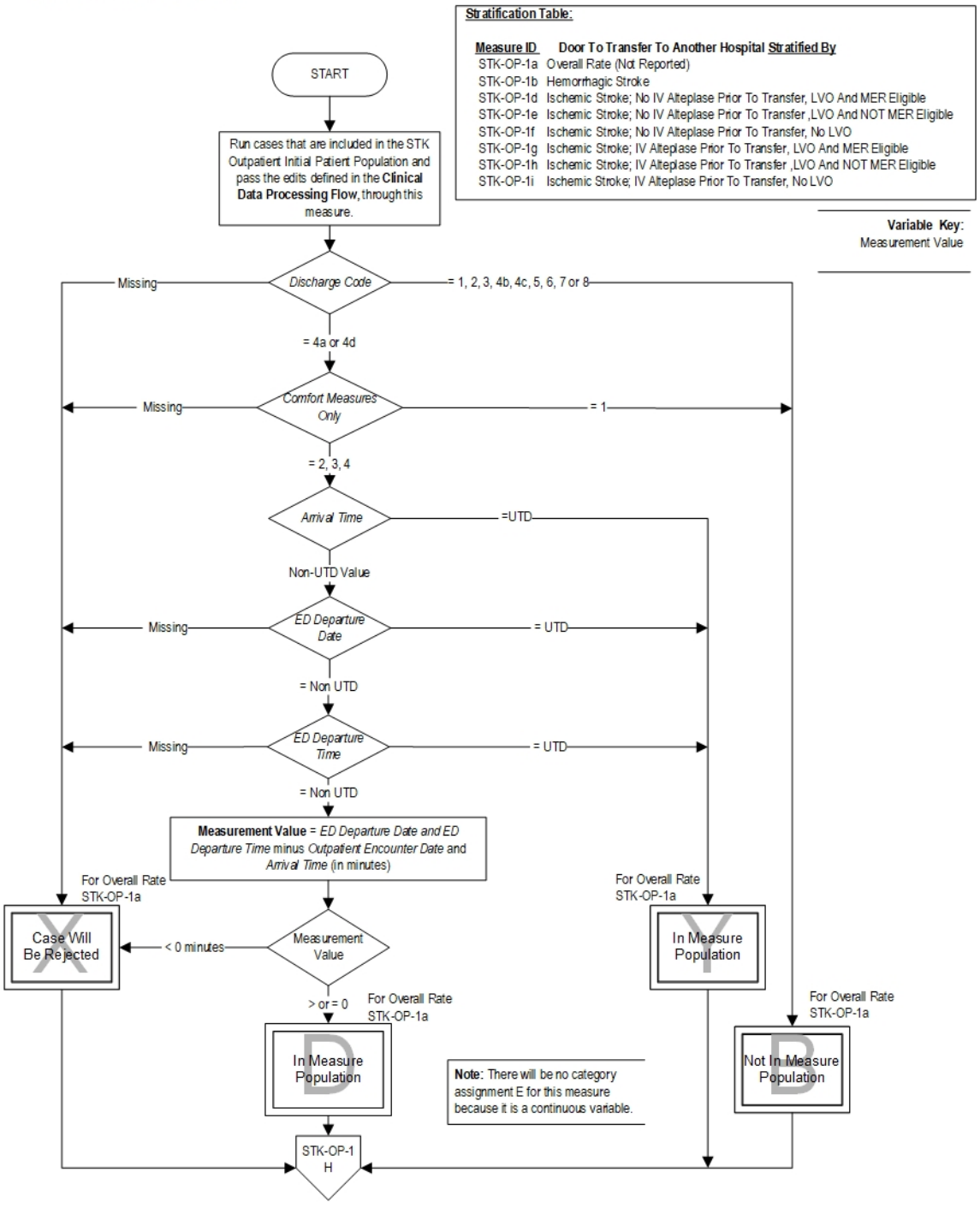
Measure Algorithm:

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.



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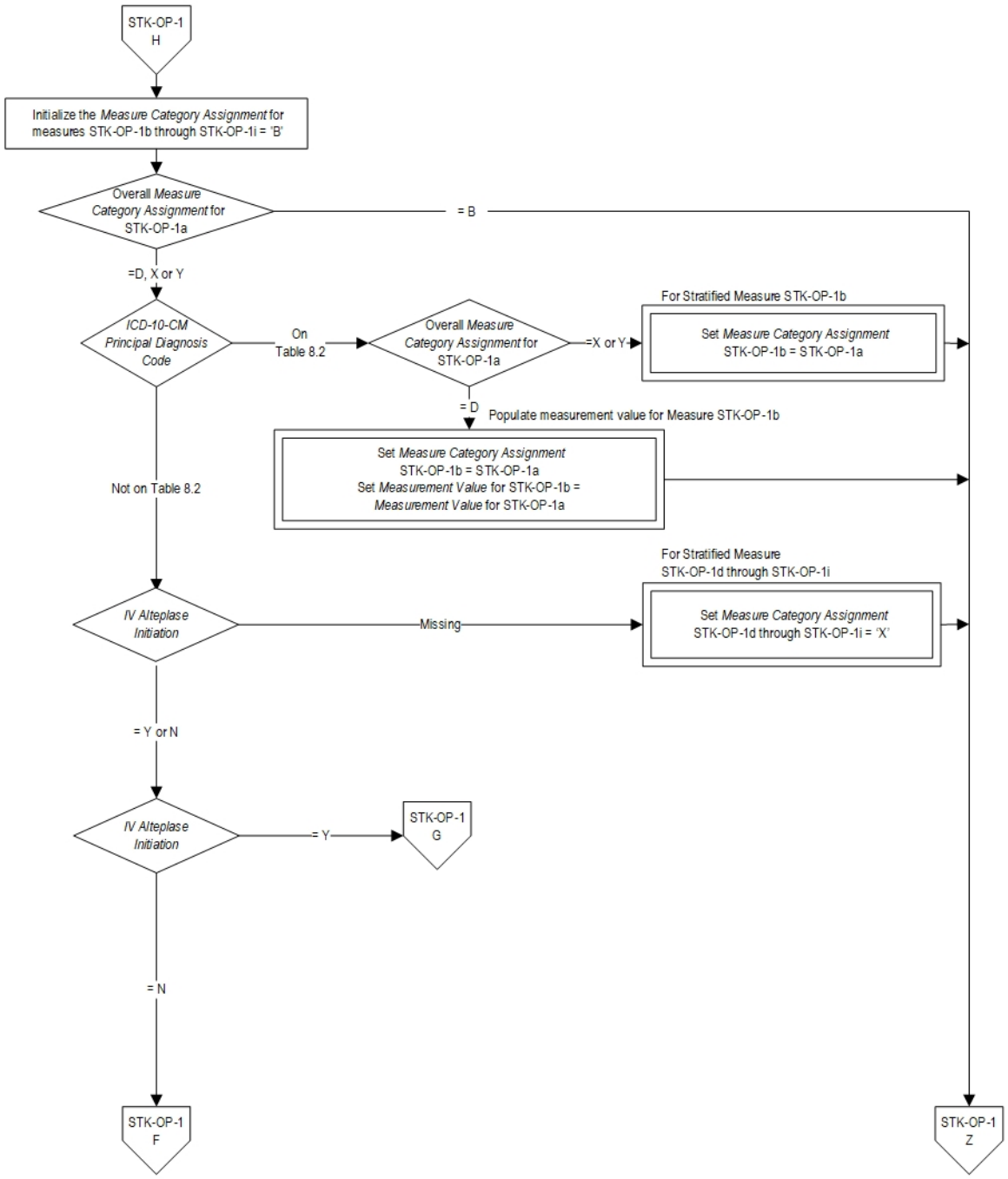

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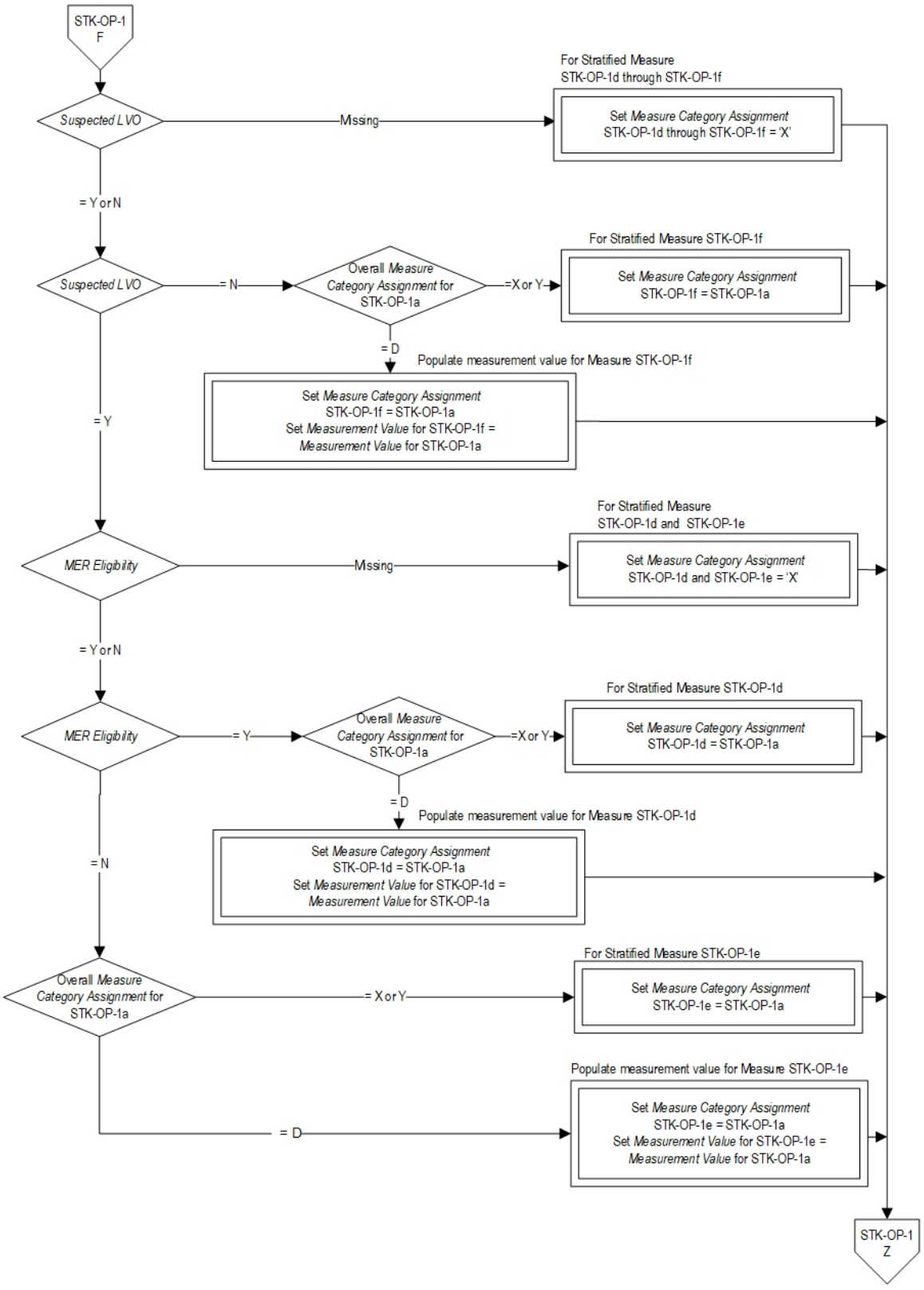

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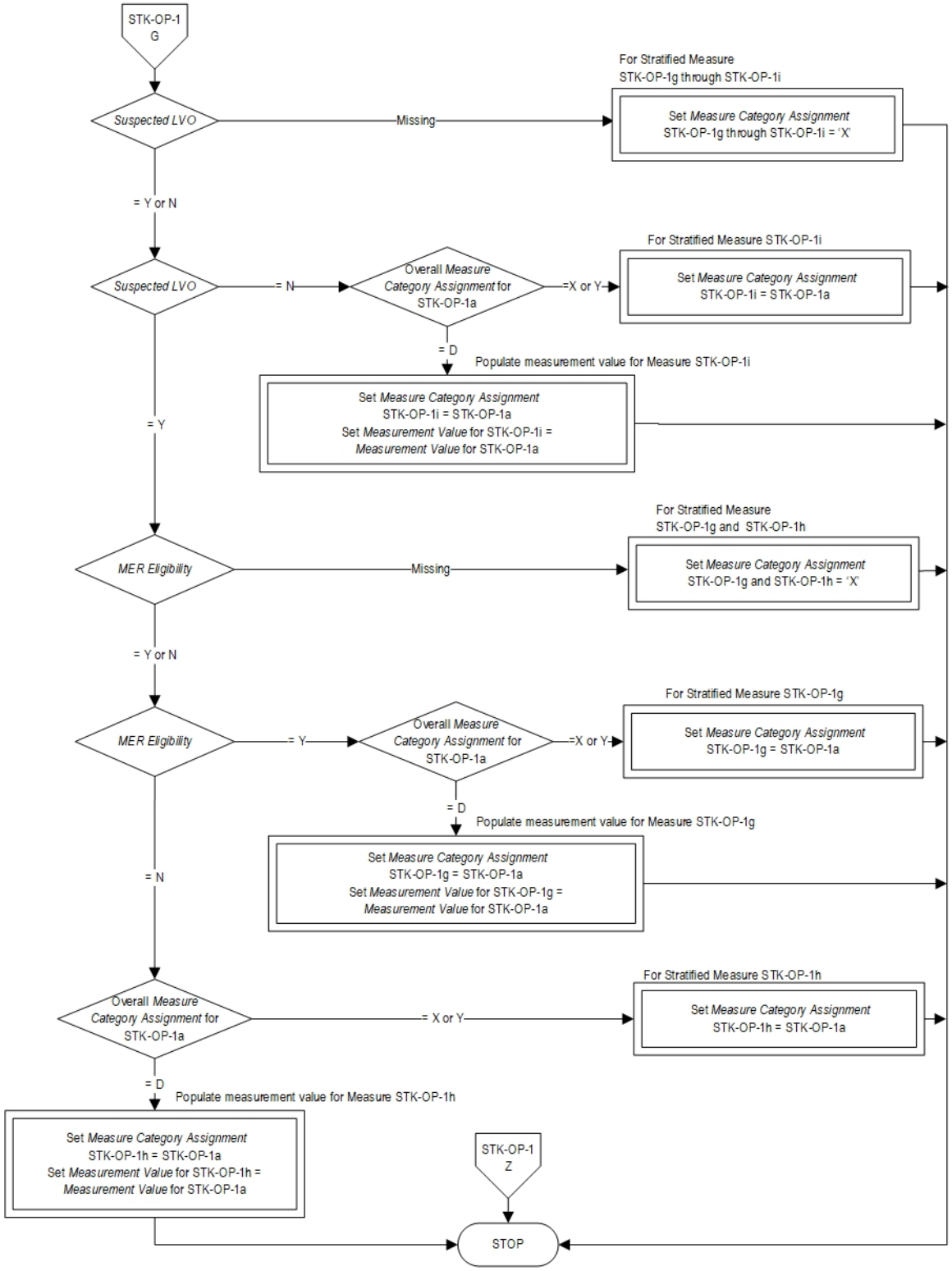

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Total Hip and Total Knee Replacement Inpatient (THKR-IP)

Set Measures

Set Measure ID	Measure Short Name
THKR-IP-1	Regional Anesthesia
THKR-IP-2	Postoperative Ambulation on Day of Surgery
THKR-IP-3	Discharged to Home
THKR-IP-4	Preoperative Functional/Health Status Assessment
THKR-IP-5	Postoperative Functional/Health Status Assessment

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 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 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,

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Measure Set Specific Data Elements

Element Name	Collected For
Ambulation	THKR-IP-2
Ambulation Date	THKR-IP-2
Ambulation Time	THKR-IP-2
Discharge Disposition	THKR-IP-2, THKR-IP-3
PACU Discharge Date	THKR-IP-2
PACU Discharge Time	THKR-IP-2
Postoperative Assessments Completed	THKR-IP-5
Postoperative Assessments Completion Date	THKR-IP-5
Postoperative ICU Admit or Transfer	THKR-IP-2
Preoperative Assessments Completed	THKR-IP-4
Preoperative Assessments Completion Date	THKR-IP-4
Reason for No Regional Anesthesia	THKR-IP-1
Reason for Not Ambulating the Day of Surgery	THKR-IP-2
Reason for Not Discharging Patient to Home	THKR-IP-3
Regional Anesthesia	THKR-IP-1
Resident of Other Health Care Facility	THKR-IP-3

THKR-IP Initial Patient Population

The THKR measure set is unique in that there are two distinct strata within the measure set, each identified by a specific group of principal procedure codes, or lack thereof. The patients in each stratum are counted in the Initial Patient Population of multiple measures. The inpatient population is defined as a patient who is hospitalized overnight. ICD-10 PCS codes are utilized to bill inpatient and observation cases when the patient undergoes a procedure. Any patient who is listed as an inpatient or observation and has surgery that is billed using an ICD-10 PCS code should be assigned to the inpatient bucket to determine patient volumes and cases for abstraction within the THKR performance measures.

The population of the THKR measure set is identified using 6 data elements:

- ICD-10-PCS principal procedure code
- Admission Date

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- Birthdate
- Discharge Date
- ICD-10-PCS Other procedure code
- ICD-10-CM Principal or Other Diagnosis Code

Patients admitted to the hospital for inpatient care are included in THKR-IP Measure set if they have:

An ICD-10-PCS Principal procedure Code as defined in Appendix A, Table 14.01a, 14.02a , 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, ICD-10-PCS Other procedure codes are all missing or none on Table 14.05a, 14.06a, 14.07a, and no ICD-10-CM Principal or Other Diagnosis Codes on Table 14.08, 14.09.

And are eligible to be sampled for:

1 – **Stratum 1** – If patients have an ICD-10-PCS Principal Procedure Code as defined in Appendix A, Table 14.01a are included in the THKR stratum-1 and are eligible to be sampled.

2 – **Stratum 2** – If patients have an ICD-10-PCS Principal Procedure Code as defined in Appendix A, Table 14.02a are included in the THKR stratum-2 and are eligible to be sampled.

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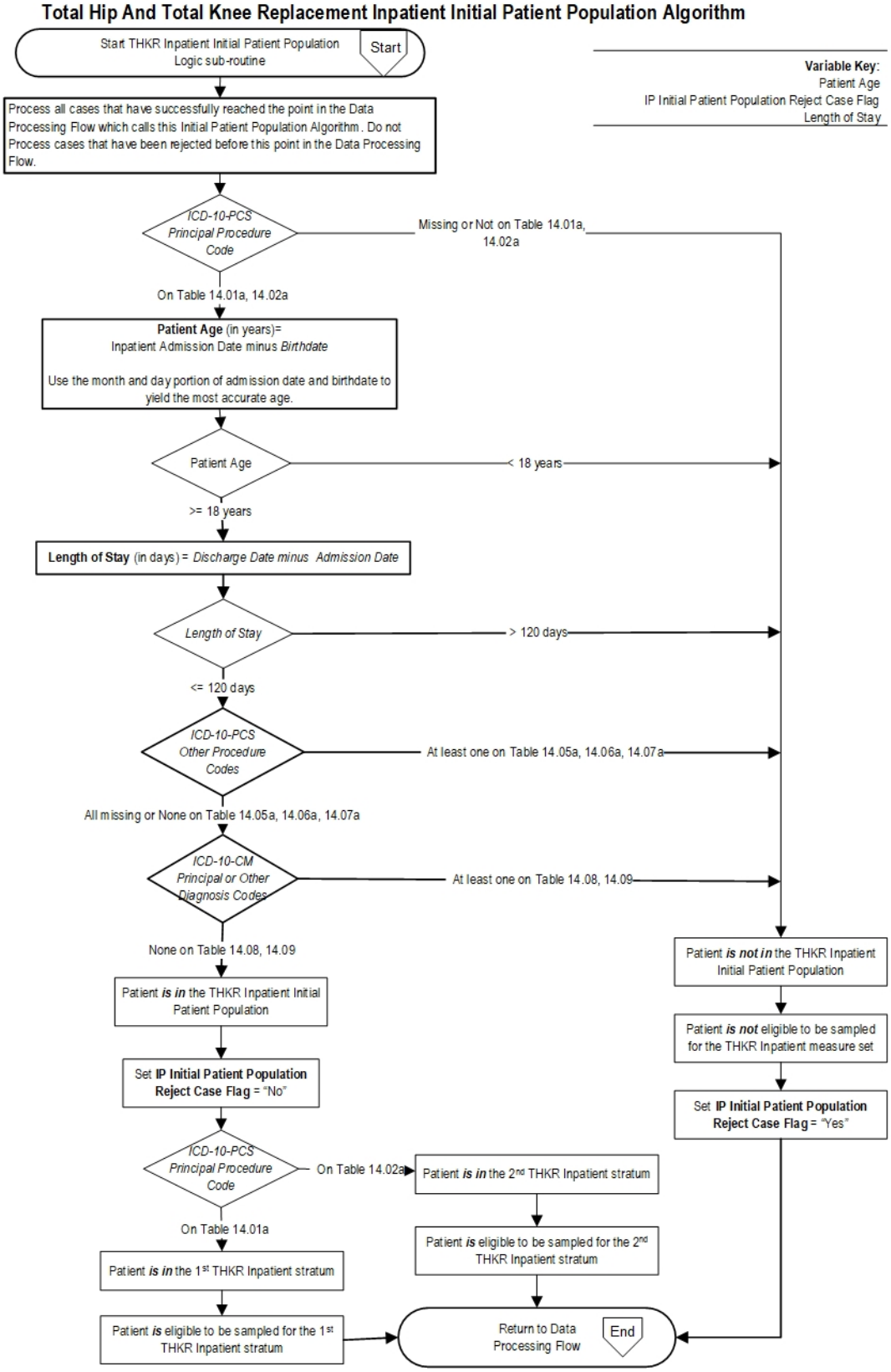
Initial Patient Population Algorithm



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Total Hip and Total Knee Replacement Inpatient (THKR-IP) Initial Patient Population Algorithm Narrative

Variable Key: Patient Age, Initial Patient Population Reject Case Flag, and Length of Stay.

1. Start THKR Initial Patient Population logic sub-routine. Process all cases that have successfully reached the point in the Clinical Data Processing Flow which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Clinical Data Processing Flow.
2. Check ICD-10-PCS Principal Procedure code
    a. If the ICD-10-PCS Principal Procedure code is not on Table 14.01a, 14.02a, the patient is not in the THKR Inpatient Initial Patient Population and is not eligible to be sampled for the THKR Inpatient measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Clinical Data Processing Flow in the Data Processing section.
    b. If the ICD-10-PCS Principal Procedure code is on Table 14.01a, 14.02a, continue processing and proceed to Patient Age Calculation.
3. 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.
4. Check Patient Age:
    a. If the Patient Age is less than 18 years, the patient is not in the THKR Inpatient Initial Patient Population and is not eligible to be sampled for the THKR Inpatient measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Clinical Data Processing Flow in the Data Processing section.
    b. If the Patient Age is greater than or equal to 18 years, continue processing and proceed to Length of Stay Calculation.
5. Calculate the Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.
6. Check Length of Stay:
    a. If the Length of Stay is greater than 120 days, the patient is not in the THKR Inpatient Initial Patient Population and is not eligible to be sampled for the THKR Inpatient measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Clinical Data Processing Flow in the Data Processing section.
    b. If the Length of Stay is less than or equal to 120 days, continue processing and proceed to ICD- 10-PCS Other procedure code Check.
7. Check ICD-10-PCS Other procedure code
    a. If there is at least one ICD-10-PCS Other procedure code on Table 14.05a, 14.06a, 14.07a, the patient is not in the THKR Inpatient Initial Patient Population and is not eligible to be sampled for the THKR Inpatient measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Clinical Data Processing Flow in the Data Processing section.
    b. If the ICD-10-PCS Other procedure code is all missing or none on Table 14.05a, 14.06a, 14.07a, continue processing and proceed to ICD-10-CM Principal or Other Diagnosis Code Check.
8. Check ICD-10-CM Principal or Other Diagnosis Code
    a. If there is at least one ICD-10-CM Principal or Other Diagnosis Code on Table 14.08, 14.09, the patient is not in the THKR Inpatient Initial Patient Population and is not eligible to be sampled for the THKR Inpatient measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Clinical Data Processing Flow in the Data Processing section.

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b. If there is no ICD-10-CM Principal or Other Diagnosis Code on Table 14.08, 14.09, the patient is in the THKR Initial Patient Population. Set the Initial Patient Population Reject Case Flag to equal No. Proceed to ICD-10-PCS Principal procedure code check to determine the stratification.

9. Check ICD-10-PCS Principal procedure code
    a. If the ICD-10-PCS Principal procedure code on Table 14.01a, the patient is in the 1st THKR Inpatient stratum and patient is eligible to be sampled for the 1st THKR Inpatient Stratum. Include the patient in the Initial Patient Population for the appropriate measures. Return to Clinical Data Processing Flow in the Data Processing section.
    b. If the ICD-10-PCS Principal procedure code on Table14.02a, the patient is in the 2nd THKR Inpatient stratum and patient is eligible to be sampled for the 2nd THKR Inpatient Stratum. Include the patient in the Initial Patient Population for the appropriate measures. Return to Clinical Data Processing Flow in the Data Processing section.

Sampling / Sample Size Requirements

Abstract a minimum of 10 inpatient hip cases and 10 inpatient knee cases per month (e.g. 20 cases for July, 20 cases for August, etc.).

- If a site has a monthly population of 10 or less inpatient hip cases, abstract all inpatient hip cases. Similarly, if 10 or less inpatient knee cases per month were performed, abstract all inpatient knee cases.
- If a site has a monthly population of greater than 10 inpatient hip cases, it is acceptable to abstract a sample of 10 hip cases. Similarly, if more than 10 inpatient knee cases per month were performed, it is acceptable to abstract a sample of 10 knee cases.

Sampling is a process of selecting a representative part of a population in order 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 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 the project measures, the terms "sample" and "case" are defined as: "sample" is the fraction of the population that is selected for further study; "case" refers to a single record (or an episode of care [EOC]) within the population. Organizations are NOT required to sample their data. If sampling offers minimal benefit (i.e., a hospital has 13 cases for the month and must select a sample of 10 cases), the organization may choose to use all cases.

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 $k \leq N/n$. 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.

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Measure Information Form

Measure Set: Total Hip and Total Knee Replacement Inpatient (THKR-IP)

Set Measure ID: THKR-IP-1

Set Measure ID	Performance Measure Name
THKR-IP-1a	Regional Anesthesia - Hip and Knee Overall
THKR-IP-1b	Regional Anesthesia - Hip
THKR-IP-1c	Regional Anesthesia - Knee

Performance Measure Name: Regional Anesthesia

Description: Patients undergoing a total hip or total knee replacement with regional anesthesia attempted or performed. Regional anesthesia includes neuraxial anesthesia (spinal and epidural blocks) as well as peripheral nerve blocks.

Rationale: Regional anesthesia is associated with fewer postoperative complications and deaths than general anesthesia. Research shows that patients who received neuraxial anesthesia had statistically significant decreases in 30-day mortality and in-hospital complications including pneumonia, kidney failure and the need for mechanical ventilation.[1] Additional studies show decrease in operative blood loss and need for blood transfusions.[2-3] Additionally, evidence supports the overall beneficial effects of neuraxial anesthesia versus general anesthesia in decreasing the development of surgical site infections after total hip and knee arthroplasty.[4] Several factors, such as compromised cardiopulmonary function, anticoagulative therapy, or anatomical deformity, may prevent general anesthesia and neuraxial blockade from being conducted in total joint replacement surgery.[5] Peripheral nerve blocks (PNBs) can be used as the primary anesthetic for total knee replacement facilitating faster postoperative recovery than general anesthesia.[6]

In December, 2015, The American Academy of Orthopaedic Surgeons (AAOS) published Surgical Management of Osteoarthritis of the Knee Evidence-Based Clinical Practice Guidelines. Per the guidelines, evidence supports that neuraxial anesthesia could be used to improve select perioperative outcomes and complication rates compared to general anesthesia.[7] In March, 2017, AAOS published Management of Osteoarthritis of the Hip Evidence-Based Clinical Practice Guidelines. These guidelines state evidence supports the use of neuraxial anesthesia compared to general anesthesia to reduce complications in patients undergoing total hip arthroplasty.[8] According to the American College of Surgeons National Surgical Quality Improvement Program, from 2005-2011, 52% of knee replacements and 60% of hip replacements were performed under general anesthesia.

Some surgeons avoid using regional anesthesia due to concerns that regional anesthesia may cause motor weakness, making patients more likely to fall when they are walking postoperatively. Peripheral nerve blockade did not alter the risk of inpatient fall, whereas use of neuraxial anesthesia reduced the risk by 30% compared with general anesthesia. The type of anesthesia may represent a modifiable risk factor and the use of neuraxial over general anesthesia may be considered in the context of a fall-prevention program.[9]

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Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients undergoing a total hip or total knee replacement with regional anesthesia attempted or performed.

> **Included Populations:** Patients receiving any of the following or documentation of a failed attempt of any of the following during the operative episode:
>
> - Epidural anesthesia
> - Epidural block
> - Peripheral nerve block (single injection or continuous infusion)
> - Spinal anesthesia
> - Spinal block
> - Subarachnoid block
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Regional Anesthesia*

Denominator Statement: Patients undergoing a total hip or total knee replacement.

> **Included Populations:**
>
> - Patients with an ICD-10-PCS Principal Procedure Code as defined in Appendix A: Table 14.01a Total Hip Replacements or Table 14.02a Total Knee Replacements
>
> **Excluded Populations:**
>
> - Patients less than 18 years of age
> - Patients who have a Length of Stay greater than 120 days
> - Patients with an ICD-10-PCS Other Procedure Code as defined in Appendix A: Table 14.05A (partial hip and partial knee replacements), or Table 14.06a (revision and resurfacing procedures), or Table 14.07a (removal of implanted devices/prostheses)
> - Patients with an ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Code as defined in Appendix A: Table 14.08 (Complication of Internal Fixation Device/Prosthesis), or Table 14.09 (malignant neoplasm of the pelvis, sacrum, coccyx, lower limbs, or bone/bone marrow or a disseminated malignant neoplasm.
> - Documented contraindication by physician/APN/PA (e.g. anticoagulated patients, coagulopathies, neurologic condition, previous spinal fusion) clearly indicated as reason for no regional anesthesia
>
> **Data Elements:**

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- *Admission Date*
- *Birthdate*
- *Discharge Date*
- *ICD-10-CM Other Diagnosis Codes*
- *ICD-10-CM Principal Diagnosis Code*
- *ICD-10-PCS Other Procedure Codes*
- *ICD-10-PCS Principal Procedure Code*
- *Reason for No Regional Anesthesia*

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. Proportion for hip replacements, proportion for knee replacements and aggregated proportion for hip & knee replacements.

Selected References:

- [1] Memtsoudis SG, Xuming S.; Ya-Lin Chiu, et al. Perioperative Comparative Effectiveness of Anesthetic Technique in Orthopedic Patients, Anesthesiology 05 2013, Vol.118, 1046-1058.
- [2] Mauermann WJ, Shilling AM, Zuo Z. A comparison of neuraxial block versus general anesthesia for elective total hip replacement: a metaanalysis. Anesth. Analg. 2006; 103: 1018–25.
- [3] Hu S, Zhang Z-Y, Hua Y-Q, Li J, Cai Z-D. A comparison of regional and general anaesthesia for total replacement of the hip or knee: a metaanalysis. J. Bone Joint Surg. Br. 2009; 91: 935–42.
- [4] Zorrilla-Vaca A, Grant MC, Mathur V, Li J, Wu CL. The Impact of Neuraxial Versus General Anesthesia on the Incidence of Postoperative Surgical Site Infections Following Knee or Hip Arthroplasty: A Meta-Analysis. Regional Anesthesia & Pain Medicine: September/October 2016 - Volume 41 - Issue 5 - p 555–563.
- [5] Kim JH, Cho MR, et al. A comparison of femoral/sciatic nerve block with lateral femoral cutaneous nerve block and combined spinal epidural anesthesia for total knee replacement arthroplasty. Korean J Anesthesiol 2012 May 62(5): 448-453.
- [6] Liu JL, Yuan WX, et al. Peripheral nerve blocks versus general anesthesia for total knee replacement in elderly patients on the postoperative quality of recovery. Clinical Interventions in Aging 2014:9 341-350.

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- [7] Surgical Management of Osteoarthritis of the Knee Evidence-Based Clinical Practice Guideline. Adopted by the American Academy of Orthopaedic Surgeons Board of Directors, 12/4/2015.
- [8] Management of Osteoarthritis of the Hip Evidence-Based Clinical Practice Guideline. Adopted by the American Academy of Orthopaedic Surgeons Board of Directors, 3.13.17.
- [9] Memtsoudis SG, Thomas Danninger, Rehana Rasul, Jashvant Poeran, Philipp Gerner, Ottokar Stundner, Edward R. Mariano, Madhu Mazumdar. Inpatient Falls after Total Knee Arthroplasty. Anesthesiology, 2014; 120 (3): 551-563.
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- Soohoo NF, Lieberman JR, et al. Development of Quality of Care Indicators for Patients Undergoing THR/TKR. BMJ Qual Saf 2011;20:153-157
- Basques BA, Toy JO, Bohl, DD, Golinvaux, NS, Grauer, JN. General Compared with Spinal Anesthesia for Total Hip Arthroplasty. The Journal of Bone and Joint Surgery 2015;97:455-61
- Hunt LP, Ben-Shlomo Y, Clark EM, Dieppe P, Judge A, MacGregor AJ, Tobias JH, Vernon K, Blom AW. 90 day mortality after 409,096 total hip replacements for osteoarthritis, from the National Joint Registry for England and Wales: a retrospective analysis, Lancet. 2013 Sep 28;382(9898):1097-104
- Premier-IHI Integrated Care Pathway for Total Joint Arthroplasty (April 2013)
- Williams-Russo P, Sharrock NE, Haas SB, et al. Randomized Trial of Epidural Versus General Anesthesia: Outcomes After Primary Total Knee Replacement. Clinical Orthopaedics & Related Research. 331:199-208, October, 1996.
- National Surgical Quality Improvement Project database
- FORCE-Total Joint Registry database
- Warren, F., Sundaram, A., Anis, A., Kamath, S., Mont, S., Higuera, S., & Piuzzi, S. (2020). Spinal Anesthesia Is Associated With Decreased Complications After Total Knee and Hip Arthroplasty. Journal of the American Academy of Orthopaedic Surgeons, 28(5), e213–e221.

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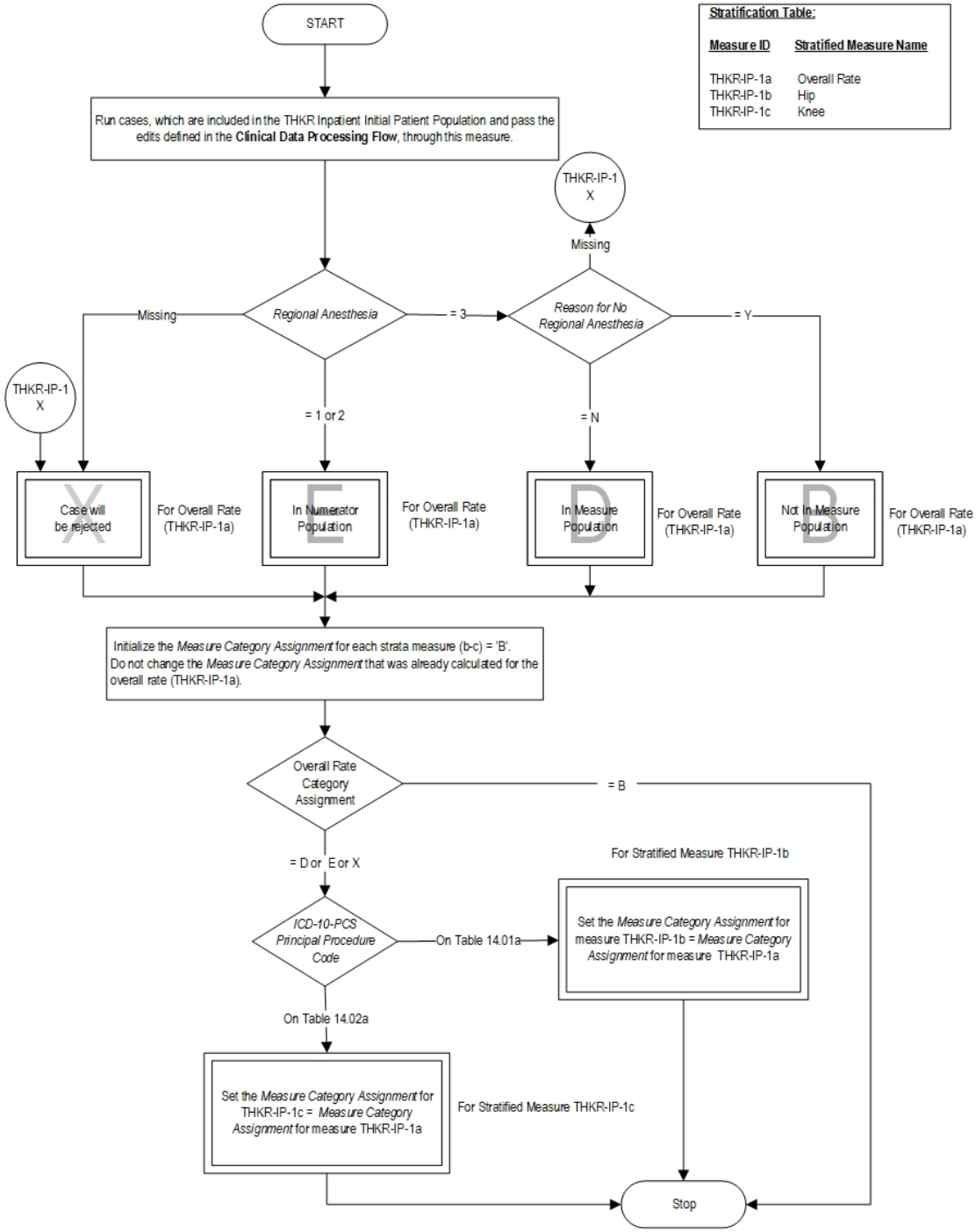
Measure Algorithm:

THKR–IP–1: Inpatient Regional Anesthesia

Numerator: Patients undergoing a total hip or total knee replacement with regional anesthesia attempted or performed.
Denominator: Patients undergoing a total hip or total knee replacement.



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Measure Information Form

Measure Set: Total Hip and Total Knee Replacement Inpatient (THKR-IP)

Set Measure ID: THKR-IP-2

Set Measure ID	Performance Measure Name
THKR-IP-2a	Postoperative Ambulation on Day of Surgery - Hip & Knee Overall
THKR-IP-2b	Postoperative Ambulation on Day of Surgery - Hip
THKR-IP-2c	Postoperative Ambulation on Day of Surgery - Knee

Performance Measure Name: Postoperative Ambulation on Day of Surgery

Description: Patients undergoing total hip or total knee replacement who ambulated postoperatively the day of surgery or ambulated in the PACU or within 4 hours of discharge from the PACU.

Rationale: Early ambulation as close to the time of surgery as possible can reduce the risk of complications associated with bed rest such as deep vein thrombosis, pulmonary embolism, atelectasis, pneumonia and urinary retention. Additionally, early ambulation results in a decreased length of stay, lowering the patient's risk for hospital acquired infections and other complications. Early ambulation leads to improvement in outcomes (range of motion, gait, balance, muscle strength and pain) without an increase in adverse events.[1] Studies demonstrating positive results showed that rapid ambulation can be achieved as early as in the PACU.[2]

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients undergoing total hip or total knee replacement who ambulated postoperatively the day of surgery or ambulated in the PACU or within 4 hours of discharge from the PACU.

> **Included Populations:**
>
> - Postoperative ambulation (walking) on the day of surgery
> - Postoperative ambulation (walking) in the PACU or within 4 hours of discharge from the PACU
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Ambulation*
> - *Ambulation Date*
> - *Ambulation Time*
> - *ICD-10-PCS Principal Procedure Date*

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- *PACU Discharge Date*
- *PACU Discharge Time*

Denominator Statement: Patients undergoing a total hip or total knee replacement.

Included Populations:

- Patients with an ICD-10-PCS Principal Procedure Code as defined in Appendix A: Table 14.01a Total Hip Replacement or Table 14.02a Total Knee Replacement

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Patients with an ICD-10-PCS Other Procedure Code as defined in Appendix A: Table 14.05a (partial hip and partial knee replacements), or Table 14.06a (revision and resurfacing procedures, or Table 14.07a (removal of implanted devices/prostheses)
- Patients with an ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Code as defined in Appendix A: Table 14.08 (complication of Internal Fixation Device/Prosthesis) or Table 14.09 (malignant neoplasm of the pelvis, sacrum, coccyx, lower limbs, or bone/bone marrow or a disseminated malignant neoplasm), or Table 14.10 (femur, hip, pelvic fracture)
- Postoperative patients who are admitted to ICU on Principal Procedure Date or PACU Discharge Date
- Patient expired on Principal Procedure Date
- Patient expired on PACU Discharge Date
- Patient left AMA on PACU Discharge Date
- Documented contraindication by physician/APN/PA/nurse/physical therapist/occupational therapist for not ambulating on day of surgery (e.g. nerve block has not worn off, hypotensive upon standing, patient is vomiting)

Data Elements:

- *Admission Date*
- *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*
- *ICD-10-PCS Principal Procedure Date*
- *PACU Discharge Date*
- *Postoperative ICU Admit or Transfer*
- *Reason for Not Ambulating the Day of Surgery*

Risk Adjustment: No.

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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. Proportion for hip replacements, proportion for knee replacements and aggregated proportion for hip & knee replacements.

Selected References:

- [1]Guerra ML, Singh PJ, Taylor NF. Early mobilization of patients who have had a hip or knee joint replacement reduces length of stay in hospital: A systematic review. Clin Rehabil. 2014 Dec 1.
- [2]Tayrose G, Newman D, Slover J, Jaffe F, Hunter T, Bosco J. Rapid Mobilization Decreases Length of Stay in Joint Replacement Patients. Bulletin of the Hospital for Joint Diseases 2013;71(3):222-6.
- AAOS Guidelines on Preventing Venous Thromboembolic Disease in Patients Undergoing Elective Hip and Knee Arthroplasty", AAOS.
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- Raphael M, Jaeger M, van Vlymen J. Easily adoptable total joint arthroplasty program allows discharge home in two days. Can J Anaesth 2011; 58: 902–910
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- Chen AF, Stewart MK, Heyl AE, Klatt BA. Effect of Immediate Postoperative Physical Therapy on Length of Stay for Total Joint Arthroplasty Patients. The Journal of Arthroplasty 2012;Vol.27 No. 6

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- Wellman SS, Murphy AC, Gulcynski D, Murphy SB. Implementation of an accelerated mobilization protocol following primary total hip arthroplasty: impact on length of stay and disposition. Current Reviews in Musculoskeletal Medicine Volume 4(3); 2011 Sep
- Renkawitz T, Rieder T, Handel M. Comparison of two accelerated clinical pathways – after total knee replacement how fast can we really go? Clinical Rehabilitation 2010; 24:230-239
- Labraca,NS, Castro-Sanchez,AM, Mataran-Penarrocha,G, Arroyo-Morales,M, Sanchez-Joya,M, Moreno-Lorenzo C. Benefits of starting rehabilitation within 24 hours of primary total knee arthroplasty: randomized clinical trial. Clin Rehabil. 2011/25(6):557-566
- Surgical Management of Osteoarthritis of the Knee Evidence-Based Clinical Practice Guideline. Adopted by the American Academy of Orthopaedic Surgeons Board of Directors, 12/4/2015.

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Measure Algorithm:

THKR–IP–2: Inpatient Postoperative Ambulation on Day of Surgery

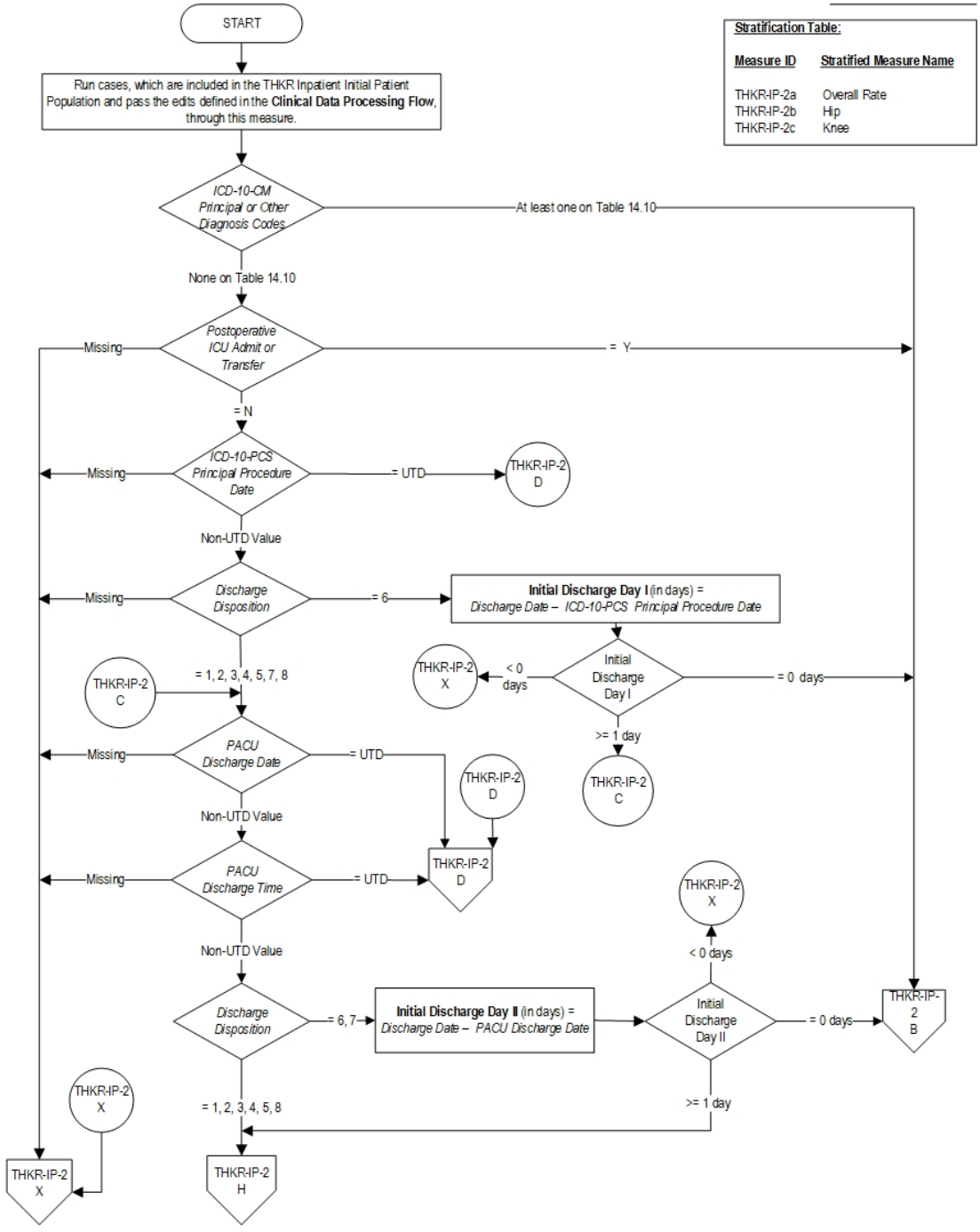
Numerator: Patients undergoing total hip or total knee replacement who ambulated postoperatively the day of surgery or in the PACU or within 4 hours of discharge from the PACU.

Denominator: Patients undergoing a total hip or total knee replacement.

Variable Key:
Initial Discharge Day I
Initial Discharge Day II
Initial Ambulation Day
Initial Ambulation Time

Stratification Table:

Measure ID	Stratified Measure Name
THKR-IP-2a	Overall Rate
THKR-IP-2b	Hip
THKR-IP-2c	Knee



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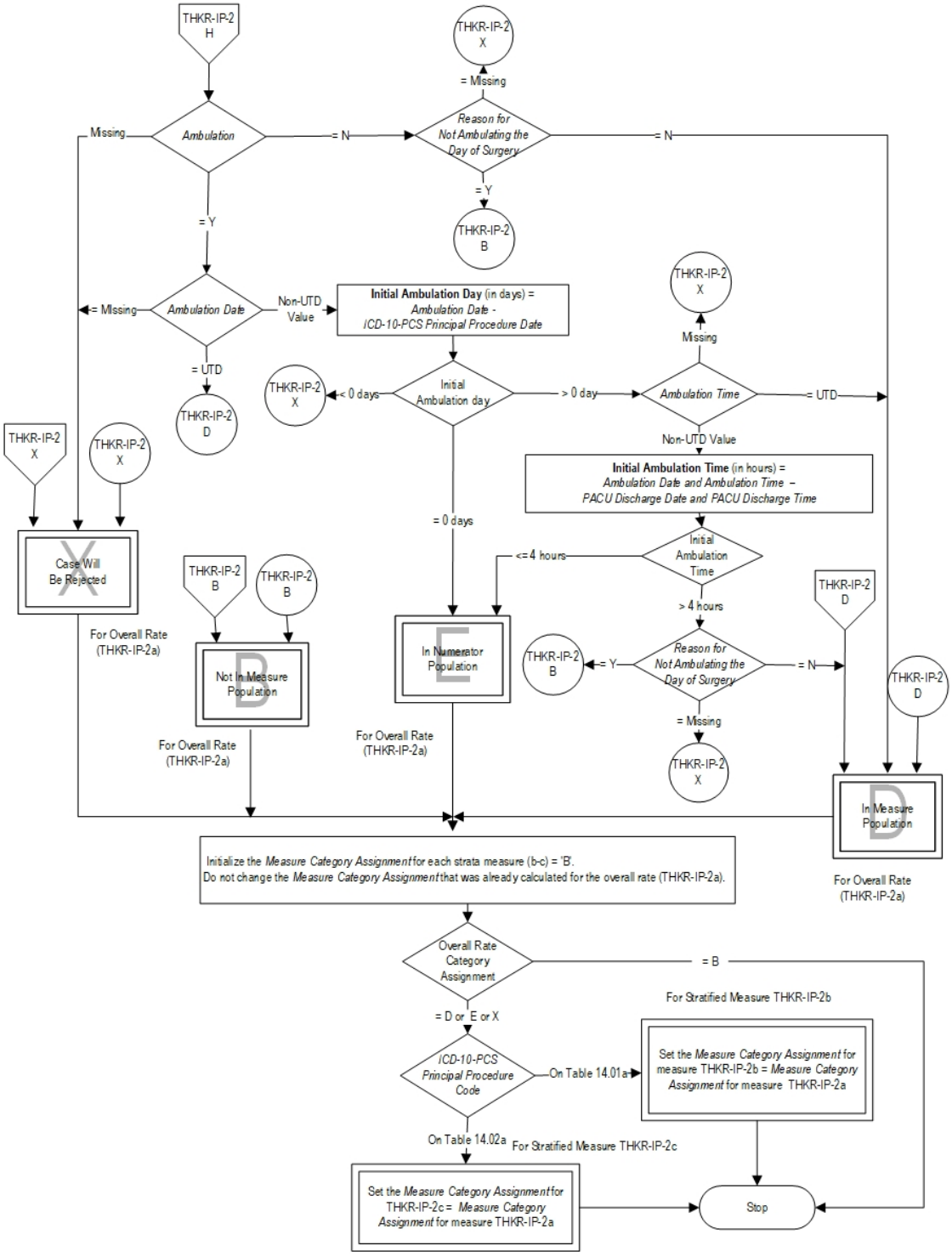

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Measure Information Form

Measure Set: Total Hip and Total Knee Replacement Inpatient (THKR-IP)

Set Measure ID: THKR-IP-3

Set Measure ID	Performance Measure Name
THKR-IP-3a	Discharged to Home- Hip and Knee Overall
THKR-IP-3b	Discharged to Home - Hip
THKR-IP-3c	Discharged to Home - Knee

Performance Measure Name: Discharged to Home

Description: Patients discharged to home following total hip or total knee replacement.

Rationale: Home-based rehabilitation is increasingly utilized to reduce health-care costs; however, with a shorter hospital stay, the possibility arises for an increase in adverse clinical outcomes. Research has shown that despite concerns about early hospital discharge, there is no difference in pain, functional outcomes, or patient satisfaction between groups that received home-based rehabilitation versus inpatient rehabilitation. Home-based rehabilitation protocol following elective primary total hip or knee replacement is the more cost-effective strategy.[1-2]

According to 2012 Medicare claims data, 49% of patients undergoing hip and knee replacements were discharged to an inpatient rehabilitation facility (IRF) or skilled nursing facility (SNF) for rehabilitation. Therefore, only 51% of patients were discharged to home.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients who were discharged to home following total hip or total knee replacement.

> **Included Populations:** Patients discharged to home with or without home health services, in-home physical therapy or outpatient physical therapy.
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Discharge Disposition*

Denominator Statement: Patients undergoing a total hip or total knee replacement.

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Included Populations:

- Patients with an ICD-10-PCS Principal Procedure Code as defined in Appendix A: Table 14.01a Total Hip Replacement or Table 14.02a Total Knee Replacements

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Residents of Other Health Care Facility:
    - 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
    - Skilled Nursing Facility (SNF), Sub-Acute Care or Swing Bed
    - Veterans Home
- Patients with an ICD-10-PCS Other Procedure Code as defined in Appendix A: Table 14.01a (concurrent total hip replacements), or Table 14.02a (concurrent total knee replacements), or Table 14.05a (partial hip and partial knee replacements), or Table 14.06a (revision and resurfacing procedures), or Table 14.07a (removal of implanted devices/prostheses)
- Patients with an ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Code as defined in Appendix A: Table 14.08 (complication of internal fixation device/prosthesis), Table 14.09 (malignant neoplasm of the pelvis, sacrum, coccyx, lower limbs, or bone/bone marrow or a disseminated malignant neoplasm), or Table 14.10 (femur, hip, pelvic fracture)
- Patient expired
- Patient left AMA
- Physician/APN/PA/nurse/social worker/care manager/discharge planner/physical therapist/occupational therapist documentation of medical/social reason why patient cannot be discharged to home.

Data Elements:

- *Admission Date*
- *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*
- *Reason for Not Discharging Patient to Home*
- *Resident of Other Health Care Facility*

Risk Adjustment: No.

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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. Proportion for hip replacements, proportion for knee replacements and aggregated proportion for hip & knee replacements.

Selected References:

- [1]Mahomed NN, Davis AM, Hawker G, Badley E, Davey JR, Syed KA. et al. Inpatient compared with home-based rehabilitation following primary unilateral total hip or knee replacement: a randomized controlled trial. J Bone Joint Surg Am. 2008;90(8):1673–1680.
- [2]Padgett DE, et al. Study: Patients Who Go Home After Knee Replacement Do As Well as Those Discharged to Rehab Facility. Presented at: American Academy of Orthopaedic Surgeons Annual Meeting; March 24-28, 2015; Las Vegas.
- Inpatient Rehabilitation Facility Services: Assessing payment adequacy and updating payments - Report to the Congress: Medicare Payment Policy March 2014
- Mallinson TR, Bateman J, Tseng HY, Manheim L, et al. A Comparison of Discharge Functional Status After Rehabilitation in Skilled Nursing, Home Health, and Medical Rehabilitation Settings for Patients After Lower-Extremity Joint Replacement Surgery. Arch Phys Med Rehabil Vol 92, May 2011.
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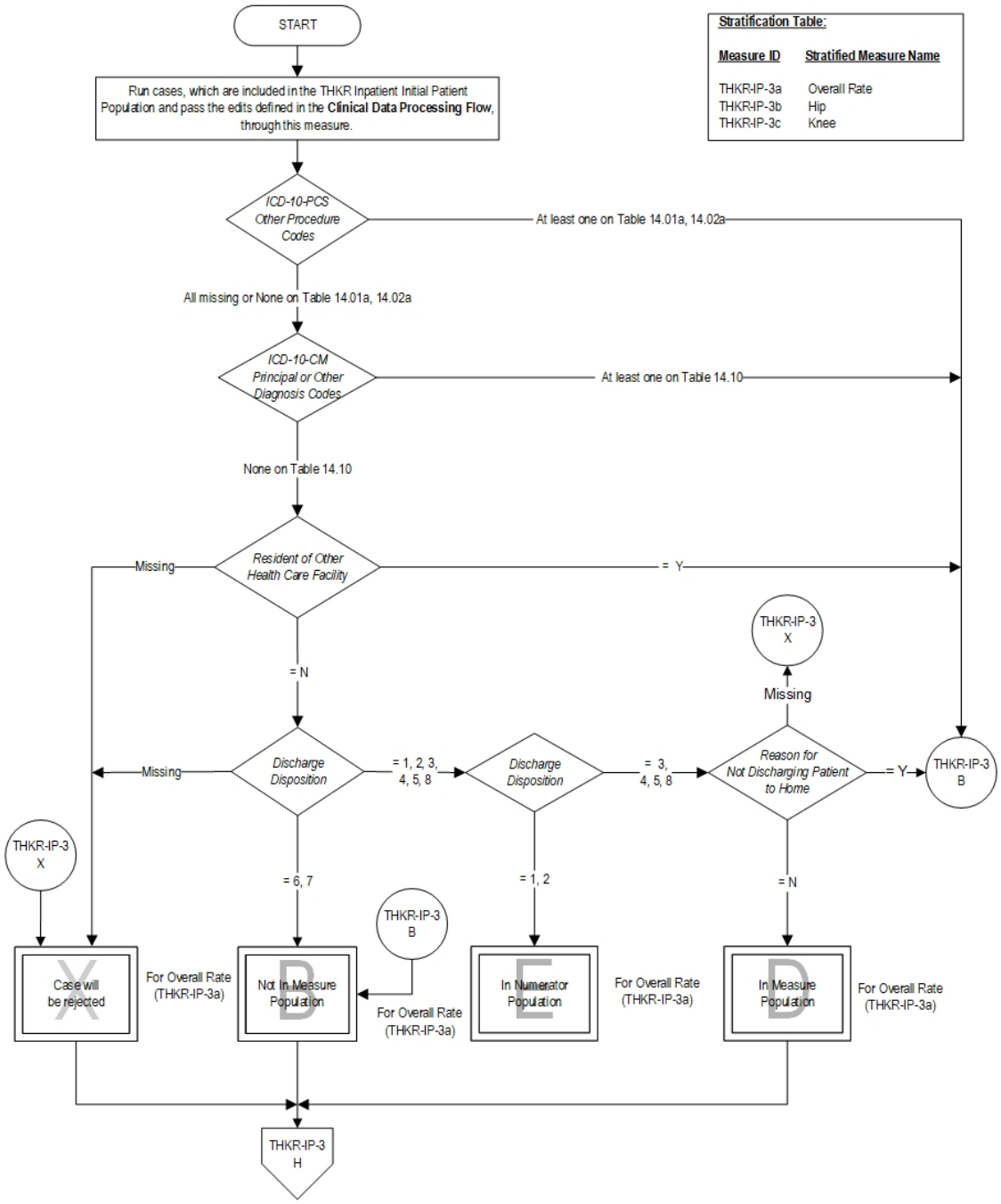
Measure Algorithm:

THKR–IP–3: Inpatient Discharged to Home

Numerator: Patients who were discharged to home following total hip or total knee replacement.

Denominator: Patients undergoing a total hip or total knee replacement.



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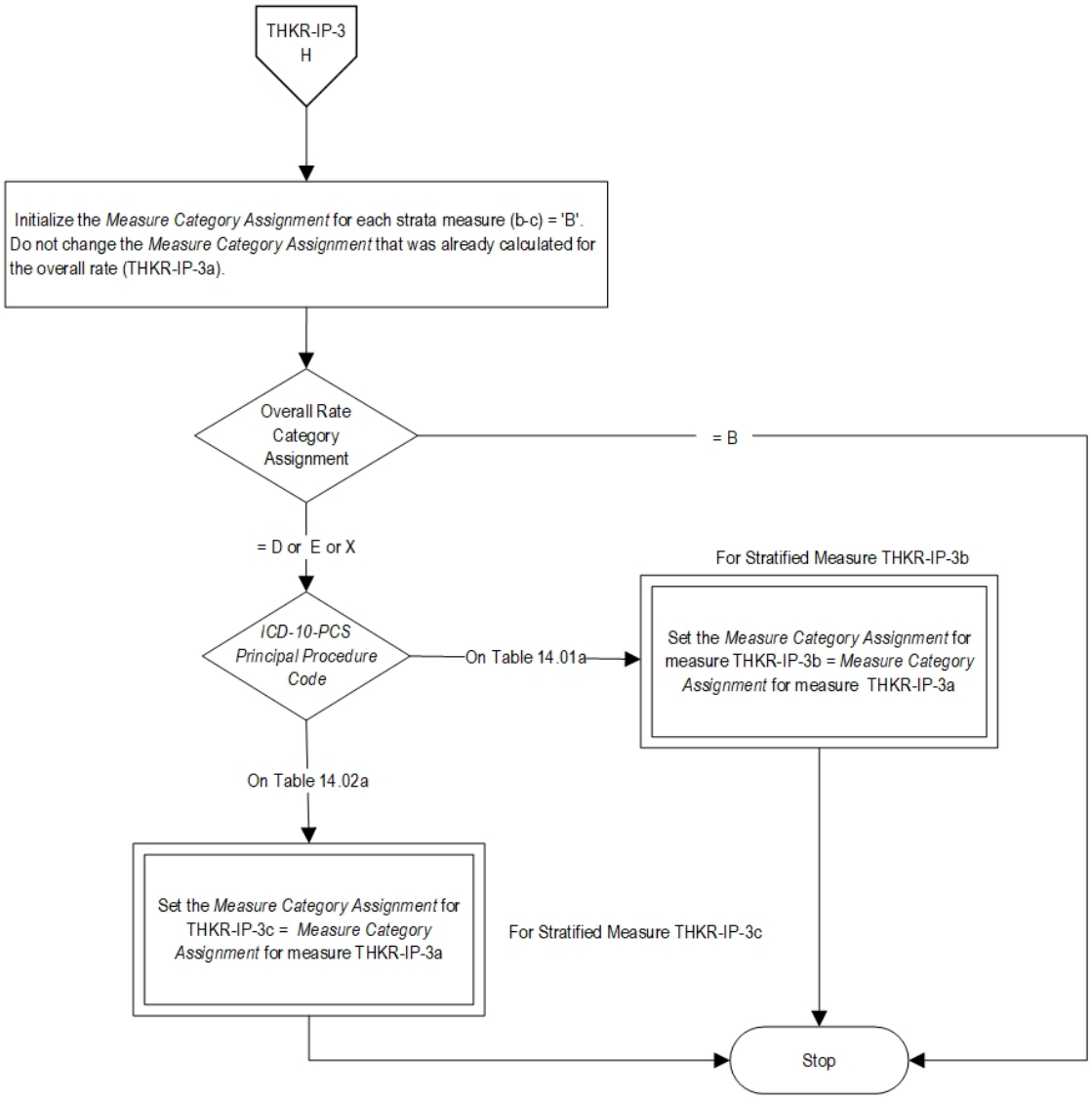

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Measure Information Form

Measure Set: Total Hip and Total Knee Replacement Inpatient (THKR-IP)

Set Measure ID: THKR-IP-4

Set Measure ID	Performance Measure Name
THKR-IP-4a	Preoperative Functional/Health Status Assessment - Hip and Knee Overall
THKR-IP-4b	Preoperative Functional/Health Status Assessment - Hip
THKR-IP-4c	Preoperative Functional/Health Status Assessment - Knee

Performance Measure Name: Preoperative Functional/Health Status Assessment

Description: Patients who completed the general health and joint specific functional status assessments within 90 days prior to surgery as specified below:

Hips: [VR-12 or PROMIS-Global] AND [HOOS Jr. (6 questions) or HOOS Pain, Function Daily Living Subscales (27 questions)]

Knees: [VR-12 or PROMIS-Global] AND [KOOS Jr. (7 questions) or KOOS Stiffness, Pain, Function Daily Living Subscales (28 questions)]

The assessment tool must reflect the status of the patient's health condition, health behavior, or experience with health care from the patient's perspective, without interpretation of the patient's response by a clinician or anyone else [1]. The assessment can be completed by phone, mail, email, or in-person.

Note: Links to the survey instruments are provided in the Selected References at the bottom of this section.

Rationale: Good orthopedic care requires knowledge of the patient's history of musculoskeletal pain and associated limitations in daily function. Standardized measures of patient-reported outcomes (PROs) can provide this information. Integrating PROs into routine orthopedic patient visits can provide key information to monitor changes in symptom severity over time, support shared clinical care decisions, and assess treatment effectiveness.[2]

Patient reported outcome measures (PROMs) capture patients' self-assessments of their health and provide a mechanism for evaluating the effectiveness of patient-centered care.[3] In acknowledgement of the administrative burden associated with PRO data capture, The Joint Commission will implement PROMs in a phased approach. During this first phase, the process of collecting preoperative data will be measured. During the second phase, pre- and postoperative data will be evaluated with the goal of calculating patients' improvement scores. The American Academy of Orthopedic Surgeons and American Association of Hip and Knee Surgeons are very supportive of the Centers for Medicare and Medicaid Services' effort to develop patient-reported functional status outcome measures for total hip and knee arthroplasty. When fully specified and risk-adjusted, these meas-

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ures will be useful in assessing quality and value of care and will permit performance measurement progression beyond process measures.[4-5]

On August 31, 2015, the American Association of Hip and Knee Surgeons (AAHKS) convened a Patient Reported Outcomes Summit for Total Joint Arthroplasty in Baltimore, Maryland. Representatives from orthopaedic organizations (AAHKS, AAOS, The Hip Society, The Knee Society, and American Joint Replacement Registry), CMS, YNHHSC/CORE, National Committee for Quality Assurance (NCQA), Mathematica, CECity, and Blue Cross Blue Shield Association participated in the Summit. The Summit's goal was to obtain a consensus regarding the patient-reported outcomes (PRO) and risk variables suitable for total hip and knee arthroplasty performance measures.[6] The instruments specified in this measure, align with the Summit's recommendations as well as CMS Comprehensive Care for Joint Replacement (CJR) legislation.

The Veterans RAND 12 Item Health Survey (VR-12) is a generic patient reported outcome (PRO) instrument used to measure health related quality of life. This tool, which measures physical function and health status, is widely used and is well validated in the total hip and total knee population. Additionally, the Patient Reported Outcomes Measurement Information System (PROMIS) Global-10 instrument, funded by the National Institute of Health, is increasingly used in the United States. PROMIS instruments use modern measurement theory to assess patient–reported health status for physical, mental, and social well–being to reliably and validly measure patient reported outcomes (PROs) for clinical research and practice. PROMIS instruments measure concepts such as pain, fatigue, physical function, depression, anxiety and social function. Hip disability and Osteoarthritis Outcome Score (HOOS) and Knee injury and Osteoarthritis Outcome Score (KOOS) are well validated and widely used instruments for measuring joint-specific pain and physical function before and after joint replacement. While the full HOOS and KOOS surveys are lengthy, the orthopedic community prefers an abbreviated survey that captures a subset of items referred to as HOOS JR/KOOS JR.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients who completed the general health (VR-12 or PROMIS-Global) AND joint specific functional status assessments (HOOS Jr./subscales or KOOS Jr./subscales) within 90 days prior to surgery.

> **Included Populations:** As above
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *ICD-10-PCS Principal Procedure Date*
> - *Preoperative Assessments Completed*
> - *Preoperative Assessments Completion Date*

Denominator Statement: Patients undergoing total hip or total knee replacement.

> **Included Populations:**

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- Patients with an ICD-10-PCS Principal Procedure Code as defined in Appendix A: Table 14.01a Total Hip Replacement or Table 14.02a Total Knee Replacement

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 day
- Patients with an ICD-10-PCS Other Procedure Code as defined in Appendix A: Table 14.05a (partial hip and partial knee replacements), Table 14.06a (revision and resurfacing procedures), Table 14.07a (removal of implanted devices/prostheses)
- Patients with an ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Code as defined in Appendix A: Table 14.08 (complication of internal fixation device/prosthesis), Table 14.09 (malignant neoplasm of the pelvis, sacrum, coccyx, lower limbs, or bone/bone marrow or a disseminated malignant neoplasm), or Table 14.10 (femur, hip, pelvic fracture)

Data Elements:

- *Admission Date*
- *Birthdate*
- *Discharge Date*
- *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: 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. Proportion for hip replacements, proportion for knee replacements and aggregated proportion for hip & knee replacements

Selected References:

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- [1] Cella D, Hahn EA, Jensen SE, Patient-Reported Outcomes in Performance Measurement, ©2015 Research Triangle Institute.
- [2] Ayers DC, Zheng H, Franklin PD. Integrating Patient-reported Outcomes Into Orthopaedic Clinical Practice: Proof of Concept From FORCE-TJR. Clinical Orthopaedics and Related Research. 2013;471(11):3419-3425. doi:10.1007/s11999-013-3143-z.
- [3] Patient-Reported Outcomes Following Elective Primary Total Hip and/or Total Knee Arthroplasty: Hospital-Level Performance Measure(s), Phase 3 Measure Methodology Report, Yale New Haven Health Services Corporation – Center for Outcomes Research and Evaluation (CORE), May 2015.
- [4] AAOS letter to Andy Slavitt, Acting Administrator/CMS dated April 3, 2015. Re.: Response during public comment on "Proposed Electronic Clinical Quality Measures for Functional Status Assessment and Improvement for Patients who received a Total Hip Replacement and Functional Status Assessment and Improvement for Patients who received a Total Knee Replacement."
- [5] AAHKS letter to Andy Slavitt, Acting Administrator/CMS dated March 30, 2015. Re.: Response during public comment on "Proposed Electronic Clinical Quality Measures for Functional Status Assessment and Improvement for Patients who received a Total Hip Replacement and Functional Status Assessment and Improvement for Patients who received a Total Knee Replacement."
- [6] Patient Reported Outcomes Summit for Total Joint Arthroplasty Report, August 31, 2015.
- AAHKS sponsored Patient Reported Outcomes Summit for Total Joint Arthroplasty Report. August 31, 2015.
- FORCE-TJR letter to CMS dated September 3, 2015. Response during public comment on CMS-5516-Proposal for Comprehensive Care for Joint Replacement Payment Model for Acute Care Hospitals Furnishing Lower Extremity Joint Replacement Services.
- AAHKS, AAOS, AJRR letter to Andy Slavitt, Acting Administrator/CMS dated September 8, 2015. Response during public comment on CMS-5516-Proposal for Comprehensive Care for Joint Replacement Payment Model for Acute Care Hospitals Furnishing Lower Extremity Joint Replacement Services.
- AAHKS letter to Andy Slavitt, Acting Administrator/CMS dated September 8, 2015. Response during public comment on CMS-5516-Proposal for Comprehensive Care for Joint Replacement Payment Model for Acute Care Hospitals Furnishing Lower Extremity Joint Replacement Services.
- Hyperlinks to Patient-Reported Outcome Survey Instruments:
    - HOOS http://www.koos.nu/
    - HOOS Jr. https://www.hss.edu/hoos-jr-koos-jr-outcomes-surveys.asp
    - KOOS http://www.koos.nu/
    - KOOS Jr. https://www.hss.edu/hoos-jr-koos-jr-outcomes-surveys.asp
    - VR-12 http://www.bu.edu/sph/research/research-landing-page/vr-36-vr-12-and-vr-6d/
    - PROMIS-Global http://www.nihpromis.org/measures/availableinstruments

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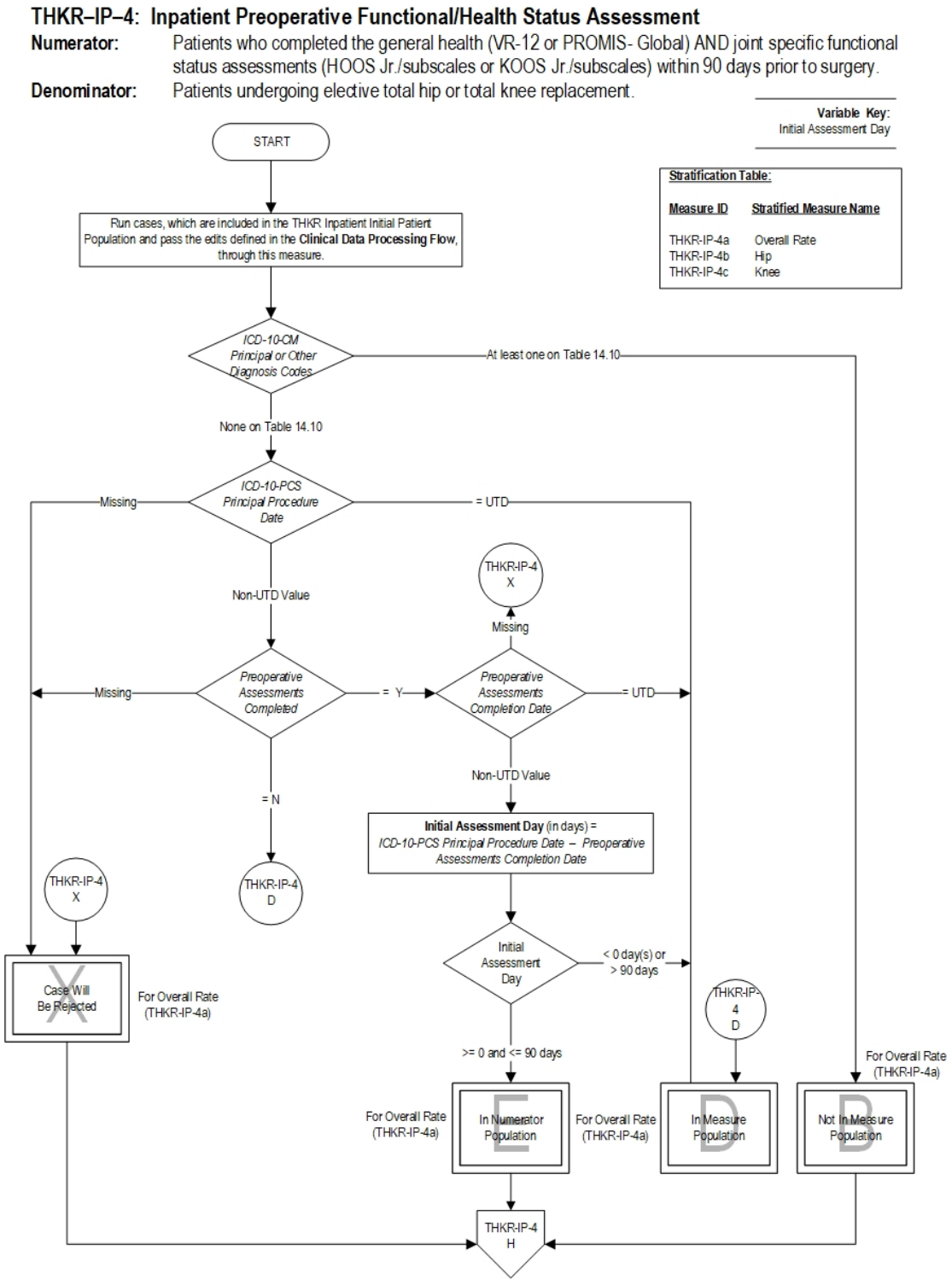
Measure Algorithm:



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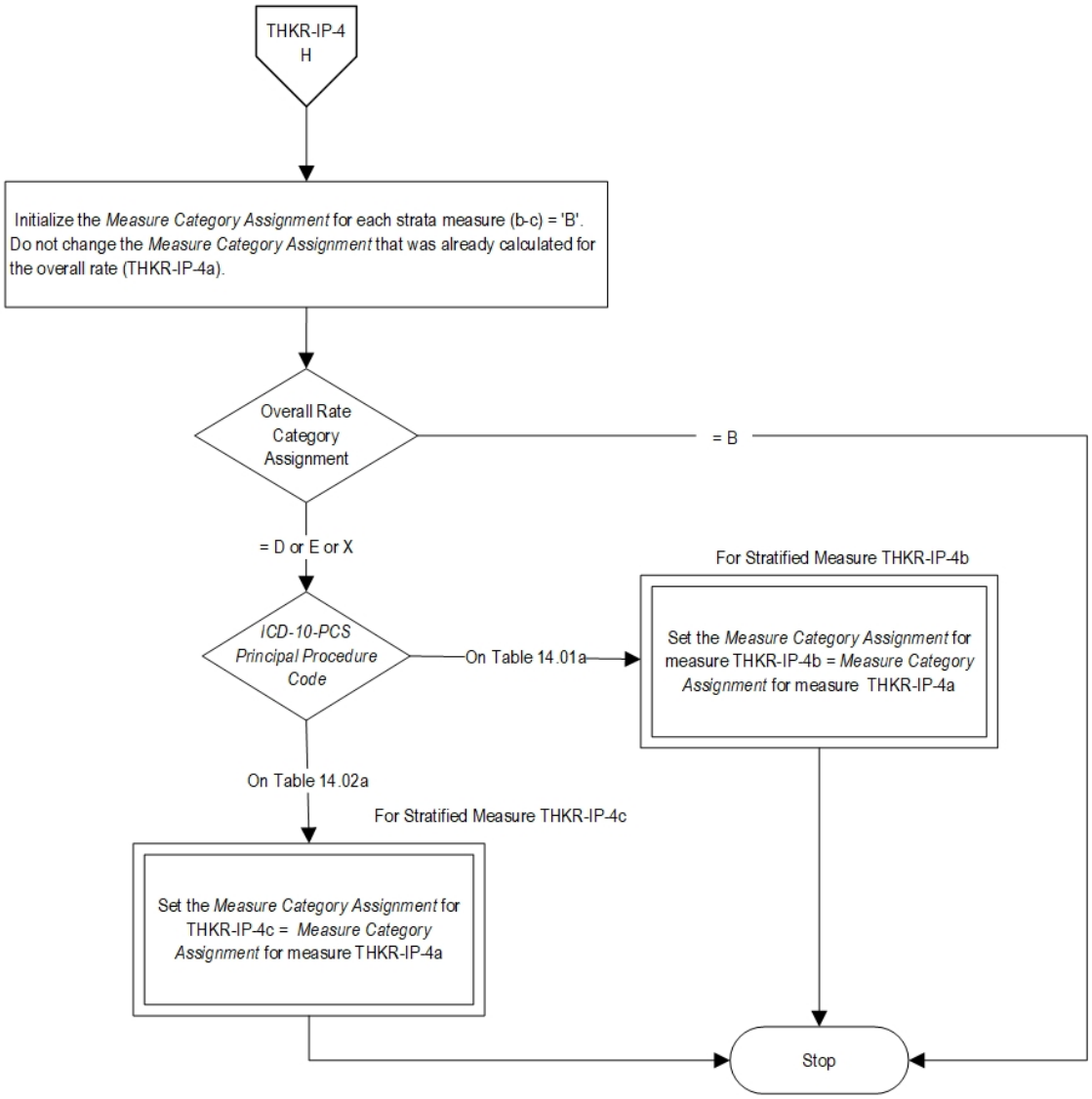

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Measure Information Form

Measure Set: Total Hip and Total Knee Replacement Inpatient (THKR-IP)

Set Measure ID: THKR-IP-5

Set Measure ID	Performance Measure Name
THKR-IP-5a	Postoperative Functional/Health Status Assessment-Hip and Knee Overall
THKR-IP-5b	Postoperative Functional/Health Status Assessment-Hip
THKR-IP-5c	Postoperative Functional/Health Status Assessment-Knee

Performance Measure Name: Postoperative Functional/Health Status Assessment

Description: Patients who completed the general health and joint specific functional status assessments within 90 days after surgery, as specified below:

Hips: [VR-12 or PROMIS-Global] AND [HOOS Jr. (6 questions) or HOOS Pain, Function Daily Living Subscales (27 questions)]

Knees: [VR-12 or PROMIS-Global] and {KOOS Jr. (7 questions) or KOOS Stiffness, Pain, Function Daily Living Subscales (28 questions)]

The assessment tool must reflect the status of the patient's health condition, health behavior, or experience with health care from the patient's perspective, without interpretation of the patient's response by a clinician or anyone else (Cella et al. 2015). The assessment can be completed by phone, mail, email, or in-person.

Note: Links to the survey instruments are provided in the Selected References at the bottom of this section.

Rationale: Good orthopedic care requires knowledge of the patient's history of musculoskeletal pain and associated limitations in daily function, along with improvements or declines seen after surgery. Standardized measures of patient-reported outcomes (PROs) can provide this information.

The American Association of Hip and Knee Surgeons (AAHKS) convened a Patient Reported Outcomes Summit for Total Joint Arthroplasty in 2015 with the goal of obtaining consensus regarding the patient-reported outcomes and risk variables suitable for total hip and total knee arthroplasty performance measures (Patient Reported Outcomes Summit for Total Joint Arthroplasty Report, 2015). The instruments specified in this measure align with the Summit's recommendations as well as CMS Comprehensive Care for Joint Replacement legislation.

The Veterans RAND 12 item Health Survey (VR-12) is a generic patient reported outcome (PRO) instrument. It is a well validated and widely used in the hip and knee population to measure health related quality of life by capturing the patient's physical function and health status. The Patient Reported Outcomes Measurement Information System (PROMIS) Global-10 assess patient-reported health status for physical, mental, and social well-being by measuring a patient's pain, fatigue, physical function, depression/anxiety status, and social function. Hip disab-

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ility and Osteoarthritis Outcome Score (HOOS) and Knee injury and Osteoarthritis Outcome Score (KOOS) are well validated and widely used instruments for measuring joint-specific pain and physical function before and after joint replacements. Full HOOS and KOOS surveys are lengthy, however, abbreviated versions are available as HOOS Jr./KOOS Jr.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Number of patients who completed the general health and joint specific functional status assessments 90 days after surgery.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *ICD-10-PCS Principal Procedure Date*
> - *Postoperative Assessments Completed*
> - *Postoperative Assessments Completion Date*

Denominator Statement: Patients who underwent a total hip or total knee replacement.

> **Included Populations:**
>
> - Patients with an ICD-10-PCS Principal Procedure Code as defined in Appendix A: Table 14.01a Total Hip Replacement or Table 14.02a Total Knee Replacement
>
> **Excluded Populations:**
>
> - Patients less than 18 years of age
> - Patients who have a Length of Stay greater than 120 day
> - Patients with an ICD-10-PCS Other Procedure Code as defined in Appendix A: Table 14.05a (partial hip and partial knee replacements), Table 14.06a (revision and resurfacing procedures), Table 14.07a (removal of implanted devices/prostheses)
> - Patients with an ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Code as defined in Appendix A: Table 14.08 (complication of internal fixation device/prosthesis), Table 14.09 (malignant neoplasm of the pelvis, sacrum, coccyx, lower limbs, or bone/bone marrow or a disseminated malignant neoplasm), or Table 14.10 (femur, hip, pelvic fracture)
>
> **Data Elements:**
>
> - *Admission Date*
> - *Birthdate*
> - *Discharge Date*

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- *ICD-10-CM Other Diagnosis Codes*
- *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. Proportion for hip replacements, proportion for knee replacements and aggregated proportion for hip & knee replacements.

Selected References:

- Cella, D., Hahn, E., Jensen, S., Butt, Z., Nowinski, C. et al. Patient-Reported Outcomes in Performance Measurement. Research Triangle Park (NC): RTI Press; 2015 Sep.
- Patient Report Outcomes Summit for Total Joint Arthroplasty Report, August 31, 2015.

Links to Patient-Reported Outcome Survey Instruments:

- HOOS http://www.koos.nu/HOOSEng.pdf
- HOOS Jr. https://www.hss.edu/hoos-jr-koos-jr-outcomes-surveys.asp
- KOOS http://www.koos.nu/koos-english.pdf
- KOOS Jr. https://www.hss.edu/hoos-jr-koos-jr-outcomes-surveys.asp
- VR-12 https://www.aaos.org/uploadedFiles/PreProduction/Quality/Measures/Veterans RAND 12 (VR-12).pdf
- PROMIS-Global http://www.healthmeasures.net/explore-measurement-systems/promis/obtain-administer-measures

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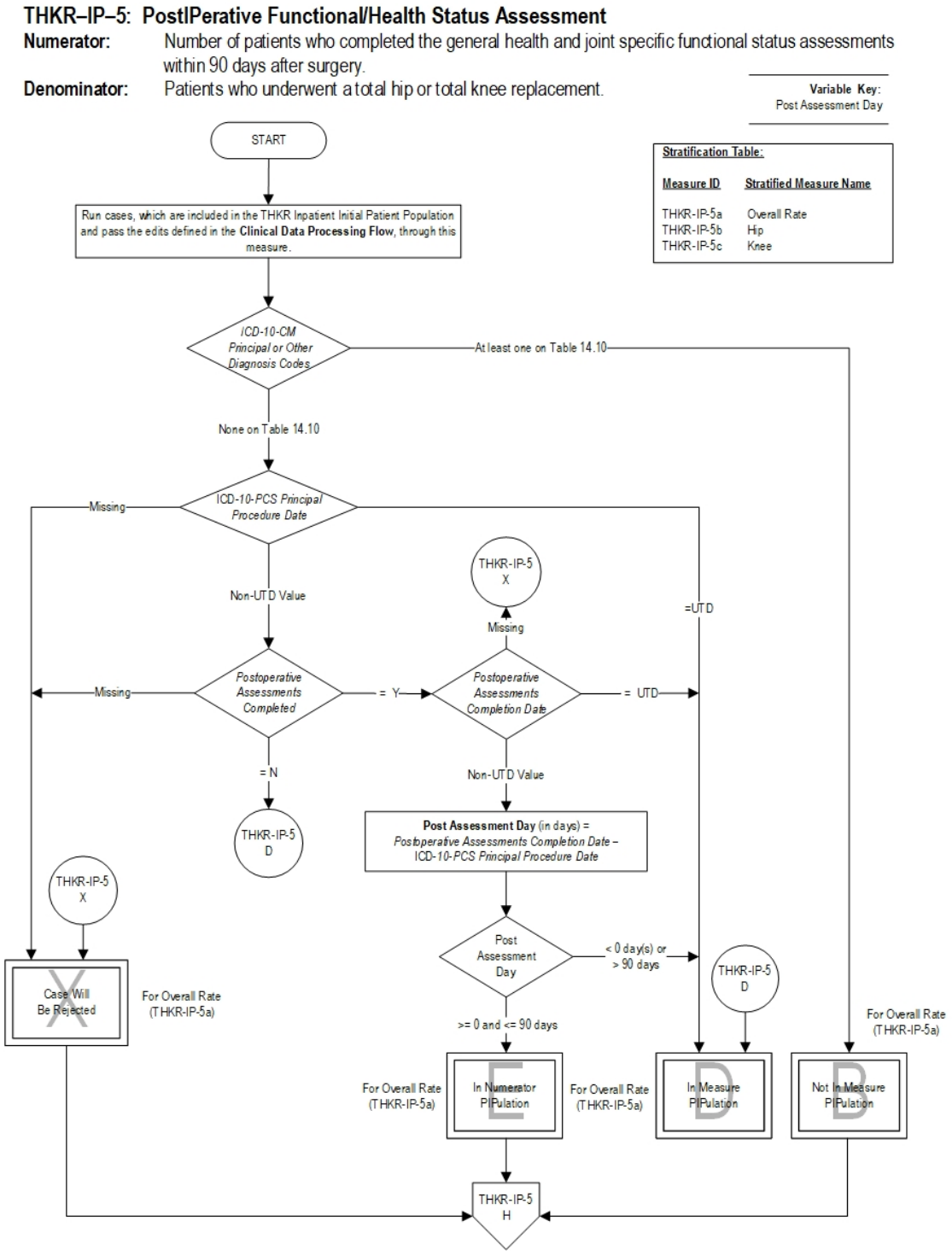
Measure Algorithm:



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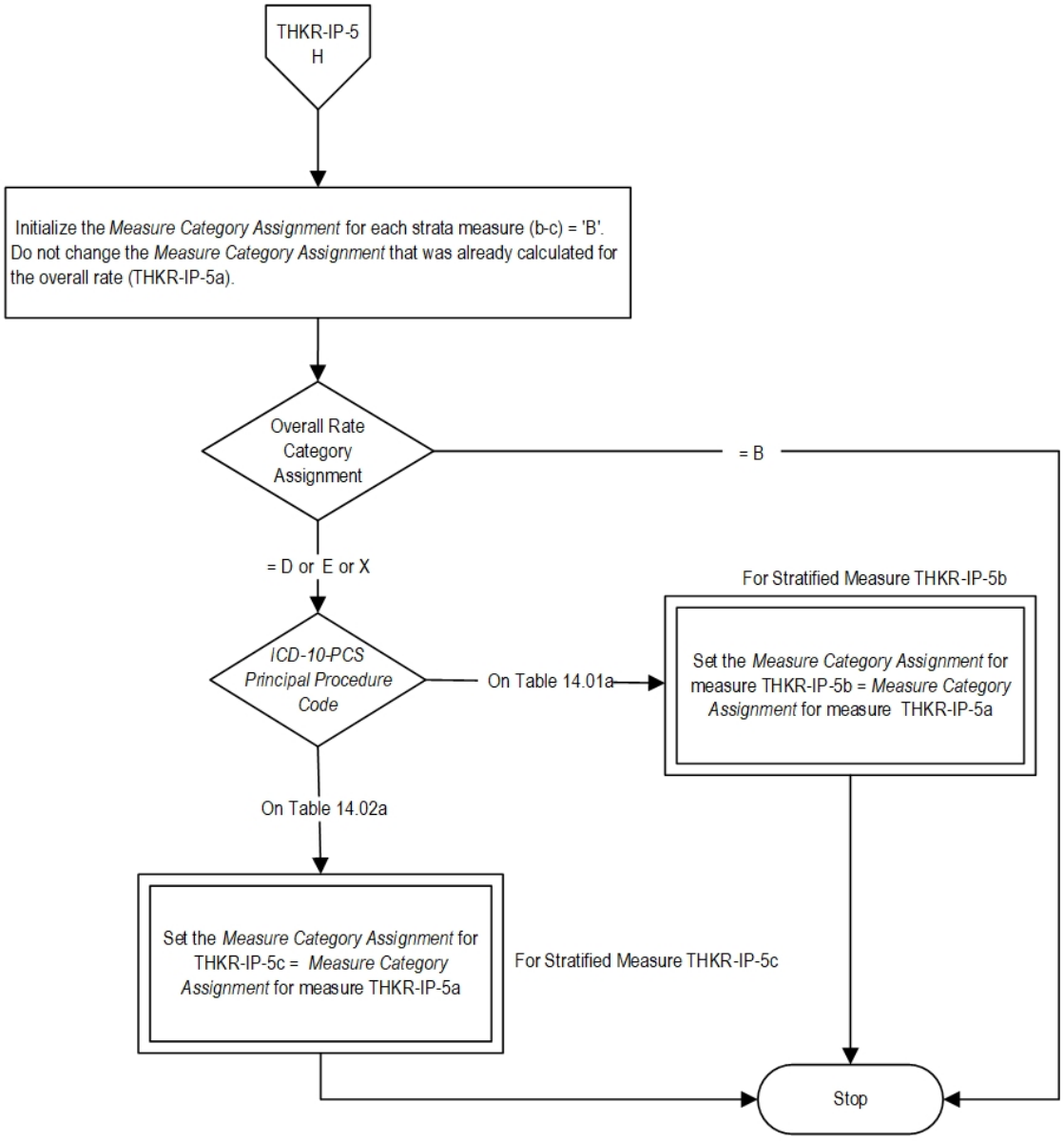

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Total Hip and Total Knee Replacement Outpatient (THKR-OP)

Set Measures

Set Measure ID	Measure Short Name
THKR-OP-1	Regional Anesthesia
THKR-OP-2	Postoperative Ambulation on Day of Surgery
THKR-OP-3	Discharged to Home
THKR-OP-4	Preoperative Functional/Health Status Assessment
THKR-OP-5	Postoperative Functional/Health Status Assessment

General Data Elements

Element Name	Collected For
Birthdate	All Records,
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
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
Ambulation	THKR-OP-2

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Element Name	Collected For
Ambulation Date	THKR-OP-2
Ambulation Time	THKR-OP-2
CPT® Code Procedure Date	THKR-OP-2, THKR-OP-4, THKR-OP-5
CPT® Codes with Modifier	THKR-OP
Discharge Code	THKR-OP-2, THKR-OP-3
Outpatient Departure Date	THKR-OP-2
Outpatient Encounter Date	THKR-OP
PACU Discharge Date	THKR-OP-2
PACU Discharge Time	THKR-OP-2
Postoperative Assessments Completed	THKR-OP-5
Postoperative Assessments Completion Date	THKR-OP-5
Postoperative ICU Admit or Transfer	THKR-OP-2
Preoperative Assessments Completed	THKR-OP-4
Preoperative Assessments Completion Date	THKR-OP-4
Reason for No Regional Anesthesia	THKR-OP-1
Reason for Not Ambulating the Day of Surgery	THKR-OP-2
Reason for Not Discharging Patient to Home	THKR-OP-3
Regional Anesthesia	THKR-OP-1
Resident of Other Health Care Facility	THKR-OP-3

THKR-OP Initial Patient Population

The THKR measure set is unique in that there are two distinct strata within the measure set, each identified by a specific group of CPT® Codes with Modifier, or lack thereof. The patients in each stratum are counted in the Initial Patient Population of multiple measures. The outpatient population is defined as a patient who is not hospitalized overnight but who visits a hospital, clinic, or associated facility for diagnosis or treatment. CPT® codes are utilized to bill outpatient cases when the patient undergoes a procedure. Any patient who has outpatient surgery that is billed using a CPT® code should be assigned to the outpatient bucket to determine patient volumes and cases for abstraction within the THKR performance measures.

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

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- CPT® Codes with Modifier
- Outpatient Encounter Date
- ICD-10-CM Principal or Other Diagnosis Code
- Birthdate

Patients seen in the outpatient setting are included in the THKR-OP measure set if they have:

CPT® Codes with Modifier is at least one on Appendix A, Table 14.01b, 14.02b, 14.03b, 14.04b, a Patient Age (Outpatient Encounter Date minus Birthdate) greater than or equal to 18 years, CPT® Codes with Modifier is none on Appendix A, Table 14.05b, 14.06b, 14.07b, and an ICD-10-CM Principal or other Diagnosis Code is none on Table 14.08, 14.09.

And are eligible to be sampled for:

1 – **Stratum 1** – If patients have CPT® Codes with Modifier as defined in Appendix A, Table 14.01b, 14.03b are included in the THKR-OP stratum-1 and are eligible to be sampled.

2 – **Stratum 2** – If patients have CPT® Codes with Modifier on as defined in Appendix A, Table 14.02b, 14.04b.are included in the THKR-OP stratum-2 and are eligible to be sampled.

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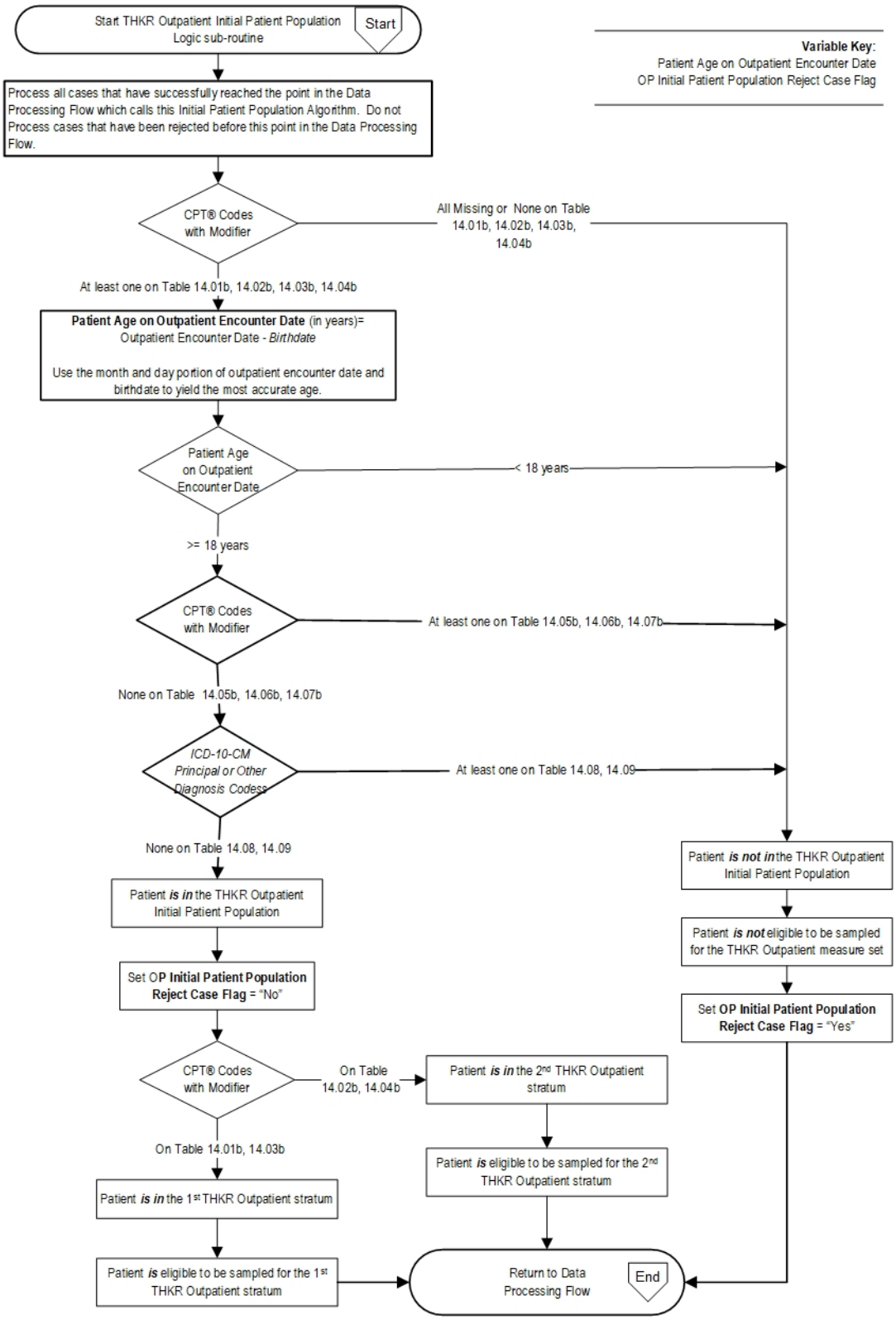
Initial Patient Population Algorithm

Total Hip And Total Knee Replacement Outpatient Initial Patient Population Algorithm



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Total Hip and Total Knee Replacement Outpatient (THKR-OP) Initial Patient Population Algorithm Narrative

Variable Key: Patient Age, and Outpatient Initial Patient Population Reject Case Flag

1. Start THKR Initial Patient Population logic sub-routine. Process all cases that have successfully reached the point in the Clinical Data Processing Flow which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Clinical Data Processing Flow.
2. Check CPT® Codes with Modifier
    a. If the CPT® Codes with Modifier is all missing or none on Table 14.01b, 14.02b, 14.03b, 14.04b, the patient is not in the THKR Outpatient Initial Patient Population and is not eligible to be sampled for the THKR Outpatient measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Clinical Data Processing Flow in the Data Processing section.
    b. If there is at least one CPT® Codes with Modifier on Table 14.01b, 14.02b, 14.03b, 14.04b, continue processing and proceed to Patient Age Calculation.
3. Calculate Patient Age. Patient Age, in years, is equal to the Outpatient Encounter Date minus the Birthdate. Use the month and day portion of admission date and birthdate to yield the most accurate age.
4. Check Patient Age:
    a. If the Patient Age is less than 18 years, the patient is not in the THKR Outpatient Initial Patient Population and is not eligible to be sampled for the THKR Outpatient measure set. Set the OP Initial Patient Population Reject Case Flag to equal Yes. Return to Clinical Data Processing Flow in the Data Processing section.
    b. If the Patient Age is greater than or equal to 18 years, continue processing and proceed to CPT® Codes with Modifier.
5. Check CPT® Codes with Modifier
    a. If there is at least one CPT® Codes with Modifier is on Table 14.05b, 14.06b, 14.07b, the patient is not in the THKR Outpatient Initial Patient Population and is not eligible to be sampled for the THKR Outpatient measure set. Set the OP Initial Patient Population Reject Case Flag to equal Yes. Return to Clinical Data Processing Flow in the Data Processing section.
    b. If there is no CPT® Codes with Modifier on Table 14.05b, 14.06b, 14.07b, continue processing and proceed to ICD-10-CM Principal or Other Diagnosis Code Check.
6. Check ICD-10-CM Principal or Other Diagnosis Code
    a. If there is at least one ICD-10-CM Principal or Other Diagnosis Code on Table 14.08, TABLE14.09, the patient is not in the THKR Outpatient Initial Patient Population and is not eligible to be sampled for the THKR Outpatient measure set. Set the OP Initial Patient Population Reject Case Flag to equal Yes. Return to Clinical Data Processing Flow in the Data Processing section.
    b. If there is no ICD-10-CM Principal or Other Diagnosis Code on Table 14.08, 14.09, the patient is in the THKR Outpatient Initial Patient Population. Set the OP Initial Patient Population Reject Case Flag to equal No. Continue processing and proceed to CPT® Codes with Modifier to determine the stratification.
7. Check CPT® Codes with Modifier
    a. If the CPT® Codes with Modifier on Table 14.01b, 14.03b, the patient is in the 1st THKR Outpatient stratum and patient is eligible to be sampled for the 1st THKR Outpatient Stratum. Include the patient in the Initial Patient Population for the appropriate measures. Return to Clinical Data Processing Flow in the Data Processing section.

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b. If the CPT® Codes with Modifier on Table 14.02b, 14.04b, the patient is in the 2nd THKR Outpatient stratum and patient is eligible to be sampled for the 2nd THKR Outpatient Stratum. Include the patient in the Initial Patient Population for the appropriate measures. Return to Clinical Data Processing Flow in the Data Processing section.

Sampling / Sample Size Requirements

Abstract a minimum of 10 outpatient hip cases and 10 outpatient knee cases per month (e.g. 20 cases for July, 20 cases for August, etc.).

- If a site has a monthly population of 10 or less outpatient hip cases, abstract all outpatient hip cases. Similarly, if 10 or less outpatient knee cases per month were performed, abstract all outpatient knee cases.
- If a site has a monthly population of greater than 10 outpatient hip cases, it is acceptable to abstract a sample of 10 hip cases. Similarly, if more than 10 outpatient knee cases per month were performed, it is acceptable to abstract a sample of 10 knee cases.

Sampling is a process of selecting a representative part of a population in order 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 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 the project measures, the terms "sample" and "case" are defined as: "sample" is the fraction of the population that is selected for further study; "case" refers to a single record (or an episode of care [EOC]) within the population. Organizations are NOT required to sample their data. If sampling offers minimal benefit (i.e., a hospital has 13 cases for the month and must select a sample of 10 cases), the organization may choose to use all cases.

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 $k \leq N/n$. 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.

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Measure Information Form

Measure Set: Total Hip and Total Knee Replacement Outpatient (THKR-OP)

Set Measure ID: THKR-OP-1

Set Measure ID	Performance Measure Name
THKR-OP-1a	Regional Anesthesia - Hip and Knee Overall
THKR-OP-1b	Regional Anesthesia - Hip
THKR-OP-1c	Regional Anesthesia - Knee

Performance Measure Name: Regional Anesthesia

Description: Patients undergoing a total hip or total knee replacement with regional anesthesia attempted or performed. Regional anesthesia includes neuraxial anesthesia (spinal and epidural blocks) as well as peripheral nerve blocks.

Rationale: Regional anesthesia is associated with fewer postoperative complications and deaths than general anesthesia. Research shows that patients who received neuraxial anesthesia had statistically significant decreases in 30-day mortality and in-hospital complications including pneumonia, kidney failure and the need for mechanical ventilation.[1] Additional studies show decrease in operative blood loss and need for blood transfusions.[2-3] Additionally, evidence supports the overall beneficial effects of neuraxial anesthesia versus general anesthesia in decreasing the development of surgical site infections after total hip and knee arthroplasty.[4] Several factors, such as compromised cardiopulmonary function, anticoagulative therapy, or anatomical deformity, may prevent general anesthesia and neuraxial blockade from being conducted in total joint replacement surgery.[5] Peripheral nerve blocks (PNBs) can be used as the primary anesthetic for total knee replacement facilitating faster postoperative recovery than general anesthesia.[6]

In December, 2015, The American Academy of Orthopaedic Surgeons (AAOS) published Surgical Management of Osteoarthritis of the Knee Evidence-Based Clinical Practice Guidelines. Per the guidelines, evidence supports that neuraxial anesthesia could be used to improve select perioperative outcomes and complication rates compared to general anesthesia.[7] In March, 2017, AAOS published Management of Osteoarthritis of the Hip Evidence-Based Clinical Practice Guidelines. These guidelines state evidence supports the use of neuraxial anesthesia compared to general anesthesia to reduce complications in patients undergoing total hip arthroplasty.[8] According to the National Surgical Quality Improvement Project database, from 2005-2011, 52% of knee replacements and 60% of hip replacements were performed under general anesthesia.

Some surgeons avoid using regional anesthesia due to concerns that regional anesthesia may cause motor weakness, making patients more likely to fall when they are walking postoperatively. Peripheral nerve blockade did not alter the risk of inpatient fall, whereas use of neuraxial anesthesia reduced the risk by 30% compared with general anesthesia. The type of anesthesia may represent a modifiable risk factor and the use of neuraxial over general anesthesia may be considered in the context of a fall-prevention program.[9]

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Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients undergoing a total hip or total knee replacement with regional anesthesia attempted or performed.

Included Populations: Patients receiving any of the following or documentation of a failed attempt of any of the following during the operative episode:

- Epidural anesthesia
- Epidural block
- Peripheral nerve block (single injection or continuous infusion)
- Spinal anesthesia
- Spinal block
- Subarachnoid block

Excluded Populations: None

Data Elements:

- *Regional Anesthesia*

Denominator Statement: Patients undergoing a total hip or total knee replacement.

Included Populations:

- Patients with a CPT® Code with Modifier as defined in Appendix A: Table 14.01b (Total Hip Replacements-OP), or Table 14.02b (Total Knee Replacements-OP), or Table 14.03b (Bilateral Hip Replacements-OP) or Table 14.04b (Bilateral Knee Replacements-OP)

Excluded Populations:

- Patients less than 18 years of age
- Patients with a CPT® Code with Modifier as defined in Appendix A: Table 14.05b (partial hip and partial knee replacements-OP), or Table 14.06b (revision and resurfacing procedures-OP), or Table 14.07b (removal of implanted devices/prostheses-OP)
- Patients with an ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes as defined in Appendix A: Table 14.08 (complication of internal fixation device/prosthesis, or Table 14.09 (malignant neoplasm of the pelvis, sacrum, coccyx, lower limbs, or bone/bone marrow or a disseminated malignant neoplasm)
- Documented contraindication by physician/APN/PA (e.g. anticoagulated patients, coagulopathies, neurologic condition, previous spinal fusion) clearly indicated as reason for no regional anesthesia

Data Elements:

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- *Birthdate*
- *CPT® Codes with Modifier*
- *ICD-10-CM Other Diagnosis Codes*
- *ICD-10-CM Principal Diagnosis Code*
- *Outpatient Encounter Date*
- *Reason for No Regional Anesthesia*

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 CPT procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10 and CPT 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. Proportion for hip replacements, proportion for knee replacements and aggregated proportion for hip & knee replacements.

Selected References:

- [1] Memtsoudis SG, Xuming S.; Ya-Lin Chiu, et al. Perioperative Comparative Effectiveness of Anesthetic Technique in Orthopedic Patients, Anesthesiology 05 2013, Vol.118, 1046-1058.
- [2] Mauermann WJ, Shilling AM, Zuo Z. A comparison of neuraxial block versus general anesthesia for elective total hip replacement: a metaanalysis. Anesth. Analg. 2006; 103: 1018–25.
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- [5] Kim JH, Cho MR, et al. A comparison of femoral/sciatic nerve block with lateral femoral cutaneous nerve block and combined spinal epidural anesthesia for total knee replacement arthroplasty. Korean J Anesthesiol 2012 May 62(5): 448-453.
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- [9] Memtsoudis SG, Thomas Danninger, Rehana Rasul, Jashvant Poeran, Philipp Gerner, Ottokar Stundner, Edward R. Mariano, Madhu Mazumdar. Inpatient Falls after Total Knee Arthroplasty. Anesthesiology, 2014; 120 (3): 551-563.
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- Mitchell D, Friedman, RJ, Baker DJ, Cooke JE, Darcy, MD, Miller MC. Prevention of thromboembolic disease following total knee arthroplasty: Epidural versus general anesthesia. Clinical Orthopaedics & Related Research, August 1991; 269:109-112.
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- Soohoo NF, Lieberman JR, et al. Development of Quality of Care Indicators for Patients Undergoing THR/TKR. BMJ Qual Saf 2011;20:153-157
- Basques BA, Toy JO, Bohl, DD, Golinvaux, NS, Grauer, JN. General Compared with Spinal Anesthesia for Total Hip Arthroplasty. The Journal of Bone and Joint Surgery 2015;97:455-61
- Hunt LP, Ben-Shlomo Y, Clark EM, Dieppe P, Judge A, MacGregor AJ, Tobias JH, Vernon K, Blom AW. 90 day mortality after 409,096 total hip replacements for osteoarthritis, from the National Joint Registry for England and Wales: a retrospective analysis, Lancet. 2013 Sep 28;382(9898):1097-104
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- Williams-Russo P, Sharrock NE, Haas SB, et al. Randomized Trial of Epidural Versus General Anesthesia: Outcomes After Primary Total Knee Replacement. Clinical Orthopaedics & Related Research. 331:199-208, October, 1996.
- National Surgical Quality Improvement Project database
- FORCE-Total Joint Registry database
- Warren, F., Sundaram, A., Anis, A., Kamath, S., Mont, S., Higuera, S., & Piuzzi, S. (2020). Spinal Anesthesia Is Associated With Decreased Complications After Total Knee and Hip Arthroplasty. Journal of the American Academy of Orthopaedic Surgeons, 28(5), e213–e221.

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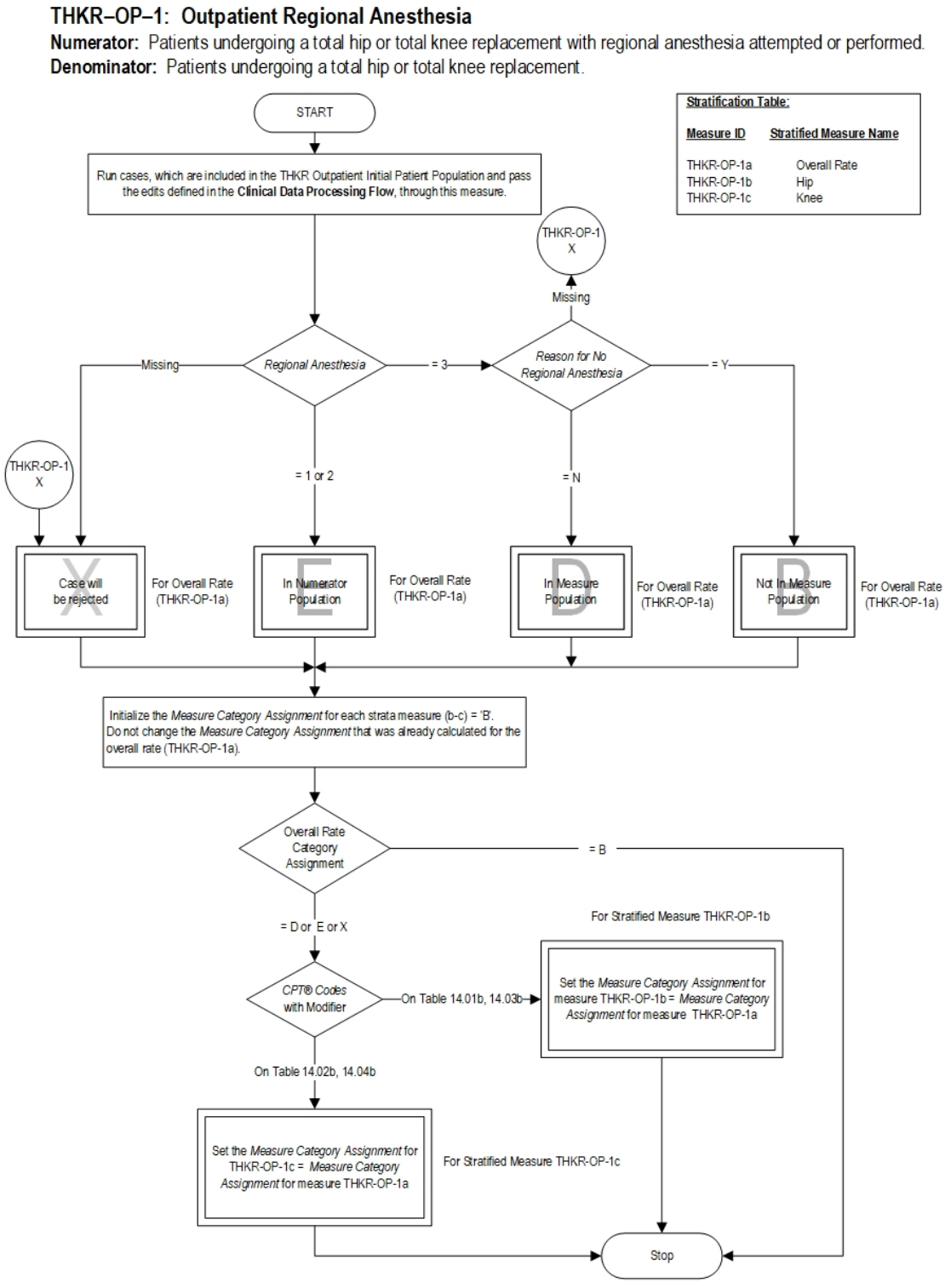
Measure Algorithm:



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Measure Information Form

Measure Set: Total Hip and Total Knee Replacement Outpatient (THKR-OP)

Set Measure ID: THKR-OP-2

Set Measure ID	Performance Measure Name
THKR-OP-2a	Postoperative Ambulation on Day of Surgery - Hip and Knee Overall
THKR-OP-2b	Postoperative Ambulation on Day of Surgery - Hip
THKR-OP-2c	Postoperative Ambulation on Day of Surgery - Knee

Performance Measure Name: Postoperative Ambulation on Day of Surgery

Description: Patients undergoing total hip or total knee replacement who ambulated postoperatively the day of surgery or ambulated in the PACU or within 4 hours of discharge from the PACU.

Rationale: Early ambulation as close to the time of surgery as possible can reduce the risk of complications associated with bed rest such as deep vein thrombosis, pulmonary embolism, atelectasis, pneumonia and urinary retention. Additionally, early ambulation results in a decreased length of stay, lowering the patient's risk for hospital acquired infections and other complications. Early ambulation leads to improvement in outcomes (range of motion, gait, balance, muscle strength and pain) without an increase in adverse events.[1] Studies demonstrating positive results showed that rapid ambulation can be achieved as early as in the PACU.[2]

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients undergoing total hip or total knee replacement who ambulated postoperatively the day of surgery or ambulated in the PACU or within 4 hours of discharge from the PACU.

> **Included Populations:**
>
> - Postoperative ambulation (walking) on the day of surgery
> - Postoperative ambulation (walking) in the PACU or within 4 hours of discharge from the PACU
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Ambulation*
> - *Ambulation Date*
> - *Ambulation Time*
> - *CPT® Code Procedure Date*

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- *PACU Discharge Date*
- *PACU Discharge Time*

Denominator Statement: Patients undergoing a total hip or total knee replacement.

Included Populations:

- Patients with a CPT® Code with Modifier as defined in Appendix A, Table 14.01b (Total Hip Replacements-OP), or Table 14.02b (Total Knee Replacements-OP), or Table 14.03b (Bilateral Hip Replacements-OP), or Table 14.04b Bilateral Knee Replacements-OP)

Excluded Populations:

- Patients less than 18 years of age
- Patients with a CPT® Code with Modifier as defined in Appendix A: Table 14.05b (partial hip and partial knee replacements-OP), or Table 14.06b (revision and resurfacing procedures-OP), or Table 14.07b (removal of implanted devices/prostheses-OP)
- Patients with an ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Code as defined in Appendix A: Table 14.08 (Complication of Internal Fixation Device/Prosthesis), or Table 14.09 (malignant neoplasm of the pelvis, sacrum, coccyx, lower limbs, or bone/bone marrow or a disseminated malignant neoplasm), or Table 14.10 (femur, hip, pelvic fracture)
- Postoperative patients who are admitted to ICU the day of surgery or PACU discharge date
- Patient expired on CPT® Code Procedure Date
- Patient expired on PACU Discharge Date
- Patient left AMA on PACU Discharge Date
- Documented contraindication by physician/APN/PA/nurse/physical therapist/occupational therapist for not ambulating on day of surgery (e.g. nerve block has not worn off, hypotensive upon standing, patient is vomiting)

Data Elements:

- *Birthdate*
- *CPT® Code Procedure Date*
- *CPT® Codes with Modifier*
- *Discharge Code*
- *ICD-10-CM Other Diagnosis Codes*
- *ICD-10-CM Principal Diagnosis Code*
- *Outpatient Departure Date*
- *Outpatient Encounter Date*
- *PACU Discharge Date*
- *Postoperative ICU Admit or Transfer*
- *Reason for Not Ambulating the Day of Surgery*

Risk Adjustment: No.

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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 CPT procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10 and CPT 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. Proportion for hip replacements, proportion for knee replacements and aggregated proportion for hip & knee replacements.

Selected References:

- [1]Guerra ML, Singh PJ, Taylor NF. Early mobilization of patients who have had a hip or knee joint replacement reduces length of stay in hospital: A systematic review. Clin Rehabil. 2014 Dec 1.
- [2]Tayrose G, Newman D, Slover J, Jaffe F, Hunter T, Bosco J. Rapid Mobilization Decreases Length of Stay in Joint Replacement Patients. Bulletin of the Hospital for Joint Diseases 2013;71(3):222-6.
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- Chen AF, Stewart MK, Heyl AE, Klatt BA. Effect of Immediate Postoperative Physical Therapy on Length of Stay for Total Joint Arthroplasty Patients. The Journal of Arthroplasty 2012;Vol.27 No. 6

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- Renkawitz T, Rieder T, Handel M. Comparison of two accelerated clinical pathways – after total knee replacement how fast can we really go? Clinical Rehabilitation 2010; 24:230-239
- Labraca,NS, Castro-Sanchez,AM, Mataran-Penarrocha,G, Arroyo-Morales,M, Sanchez-Joya,M, Moreno-Lorenzo C. Benefits of starting rehabilitation within 24 hours of primary total knee arthroplasty: randomized clinical trial. Clin Rehabil. 2011/25(6):557-566
- Surgical Management of Osteoarthritis of the Knee Evidence-Based Clinical Practice Guideline. Adopted by the American Academy of Orthopaedic Surgeons Board of Directors, 12/4/2015.

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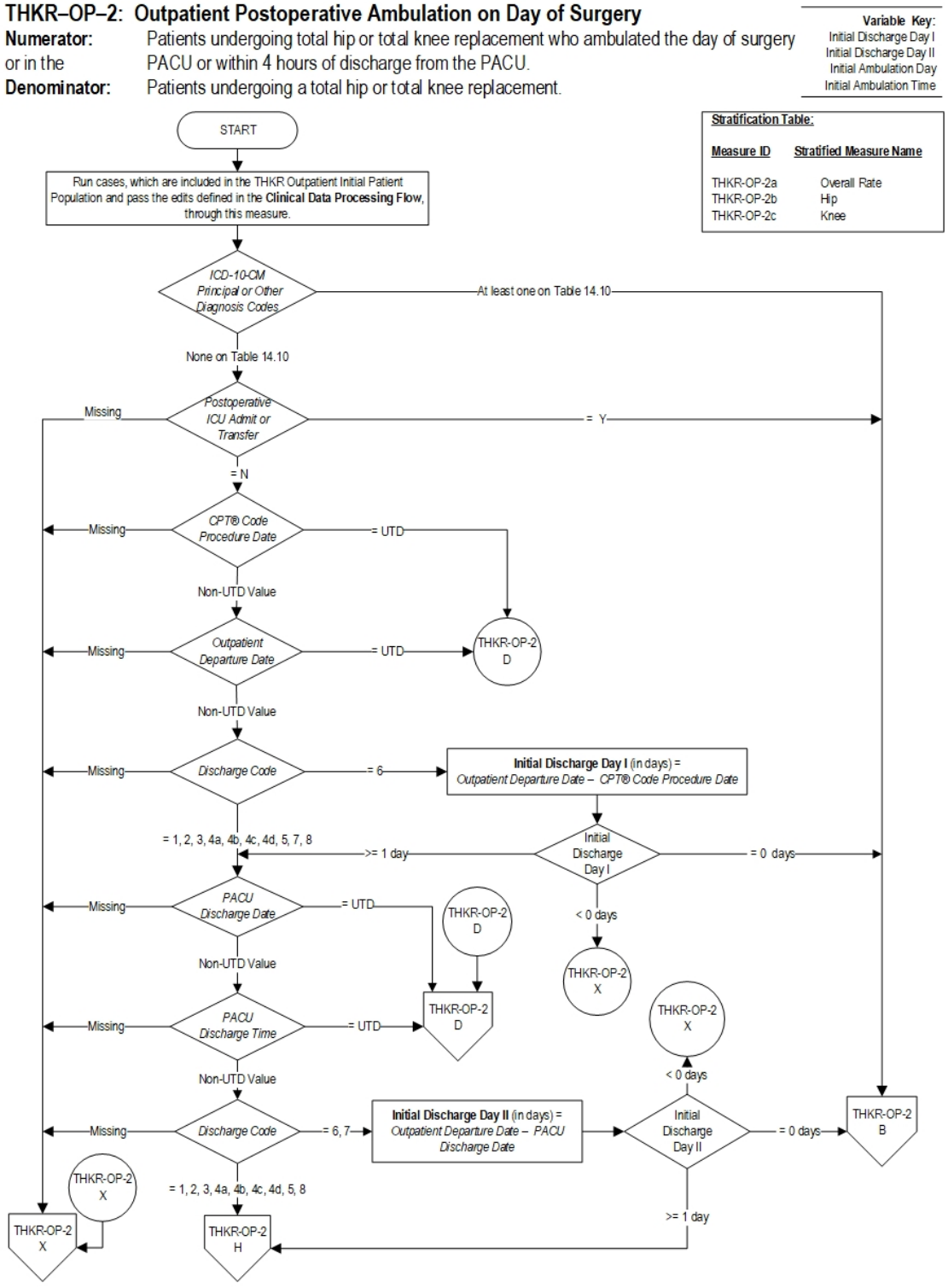
Measure Algorithm:



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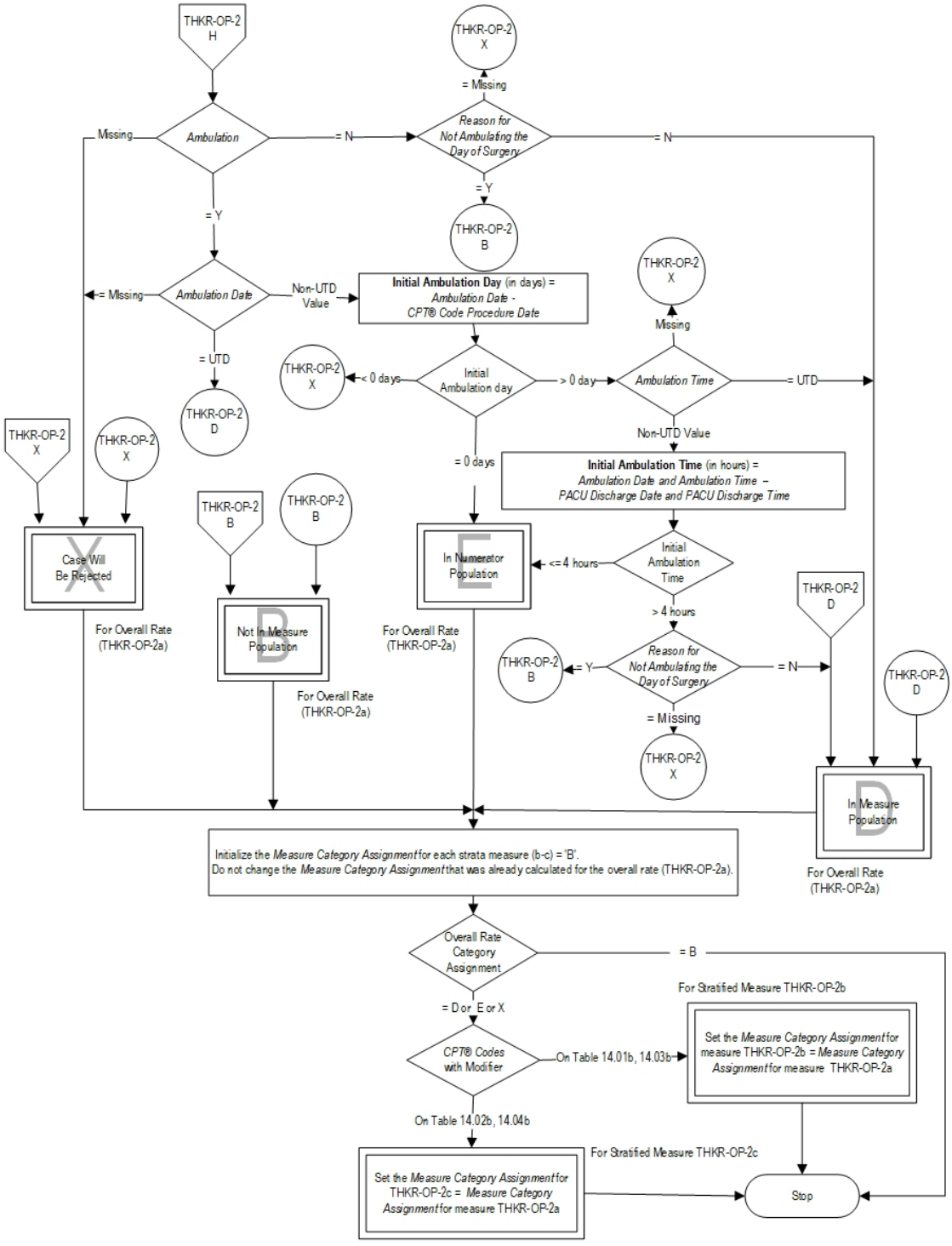

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Measure Information Form

Measure Set: Total Hip and Total Knee Replacement Outpatient (THKR-OP)

Set Measure ID: THKR-OP-3

Set Measure ID	Performance Measure Name
THKR-OP-3a	Discharged to Home - Hip and Knee Overall
THKR-OP-3b	Discharged to Home - Hip
THKR-OP-3c	Discharged to Home - Knee

Performance Measure Name: Discharged to Home

Description: Patients discharged to home following total hip or total knee replacement.

Rationale: Home-based rehabilitation is increasingly utilized to reduce health-care costs; however, with a shorter hospital stay, the possibility arises for an increase in adverse clinical outcomes. Research has shown that despite concerns about early hospital discharge, there is no difference in pain, functional outcomes, or patient satisfaction between groups that received home-based rehabilitation versus inpatient rehabilitation. Home-based rehabilitation protocol following elective primary total hip or knee replacement is the more cost-effective strategy.[1-2]

According to 2012 Medicare claims data, 49% of patients undergoing hip and knee replacements were discharged to an inpatient rehabilitation facility (IRF) or skilled nursing facility (SNF) for rehabilitation. Therefore, only 51% of patients were discharged to home.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients who were discharged to home following total hip or total knee replacement.

> **Included Populations:** Patients discharged to home with or without home health services, in-home physical therapy or outpatient physical therapy.
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *Discharge Code*

Denominator Statement: Patients undergoing a total hip or total knee replacement.

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Included Populations:

- Patient with a CPT® Code with Modifier as defined in Appendix A, Table 14.01b (Total Hip Replacement-OP), or Table 14.02b (Total Knee Replacement-OP), or Table 14.03b (Bilateral Hip Replacements-OP), or Table 14.04b (Bilateral Knee Replacements-OP).

Excluded Populations:

- Patients less than 18 years of age
- Residents of Other Health Care Facility:
    - 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
    - Skilled Nursing Facility (SNF), Sub-Acute Care or Swing Bed
    - Veterans Home
- Patients with a CPT® Code with Modifier as defined in Appendix A: Table 14.05b (partial hip and partial knee replacements-OP), or Table 14.06b (revision and resurfacing procedures-OP), or Table 14.07b (removal of implanted devices/prostheses-OP)
- Patients with an ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Code as defined in Appendix A: Table 14.08 (Complication of Internal Fixation Device/Prosthesis), or Table 14.09 (malignant neoplasm of the pelvis, sacrum, coccyx, lower limbs, or bone/bone marrow or a disseminated malignant neoplasm), or Table 14.10 (femur, hip, pelvic fracture)
- Patient expired
- Patient left AMA
- Physician/APN/PA/nurse/social worker/care manager/discharge planner/physical therapist/occupational therapist documentation of medical/social reason why patient cannot be discharged to home.

Data Elements:

- *Birthdate*
- *CPT® Codes with Modifier*
- *Discharge Code*
- *ICD-10-CM Other Diagnosis Codes*
- *ICD-10-CM Principal Diagnosis Code*
- *Outpatient Encounter Date*
- *Reason for Not Discharging Patient to Home*
- *Resident of Other Health Care Facility*

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,

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

Data Accuracy: Variation may exist in the assignment of ICD-10 and CPT 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. Proportion for hip replacements, proportion for knee replacements and aggregated proportion for hip & knee replacements.

Selected References:

- [1]Mahomed NN, Davis AM, Hawker G, Badley E, Davey JR, Syed KA. et al. Inpatient compared with home-based rehabilitation following primary unilateral total hip or knee replacement: a randomized controlled trial. J Bone Joint Surg Am. 2008;90(8):1673–1680.
- [2]Padgett DE, et al. Study: Patients Who Go Home After Knee Replacement Do As Well as Those Discharged to Rehab Facility. Presented at: American Academy of Orthopaedic Surgeons Annual Meeting; March 24-28, 2015; Las Vegas.
- Inpatient Rehabilitation Facility Services: Assessing payment adequacy and updating payments - Report to the Congress: Medicare Payment Policy March 2014
- Mallinson TR, Bateman J, Tseng HY, Manheim L, et al. A Comparison of Discharge Functional Status After Rehabilitation in Skilled Nursing, Home Health, and Medical Rehabilitation Settings for Patients After Lower-Extremity Joint Replacement Surgery. Arch Phys Med Rehabil Vol 92, May 2011.
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- McLawhorn AS, Fu, MC, Schairer WW, Sculco PK, MacLeanCH,Padgett DE. Continued Inpatient Care After Primary Total Knee Arthroplasty Increases 30-Day Post-Discharge Complications: A Propensity Score-Adjusted Analysis. The Journal of Arthroplasty. January 31, 2017 (http://dx.doi.org/10.1016/j.arth.2017.01.039).
- Ramos NL, Karia RJ, Hutzler LH, Brandt AM, Slover JD, Bosco JA. The effect of discharge disposition on 30-day readmission rates after total joint arthroplasty. J Arthroplasty. 2014 Apr;29(4):674-7. doi: 10.1016/j.arth.2013.09.010. Epub 2013 Oct 30.

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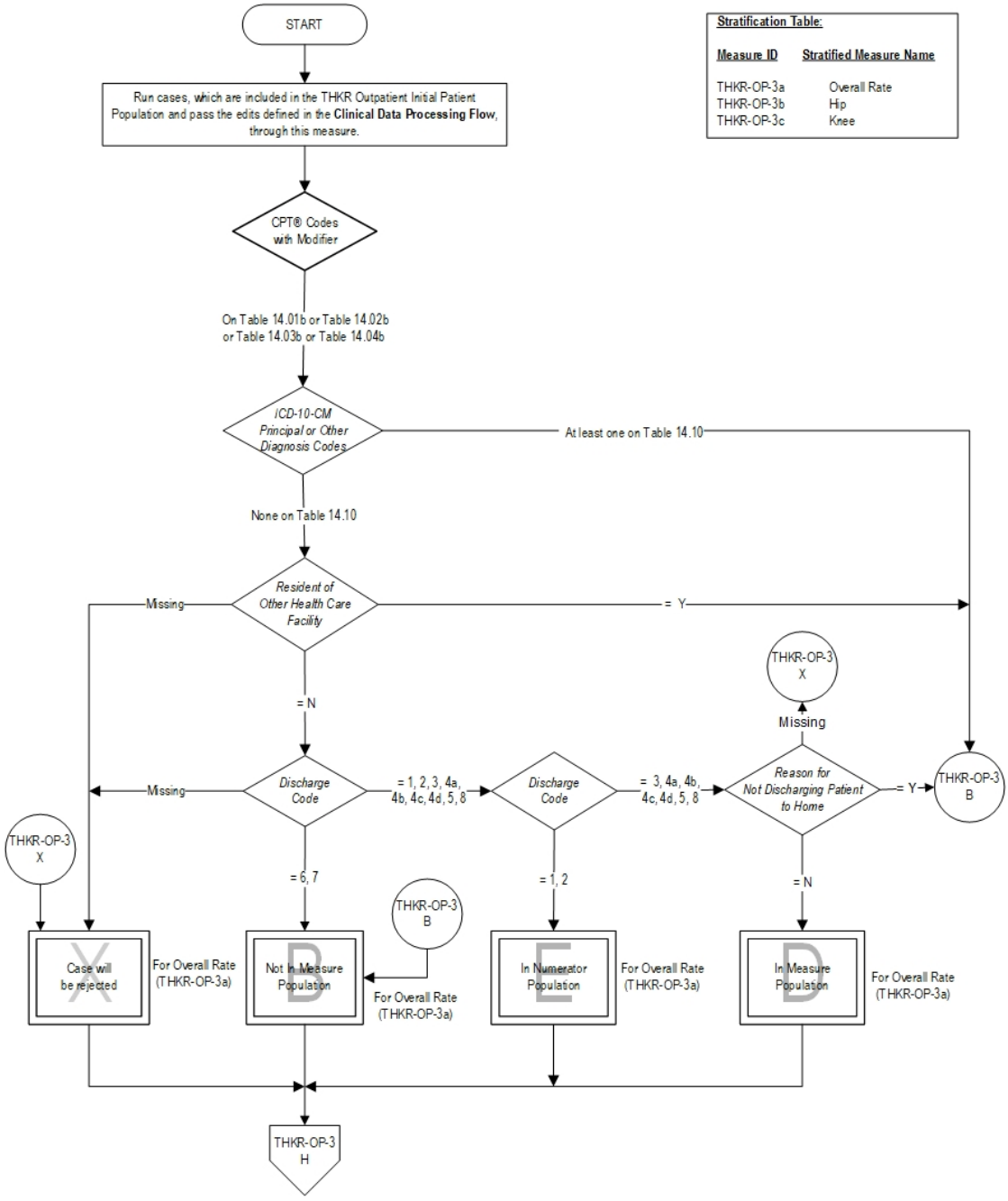
Measure Algorithm:

THKR–OP–3: Outpatient Discharged to Home

Numerator: Patients who were discharged to home following total hip or total knee replacement.

Denominator: Patients undergoing a total hip or total knee replacement.



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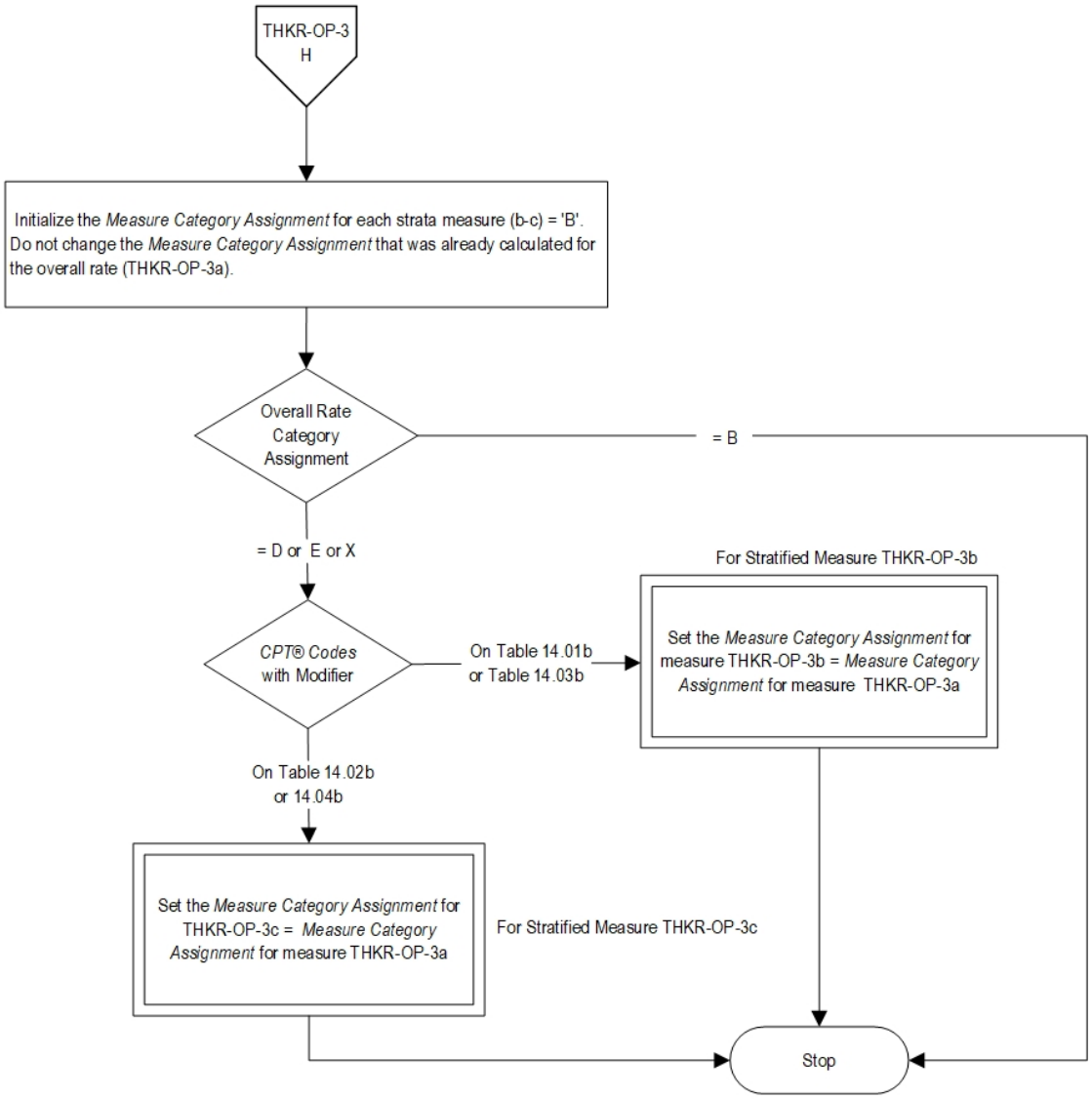

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Measure Information Form

Measure Set: Total Hip and Total Knee Replacement Outpatient (THKR-OP)

Set Measure ID: THKR-OP-4

Set Measure ID	Performance Measure Name
THKR-OP-4a	Preoperative Functional/Health Status Assessment - Hip and Knee Overall
THKR-OP-4b	Preoperative Functional/Health Status Assessment - Hip
THKR-OP-4c	Preoperative Functional/Health Status Assessment - Knee

Performance Measure Name: Preoperative Functional/Health Status Assessment

Description: Patients who completed the general health and joint specific functional status assessments within 90 days prior to surgery as specified below:

Hips: [VR-12 or PROMIS-Global] AND [HOOS Jr. (6 questions) or HOOS Pain, Function Daily Living Subscales (27 questions)]

Knees: [VR-12 or PROMIS-Global] AND [KOOS Jr. (7 questions) or KOOS Stiffness, Pain, Function Daily Living Subscales (28 questions)]

The assessment tool must reflect the status of the patient's health condition, health behavior, or experience with health care from the patient's perspective, without interpretation of the patient's response by a clinician or anyone else [1]. The assessment can be completed by phone, mail, email, or in-person.

Note: Links to the survey instruments are provided in the Selected References at the bottom of this section.

Rationale: Good orthopedic care requires knowledge of the patient's history of musculoskeletal pain and associated limitations in daily function. Standardized measures of patient-reported outcomes (PROs) can provide this information. Integrating PROs into routine orthopedic patient visits can provide key information to monitor changes in symptom severity over time, support shared clinical care decisions, and assess treatment effectiveness.[2]

Patient reported outcome measures (PROMs) capture patients' self-assessments of their health and provide a mechanism for evaluating the effectiveness of patient-centered care.[3] In acknowledgement of the administrative burden associated with PRO data capture, The Joint Commission will implement PROMs in a phased approach. During this first phase, the process of collecting preoperative data will be measured. During the second phase, pre- and postoperative data will be evaluated with the goal of calculating patients' improvement scores. The American Academy of Orthopedic Surgeons and American Association of Hip and Knee Surgeons are very supportive of the Centers for Medicare and Medicaid Services' effort to develop patient-reported functional status outcome measures for total hip and knee arthroplasty. When fully specified and risk-adjusted, these meas-

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ures will be useful in assessing quality and value of care and will permit performance measurement progression beyond process measures.[4-5]

On August 31, 2015, the American Association of Hip and Knee Surgeons (AAHKS) convened a Patient Reported Outcomes Summit for Total Joint Arthroplasty in Baltimore, Maryland. Representatives from orthopaedic organizations (AAHKS, AAOS, The Hip Society, The Knee Society, and American Joint Replacement Registry), CMS, YNHHSC/CORE, National Committee for Quality Assurance (NCQA), Mathematica, CECity, and Blue Cross Blue Shield Association participated in the Summit. The Summit's goal was to obtain a consensus regarding the patient-reported outcomes (PRO) and risk variables suitable for total hip and knee arthroplasty performance measures.[6] The instruments specified in this measure, align with the Summit's recommendations as well as CMS Comprehensive Care for Joint Replacement (CJR) legislation.

The Veterans RAND 12 Item Health Survey (VR-12) is a generic patient reported outcome (PRO) instrument used to measure health related quality of life. This tool, which measures physical function and health status, is widely used and is well validated in the total hip and total knee population. Additionally, the Patient Reported Outcomes Measurement Information System (PROMIS) Global-10 instrument, funded by the National Institute of Health, is increasingly used in the United States. PROMIS instruments use modern measurement theory to assess patient–reported health status for physical, mental, and social well–being to reliably and validly measure patient reported outcomes (PROs) for clinical research and practice. PROMIS instruments measure concepts such as pain, fatigue, physical function, depression, anxiety and social function. Hip disability and Osteoarthritis Outcome Score (HOOS) and Knee injury and Osteoarthritis Outcome Score (KOOS) are well validated and widely used instruments for measuring joint-specific pain and physical function before and after joint replacement. While the full HOOS and KOOS surveys are lengthy, the orthopedic community prefers an abbreviated survey that captures a subset of items referred to as HOOS JR/KOOS JR.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Patients who completed the general health (VR-12 or PROMIS-Global) AND joint specific functional status assessments (HOOS Jr./subscales or KOOS Jr./subscales) within 90 days prior to surgery.

> **Included Populations:** As above
>
> **Excluded Populations:**
>
> **Data Elements:**
>
> - *CPT® Code Procedure Date*
> - *Preoperative Assessments Completed*
> - *Preoperative Assessments Completion Date*

Denominator Statement: Patients undergoing elective total hip or total knee replacement.

> **Included Populations:**

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- Patients with a CPT® Code with Modifier as defined in Appendix A: Table 14.01b (Total Hip Replacements-OP), or Table 14.02b (Total Knee Replacements-OP), or Table 14.03b (Bilateral Hip Replacements-OP), or Table 14.04b (Bilateral Knee Replacements-OP)

Excluded Populations:

- Patients less than 18 years of age
- Patients a CPT® Code with Modifier as defined in Appendix A: Table 14.05b (Partial hip and partial knee replacements-OP), or Table 14.06b (Revision and resurfacing procedures-OP), or Table 14.07b (Removal of implanted devices/prostheses-OP)
- Patients with an ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Code as defined in Appendix A: Table 14.08 (Complication of Internal Fixation Device/Prosthesis), or Table 14.09 (Malignant neoplasm of the pelvis, sacrum, coccyx, lower limbs, or bone/bone marrow or a disseminated malignant neoplasm) or Table 14.10 (Femur, hip, pelvic fracture)

Data Elements:

- *Birthdate*
- *CPT® Codes with Modifier*
- *ICD-10-CM Other Diagnosis Codes*
- *ICD-10-CM Principal Diagnosis Code*
- *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 CPT procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10 and CPT 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. Proportion for hip replacements, proportion for knee replacements and aggregated proportion for hip & knee replacements

Selected References:

- [1] Cella D, Hahn EA, Jensen SE, Patient-Reported Outcomes in Performance Measurement, ©2015 Research Triangle Institute.

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- [2] Ayers DC, Zheng H, Franklin PD. Integrating Patient-reported Outcomes Into Orthopaedic Clinical Practice: Proof of Concept From FORCE-TJR. Clinical Orthopaedics and Related Research. 2013;471(11):3419-3425. doi:10.1007/s11999-013-3143-z.
- [3] Patient-Reported Outcomes Following Elective Primary Total Hip and/or Total Knee Arthroplasty: Hospital-Level Performance Measure(s), Phase 3 Measure Methodology Report, Yale New Haven Health Services Corporation – Center for Outcomes Research and Evaluation (CORE), May 2015.
- [4] AAOS letter to Andy Slavitt, Acting Administrator/CMS dated April 3, 2015. Re.: Response during public comment on "Proposed Electronic Clinical Quality Measures for Functional Status Assessment and Improvement for Patients who received a Total Hip Replacement and Functional Status Assessment and Improvement for Patients who received a Total Knee Replacement."
- [5] AAHKS letter to Andy Slavitt, Acting Administrator/CMS dated March 30, 2015. Re.: Response during public comment on "Proposed Electronic Clinical Quality Measures for Functional Status Assessment and Improvement for Patients who received a Total Hip Replacement and Functional Status Assessment and Improvement for Patients who received a Total Knee Replacement."

- [6] Patient Reported Outcomes Summit for Total Joint Arthroplasty Report, August 31, 2015.
- AAHKS sponsored Patient Reported Outcomes Summit for Total Joint Arthroplasty Report. August 31, 2015.
- FORCE-TJR letter to CMS dated September 3, 2015. Response during public comment on CMS-5516-Proposal for Comprehensive Care for Joint Replacement Payment Model for Acute Care Hospitals Furnishing Lower Extremity Joint Replacement Services.
- AAHKS, AAOS, AJRR letter to Andy Slavitt, Acting Administrator/CMS dated September 8, 2015. Response during public comment on CMS-5516-Proposal for Comprehensive Care for Joint Replacement Payment Model for Acute Care Hospitals Furnishing Lower Extremity Joint Replacement Services.
- AAHKS letter to Andy Slavitt, Acting Administrator/CMS dated September 8, 2015. Response during public comment on CMS-5516-Proposal for Comprehensive Care for Joint Replacement Payment Model for Acute Care Hospitals Furnishing Lower Extremity Joint Replacement Services.
- Hyperlinks to Patient-Reported Outcome Survey Instruments:
    - HOOS http://www.koos.nu/
    - HOOS Jr. https://www.hss.edu/hoos-jr-koos-jr-outcomes-surveys.asp
    - KOOS http://www.koos.nu/
    - KOOS Jr. https://www.hss.edu/hoos-jr-koos-jr-outcomes-surveys.asp
    - VR-12 http://www.bu.edu/sph/research/research-landing-page/vr-36-vr-12-and-vr-6d/
    - PROMIS-Global http://www.nihpromis.org/measures/availableinstruments

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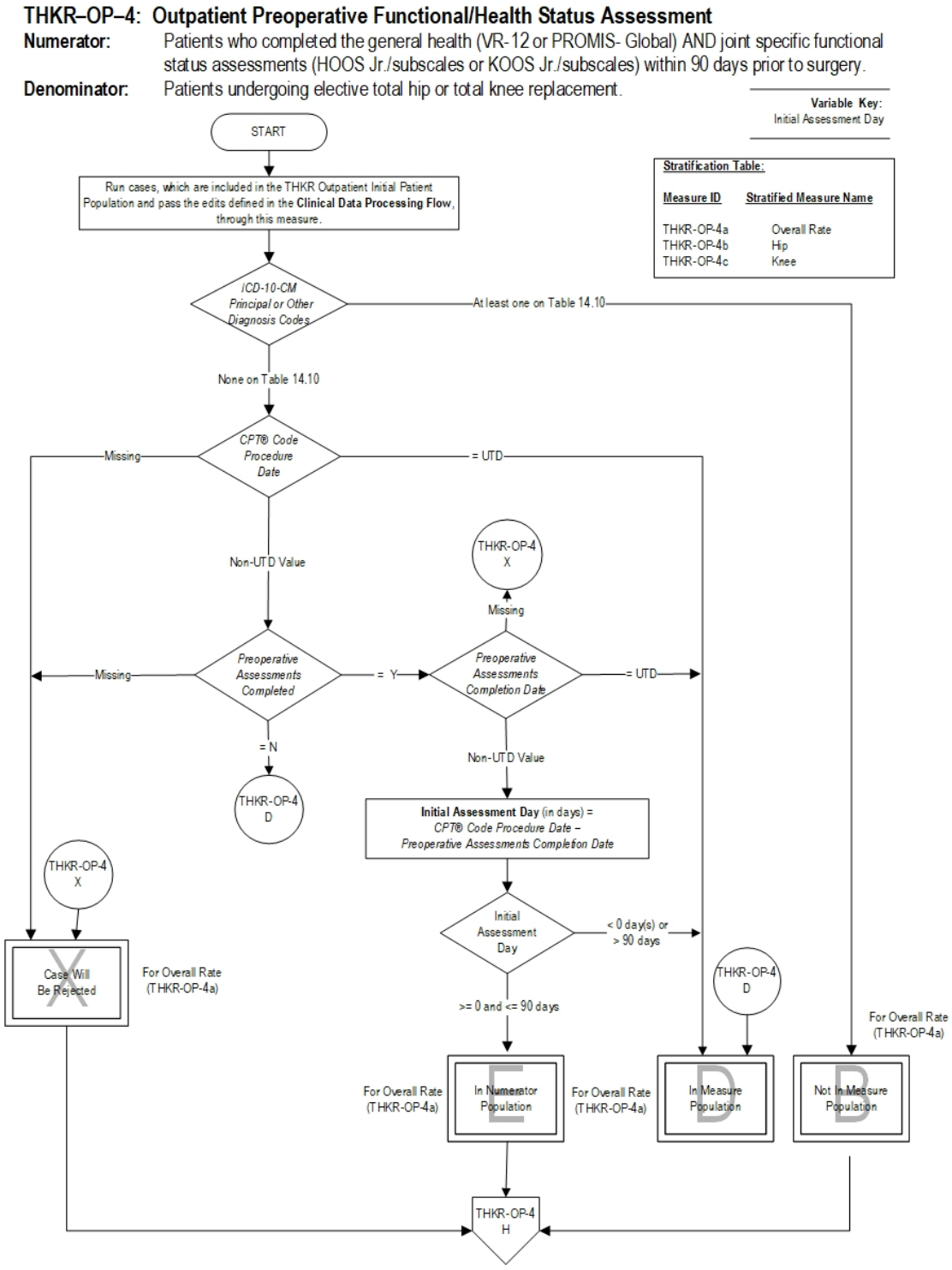
Measure Algorithm:



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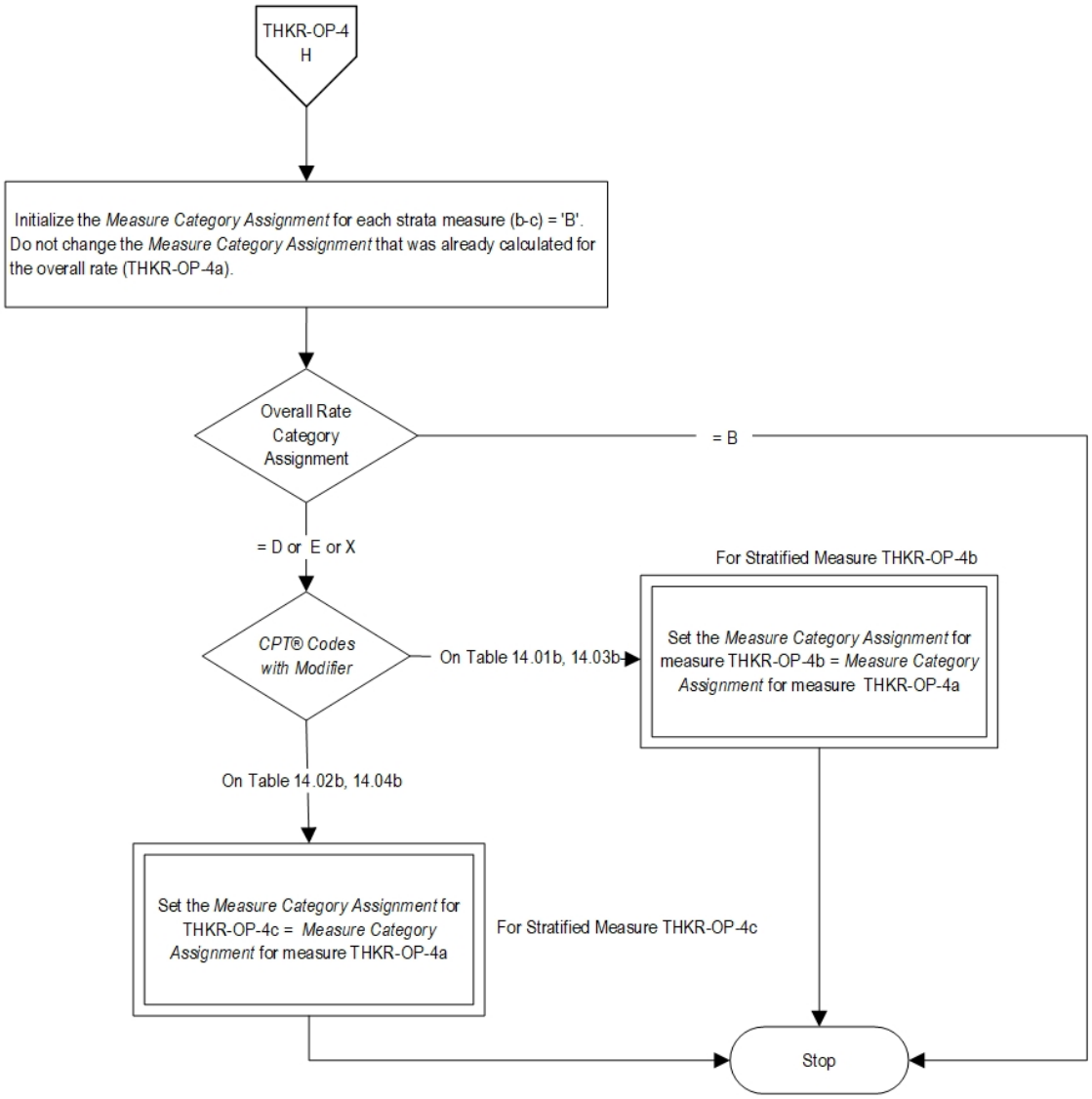

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Measure Information Form

Measure Set: Total Hip and Total Knee Replacement Outpatient (THKR-OP)

Set Measure ID: THKR-OP-5

Set Measure ID	Performance Measure Name
THKR-OP-5a	Postoperative Functional/Health Status Assessment-Hip and Knee Overall
THKR-OP-5b	Postoperative Functional/Health Status Assessment-Hip
THKR-OP-5c	Postoperative Functional/Health Status Assessment-Knee

Performance Measure Name: Postoperative Functional/Health Status Assessment

Description: Patients who completed the general health and joint specific functional status assessments, within 90 days after surgery, as specified below:

Hips: [VR-12 or PROMIS-Global] AND [HOOS Jr. (6 questions) or HOOS Pain, Function Daily Living Subscales (27 questions)]

Knees: [VR-12 or PROMIS-Global] and {KOOS Jr. (7 questions) or KOOS Stiffness, Pain, Function Daily Living Subscales (28 questions)]

The assessment tool must reflect the status of the patient's health condition, health behavior, or experience with health care from the patient's perspective, without interpretation of the patient's response by a clinician or anyone else (Cella et al. 2015). The assessment can be completed by phone, mail, email, or in-person.

Note: Links to the survey instruments are provided in the Selected References at the bottom of this section.

Rationale: Good orthopedic care requires knowledge of the patient's history of musculoskeletal pain and associated limitations in daily function, along with improvements or declines seen after surgery. Standardized measures of patient-reported outcomes (PROs) can provide this information.

The American Association of Hip and Knee Surgeons (AAHKS) convened a Patient Reported Outcomes Summit for Total Joint Arthroplasty in 2015 with the goal of obtaining consensus regarding the patient-reported outcomes and risk variables suitable for total hip and total knee arthroplasty performance measures (Patient Reported Outcomes Summit for Total Joint Arthroplasty Report, 2015). The instruments specified in this measure align with the Summit's recommendations as well as CMS Comprehensive Care for Joint Replacement legislation.

The Veterans RAND 12 item Health Survey (VR-12) is a generic patient reported outcome (PRO) instrument. It is a well validated and widely used in the hip and knee population to measure health related quality of life by capturing the patient's physical function and health status. The Patient Reported Outcomes Measurement Information System (PROMIS) Global-10 assess patient-reported health status for physical, mental, and social well-being by measuring a patient's pain, fatigue, physical function, depression/anxiety status, and social function. Hip disab-

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ility and Osteoarthritis Outcome Score (HOOS) and Knee injury and Osteoarthritis Outcome Score (KOOS) are well validated and widely used instruments for measuring joint-specific pain and physical function before and after joint replacements. Full HOOS and KOOS surveys are lengthy, however, abbreviated versions are available as HOOS Jr./KOOS Jr.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Number of patients who completed the general health and joint specific functional status assessments within 90 days after surgery.

> **Included Populations:** Not applicable
>
> **Excluded Populations:** None
>
> **Data Elements:**
>
> - *CPT® Code Procedure Date*
> - *Postoperative Assessments Completed*
> - *Postoperative Assessments Completion Date*

Denominator Statement: Patients who underwent a total hip or total knee replacement.

> **Included Populations:** Patients with a CPT® Code with Modifier as defined in Appendix A: Table 14.01b (Total Hip Replacements-OP), or Table 14.02b (Total Knee Replacements-OP), or Table 14.03b (Bilateral Hip Replacements-OP), or Table 14.04b (Bilateral Knee Replacements-OP)
>
> **Excluded Populations:**
>
> - Patients less than 18 years of age
> - Patients a CPT® Code with Modifier as defined in Appendix A: Table 14.05b (Partial hip and partial knee replacements-OP), or Table 14.06b (Revision and resurfacing procedures-OP), or Table 14.07b (Removal of implanted devices/prostheses-OP)
> - Patients with an ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Code as defined in Appendix A: Table 14.08 (Complication of Internal Fixation Device/Prosthesis), or Table 14.09 (Malignant neoplasm of the pelvis, sacrum, coccyx, lower limbs, or bone/bone marrow or a disseminated malignant neoplasm) or Table 14.10 (Femur, hip, pelvic fracture)
>
> **Data Elements:**
>
> - *Birthdate*
> - *CPT® Codes with Modifier*
> - *ICD-10-CM Other Diagnosis Codes*
> - *ICD-10-CM Principal Diagnosis Code*

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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. 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. Proportion for hip replacements, proportion for knee replacements and aggregated proportion for hip & knee replacements.

Selected References:

- Cella, D., Hahn, E., Jensen, S., Butt, Z., Nowinski, C. et al. Patient-Reported Outcomes in Performance Measurement. Research Triangle Park (NC): RTI Press; 2015 Sep.
- Patient Report Outcomes Summit for Total Joint Arthroplasty Report, August 31, 2015.

Links to Patient-Reported Outcome Survey Instruments:

- HOOS http://www.koos.nu/HOOSEng.pdf
- HOOS Jr. https://www.hss.edu/hoos-jr-koos-jr-outcomes-surveys.asp
- KOOS http://www.koos.nu/koos-english.pdf
- KOOS Jr. https://www.hss.edu/hoos-jr-koos-jr-outcomes-surveys.asp
- VR-12 https://www.aaos.org/uploadedFiles/PreProduction/Quality/Measures/Veterans RAND 12 (VR-12).pdf
- PROMIS-Global http://www.healthmeasures.net/explore-measurement-systems/promis/obtain-administer-measures

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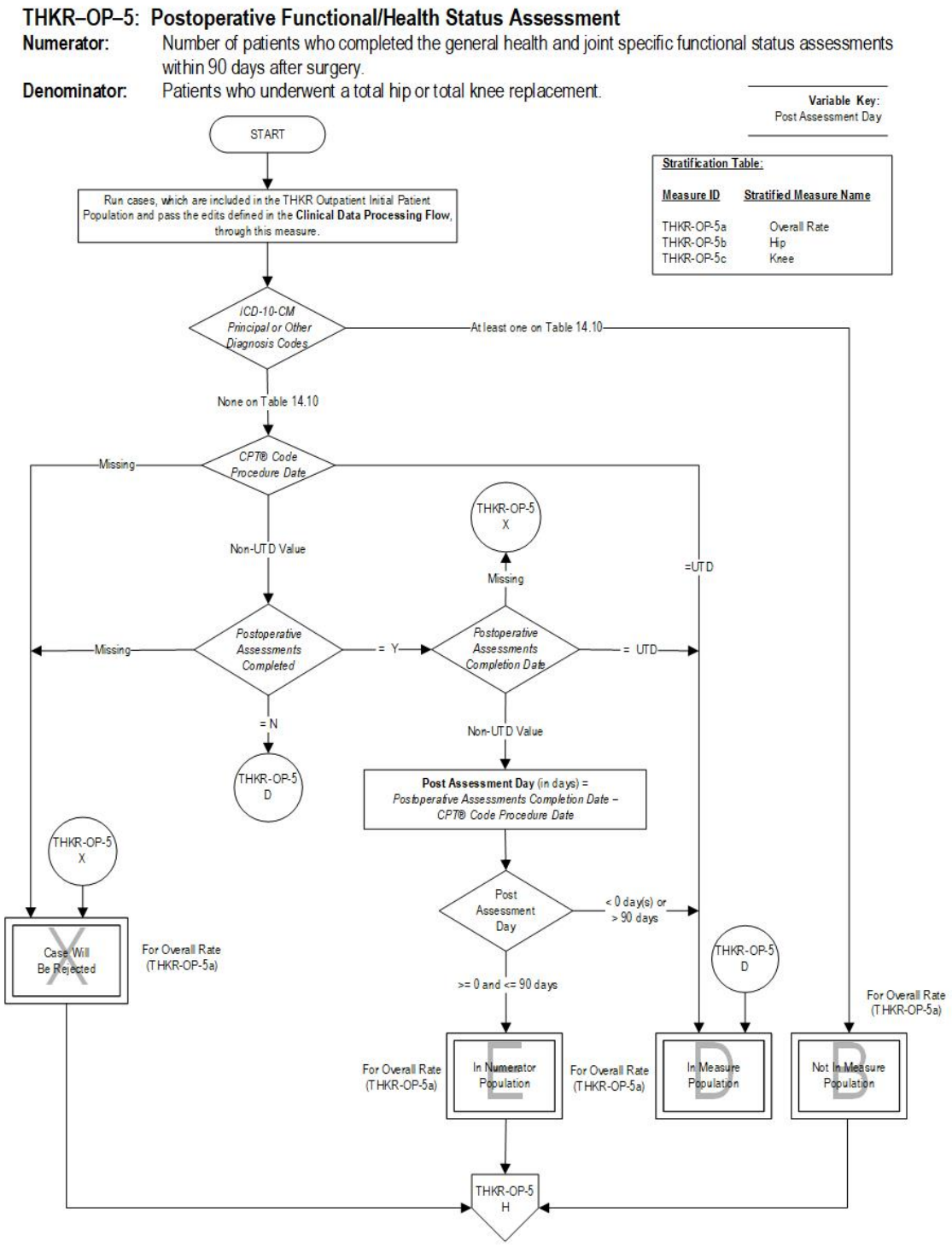
Measure Algorithm:



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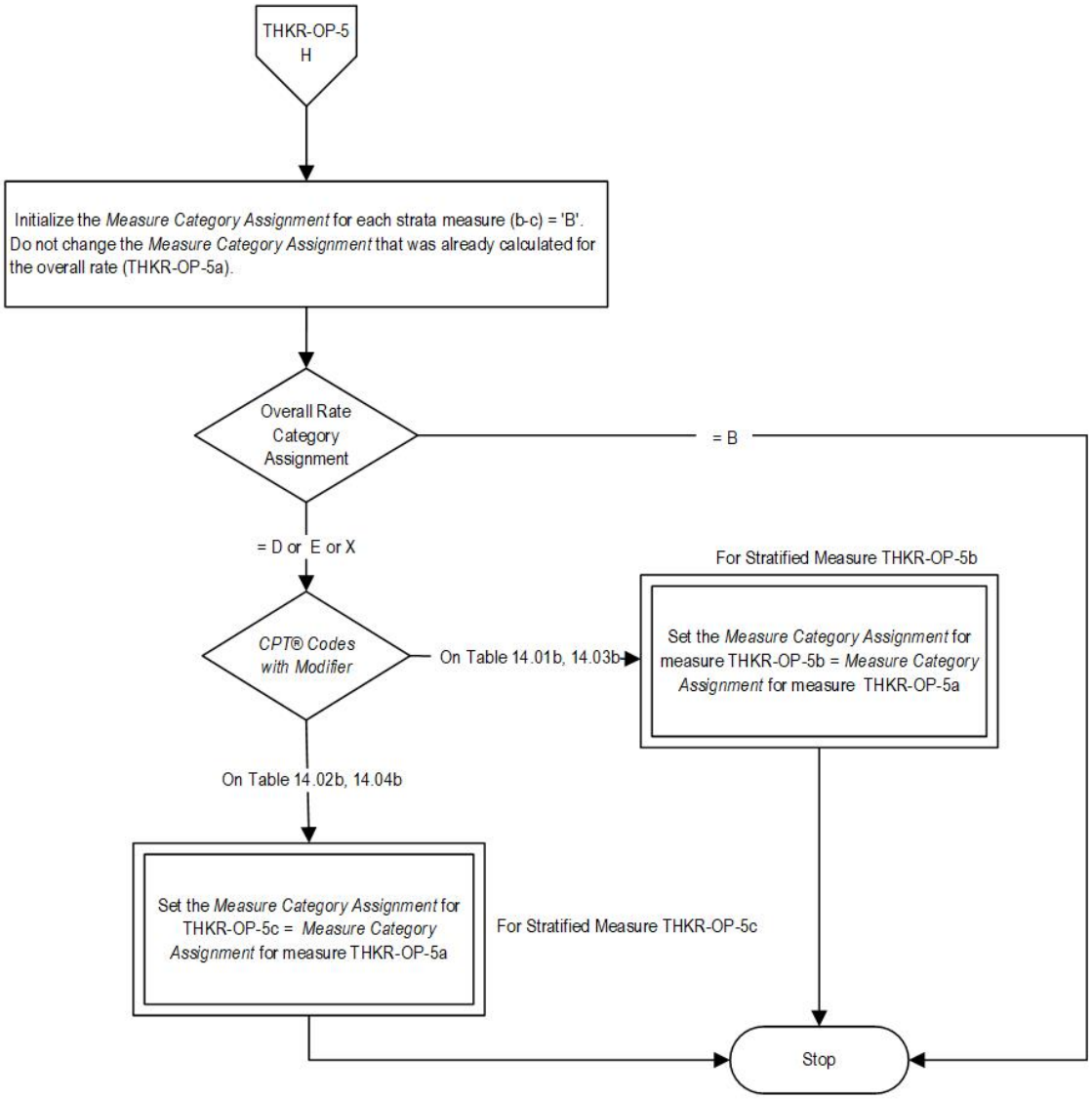

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Data Dictionary Introduction

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*
- *Hispanic Ethnicity*
- *Measure Set*
- *Race*
- *Sex*

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)

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- *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*

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 discharge measure, 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. 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.

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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* used to determine measure result

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 processing or verification.
Definition:	A detailed explanation of the data element. *Data collection software may include this information*.
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

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Term	Definition
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©(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

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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".

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- 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)
    - Anesthesiologist Assistant (AA) (CMS also considers an Anesthesiologist Assistant the same as an APN or PA).
- 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.

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- 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.
- 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 EMT or ambulance record, there is no need for documentation indicating that the medication was actually given.
  Example:
  If the EMT or ambulance record reflects "Epinephrine 0.05 mcg/kg/min IV 13:00" without 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.

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- 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©(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©(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

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Data Element Name	Collection Notes	Associated Measures
Activity Recommendation — Intensity of Activity		ACHFOP-05
Activity Recommendation — Type of Activity		ACHFOP-05
Admission Date	All Records	ACHF, ASR-IP, CCCIP, CSTK, ED, HBIPS, IMM, PAL, PC, STK, SUB, THKR-IP, TOB, VTE
Admission to NICU		PC-05
Admitting Diagnosis		CSTK-04
Advance Directive Executed		ACHF-05, ACHFOP-07
Alcohol Use Status		SUB-2, SUB-3
Aldosterone Receptor Antagonist Prescribed for LVSD at Discharge		CCCIP-02
Aldosterone Receptor Antagonist Prescribed in the Outpatient Setting		ACHFOP-03
Ambulation		THKR-IP-2, THKR-OP-2
Ambulation Date		THKR-IP-2, THKR-OP-2
Ambulation Time		THKR-IP-2, THKR-OP-2
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, ED-1, 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, ED-1, STK-4, STK-OP-1
Assessed for Rehabilitation Services		STK-10
Atrial Fibrillation/Flutter		STK-3
Birth Weight		PC-06

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Data Element Name	Collection Notes	Associated Measures
Birthdate	All Records	ACHF, ACHFOP, ASR-IP, ASR-OP, CCCIP, CCCOP, CSTK, ED, HBIPS, IMM, PAL, PC, STK, STK-OP, SUB, THKR-IP, THKR-OP, TOB, VTE
Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD in the Out-patient Setting		ACHFOP-01
Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate Prescribed for LVSD at Discharge		ACHF-01
Brief Intervention		SUB-2
CPT® Code	All Records	CCCOP-01, CCCOP-03
CPT® Code Procedure Date		CCCOP-01, CCCOP-03, THKR-OP-2, THKR-OP-4, THKR-OP-5
CPT® Codes with Modifier		THKR-OP
Cardiac Rehabilitation Attendance		CCCIP-05, CCCOP-03
Care Transition Record Transmitted		ACHF-03
Care Transition Record-Discharge Medica-tions		ACHF-03
Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed		ACHF-03
Care Transition Record-Procedures Per-formed During Hospitalization		ACHF-03
Care Transition Record-Reason for Hospital-ization		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, CCCIP-01, CCCIP-02, CCCIP-03, CCCIP-04, CCCOP-01, CCCOP-02, CSTK-04, CSTK-06, STK, VTE-6

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Data Element Name	Collection Notes	Associated Measures
Comfort Measures Only		ACHF, ASR-IP-2, ASR-IP-3, ASR-OP-2, CCCIP-01, CCCIP-02, CCCIP-03, CCCIP-04, CCCOP-01, CCCOP-02, 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, SUB-2, SUB-3, TOB-2, TOB-3, VTE-6
Communication of Outpatient Referral to Patient		CCCIP-03, CCCIP-04, CCCOP-01, CCCOP-02
Date Last Known Well		ASR-IP-1, ASR-OP-1, STK-4
Decision to Admit Date		ED-2
Decision to Admit Time		ED-2
Delayed Endovascular Rescue Procedure		CSTK-09, CSTK-11
Discharge Code		ACHFOP, ASR-OP-2, CCCOP-01, CCCOP-02, CCCOP-03, STK-OP-1, THKR-OP-2, THKR-OP-3
Discharge Date	All Records	ACHF, ASR-IP-1, ASR-IP-2, ASR-IP-3, CCCIP, CSTK, ED, HBIPS-1, HBIPS-5, IMM, PAL, PC, STK, SUB, THKR-IP, TOB, VTE
Discharge Disposition		ACHF, ASR-IP-3, CCCIP, CSTK-02, CSTK-10, HBIPS-5, IMM-2, PAL-05, PC-05, PC-06, STK-10, STK-2, STK-3, STK-6, STK-8, SUB-3, THKR-IP-2, THKR-IP-3, TOB-3
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, CCCOP-01, CCCOP-02, CCCOP-03, STK-OP-1
ED Departure Date		ASR-OP-2, ED-1, ED-2, STK-OP-1
ED Departure Time		ASR-OP-2, ED-1, ED-2, STK-OP-1
ED Patient		ASR-IP-1, ED-1, ED-2, STK-4
Education Addresses Activation of Emergency Medical System		STK-8
Education Addresses Follow-up After Discharge		STK-8

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Data Element Name	Collection Notes	Associated Measures
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
Gestational Age		PC-01, PC-02
Goals of Care		PAL-04
High-intensity Statin at Discharge		CCCIP-01
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, CCCIP, CCCOP, CSTK, ED, HBIPS, IMM, PC, STK, STK-OP, SUB, THKR-IP, THKR-OP, TOB, VTE
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
IA Thrombolytic Initiation		CSTK-07

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Data Element Name	Collection Notes	Associated Measures
IA Thrombolytic Initiation Date		CSTK-07
IA Thrombolytic Initiation Time		CSTK-07
ICD-10-CM Other Diagnosis Codes	All Records	CCCIP, CCCOP, CSTK-05, ED, HBIPS-1, HBIPS-5, IMM, PC, STK, SUB, THKR-IP, THKR-OP, TOB, VTE
ICD-10-CM Principal Diagnosis Code	All Records	ACHF, ACHFOP, ASR-IP, ASR-OP, CCCIP, CCCOP, CSTK, ED, HBIPS-1, HBIPS-5, IMM, PC, STK, STK-OP, SUB, THKR-IP, THKR-OP, TOB, VTE
ICD-10-PCS Other Procedure Codes	All Records	ACHF, ACHFOP, CCCIP-03, CCCIP-05, CCCOP-01, CCCOP-03, CSTK-01, CSTK-02, CSTK-03, CSTK-05, CSTK-07, ED, HBIPS, IMM, PC, STK, SUB, THKR-IP, TOB, VTE
ICD-10-PCS Other Procedure Dates	All Records	CCCIP-03, CCCIP-05, CCCOP-01, CCCOP-03, CSTK-01, CSTK-02, CSTK-03, CSTK-05, CSTK-07, ED, HBIPS, IMM, PC, STK, SUB, TOB, VTE
ICD-10-PCS Other Procedure Times		CSTK-01, CSTK-03
ICD-10-PCS Principal Procedure Code	All Records	ACHF, ACHFOP, CCCIP-03, CCCIP-05, CCCOP-01, CCCOP-03, CSTK-01, CSTK-02, CSTK-03, CSTK-05, CSTK-07, ED, HBIPS, IMM, PC, STK, SUB, THKR-IP, TOB, VTE
ICD-10-PCS Principal Procedure Date	All Records	ACHF-05, ACHFOP, CCCIP-03, CCCIP-05, CCCOP-01, CCCOP-03, CSTK-01, CSTK-02, CSTK-03, CSTK-05, CSTK-07, ED, HBIPS, IMM, PC, STK, SUB, THKR-IP-2, THKR-IP-4, TOB, VTE
ICD-10-PCS Principal Procedure Time		CSTK-01, CSTK-03
INR Value > 1.4		CSTK-04
IV Alteplase Initiation		ASR-IP-1, ASR-OP-1, ASR-OP-2, CSTK-05, CSTK-10, 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

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Data Element Name	Collection Notes	Associated Measures
Influenza Vaccination Status		IMM-2
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 Less Than 6		CSTK-09, CSTK-11
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		ACHF-01, ACHFOP-01, ACHFOP-02, ACHFOP-03, CCCIP-02, CCCIP-04, CCCOP-02
Labor		PC-01
Last Known Well		ASR-IP-1, ASR-OP-1, STK-4
MER Eligibility		STK-OP-1
Measure Category Assignment	All Records, Calculation	ASR-IP, ASR-OP, CSTK, ED, HBIPS, IMM, PC, STK, STK-OP, SUB, TOB, VTE
Minutes of Physical Restraint		HBIPS-2
Minutes of Seclusion		HBIPS-3
Mode of Arrival		CSTK-09

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Data Element Name	Collection Notes	Associated Measures
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-03, 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 Departure Date		THKR-OP-2
Outpatient Encounter Date		ACHFOP, ASR-OP-1, ASR-OP-2, CCCOP-01, CCCOP-02, CCCOP-03, STK-OP-1, THKR-OP
PACU Discharge Date		THKR-IP-2, THKR-OP-2
PACU Discharge Time		THKR-IP-2, THKR-OP-2
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

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Data Element Name	Collection Notes	Associated Measures
Payment Source	All Records	ASR-IP, ASR-OP, CSTK, ED, HBIPS, IMM, PC, STK, STK-OP, SUB, THKR-IP, THKR-OP, TOB, VTE
Positive Brain Image		CSTK-05
Positive Brain Image Date		CSTK-05
Positive Brain Image Time		CSTK-05
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
Postoperative Assessments Completed		THKR-IP-5, THKR-OP-5
Postoperative Assessments Completion Date		THKR-IP-5, THKR-OP-5
Postoperative ICU Admit or Transfer		THKR-IP-2, THKR-OP-2
Pre-Stroke Modified Rankin Score (mRS)		CSTK-10
Preoperative Assessments Completed		THKR-IP-4, THKR-OP-4
Preoperative Assessments Completion Date		THKR-IP-4, THKR-OP-4
Prescription for Alcohol or Drug Disorder Medication		SUB-3
Prescription for Tobacco Cessation Medication		TOB-3
Previous Live Births		PC-02
Prior Uterine Surgery		PC-01
Procoagulant Reversal Agent Initiation		CSTK-04
Psychiatric Care Setting	All Records	HBIPS-1, HBIPS-2, HBIPS-3, HBIPS-5
Psychiatric Inpatient Days - Medicare Only		HBIPS-2, HBIPS-3

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Data Element Name	Collection Notes	Associated Measures
Psychiatric Inpatient Days-Non-Medicare Only		HBIPS-2, HBIPS-3
Psychological Trauma History		HBIPS-1
Race	All Records	ACHF, ASR-IP, ASR-OP, CCCIP, CCCOP, CSTK, ED, HBIPS, IMM, PC, STK, STK-OP, SUB, THKR-IP, THKR-OP, TOB, VTE
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 Administration of VTE Prophylaxis		VTE-6
Reason for No Aldosterone Receptor Antagonist Prescribed at Discharge		CCCIP-02
Reason for No Aldosterone Receptor Antagonist Prescribed in the Outpatient Setting		ACHFOP-03
Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD in the Outpatient Setting		ACHFOP-01
Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate Prescribed for LVSD at Discharge		ACHF-01
Reason for No Cardiac Rehabilitation Enrollment		CCCIP-05, CCCOP-03
Reason for No Post-Discharge Appointment Within 7 Days		ACHF-02
Reason for No Referral to Outpatient Cardiac Rehabilitation Program		CCCIP-03, CCCIP-04, CCCOP-01, CCCOP-02, CCCOP-03
Reason for No Regional Anesthesia		THKR-IP-1, THKR-OP-1
Reason for No Tobacco Cessation Medication During the Hospital Stay		TOB-2
Reason for No Tobacco Cessation Medication at Discharge		TOB-3

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Data Element Name	Collection Notes	Associated Measures
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 Ambulating the Day of Surgery		THKR-IP-2, THKR-OP-2
Reason for Not Discharging Patient to Home		THKR-IP-3, THKR-OP-3
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 Not Prescribing a High-Intensity Statin		CCCIP-01
Reason for Oral Factor Xa Inhibitor		STK-1
Referral for Addictions Treatment		SUB-3
Referral for Outpatient Tobacco Cessation Counseling		TOB-3
Referral to Outpatient Cardiac Rehabilitation		CCCIP-03, CCCIP-04, CCCIP-05, CCCOP-01, CCCOP-02, CCCOP-03
Regional Anesthesia		THKR-IP-1, THKR-OP-1
Resident of Other Health Care Facility		THKR-IP-3, THKR-OP-3
Sex	All Records	ACHF, ASR-IP, ASR-OP, CCCIP, CCCOP, CSTK, ED, HBIPS, IMM, PAL, PC, STK, STK-OP, SUB, THKR-IP, THKR-OP, TOB, VTE
Site of Primary Vessel Occlusion		CSTK-08, CSTK-11, CSTK-12
Skin Puncture		CSTK-09, CSTK-12

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Data Element Name	Collection Notes	Associated Measures
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
Suspected Large Vessel Occlusion (LVO)		STK-OP-1
Term Newborn		PC-05, PC-06
Time Last Known Well		ASR-IP-1, ASR-OP-1, STK-4
Tobacco Use Status		TOB-2, TOB-3
Tobacco Use Treatment FDA-Approved Cessation Medication		TOB-2
Tobacco Use Treatment Practical Counseling		TOB-2
Total Leave Days - Medicare Only		HBIPS-2, HBIPS-3
Total Leave Days-Non-Medicare Only		HBIPS-2, HBIPS-3
Treatment Preferences		PAL-04
Treatment Preferences Document		PAL-05
VTE Confirmed		VTE-6
VTE Diagnostic Test		VTE-6
VTE Present at Admission		VTE-6
VTE Prophylaxis		STK-1
VTE Prophylaxis Date		STK-1
VTE Prophylaxis Status		VTE-6
Violence Risk to Others		HBIPS-1
Violence Risk to Self		HBIPS-1

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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.

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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

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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

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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

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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.

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- 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

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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

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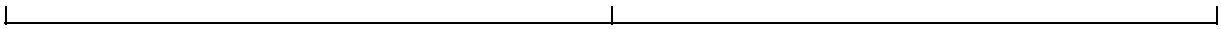

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Name: *Admitting Diagnosis*

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
Refer to Appendix A, Table 8.2c Primary Parenchymal Intracerebral Hemorrhage	None

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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

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• Living will • MOLST (Medical Orders for Life-Sustaining Treatment) • Personal directive • POLST (Physician Orders for Life-Sustaining Treatment) • Power of attorney for healthcare	

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Name: *Alcohol Use Status*

Collected For: SUB-2, SUB-3

Definition: Documentation of the adult patient's alcohol use status using a validated screening questionnaire for **unhealthy** alcohol use within the first day of admission (by end of Day 1). A validated screening questionnaire is an instrument that has been psychometrically tested for reliability (the ability of the instrument to produce consistent results), validity (the ability of the instrument to produce true results), and sensitivity (the probability of correctly identifying a patient with the condition). Validated screening questionnaires can be administered by pencil and paper, by computer or verbally. The screening questionnaire should be at a comprehension level or reading level appropriate for the patient population and in the appropriate language for non-English speaking patients.

An example of a validated questionnaire for alcohol screening is the 10 item Alcohol Use Disorder Identification Tests (AUDIT). The first three questions of the AUDIT, the AUDIT-C, ask about alcohol consumption, and can be used reliably and validly to identify unhealthy alcohol use. The four-item CAGE questionnaire is generally inappropriate for screening general populations, as it aims to identify only severely alcohol dependent patients.

Question: What is the patient's alcohol use status?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 The patient was screened with a validated tool within the first day of admission (by end of Day 1) and the score on the alcohol screen indicates no or low risk of alcohol related problems.

2 The patient was screened with a validated tool within the first day of admission (by end of Day 1) and the score on the alcohol screen indicates unhealthy alcohol use (moderate or high risk) benefiting from brief intervention.

3 The patient was screened with a non-validated tool within the first day of admission (by end of Day 1) and the score on the alcohol screen indicates no or low risk of alcohol related problems.

4 The patient was screened with a non-validated tool within the first day of admission (by end of Day 1) and the score on the alcohol screen indicates unhealthy alcohol use (moderate or high risk) benefiting from brief intervention.

5 The patient refused the screen for alcohol use within the first day of admission (by end of Day 1).

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6 The patient was not screened for alcohol use within the first day of admission (by end of Day 1) or unable to determine from medical record documentation.

7 The patient was not screened for alcohol use within the first day of admission (by end of Day 1) because of cognitive impairment.

Notes for Abstraction:

- The alcohol use status screening must have occurred within the first day of admission (by end of Day 1). This includes the day of admission which is defined as Day 0 and the day after admission which is defined as Day 1.
  EXCEPTION:
  If the screening was performed within 3 days prior to admission, i.e., at the transferring facility, in another inpatient hospital unit, emergency department or observation unit, the screening documentation must be present in the current medical record.
- If patient has a blood alcohol test with a result of .08 g/dL or greater or the clinician documents the patient was acutely intoxicated per blood alcohol test results, select Value "2."
  - The 0.08 limit is a blood alcohol concentration (BAC) reported in g/dL. If results are given in mg/dL, convert to g/dL by moving the decimal point 3 places to the left.
    Examples:
    - A 100 mg/dL serum ethanol level is equivalent to a 0.10 g/dL BAC.
    - An 80 mg/dL serum ethanol level is equivalent to a 0.08 g/dL BAC.
- Screening may be done with a "validated" Single Alcohol Screening Question (SASQ) in order to identify those patients with no risk or low risk or who do not drink. Further screening should be done with a validated tool for those patients with a positive result to determine if there is need for a brief intervention.
  Examples of SASQs include:
  - "On any single occasion during the past 3 months, have you had more than 5 drinks containing alcohol?" ("Yes" response is considered positive.)
  - "When was the last time you had more than X drinks in 1 day?" (X = 4 for women and 5 for men) (Within the last 3 months is considered positive.)
  - "How many times in the past year have you had X or more drinks in a day?" (X = 5 men and 4 women) (Response of >1 is considered positive.)
  - How often have you had 6 or more drinks on one occasion in the past year? (Ever in the past year considered positive.)
  - How often do you have X or more drinks on one occasion? (X = 4 for women and 5 for men) (Ever in the past year considered positive.)
- Refer to the Inclusion Guidelines for examples of commonly used validated screening tools; note that the CAGE, although a validated tool, is not recommended for this measure set.
- If there is documentation in the medical record indicating the patient drinks alcohol and conflicting documentation indicating the patient does not drink alcohol, select Value "6" since alcohol use status is unable to be determined.
  EXCEPTION:
  If there is documentation of a validated questionnaire for alcohol screening com-

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pleted within the first day of admission, select the appropriate Value 1 or 2 regardless of conflicting documentation.

- When there is conflicting information in the record with regard to risk, for instance, the results from a validated screening tool are documented as both low AND moderate/high risk, select Value "2" indicating the highest risk.
- Cognition refers to mental activities associated with thinking, learning, and memory. Cognitive impairment for the purposes of this measure set is related to documentation that the patient cannot be screened for alcohol use due to the impairment (e.g., comatose, obtunded, confused, memory loss) within the first day of admission (by end of Day 1).
- If there is documentation within the first day of admission (by end of Day 1) that the patient was psychotic, symptoms of psychosis, e.g., hallucinating, non-communicative, catatonic, etc., must also be documented for the patient to be considered cognitively impaired.
- If there is documentation to "rule out" a condition/diagnosis related to cognitive impairment, Value "7" cannot be selected unless there is documentation of symptoms.

  Examples:
  - Patient actively hallucinating, rule out psychosis. (Select Value "7").
  - Rule out psychosis. (Cannot select Value "7").
- If there is documentation within the first day of admission (by end of Day 1) of any of the examples below, select Value "7" regardless of conflicting documentation.

  Examples of cognitive impairment include:
  - Altered Level of Consciousness (LOC)
  - Altered Mental Status
  - Cognitive impairment
  - Cognitively impaired
  - Cognitive impairment due to acute substance use, overdose, acute intoxication
  - Confused
  - Dementia
  - Intubation and patient is intubated through the end of Day 1
  - Memory loss
  - Mentally handicapped
  - Obtunded
  - Psychotic/psychosis with documented symptoms
  - Sedation
- Documentation of cognitive impairment overrides documentation of an alcohol use screen and therefore would not be considered "conflicting documentation." Even if the family or others tell staff the patient uses alcohol, the patient could not be appropriately screened and subsequently counseled due to cognitive impairment. Select Value "7."

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Nursing admission assessment
- Nursing Admission Notes

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- Physician Progress Notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Validated Screening Tools for Unhealthy Alcohol Use: This list is not ALL Inclusive • AUDIT • AUDIT-C • ASSIST • CRAFFT • G-MAST • MAST • TWEAK	Any tool which specifically screens for alcohol use disorder, alcohol dependency or alcohol abuse. Examples include, but are not limited to: • CAGE • SASSI • S2BI

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Name: *Aldosterone Receptor Antagonist Prescribed in the Outpatient Setting*

Collected For: ACHFOP-03

Definition: Documentation that an aldosterone receptor antagonist was prescribed for New York Heart Association (NYHA) class III-IV and LVSD ≤35% in the outpatient setting.

Question: Was an aldosterone receptor antagonist prescribed for a NYHA class III-IV and LVSD ≤35% in the outpatient setting?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) An aldosterone receptor antagonist was prescribed for a NYHA class III-IV and an LVSD ≤35%.

N (No) An aldosterone receptor antagonist was not prescribed for a NYHA class III-IV and an LVSD ≤35% 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, select 1.

Suggested Data Sources:
- Discharge summary
- Discharge instruction sheet
- Outpatient medical record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Aldactone • Aldactazide (Hydrochlorothiazide + Spironolactone) • Eplerenone • Inspra • Spironolactone	All other aldosterone receptor antagonist medications other than those listed as inclusions.

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Name: *Aldosterone Receptor Antagonist Prescribed for LVSD at Discharge*

Collected For: CCCIP-02

Definition: Documentation that aldosterone receptor antagonist was prescribed for LVSD at discharge.

Question: Was an aldosterone receptor antagonist for an LVSD ≤35% prescribed at discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) An aldosterone receptor antagonist for an LVSD ≤35% was prescribed at discharge.

N (No) An aldosterone receptor antagonist an LVSD ≤35% was not prescribed at discharge 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 ≤35, select "No".

Suggested Data Sources:
- Discharge summary
- Discharge instruction sheet
- Outpatient medical record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Aldactone • Aldactazide (Hydrochlorothiazide + Spironolactone) • Eplerenone • Inspra • Spironolactone	• All other aldosterone receptor antagonist medications other than those listed as inclusions.

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Name: *Ambulation Date*

Collected For: THKR-IP-2, THKR-OP-2

Definition: The date the patient first ambulated following the surgical procedure.

Question: On what date did the patient first ambulate following the surgical 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 (20xx)
UTD = Unable to Determine

Notes for Abstraction:

- Select "UTD" if unable to determine the ambulation date.
- Review the record to determine the earliest date the patient ambulated following the surgical procedure. There is no minimum distance requirement.
- Ambulation with assistive devices (e.g., walker, cane) and/or physical assist (e.g., therapist, nurse) is acceptable.
- Ambulation in the PACU is acceptable.
- Documentation that the patient actually ambulated must be present. Do not assume the patient ambulated based solely on documentation that physical/occupational therapy saw the patient.
- See the list of terms listed in the Inclusion/Exclusion Guidelines to determine if documentation supports ambulation.
- Ambulation can be documented by any member of the healthcare team including but not limited to physician, advanced practice nurse, physician assistant, nurse, nurse assistant, clinical technician, physical therapist, occupational therapist, kinesiotherapist.
- When the date documented is obviously invalid (not a valid format/range), e.g., a date after the Discharge Date or Outpatient Departure Date, or in an invalid format (12-39-20xx), and if no other documentation is found that provides the correct information, the abstractor should select "UTD."
  Example:
  - Patient discharged on 02-12-20xx and documentation indicates the Ambulation Date was 03-12-20xx. Other documentation in the medical record supports the date of discharge as being accurate. Since the Ambulation Date is outside of the parmeter for care (after the Discharge Date), the abstractor should select "UTD."
- If the Ambulation Date is incorrect (in error) but it is a valid date and the correct date can be found and supported with other documentation in the medical record, use the correct date for Ambulation Date. If supporting documentation of the correct date cannot be found, the medical record must be abstracted as documented (at "face value.")
  Example:

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- The patient underwent surgery on 12-10-2009. Nursing documentation indicates that the patient first ambulated on 12-10-2007 and the physical therapy documentation supports that the correct date was 12-10-2009; use the correct date (12-10-2009) as the Ambulation Date.

Suggested Data Sources:

- Nursing notes
- Progress notes
- Flowsheets
- PACU records
- Rehabilitation records
- Therapy notes (e.g., physical therapy, occupational therapy, kinesiotherapy)

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Ambulate • Step • Walk	• Bedside commode usage • Dangle • Out of bed order • Sit in bed • Sit out of bed • Sit to Stand • Stand • Transfer from bed to chair • Up to chair

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Name: *Ambulation Time*

Collected For: THKR-IP-2, THKR-OP-2

Definition: The time the patient first ambulated following the surgical procedure.

Question: At what time did the patient first ambulate following the surgical 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

Notes for Abstraction:

- Select "UTD" if unable to determine the ambulation time.
- Review the record to determine the earliest time the patient ambulated following the surgical procedure. There is no minimum distance requirement.
- Ambulation with assistive devices (e.g., walker, cane) and/or physical assist (e.g., therapist, nurse) is acceptable.
- Ambulation in the PACU is acceptable.
- Documentation that the patient actually ambulated must be present. Do not assume the patient ambulated based solely on documentation that physical/occupational therapy saw the patient.
- See the list of terms listed in the Inclusion/Exclusion Guidelines to determine if documentation supports ambulation.
- Ambulation can be documented by any member of the healthcare team including but not limited to physician, advanced practice nurse, physician assistant, nurse, nurse assistant, clinical technician, physical therapist, occupational therapist, kinesiotherapist.
- The medical record must be abstracted as documented (taken at "face value"). When the time documented is obviously in error (not a valid time format) or is outside of the parameters of care (after Discharge Date or Outpatient Departure Date), and no other documentation is found that provides this information, the abstractor should select "UTD."

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Suggested Data Sources:

- Nursing notes
- Progress notes
- Flowsheets
- Rehabilitation records
- Therapy notes (e.g., physical therapy, occupational therapy, kinesiotherapy)

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Ambulate • Step • Walk	• Bedside commode usage • Dangle • Out of bed order • Sit in bed • Sit out of bed • Sit to Stand • Stand • Transfer from bed to chair • Up to chair

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Name: *Ambulation*

Collected For: THKR-IP-2, THKR-OP-2

Definition: Documentation that the patient ambulated at any time during the postoperative period.

Question: Did the patient ambulate at any time during the postoperative period?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation the patient ambulated during the postoperative period.

N (No) There is no documentation the patient ambulated during the postoperative period or unable to determine from medical record documentation.

Notes for Abstraction:

- Review the record to determine if the patient ambulated at any time following the surgical procedure. There is no minimum distance requirement.
- Ambulation with assistive devices (e.g., walker, cane) and/or physical assist (e.g., therapist, nurse) is acceptable.
- Ambulation in the PACU is acceptable.
- Documentation that the patient actually ambulated must be present. Do not assume the patient ambulated based solely on documentation that physical/occupational therapy saw the patient.
- See the list of terms listed in the Inclusion/Exclusion Guidelines to determine if documentation supports ambulation.
- Ambulation can be documented by any member of the healthcare team including but not limited to physician, advanced practice nurse, physician assistant, nurse, nurse assistant, clinical technician, physical therapist, occupational therapist, kinesiotherapist.

Suggested Data Sources:

- Nursing notes
- Progress notes
- Flowsheets
- Rehabilitation records
- Therapy notes (e.g., physical therapy, occupational therapy, kinesiotherapy)

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Ambulate • Step • Walk	• Bedside commode usage • Dangle • Out of bed order • Sit in bed • Sit out of bed • Sit to Stand

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	• Stand • Transfer from bed to chair • Up to chair

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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.”

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- 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

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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:

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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

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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

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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

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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 of monotherapy in which there was a lack of sufficient improvement in symptoms or functioning.

- The trials could have been conducted with three different medications in which the documentation must include at a minimum the names of the antipsychotic medications that previously failed.

OR

- There could have been multiple trials with the same medication but different doses and timing of administration, in which case the documentation should include the names of the medication and a statement that the trials failed with different dosing and/or timing.

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 medica-

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tion to a level which results in controlling the patient's symptoms with one anti-psychotic 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

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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

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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, ED-1, 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 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

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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:**

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- 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, STK-OP, 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 • Pre-arrival Orders

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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, ED-1, 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

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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 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

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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, STK-OP, 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-arrival Orders • Pre-printed times on a vital sign graphic record

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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:**

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- 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

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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."

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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

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Name: *Birth Weight*

Collected For: PC-06

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 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.”
- 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

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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

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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

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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").

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- 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 • Toprol-XL	All other beta-blocker medications other than those listed as inclusions.

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• Zebeta • Ziac	

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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").

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- 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 • Carvedilol	All other beta-blocker medications other than those listed as inclusions.

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• Carvedilol phosphate • Coreg • Coreg CR • Metoprolol succinate • Toprol-XL • Zebeta • Ziac	

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Name: *Brief Intervention*

Collected For: SUB-2

Definition: A brief intervention is a single session or multiple sessions conducted by a qualified healthcare professional or trained peer support person, following a positive screen for unhealthy alcohol use. The intervention includes motivational discussion focused on increasing insight and awareness regarding alcohol use and motivation toward behavioral change. Brief interventions can be tailored for variance in population or setting and can be used as a stand-alone treatment for those at risk as well as a vehicle for engaging those in need of more extensive levels of care.

A brief intervention focuses on increasing the patient's understanding of the impact of substance use on his or her health and motivating the patient to change risky behaviors. The components of the intervention include feedback concerning the quantity and frequency of alcohol consumed by the patient in comparison with national norms; a discussion of negative physical, emotional, and occupational consequences; and a discussion of the overall severity of the problem. The qualified health care professional engages the patient in a joint decision-making process regarding alcohol use and plans for follow-up are discussed and agreed to.

Question: Did patients with a positive screening result for unhealthy alcohol use or alcohol use disorder (abuse or dependence) receive a brief intervention prior to discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 The patient received the components of a brief intervention

2 The patient refused/declined the brief intervention

3 Brief counseling was not offered to the patient during the hospital stay or Unable to Determine (UTD) if a brief intervention was provided from medical record documentation

Notes for Abstraction:

- A qualified healthcare professional may be defined as a physician, nurse, certified addictions counselor, psychologist, social worker, or health educator with training in brief intervention.
- A peer support person who has received specialized training in brief intervention may perform the brief intervention in lieu of a qualified healthcare professional.
- If there is no documentation that a brief intervention was given to the patient, select allowable 3
- Select value "3" if the documentation provided is not explicit enough to determine if the intervention provided contained the specific components or if the intervention meets the intent of the measures.
- A brief intervention includes, at a minimum, the following three components:

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- Concern that the patient is drinking at unhealthy levels known to increase his/her risk of alcohol-related health problems
- Feedback linking alcohol use and health, including:
  - Personalized feedback (i.e., explaining how alcohol use can interact with patient's medical concerns [hypertension, depression/anxiety, insomnia, injury, congestive heart failure (CHF), diabetes mellitus (DM), breast cancer risk, interactions with medications])
    OR
  - General feedback on health risks associated with drinking.
- Advice:
  - To abstain (if there are contraindications to drinking)
    OR
  - To drink below recommended limits (specified for patient).

Suggested Data Sources:

- Consultation notes
- Nursing notes
- Progress notes
- Physicial Progress Notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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Name: *Cardiac Rehabilitation Attendance*

Collected For: CCCIP-05, CCCOP-03

Definition: Patients with a qualifying event or diagnosis, who received a referral to CR and who attended at least one (1) CR session.

Question: Did the patient attend at least one (1) CR session within 90 days after hospital discharge, outpatient procedure, or office visit?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) The patient attended one (1) outpatient CR session within 90 days of hospital discharge, outpatient procedure, or office visit.

N (No) The patient did not attend one (1) outpatient CR session within 90 days of hospital discharge, outpatient procedure, or office visit or unable to determine from medical record documentation.

Notes for Abstraction:
- Documentation that the patient attended at least one cardiac rehab session must include the date of the visit to select "Yes". If the date of the visit is not documented, select "No.
- Attendance of one cardiac rehab session must be documented by a physician/APN/PA/RN/social worker/physical therapist/occupational therapist/discharge planner.
- Clinicians may verify cardiac rehab attendance with the patient, as long as the date of the visit is documented in the medical record.

Suggested Data Sources:
- History and physical
- Nursing notes
- Progress notes
- Clinic physician notes
- Cardiac rehabilitation notes
- Outpatient medical record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion

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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:

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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

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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:

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Inclusion	Exclusion
• Routinely scheduled medications • PRN medications	None

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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

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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

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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

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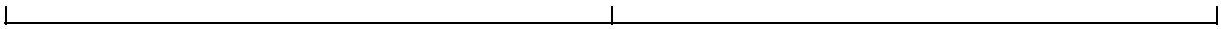

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Name: *Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed*

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:

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Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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Name: *Clinical Trial*

Collected For: ACHF-01, ACHF-02, ACHF-03, ACHF-06, ACHFOP-01, ACHFOP-02, ACHFOP-03, ACHFOP-04, ACHFOP-05, CCCIP-01, CCCIP-02, CCCIP-03, CCCIP-04, CCCOP-01, CCCOP-02, CSTK-04, CSTK-06, STK, VTE-6

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.

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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

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Name: *Comfort Measures Only*

Collected For: ACHF, ASR-IP-2, ASR-IP-3, ASR-OP-2, CCCIP-01, CCCIP-02, CCCIP-03, CCCIP-04, CCCOP-01, CCCOP-02, 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, SUB-2, SUB-3, TOB-2, TOB-3, VTE-6

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).**

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- 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

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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

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Name: *Communication of Outpatient Referral to Patient*

Collected For: CCCIP-03, CCCIP-04, CCCOP-01, CCCOP-02

Definition: Documentation in the medical record that the patient's healthcare provider has discussed cardiac rehabilitation and informed the patient that this is being recommended.

Question: Is there documentation of communication between the healthcare provider and the patient recommending outpatient cardiac rehabilitation.

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of communication between the healthcare provider and the patient recommending outpatient cardiac rehabilitation.

N (No) There is no documentation of communication between the healthcare provider and the patient recommending outpatient cardiac rehabilitation or it is unable to be determined.

Notes for Abstraction:
- A physician/APN/PA/RN/social worker/physical therapist/occupational therapist must document in the medical record that they discussed referral to cardiac rehabilitation with the patient. * If the patient refuses communication regarding cardiac rehabilitation abstract 'Yes'.

Suggested Data Sources:
- Consultation notes
- Nursing notes
- Progress notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion

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Name: *CPT® Code Procedure Date*

Collected For: CCCOP-01, CCCOP-03, THKR-OP-2, THKR-OP-4, THKR-OP-5

Definition: The month, day, and year when the procedure was performed.

Question: What was the date the 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 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 Outpatient Departure Date) and no other documentation is found that provides this information, the abstractor should select "UTD."
  Example:
  - Documentation indicates the CPT® Code Procedure Date was 02-*42*-20xx. No other documentation in the medical record provides a valid date. Since the CPT® Code 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."

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

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Name: *CPT® Codes with Modifier*

Collected For: THKR-OP

Definition: The Current Procedural Terminology (CPT®) code(s) and modifier(s) associated with this outpatient encounter.

Question: What was the CPT® code(s) and modifier(s) (if available) associated with this outpatient encounter?

Format:
Length: 8 xxxxx-xx (5 digit CPT code, 2 digit modifier (if available))
Type: Alphanumeric
Occurs: 10

Allowable Values:

Select the allowable values from Appendix B.

Notes for Abstraction: None

Suggested Data Sources:
- Billing records
- Facesheet
- Outpatient Medical Record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Refer to Appendix A	None

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Name: *CPT® Code*

Collected For: All Records

Definition: The Current Procedural Terminology (CPT®) code associated with this outpatient encounter.

Question: What was the CPT® code selected for this outpatient encounter?

Format:
Length: 5
Type: Alphanumeric
Occurs: 1

Allowable Values:

Any valid CPT® code from the inclusion list below:

- 96360 Intravenous (IV) infusion, hydration
- 96365 Intravenous infusion, for therapy, prophylaxis, or diagnosis
- 96374 Therapeutic, prophylactic or diagnostic injection; IV push
- 96409 Chemotherapy administration; IV, push technique
- 96413 Chemotherapy administration, IV infusion technique
- 96416 Initiation of prolonged chemotherapy infusion (more than 8 hours), requiring use of a portable or implantable pump

Notes for Abstraction: None

Suggested Data Sources:

- Nursing notes
- Progress notes
- Medication administration record (MAR)
- Billing records
- Chemotherapy flow sheets

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
CPT® Code: • 96360 Intravenous (IV) infusion, hydration • 96365 Intravenous infusion, for therapy, prophylaxis, or diagnosis • 96369 Subcutaneous infusion for therapy or prophylaxis • 96374 Therapeutic, prophylactic or diagnostic injection; IV push • 96409 Chemotherapy administration; IV, push technique • 96413 Chemotherapy administration, IV infusion technique • 96416 Initiation of prolonged chemotherapy infusion (more than 8 hours), requiring use of a portable or implantable pump	None

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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."
- 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:

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- "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 • Syncope • Seizure **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

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Name: *Decision to Admit Date*

Collected For: ED-2

Definition: The documented date the decision to admit to observation or inpatient status occurred. Decision to admit to observation or inpatient status date is the date the physician/APN/PA makes the decision to admit the patient from the emergency department to the hospital for continued care in the facility.

Question: What was the earliest documented month, day, and year of the decision to admit?

Format:
Length: 10 — MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:

Enter the earliest documented date of the decision to admit

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (20xx)
UTD = Unable to Determine

Notes for Abstraction:

- If the date of the decision to admit to observation or inpatient status 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 Decision to Admit Date was 03- **42** -20xx. No other documentation in the list of ONLY ACCEPTABLE SOURCES provides a valid date. Since the Decision to Admit 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 *Decision to Admit Date* was 03-12-20xx. Other documentation in the medical record supports the date of death as being accurate. Since the *Decision to Admit Date* is after the Discharge Date (death), it is outside of the parameter of care and the abstractor should select "UTD."
  - When reviewing ED records do NOT include any documentation from external sources (e.g., ambulance records, physician/advanced practice nurse/physician assistant [physician/APN/PA] office record, laboratory reports or ECGs) obtained prior to arrival. The intent is to utilize any documentation that reflects processes that occurred in the ED or hospital.
- For purposes of this data element, the source "Emergency Department record" includes any documentation from the time of ED arrival to the time the patient physically departed from the ED.
  Example:
  ED departure is at 11:00 on 03-12-20xx. The attending physicians admit orders

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written in the inpatient record at 10:00 on 03-12-20xx are considered part of the ED record.

- Disregard physician/APN/PA narrative documentation of a consult or orders for consult, transfer to another physician's service, or discussion with another physician since this does not reflect a decision was made.
- If there is more than one date of documentation for the decision to admit, use the following order to determine which date to abstract.
  1.Specified date the decision to admit was documented.
  2.Specified date the decision to admit was documented in a non-narrative location (e.g., flowsheet, checklist, screening).
  3.Note opened date for the decision to admit documented in a non-narrative location without a specified date (e.g., flowsheet, checklist, screening).
  4.Note opened date for narrative documentation identifying the decision to admit was made without a specified date.
- *Decision to Admit Date* includes physician/APN/PA documentation of a decision to send the patient to cath lab or surgery.
  Example:
  The ED physician documents that he/she is sending the patient to the OR for surgery. The decision to admit to observation or inpatient status date will abstract as the date this was documented.
- Use the date from the earliest documentation of decision to admit for either observation or inpatient.
  Example:
  The physician ordered "Admit Observation Service." Four hours later the physician wrote an order to admit the patient to inpatient status. These orders were written while the patient was still receiving care in the ED. Use the earlier order for Observation Services to abstract as date and time.
- If it can be determined that the patient arrived on the same date and departed on the same date, the arrival date can be used as the decision to admit to observation or inpatient status date.
- Data fields representing 'decision to admit' in electronic documentation for this specific episode of care are acceptable to use as long as they are the earliestphysician/APN/PA documentation and clearly defined to capture the date an observation status or inpatient admit decision was documented. Information found in an electronically interfaced event log or Admit/Decision/Transfer (ADT) is acceptable provided this information is part of the submitted medical record covering the arrival to discharge date being abstracted.
  Examples:
  - Decision to Admit
  - Dispo
  - Disposition set to admit
- For purposes of this data element Decision to Admit Date is the date on which the physician/APN/PA makes the decision to admit the patient from the emergency department to the hospital. This will not necessarily coincide with the date the patient is officially admitted to inpatient status.

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- If the decision to admit the patient to observation or inpatient status is made, but the actual request for a bed is delayed until an inpatient bed is available, record the date the physician/APN/PA communicated the decision to admit.
- If the decision to admit to observation or inpatient status date is dated prior to the date of patient arrival or after the date of departure, select "UTD."
- For documentation of a decision to admit accompanied by an indicator, the examples below should be used. Documentation containing a positive indicator should be used for a decision to admit, documentation containing a negative indicator should **not** be used for a decision to admit.
  - **Positive Indicators**
    - Plan to admit
    - Doctors accepts admission
    - Plan to hospitalize
    - Admit to doctor
    - Need to admit
  - **Negative Indicators**
    - Request admission
    - May need admission
    - Doctor will accept patient
    - Recommend admission
    - Would like to admit

Suggested Data Sources:

Only Acceptable Sources
Emergency Department Record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Admit Order Date • Disposition Date	• Bed assignment Date • Direct admit patients seen in the ED

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Name: *Decision to Admit Time*

Collected For: ED-2

Definition: The documented time (military time) the decision to admit to observation or inpatient status occurred. Decision to admit to observation or inpatient status time is the time the physician/APN/PA makes the decision to admit the patient from the emergency department to the hospital for continued care in the facility.

Question: What was the earliest documented time of the decision to admit?

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 *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 decision to admit to observation or inpatient status 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."

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Example:
Documentation indicates the *Decision to Admit Time* was 3300. No other documentation in the list of Only Acceptable Sources provides a valid time. Since the *Decision to Admit Time* is outside of the range in the Allowable Values for "Hour," it is not a valid time and the abstractor should select "UTD."

- When reviewing ED records do NOT include any documentation from external sources (e.g., ambulance records, physician/advanced practice nurse/physician assistant [physician/APN/PA] office record, laboratory reports or ECGs) obtained prior to arrival. The intent is to utilize any documentation that reflects processes that occurred in the ED or hospital.
- For purposes of this data element, the source "Emergency Department record" includes any documentation from the time of ED arrival to the time the patient physically departed from the ED.
  Example:
  ED departure is at 11:00 on 03-12-20xx. The attending physicians admit orders written in the inpatient record at 10:00 on 03-12-20xx are considered part of the ED record.
- Disregard physician/APN/PA narrative documentation of a consult or orders for consult, transfer to another physician's service, or discussion with another physician since this does not reflect a decision was made.
  Examples that reflect a decision to admit was not made:
  - ED physician note states "Discussed case with hospitalist." This is only documentation that a discussion occurred, there is no documentation regarding a decision to admit.
  - ED physician note states "Discussed patient with Dr. Jones who recommends admission." This reflects a discussion occurred and a recommendation was made to admit, but does not indicate a decision was made to admit.
  - ED physician note states "Contacted Dr. Smith for admission consult." This reflects a consult has been requested for admission, but does not indicate a decision to admit has been made.
  - ED physician note states "Possible admission pending cardiology consult." This reflects a consult was ordered and admission is possible, but does not indicate a decision to admit has been made.

  Examples that reflect a decision to admit was made:
  - ED physician note states "Discussed case with hospitalist on call, plan to admit." The note references a discussion with another physician with "plan to admit" documented, indicating a decision to admit has been made.
  - ED physician note states "Discussed case with Dr. Brown who will admit patient to ICU." The note references a discussion with another physician with "who will admit patient" documented, indicating a decision to admit has been made.
- If there is more than one time of documentation for the decision to admit, use the following order to determine which date to abstract.
  1.Specified time the decision to admit was documented.
  2.Specified time the decision to admit was documented in a non-narrative location (e.g., flowsheet, checklist, screening).

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3.Note opened time for the decision to admit documented in a non-narrative location without a specified time (e.g., flowsheet, checklist, screening).
4.Note opened time for narrative documentation identifying the decision to admit was made without a specified time.

- *Decision to Admit Time* includes physician/APN/PA documentation of a decision to send the patient to cath lab or surgery.
  Example:
  The ED physician documents that he/she is sending the patient to the OR for surgery. The decision to admit to observation or inpatient status time will abstract as the time this was documented.
- Use the time from the earliest documentation of decision to admit for either observation or inpatient.
  Example:
  The physician ordered "Admit Observation Service." Four hours later the physician wrote an order to admit the patient to inpatient status. These orders were written while the patient was still receiving care in the ED. Use the earlier order for Observation Services to abstract decision as time.
- Data fields representing 'decision to admit' in electronic documentation for this specific episode of care are acceptable to use as long as they are the earliest physician/APN/PA documentation and clearly defined to capture the date an observation status or inpatient admit decision was documented. Information found in an electronically interfaced event log or Admit/Decision/Transfer (ADT) is acceptable provided this information is part of the submitted medical record covering the arrival to discharge date being abstracted.
  Examples:
  - Decision to Admit
  - Dispo
  - Disposition set to admit
- For purposes of this data element " *Decision to Admit Time* " is the time on which the physician/APN/PA makes the decision to admit the patient from the emergency department to the hospital. This will not necessarily coincide with the time the patient is officially admitted to inpatient status.
- If the decision to admit the patient to observation or inpatient status is made, but the actual request for a bed is delayed until an inpatient bed is available, record the date the physician/APN/PA communicated the decision to admit.
- If the decision to admit to observation or inpatient status date is dated prior to the date of patient arrival or after the date of departure, select "UTD."

Example:
The APN saw the patient in the clinic and sent him/her to the ED for admission. Select UTD.

- For documentation of a decision to admit accompanied by an indicator, the examples below should be used. Documentation containing a positive indicator should be used for a decision to admit, documentation containing a negative indicator should **not** be used for a decision to admit.
  - **Positive Indicators**

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- Plan to admit
- Doctors accepts admission
- Plan to hospitalize
- Admit to doctor
- Need to admit

- **Negative Indicators**
  - Request admission
  - May need admission
  - Doctor will accept patient
  - Recommend admission
  - Would like to admit

Suggested Data Sources:

Only Acceptable Sources

Emergency Department Record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Admit Order Time • Disposition Time	• Bed assignment Time • Direct admit patients seen in the ED • Report Called Time

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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, if medical record documentation states that such a pro-	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 pro-

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cedure was initiated later than 8 hours after hospital arrival	cedure was initiated within 8 hours after hospital arrival

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Name: *Discharge Code*

Collected For: ACHFOP, ASR-OP-2, CCCOP-01, CCCOP-02, CCCOP-03, STK-OP-1, THKR-OP-2, THKR-OP-3

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).

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- 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

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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

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Name: *Discharge Disposition*

Collected For: ACHF, ASR-IP-3, CCCIP, CSTK-02, CSTK-10, HBIPS-5, IMM-2, PAL-05, PC-05, PC-06, STK-10, STK-2, STK-3, STK-6, STK-8, SUB-3, THKR-IP-2, THKR-IP-3, TOB-3

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

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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 patient is being discharged to assisted living care or an assisted living facility (ALF) that is located within a skilled nursing facility, and documentation in the medical record 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".
- **For PC Only**: Hospitals are encouraged to utilize a data source that reduces unnecessary medical record review e.g., using vital records, delivery logs or clinical in-

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formation systems as a data source. Mapping from electronic administrative sources to the allowable values is acceptable.

- **For PC-06 Only**: If a newborn is transferred to another acute care facility for purposes other than medical treatment or the need for a higher level of care, and mother and baby remain together, abstract allowable value 8. Examples include transfers:
  - To another facility covered by their health plan
  - For disaster evacuation
  - Full census

Suggested Data Sources:

- Consultation notes
- Progress notes
- Physician orders
- Discharge summary
- Any DMAT documentation
- 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

PC ONLY Excluded Data Source

- Any documentation prior to the last two days of hospitalization

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	None

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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 • 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, but not limited to: Inpatient Rehabilitation Facility/Hospital, Rehabilitation Unit of a Hospital, Chemical Dependency/Alcohol Rehabilitation Facility • Skilled Nursing Facility (SNF), Sub-Acute Care or Swing Bed • Transitional Care Unit (TCU) • Veterans Home	

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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."

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- 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

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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

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- 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

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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

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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.

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- 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

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Name: *E/M Code*

Collected For: ACHFOP, ASR-OP-1, ASR-OP-2, CCCOP-01, CCCOP-02, CCCOP-03, 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.
- For **CCCOP 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 • For CCC-OP measures, refer to Appendix A, Table 2.0, E/M Codes for Hospital Outpatient Encounters	None

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Name: *ED Departure Date*

Collected For: ASR-OP-2, ED-1, ED-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."
- 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 the date can be determined from other documentation in the ED record, this is acceptable to use (the patient arrived and was transferred on the same day).
- Data fields representing ED Departure Date in electronic documentation for this specific episode of care are acceptable to use as long as the fields are easily understood to mean departure. Information found in an electronically interfaced event log or Admit/Decision/Transfer (ADT) is acceptable provided this information is part of the submitted medical record covering the arrival to discharge date being abstracted.

  Examples:
  - Patient departed

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  - Patient transferred off the floor (OTF)
  - Check out time
  - Transported to
- For patients who are placed into observation outside the services of the emergency department, abstract the date of departure from the emergency department.
  STK-OP-1 MEASURE ONLY
  EXCEPTION: For patients who are placed into observation services in a bed outside the ED, e.g., inpatient bed, select the date that the patient is transferred to another hospital and actually leaves your hospital (*Discharge Date*) and not the date of departure from the emergency department.
- For patients who are placed into observation under the services of the emergency department, abstract the date of departure from the observation services (e.g., patient is seen in the ED and admitted to an observation unit of the ED on 01-01-20xx then is discharged from the observation unit on 01-03-20xx abstract 01-03-20xx as the departure date).
- If there is a departure date listed within a disposition heading from the ED, this may be used for *ED Departure Date*.
- The inclusion list is not to be considered a comprehensive list of inclusions.

Suggested Data Sources:

ONLY ACCEPTABLE SOURCES:
- Emergency department record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• ED Checkout Date • ED Departure Date • ED Discharge Date • ED Leave Date • ED Transport Date	Patient Admission Date

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Name: *ED Departure Time*

Collected For: ASR-OP-2, ED-1, ED-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 documenta-

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tion 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."

- *ED Departure Time* is the documented time the patient physically left the emergency department. (e.g., nurse's notes state "18:00 transfer to floor-room 300" and other documentation includes a time that the patient left the ED via stretcher, abstract the later time or nurses notes state "18:00 transport to unit" and other documentation includes a time that the patient actually left the ED to be transferred, abstract the later time).
- If the time the patient departed is unable to be determined from medical record documentation, select, "UTD."
- When more than one acceptable emergency department departure/discharge time is documented, abstract the latest time.

  Example:

  Two departure times are found in the nurse's notes: 12:03 via wheelchair and 12:20 via wheelchair. Select the later time of 12:20.
- Do not use documentation of vital signs or medications if they are later than the ED departure time.
- Do not use the time the discharge order was written because it may not represent the actual time of departure.
- Data fields representing ED Departure Time in electronic documentation for this specific episode of care are acceptable to use as long as the fields are easily understood to mean departure. Information found in an electronically interfaced event log or Admit/Decision/Transfer (ADT) is acceptable provided this information is part of the submitted medical record covering the arrival to discharge time being abstracted.

  Examples

  - Patient departed
  - Patient transferred off the floor (OTF)
  - Check out time
  - Transported to ED
- If there is a departure time listed within a disposition heading from the ED, this may be used for ED Departure Time.
- For patients who are placed into observation outside the services of the emergency department, abstract the time of departure from the emergency department.
  - If the patient is placed into observation services and remains in the ED or in a unit of the ED abstract the time they depart the ED or ED unit for the floor/surgery etc. Do not abstract the time they are placed into observation services.

    STK-OP-1 MEASURE ONLY

    EXCEPTION: For patients who are placed into observation services in a bed outside the ED, e.g., inpatient bed, select the time that the patient is transferred to another hospital and actually leaves your hospital (*Discharge Time*) and not the time of departure from the emergency department.
- For patients who are placed into observation under the services of the emergency department, abstract the time of departure from the observation services.

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- If a patient is seen in the ED and admitted to an observation unit of the ED, then discharged from the observation unit, abstract the time they depart the observation unit.
- If the patient is placed into observation services and remains in the ED or in a unit of the ED abstract the time they depart the ED or ED unit for the floor/surgery, transfer to another hospital, admission to an inpatient bed, etc. Do not abstract the time they are placed into observation services or the time that the observation order was written.

- If the documented ED Departure Time is prior to arrival, enter "UTD."
- If the patient expired in the ED, use the time of death as the 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 Check Out Time • ED Departure Time • ED Discharge Time • ED Leave Time • ED Transport Time	• Patient Admission Time • Report called time

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Name: *ED Patient*

Collected For: ASR-IP-1, ED-1, ED-2, 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:

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Inclusion	Exclusion
None	• Urgent Care • Fast Track ED • Terms synonymous with Urgent Care

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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 edu-

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cational 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

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	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")

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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.

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- 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 • Carotid artery stenosis • Carotid/peripheral or other artery disease	Unchecked checkbox next to instruction (e.g., blank checkbox on discharge instruction sheet next to "Stroke Risk Factors teaching sheet given to patient").

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• 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)	

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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

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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

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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.

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- 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

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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.

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- 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 • Syncope • Seizure	Unchecked checkbox next to instruction (e.g., blank checkbox on discharge instruction sheet next to "Warning Signs and Symptoms of Stroke").

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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.

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- **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 • Sudden confusion, trouble speaking or understanding • Sudden trouble seeing in one or both eyes	Unchecked checkbox next to instruction (e.g., blank checkbox on discharge instruction sheet next to "Activation of the Emergency Medical System").

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• Sudden trouble walking, dizziness, loss of balance or coordination • Sudden severe headache with no known cause • Syncope • Seizure	

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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

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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.

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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

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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

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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.
- If dextrose or glucose 40% gel is given it is considered a medication not a feeding. This should be reflected as such in the documentation.

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- 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

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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".

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    - 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".
- If medical record documentation includes an ICD-10-PCS Principal or Other Procedure Code on Table 8.1b Mechanical Endovascular Reperfusion Procedures, 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 only an ICD-10-PCS Principal or Other Procedure Code on Table 8.1c Thrombectomy Root Procedures and no documentation of extirpation procedure failure, select "No."
    - 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".
- If medical record documentation mentions that a mechanical thrombectomy procedure was planned but not initiated, select "No".
    - Patient taken to the interventional suite for possible MER procedure. No arterial/groin puncture. Patient returned to ICU bed for monitoring, select "No".
    - Patient taken to angio for MER procedure. Groin punctured. Clot dissolved with IV t-PA. TICI 3. Mechanical thrombectomy not initiated, 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.

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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."

Suggested Data Sources:

- Consultation notes
- Diagnostic test reports
- Operative notes
- Procedure reports

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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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

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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".

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- 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".
- 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

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Name: *Gestational Age*

Collected For: PC-01, PC-02

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 or at the time of the delivery until a positive finding for gestational age is found:

- History and physical
- Clinician admission progress note
- Prenatal forms

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Gestational age documented closest to or at the time of the 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

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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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".

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- 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

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Name: *High-intensity Statin at Discharge*

Collected For: CCCIP-01

Definition: Documentation that the acute myocardial infarction (AMI) patient was prescribed a high-intensity statin at hospital discharge.

Question: Was Atorvastatin, between 40-80mg, or Rosuvastatin, between 20-40mg prescribed at hospital discharge for AMI?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) Patient was prescribed either Atorvastatin 40-80mg or Rosuvastatin 20-40mg at hospital discharge.

N (No) Patient was not prescribed either Atorvastatin 40-80mg or Rosuvastatin 20-40mg at hospital discharge or it is it is unable to be determined from medical record documentation.

Notes for Abstraction:
- Only select "Yes" for those statins identified in the list of inclusions at the dosages listed. No other no other statins will be accepted for this data element.
- All medication documentation available in the chart should be reviewed and taken into account by the abstractor.
- Select 'Yes', if the patient was discharged on Atorvastatin at a dose between 40-80mg or Rosuvastatin at a dose between 20-40mg or if the patient was on a high-intensity statin (i.e. Atorvastatin 40-80mg or Rosuvastatin 20-40mg) prior to admission and discharged on the same medication
- Select 'No', if the patient was not discharged on Atorvastatin at a does between 40-80mg or Rosuvastatin at a dose between 20-40mg.

Suggested Data Sources:
- Progress notes
- Discharge summary
- Discharge instructions
- Written or electronic prescriptions

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Only Acceptable Medications and Doses • Atorvastatin 40mg - 80mg • Rosuvastatin 20mg - 40mg	• All other statin medications other than those listed as inclusions. • Atorvastatin or Rosuvastatin prescribed at dosages other than those listed as inclusions.

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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

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- 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

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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

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Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	• Modified NIHSS scores • Estimated NIHSS scores • Scoring methodologies other than NIHSS

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Name: *Hispanic Ethnicity*

Collected For: All Records

Definition: Documentation that the patient is of Hispanic, Latino, or Spanish ethnicity.

Question: Is the patient of Hispanic, Latino, or Spanish Ethnicity?

Format:
Length: 1
Type: Character
Occurs: 1

Allowable Values:

Y (Yes) Patient is of Hispanic, Latino, or Spanish ethnicity.

N (No) Patient is not of Hispanic, Latino, or Spanish ethnicity 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 • Columbian • Dominican • Ecuadorian • Guatemalan • H • Hispanic • Latin American • Latino/Latina • Mexican-American • Salvadorian • Spaniard • Spanish • White-Hispanic	• None

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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

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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."

Suggested Data Sources:
- Consultation notes
- Progress notes
- Operative notes
- Diagnostic test reports

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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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

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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."

- The earliest time should be used. If both IA alteplase and MER were initiated in the same procedure or different procedures, select the 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 aspiration technique was done first, then select the time associated with clot access.
- 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
• Locate an inclusion term in a suggested data source. Use the earliest time associated with an inclusion term that represents the IA Alteplase or MER Initiation Time. IA Altplase: • Infusion time • Injection time • Bolus time MER: • Catheter pass time • Clot access time • Clot engagement time • Deployment time • First pass time • First pull time • MER initiation time	• Time out

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• MER start time • Pass time Alternative MER initiation terms that may be used when NONE of the above are documented: • Anesthesia time • ADAPT time • Aspiration time • Groin puncture time • Procedure start time • Puncture time • Skin puncture time	

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Name: *IA Route of Alteplase Administration*

Collected For: CSTK-05, CSTK-07

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: • Activase • Alteplase	• Intravenous (IV) alteplase (t-PA) • IA administration of thrombolytic agents not listed as inclusions

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• IA t-PA • Recombinant Tissue Plasminogen Activator(rt-PA) • Tissue Plasminogen Activator(t-PA)	

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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

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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".

Suggested Data Sources:
- Consultation notes
- Diagnostic test reports
- Operative notes
- Procedure notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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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.

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- 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."

Suggested Data Sources:

- Consultation notes
- Diagnostic test reports
- Operative notes
- Procedure notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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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

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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

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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

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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."

Suggested Data Sources:

- Consultation notes
- Diagnostic test reports
- Discharge summary
- Face sheet
- Operative notes
- Procedure notes
- Progress notes
- UB-04

Additional Notes:

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Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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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.

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- 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.
- For ischemic stroke patients who receive intravenous (IV) alteplase (t-PA) at your hospital's satellite/free-standing ED prior to transfer to the hospital and there is one medical record for the care provided at both facilities, use the arrival time at the hospital for the ICD-10-PCS Other Procedure Time.
- 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".
- 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

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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

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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

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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."

Suggested Data Sources:

- Consultation notes
- Diagnostic test reports
- Discharge summary
- Face sheet
- Operative notes
- Procedure notes
- Progress notes
- UB-04

Additional Notes:

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Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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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.

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- 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.
- For ischemic stroke patients who receive intravenous (IV) alteplase (t-PA) at your hospital's satellite/free-standing ED prior to transfer to the hospital and there is one medical record for the care provided at both facilities, use the arrival time at the hospital for the ICD-10-PCS Principal Procedure Time.
- 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".
- 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

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- 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

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Name: *Influenza Vaccination Status*

Collected For: IMM-2

Definition: Documentation of the patient's vaccination status during this influenza season. If found to be a candidate for the influenza vaccine, documentation that the influenza vaccine was given during this hospitalization. The main types of influenza vaccine available are: an attenuated (weakened) live vaccine given as a nasal spray and approved for healthy nonpregnant persons 2-49 years of age, a killed (inactivated) influenza vaccine administered via intramuscular (IM) needle injection for persons 6 months and older, an intradermal vaccine administered to persons 18-64 years old, or a recombinant vaccine administered IM to a person 18 years or older.

Question: What is the patient's influenza vaccination status?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 Influenza vaccine was given during this hospitalization.

2 Influenza vaccine was received prior to admission during the current flu season, not during this hospitalization.

3 Documentation of patient's or caregiver's refusal of influenza vaccine.

4 There was documentation of an allergy/sensitivity to influenza vaccine, anaphylactic latex allergy or anaphylactic allergy to eggs OR is not likely to be effective because of bone marrow transplant within the past 6 months OR history of Guillian-Barré syndrome within 6 weeks after a previous influenza vaccination.

5 None of the above/Not documented/Unable to determine from medical record documentation.

6 Only select this allowable value if there is documentation the vaccine has been ordered but has not yet been received by the hospital due to problems with vaccine production or distribution AND allowable values 1-5 are not selected.

Notes for Abstraction:

- Each year, flu vaccines start to become available usually in September and most influenza vaccine is administered in October — December, but the vaccine is recommended to be administered throughout the influenza season which can last until May in some years. For the purposes of this project, the hospitals are only responsible for discharges October through March.
  - Only influenza vaccines administered during August through March are acceptable.
- The caregiver is defined as the surrogate decision-maker, or healthcare surrogate and may be a patient's family member or any other person (e.g., home health, VNA provider, prison official or other law enforcement personnel) who is responsible for

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the healthcare decision-making and care of the minor patient or the adult patient when that patient is unable to make this decision on his/her own.

- In order to select "Influenza vaccine was given during this hospitalization," there must be documentation either on the MAR, nursing notes, standing orders, etc., where the vaccine was dated and signed as administered.
- In situations where there is documentation that would support more than one of the allowable values, 1-4, select the smallest number.
  Example:
  Nurses' notes have documentation the patient refused. Vaccination order sheet has documentation that the patient was vaccinated during this hospitalization. You will select value "1", as it is the smallest number.
- If there is no documentation to support any of the Allowable Values 1-4, and there is physician/APN/PA documentation that they will administer the vaccine after discharge or physician/APN/PA documentation not to administer the vaccine for a reason other than those noted as acceptable in this data element, select Value "5."
- If there is conflicting documentation regarding influenza vaccine refusal, select Value "5."
  Example:
  There is documentation of refusal in the influenza immunization screening for the current admission and the patient did not receive the vaccine, but a subsequent narrative note states the patient wants to receive the vaccine, select Value "5."
- If there is conflicting documentation regarding whether the influenza vaccine is current, use documentation reflecting it is current.
  Examples:
  - There is documentation in the medical record stating "influenza vaccination status: current," but the physician H&P indicates the patient has not received an influenza vaccine this season, select Value "2."
  - There is documentation in medical record stating "influenza vaccination status: current," but the influenza vaccination date is from the previous season, select Value "2."
- If there is conflicting documentation regarding administration of the vaccine in the hospital, use documentation reflecting the vaccine was given during the admission.
  Examples:
  There is documentation in the medical record indicating the vaccine was given (dated and signed as administered) during the hospital stay, but the discharge summary states order for vaccine was cancelled and patient did not receive vaccine during the hospital stay, select Value "1."
- If there is documentation that the patient received the vaccine and only the current year is documented, i.e., no month or day, select value "2".
  Example:
  There is documentation the patient received the vaccine in 2009 and it is October 2009, select value "2."
- If there is documentation the patient received the vaccine the year prior to the current year and the discharge is not January, February or March, select value "5".
  Examples:

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    - There is documentation the patient received the vaccine in 2008 and it is October 2009, select value "5".
    - There is documentation the patient received the vaccine in 2008 and it is January 2009, select value "2".
- If it is documented in the chart that a patient is "up to date" on their vaccines, you may select Allowable Value "2". Documentation of "up to date" or "current" in the vaccination record that does not reference the influenza vaccine is not sufficient to select Allowable Value "2."
- Documentation of the acronym "UTD," even with specific reference to the influenza vaccine, is not sufficient to select Allowable Value "2."
- Documentation from a pre-admission screening or previous episode of care indicating that the patient received the influenza vaccine with a date from the current season would be acceptable to choose Value "2."
- Documentation of influenza vaccine refusal from an admission or encounter that is prior to arrival cannot be used for selecting Value "3." Information for selecting Value "3" must be assessed and documented within the current admission.
- Documentation of unavailability due to problems with vaccine production or distribution from an admission or encounter that is prior to arrival cannot be used for selecting Value "6." Information for selecting Value "6" must be assessed and documented within the current admission.

Suggested Data Sources:

- Consultation notes
- Emergency department record
- Nursing notes
- Nursing admission assessment
- Physician orders
- Discharge summary
- Medication administration record (MAR)
- Immunization assessment forms
- Physician progress notes
- Social service notes
- Transfer forms
- Vaccine order sheet

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
All patients discharged during October, November, December, January, February, or March Acceptable terms for influenza vaccines include those listed below or refer to CDC list of Influenza vaccines at http://www.cdc.gov/flu/protect/vaccine/vaccines.htm. • Afluria • Flu shot • Flu vaccine • FluMist	• All discharges from April through September • Pandemic monovalent vaccine, e.g. H1N1 • Patients with an organ transplant during the current hospitalization (Appendix A, Table 12.10)

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• FluLaval • Fluarix • Fluvirin • Fluzone • Fluzone High Dose • Influenza virus vaccine • Live attenuated influenza vaccine • Quadrivalent influenza vaccine • Trivalent influenza vaccine	

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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

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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

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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

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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:

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Inclusion	Exclusion
None	None

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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'.
- Hunt and Hess obtained in response to a code stroke/stroke alert on an inpatient psychiatric or rehabilitation unit prior to admission to inpatient acute care, select 'YES'.

Suggested Data Sources:
- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Admitting note

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Excluded Data Sources:

- Any documentation dated/timed after discharge

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

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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".

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Admitting note

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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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

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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*.
- 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".

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Admitting note

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Only accept terms identified in the list of inclusions for the Time Stamp on the note. No other terminology will be accepted.	• Date of Service Time • Decision to Admit Time • Note Creation Time • Open Note Time

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• Author Time • Dictated Time • Documented Time • File Time • Note Time • Recorded Time • Signature Time (standard or electronic)	

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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).

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- ICH score obtained by teleneurology and documented in the medical record, select 'YES'.
- Total ICH scores obtained in response to a code stroke/stroke alert on an inpatient psychiatric or rehabilitation unit prior to admission to inpatient acute care, 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

Excluded Data Sources:

- Any documentation dated/timed after discharge

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	Scoring methodologies other than the ICH Score

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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".

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Admitting note

Additional Notes:

Guidelines for Abstraction:

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Inclusion	Exclusion
None	None

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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

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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*.
- 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".

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Admitting note

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Only accept terms identified in the list of inclusions for the Time Stamp on the note. No other terminology will be accepted.	• Date of Service Time • Decision to Admit Time • Note Creation Time • Open Note Time

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• Author Time • Dictated Time • Documented Time • File Time • Note Time • Recorded Time • Signature Time (standard or electronic)	

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Name: *Initial NIHSS Less Than 6*

Collected For: CSTK-09, CSTK-11

Definition: Documentation that the initial National Institutes of Health Stroke Scale (NIHSS) score after hospital arrival was less than 6.

Question: Was the initial NIHSS score after hospital arrival less than 6?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) The initial NIHSS score after hospital arrival was less than 6.

N (No) The initial NIHSS score after hospital arrival was 6 or greater, OR unable to determine from the medical record documentation.

Notes for Abstraction:
- Select the first total NIHSS score (i.e., sum of the category scores) documented after hospital arrival.
- The NIHSS score may be documented by the physician/APN/PA or nurse (RN).
- Disregard components scored when the total NIHSS score is not documented or left blank. 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
- Nursing admission assessment
- Progress notes
- Admitting note

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	• Modified NIHSS scores • Estimated NIHSS scores • Scoring methodologies other than NIHSS

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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

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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'.
- Total scores obtained in response to a code stroke/stroke alert on an inpatient psychiatric or rehabilitation unit prior to admission to inpatient acute care, 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

Excluded Data Sources:
- Any documentation dated/timed after discharge

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	• Modified NIHSS scores

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	• Estimated NIHSS scores • Scoring methodologies other than NIHSS

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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".

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:

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Inclusion	Exclusion
None	None

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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

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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 ischemic stroke patients who receive intravenous (IV) alteplase (t-PA) at your hospital's satellite/free-standing ED prior to transfer to the hospital and there is one medical record for the care provided at both facilities, use the Arrival Time at the hospital for scores documented before IV t-PA initiation.
- 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*.
- 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".

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:

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Inclusion	Exclusion
Only accept terms identified in the list of inclusions for the Time Stamp on the note. No other terminology will be accepted. • Author Time • Dictated Time • Documented Time • File Time • Note Time • Recorded Time • Signature Time (standard or electronic)	• Date of Service Time • Decision to Admit Time • Note Creation Time • Open Note Time

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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

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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

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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".

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

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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.

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- 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"."

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

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Name: *IV Alteplase Initiation*

Collected For: ASR-IP-1, ASR-OP-1, ASR-OP-2, CSTK-05, CSTK-10, 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 FDA-Approved Thrombolytic Therapy for Stroke: • Activase • Alteplase • IV t-PA • Recombinant t-PA Tissue plasminogen activator • t-PA Tissue plasminogen activator **Reasonable Alternative to Alteplase:** • Tenecteplase • TNK • TNKase	• Intra-arterial (IA) t-PA • Thrombolytic agents other than alteplase or tenecteplase • Thrombolytic administration to flush, open, or maintain patency of a central line, e.g., PICC line

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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

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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 FDA-Approved Thrombolytic Therapy for Stroke: • Activase • Alteplase • IV t-PA • Recombinant t-PA Tissue plasminogen activator • t-PA Tissue plasminogen activator **Reasonable Alternative to Alteplase:** • Tenecteplase • TNK	• Heparin Flush • Heparin Lock • Intra-arterial (IA) tenecteplase • Thrombolytic agents other than alteplase or tenecteplase • Thrombolytic administration to flush, open, or maintain patency of a central line, e.g., PICC line.

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• TNKase	

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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.
- Spontaneous Rupture Of Membranes (SROM) is not the same as labor. There are diagnosis codes on Table 11.07 Conditions Possibly Justifying Elective Delivery Prior to 39 Weeks Gestation which should be used for pre-labor (preterm) rupture of membranes and for prolonged rupture.

Suggested Data Sources:

- History and physical
- Nursing notes
- Physician orders

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- 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

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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*.

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- 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 • Syncope • Seizure	Delay in stroke diagnosis

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Name: *LVSD*

Collected For: ACHF-01, ACHFOP-01, ACHFOP-02, ACHFOP-03, CCCIP-02, CCCIP-04, CCCOP-02

Definition: Left ventricular 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) of <40% or ≤35% or a narrative description consistent with moderate or severe systolic dysfunction?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 LVSF is documented as an EF ≤35%.

2 LVSF is documented as an EF equal to 36-39%.

3 LVSF is documented as an EF equal to 40%.

4 Documentation of a narrative description consistent with moderate or severe systolic dysfunction.

5 EF or a narrative description consistent with moderate or severe systolic dysfunction is not documented, or EF ≥ 41% or unable to determine from medical record documentation.

Notes for Abstraction:

- Utilize documentation from the most recent test/procedure performed (i.e. test or procedure performed closest to discharge).
  - If a test/procedure was not performed to determine EF, other documentation within the medical record may be used (e.g. H&P, progress report, consolation report).
    - Test and procedure report results take priority over non-report sources (e.g. progress notes).
  - Final findings from a test or procedure report take priority over preliminary findings.
    - If documentation is not labeled as a "preliminary result", assume it is a final result.
    - Conclusion section of a report takes priority over other sections. Consider the "Impression," "Interpretation," and "Final Diagnosis" sections as equivalent with the "Conclusion" section.
    - Results from in-hospital test or procedure filed in the medical record after the patient's discharge can be utilized.
    - If the most recent test/procedure does not include documentation of an EF utilize the second most recent test or procedure (i.e. test/procedure performed closest to discharge), and so on.

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        - Documentation from a test/procedure performed prior to arrival for this hospital or outpatient encounter maybe utilized, if no testing/procedures were performed during this encounter. Use results from the pre-arrival test known to be most recent (i.e. closest to hospital or outpatient arrival).
        - If the EF is documented as a range, document lowest value (e.g. EF between 38% and 41%. Assign 38%).
    - Narrative descriptions
        - Use worst narrative description with severity specified.
        - Select 4 if description is synonymous with term from Inclusion list A.
        - Select 5 if description with severity specified is NOT synonymous with term from Inclusion List A (e.g., normal, mild, preserved).
        - Use narrative description without severity specified. Select 4 if description is synonymous with term from Inclusion list B. Otherwise, select 5.
        - Do not use narrative descriptions that indicates uncertainty about the patient's EF. E.g. questionable EF of <36%.

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 • 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	**Moderate or severe systolic dysfunction** • Any term in Inclusion list A or B described as mild-moderate

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• 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	

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Name: *Measure Category Assignment*

Collected For: All Records, Calculation, Used in calculation of the Joint Commission's aggregate data.

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 where *Improvement Noted As: Decrease in the rate* (a lower score or a fewer number of cases in the numerator) e.g., PC-01, CSTK-05, Measure Category Assignment of "D" means that 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.

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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 where *Improvement Noted As: Decrease in the rate* (a lower score or a fewer number of cases in the numerator) e.g., PC-01, CSTK-05, Measure Category Assignment of "E" means that the intent of the measure was NOT met. For aggregate data, the EOC record will be included in both the measure denominator and numerator

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

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Suggested Data Sources: Not Applicable

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• None	• None

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Name: *MER Eligibility*

Collected For: 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:

- If there is physician/APN/PA documentation in the medical record that the patient is a candidate or eligible for MER therapy, select “Yes".
- 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.
  Acceptable examples (select “Yes”):
  - Suspicious for left MCA – CT head negative for ICH – will transfer for potential LVO thrombectomy.
  - CTA abnormal, right MCA proximal M2 superior occlusion – transfer with possible neuro-intervention.
  - CT positive for LVO- transfer recommended because of the need for vascular surgical intervention.
  - Patient being transferred for potential intravascular clot removal.
  - Transfer to interventional suite.
  - Patient will be transferred for further management of stroke-like symptoms with possible acute large vessel occlusion.
    Unacceptable example (select “No”):
  - Although the patient is being transferred to a higher level of care due to complete occlusion, it is most likely that thrombectomy will not be performed.
- If there is documentation in one source that indicates the patient is MER eligible, AND there is documentation in another source that indicates the patient is NOT eligible (e.g., ED MD states consider transfer for mechanical thrombectomy, but neurology states that the patient is not a MER candidate), or after careful examina-

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tion of circumstances, context, etc., documentation of MER eligibility is still unclear, the case should be deemed "unable to determine" (select "No").

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
• Catheter-assisted intervention • Catheter-based intervention • Clot aspiration • Clot removal • Endovascular Therapy (EVT) • Interventional candidate • Intra-arterial catheter-based intervention • Intravascular clot removal • Mechanical Endovascular Reperfusion (MER) Therapy • Mechanical thrombectomy (MT) • Neuro-interventional radiology (NIR) procedure • Neuro IR intervention • Pneumbra procedure • Thrombectomy (head/neck only) • Vascular surgery intervention	• Carotid endarterectomy • Carotid stent procedure • CT perfusion without mention of MT • Intra-arterial (IA) thrombolytic (t-PA) therapy without mention of MT • Neuro evaluation without mention of MT • Neurosurgery evaluation • Not an interventional candidate

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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

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- 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

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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

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- 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

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Name: *Mode of Arrival*

Collected For: CSTK-09

Definition: Documentation in the medical record of how the patient arrived at your hospital. The mode of arrival refers to the methods / means used to get the patient to your hospital.

Question: How did the patient arrive to your hospital?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 EMS from home/scene

2 Mobile Stroke Unit

3 Private transport/taxi/other from home/scene

4 Transfer from another hospital

5 Not documented, **OR** unable to determine (UTD) from the medical record documentation

Notes for Abstraction:

- Select only one value (1, 2, 3, 4, or 5).
- Select the value (values 1, 2, 3, or 4) that identifies how the patient got to the hospital.
- If documentation is contradictory or multiple modes of arrival are documented, use the following hierarchy:
  - Transfer from another hospital
  - Mobile Stroke Unit
  - EMS from home/scene
  - Private transport/taxi/other from home/scene
- If the patient is transferred from an assisted-living facility (ALF) or any other healthcare facility, select '1' EMS from home/scene.
- If the patient is transferred from a free-standing emergency department (FSED), select '4' transfer from another hospital.
- If the mode of arrival is not documented or unable to determine, select value 5 "UTD".

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Nursing notes
- Nursing flow sheet
- Progress notes
- Transfer sheet
- Ambulance record

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- Code Stroke form/template

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Other Health Care Facility: • 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, but not limited to: Inpatient Rehabilitation Facility/Hospital, Rehabilitation Unit of a Hospital, Chemical Dependency/Alcohol Rehabilitation Facility • Skilled Nursing Facility (SNF), Sub-Acute Care or Swing Bed • Transitional Care Unit (TCU) • Veterans Home	None

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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”.

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- 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.

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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 05-1-20XX. Second mRS dated 07-01-20XX. Select 05-1-20XX 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 noti-

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fication 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

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Name: *New York Heart Association (NYHA) Classification*

Collected For: ACHFOP-03, 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: What is the patient's New York Heart Association (NYHA) Functional Classification?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 Class I

2 Class II

3 Class III

4 Class IV

5 Not Documented or Unable to determine (UTD)

Notes for Abstraction:
- The NYHA Functional Classification must be specifically documented in the medical record and not coded by the abstractor based upon patient symptoms.
- NYHA Classification - The Stages of Heart Failure:
  - Class I - No symptoms and no limitation in ordinary physical activity, e.g. shortness of breath when walking, climbing stairs etc.
  - Class II - Patients with cardiac disease resulting in slight limitation of physical activity. They are comfortable at rest. Ordinary physical activity results in fatigue, palpitation, or dyspnea.
  - Class III - Patients with cardiac disease resulting in marked limitation of physical activity. They are comfortable at rest. Less than ordinary activity causes fatigue, palpitation, or dyspnea.
  - Class IV - Patients with cardiac disease resulting in inability to carry on any physical activity without discomfort. Symptoms are present even at rest or minimal exertion. If any physical activity is undertaken, discomfort is increased.

Suggested Data Sources:
- Physician's notes
- Discharge summary
- Outpatient medical record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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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".

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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

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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

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- 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

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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.

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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".

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

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None	None

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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.

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- 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".

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

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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 • No aneurysm (head or neck) • Non-aneurysmal • Not aneurysmal • Trauma	• Trauma other than head • Trauma or traumatic injuries involving body parts other than the head

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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

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- 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)

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Name: *Outpatient Departure Date*

Collected For: THKR-OP-2

Definition: The month, day, and year at which the patient departed from the outpatient setting.

Question: What is the date the patient departed from the outpatient setting?

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:

- 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 **and** no other documentation is found that provides this information), the abstractor should select UTD.
  Examples:
  - Documentation indicates the *Outpatient Departure Date* was 03- **42** -20xx. No other documentation provides a valid date. Since the *Outpatient 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.
- 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 date the patient left against medical advice, select UTD.
- If the patient was placed in observation following the surgical episode, and was discharged from observation, use the date of discharge from observation as the Outpatient Departure Date.
- If the patient expired while being treated in the outpatient setting, use the date of death as the Outpatient Departure Date.

Suggested Data Sources:

- Face sheet
- Progress notes
- Physician orders
- Discharge summary
- Nursing discharge notes
- Transfer note
- UB-04

Additional Notes:

Guidelines for Abstraction:

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Inclusion	Exclusion
None	None

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Name: *Outpatient Encounter Date*

Collected For: ACHFOP, ASR-OP-1, ASR-OP-2, CCCOP-01, CCCOP-02, CCCOP-03, STK-OP-1, THKR-OP

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

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Name: *PACU Discharge Time*

Collected For: THKR-IP-2, THKR-OP-2

Definition: The time the patient was discharged from the PACU following the total hip or total knee replacement.

Question: What time was the patient discharged from the PACU following the total hip or total knee replacement?

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

Note: When converting Midnight or 24:00 to 00:00 do not forget to change the *PACU Discharge Date*. Example: Midnight or 24:00 on 11-24-20xx = 00:00 on 11-25-20xx

Notes for Abstraction:

- The intent is to capture the time the patient physically left the PACU. If a patient is discharged from a PACU level of care, however, remains in the PACU, do not abstract this time. EXCEPTION: In the outpatient setting, if a patient is discharged to home from the PACU setting, use the time anesthesia cleared the patient to the next level of care as the PACU discharge time.
- If multiple PACU discharge times are documented, select the latest time.
- If the PACU Discharge 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 format) or is outside of the parameters of care (after Discharge Date or Outpatient Departure Date) and no other documentation is found that provides this information, the abstractor should select "UTD."
  Example:
  - Documentation indicates the *PACU Discharge Time* was 24:11. No other documentation in the medical record provides a valid time. Since the *PACU Dis-*

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charge 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."

Suggested Data Sources:

- Anesthesia record
- Nursing notes
- Nursing flow sheet
- Post Anesthesia Care Unit (PACU) Record
- Recovery Room Record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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Name: *PACU Discharge Date*

Collected For: THKR-IP-2, THKR-OP-2

Definition: The month, day, and year the patient was discharged from the PACU following the total hip or total knee replacement.

Question: What was the date the patient was discharged from the PACU following the total hip or total knee replacement?

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:

- The intent is to capture the date the patient physically left the PACU. If a patient is discharged from a PACU level of care, however, remains in the PACU, do not abstract this date. EXCEPTION: In the outpatient setting, if a patient is discharged to home from the PACU setting, use the date anesthesia cleared the patient to the next level of care as the PACU discharge date.
- If multiple PACU discharge dates are documented, select the latest date.
- If the PACU Discharge 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 or Outpatient Departure Date) and no other documentation is found that provides this information, the abstractor should select "UTD."
  Example:
  - Documentation indicates the PACU Discharge Date was 02-42-20xx. No other documentation in the medical record provides a valid date. Since the PACU Discharge 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:

- Anesthesia record
- Nursing notes
- Nursing flow sheet
- Post Anesthesia Care Unit (PACU) Record
- Recovery Room Record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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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

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- Palliative care admission assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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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

- Palliative care consultation notes

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Sources:

- Palliative care team progress notes
- Palliative care initial encounter notes
- Palliative care admission assessment

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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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.”

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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

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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."

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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

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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.”

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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

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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.”

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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

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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.

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- 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:

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    - 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

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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 or critical access hospital to another level of care, (i.e. medical unit), at the same acute care or critical access hospital 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.

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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

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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

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- 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 • Assessment of self-esteem, motivation and achievement • Refrain from alcohol, drugs, sexual activity • Engagement in hobbies, sports, arts and clubs	• None

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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 aliens
  - Aliens paroled into a United States port of entry for the purpose of receiving eligible services
  - Mexican citizens permitted to enter the United States for not more than 72 hours under the authority of a laser visa, issued in accordance with the requirements of regulations prescribed under the Immigration and Nationality Act

Suggested Data Sources:

- Face sheet
- UB-04

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Medicare includes, but is not limited to: • Black Lung • End Stage Renal Disease (ESRD) • Medicare Fee for Service (includes DRG or PPS) • Medicare HMO/Medicare Advantage • Medicare Part A, B, C, D, F, G, K, L, M, and N • Medicare Secondary Payer • Railroad Retirement Board (RRB)	• None

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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

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- Radiology reports

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Bleed • Blood • Blood product(s) • 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 • Small (e.g., bleed, hemorrhage) • Subarachnoid hemorrhage (SAH)	• ECASS criteria H1 or H2 • Incidental • Micro • Petechial • Punctate • Trace

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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".

Suggested Data Sources:

- Diagnostic test reports
- Brain imaging reports
- Radiology reports

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion

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None	None

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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 intracra-

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nial 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".

Suggested Data Sources:
- Diagnostic test reports
- Brain imaging reports
- Radiology reports

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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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:

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Inclusion	Exclusion
None	None

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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”."

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- 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". The 3 attempted contacts must be made within 72 hours after discharge.
  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

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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

Excluded Data Sources:
- Any documentation dated/timed after discharge

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Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	• TIBI • TIMI • Scoring methodologies other than TICI/mTICI

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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.

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- If a TICI 2B/3 was not achieved but a TICI less than 2B/3 was documented for the procedure, then select that 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."

Suggested Data Sources:

- Consultation notes
- Progress notes
- Operative notes
- Procedure notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Recanalization time • Reperfusion time • Revascularization time • Stroke reperfusion time • TICI time	None

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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.
- If a TICI 2B/3 was not achieved but a TICI less than 2B/3 was documented for the procedure, then select that 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".

Suggested Data Sources:

- Consultation notes
- Progress notes
- Operative report
- Procedure notes

Additional Notes:

Guidelines for Abstraction:

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Inclusion	Exclusion
None	None

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Name: *Postoperative Assessments Completed*

Collected For: THKR-IP-5, THKR-OP-5

Definition: Documentation that the patient completed the general health and joint specific functional status assessments as specified below:

Hips: [VR-12 or PROMIS-Global] AND [HOOS Jr. or HOOS Pain, Function Daily Living Subscales]

Knees: [VR-12 or PROMIS-Global] AND [KOOS Jr. or KOOS Stiffness, Pain, Function Daily Living Subscales]

Question: Was a general health and joint specific functional status assessment completed as specified above?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) The general health and joint specific functional status assessments were completed.

N (No) Both the general health and joint specific functional status assessments were not completed.

Notes for Abstraction:
- Select "No" if unable to determine if both the general health and joint specific functional status assessments were completed.
- When determining if the preoperative general health and joint specific functional status assessments were completed, documentation must be present in the current medical record.
- Information can be retrieved from the actual assessment tools or a copy of the assessment tools in the current medical record or references to the tools present in the current medical record.
  Example:
  Clinic nurse documents "VR-12 and HOOS Jr. assessments completed on 2/1/2021". Select "Yes".

Suggested Data Sources:
- Nursing notes
- Progress notes
- Physician's notes
- Care management notes
- General health and joint specific functional status assessments
- Therapy notes (e.g., physical therapy, occupational therapy, kinesiotherapy)

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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Name: *Postoperative Assessments Completion Date*

Collected For: THKR-IP-5, THKR-OP-5

Definition: The date the patient completed the general health and joint specific functional status assessments as specified below:

Hips: [VR-12 or PROMIS-Global] AND [HOOS Jr. or HOOS Pain, Function Daily Living Subscales]

Knees: [VR-12 or PROMIS-Global] AND [KOOS Jr. or KOOS Stiffness, Pain, Function Daily Living Subscales]

Question: On what date was the general health and joint specific functional status assessments as specified above completed?

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:

- Patients who have completed the general health and joint specific functional status assessments within 90 days after surgery (+/- 60 days).
  Example:
  Patient had surgery on 2/17/2021. Postoperative general health and joint specific functional status assessments were completed on 6/4/2021. The case would pass the measure.
- Select "UTD" if unable to determine the date the preoperative general health and joint specific functional status assessments were completed.
- If the general health and joint specific functional status assessments were completed on 2 different dates, select the earliest completion date.
- Information regarding the postoperative general health and joint specific functional status assessments determined to be part of the current medical record may be used in abstraction.
- Information can be retrieved from the actual assessment tools or a copy of the assessment tools in the current medical record or references to the tools present in the current medical record.
  Example:
  Scanned copies of the VR-12 and the HOOS Jr. assessments are present in the current medical record and dated 2/1/2021. Abstract 2/1/2021.
- When the date documented is obviously invalid and if no other documentation is found that provides the correct information, the abstractor should select “UTD.”
- If the *Postoperative Assessments Completion Date* is incorrect (in error) but it is a valid date and the correct date can be found and supported with other documentation in the medical record, use the correct date for *Postoperative Assessments*

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Completion Date. If supporting documentation of the correct date cannot be found, the medical record must be abstracted as documented (e.g. at "face value").

Suggested Data Sources:

- Nursing notes
- Progress notes
- Physician's notes
- Care management notes
- Functional/Health Status Assessment
- General health and joint specific functional status assessments
- Social work notes
- Therapy notes (e.g., physical therapy, occupational therapy, kinesiotherapy)

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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Name: *Postoperative ICU Admit or Transfer*

Collected For: THKR-IP-2, THKR-OP-2

Definition: Documentation that the patient was admitted or transferred to an intensive care unit (ICU) postoperatively on the day of surgery or the day of discharge from the PACU (if different from the day of surgery). The definition of an ICU for the purpose of the measures noted above is that used by the CDC in the NHSN Patient Safety Project. An intensive care unit can be defined as a nursing care area that provides intensive observation, diagnosis, and therapeutic procedures for adults and/or children who are critically ill. An ICU excludes nursing areas that provide step-down, intermediate care or telemetry only and specialty care areas.

Question: Was the patient admitted or transferred to an intensive care unit (ICU) postoperatively on the day of surgery or the day of discharge from the PACU (if different from the day of surgery)?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) The patient was admitted or transferred to an ICU postoperatively on the day of surgery or the day of discharge from the PACU (if different from the day of surgery).

N (No) The patient was not admitted or transferred to an ICU postoperatively on the day of surgery or the day of discharge from the PACU (if different from the day of surgery), or unable to determine from medical record documentation.

Notes for Abstraction:

- In order to select "Yes" for this data element there must be a Physician/APN/PA order for admit or transfer to an ICU. Documentation of ICU admit or transfer can be found in the physician orders or in the secondary data sources.
- When the physician orders do not have a clear admit or transfer to the ICU, additional information listed in the secondary data sources, such as protocol to transfer to ICU, can be used to support the order to transfer to the ICU.
  Example:
  - Patient has a code blue on the medical floor the day of discharge from the PACU. The code blue sheet states transfer from medical bed to ICU bed when stabilized. The code blue sheet is signed and dated. Hospital protocol indicates that all code blue patients are transferred to ICU. Select "Yes."
- Do not use clinical judgment based on the type of care administered to the patient. The level of intensive care MUST be documented.
- PCU can represent Progressive Care Unit. PCU is not an inclusion for ICU (unless it is identified as a Pulmonary Care Unit), which can be considered synonymous with Respiratory Care Unit.
- If there is an order for ICU, but the patient was not moved to an ICU because the patient's condition changed and did not require an ICU level of care, select "No." However, if the patient is not moved to an ICU unit due to lack of a bed, select "Yes".
- For patients who are admitted to Observation status and then transferred to full admission to ICU, a physician order must be present to select "Yes."

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Example:
  - Medical record documentation reflects that the patient was admitted to observation postoperatively on 04-05-20xx. Later in the day, on 04-05-20xx the physician writes an order to admit to ICU. Select “Yes.”
- If the patient was transferred to the ICU immediately after surgery without going to the PACU, select "Yes".
- If the patient is transferred to an ICU unit at another facility postoperatively on the day of surgery or the day of discharge from the PACU (if different from the day of surgery), select "Yes".

Suggested Data Sources:

Priority Data Source (required):
- Physician/APN/PA orders

Secondary Data Souces for the Physician/APN/PA order:
- Code Blue/Rapid Response Team (RRT) Sheet
- Order to transfer
- Protocol to transfer to ICU

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion

None	• ED, OR, or procedure units as inpatient units.
	• Intermediate care unit (IMCU)
	  ◦ Step-down unit : a post critical care unit for patients that are hemodynamically stable who can benefit from close supervision and monitoring such as frequent pulmonary toilet, vital signs, and/or neurological and neurovascular checks.
	  ◦ Inpatient units with telemetry monitoring that are not intensive care units.
	• Post coronary care unit (PCCU)
	• PCU if not identified to represent Pulmonary Care Unit
	• Specialty care units (hospital locations specializing in the following types of care)
	  ◦ Bone marrow transplant
	  ◦ Solid organ transplant
	  ◦ Inpatient acute dialysis
	  ◦ Hematology/Oncology
	  ◦ Long term acute care

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Name: *Pre-Stroke Modified Rankin Score (mRS)*

Collected For: CSTK-10

Definition: The pre-stroke Modified Rankin Score (mRS) is a score used to assess the patient's pre-stroke or baseline level of function. Scores reflect the patient's ability to perform activities of daily living prior to the hospitalization for the acute ischemic stroke event.

MODIFIED RANKIN SCALE

Score	Description
0	The patient had no residual symptoms.
1	The patient had no significant disability; able to carry out all 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.

Question: What is the patient's pre-stroke Modified Rankin Score (mRS)?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 A score value of 0, 1, or 2 was documented in the medical record, **OR** physician/APN/PA documentation that the patient was able to look after self without daily help prior to this acute stroke episode.

2 A score value of 3, 4, or 5 was documented in the medical record, **OR** physician/APN/PA documentation that the patient could NOT look after self without daily help prior to this acute stroke episode.

3 A score value was not documented, **OR** unable to determine (UTD) from the medical record documentation.

Notes for Abstraction:

- A pre-stroke mRS value (i.e., 0, 1, 2, 3, 4, or 5) may be documented by the physician/APN/PA, nurse (RN), medical assistant, or any individual trained to perform the mRS.
- If more than one pre-stroke mRS value is documented, select the highest value.
- If a score range is documented, e.g. 2-3, select the higher value.

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- Pre-stroke mRS values may be documented any time during the hospital stay or within 30 days prior to hospital arrival.
  EXCEPTION:
  - A discharge mRS cannot be used as a baseline pre-stroke mRS score. Score documentation must clearly reflect the patient's functional status prior to arrival at the hospital for management of the acute ischemic stroke event.
- If an acutal pre-stroke mRS value is not documented in the medical record, physician/APN/PA documentation only may be used to document the patient's pre-stroke functional status.
  EXAMPLES:
  - "Patient independent and living alone prior to stroke onset. No past history of TIA or stroke", select **allowable value** "1".
  - "Mrs X lives with her daughter and has some memory deficit requiring assistance with meals and dressing. Ambulates without help", select **allowable value** "2".
- If there is conflicting documentation of baseline pre-stroke functional status in the medical record, select the highest score value.
- If there is an actual pre-stroke mRS value documented in the medical record, then that score should be used for abstraction over other physician/APN/PA documentation.
- If no pre-stroke mRS is documented or unable to determine, select allowable value "3".

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Discharge summary
- Admission note
- Outpatient record

Additional Notes: **Excluded Data Sources:** Any documentation dated/timed after discharge

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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Name: *Preoperative Assessments Completion Date*

Collected For: THKR-IP-4, THKR-OP-4

Definition: The date the patient completed the general health and joint specific functional status assessments as specified below:

Hips: [VR-12 or PROMIS-Global] AND [HOOS Jr. or HOOS Pain, Function Daily Living Subscales]

Knees: [VR-12 or PROMIS-Global] AND [KOOS Jr. or KOOS Stiffness, Pain, Function Daily Living Subscales]

Question: On what date was the general health and joint specific functional status assessments as specified above completed?

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:

- Select "UTD" if unable to determine the date the preoperative general health and joint specific functional status assessments were completed.
- If the general health and joint specific functional status assessments were completed on 2 different dates, select the earliest completion date.
- Information regarding the preoperative general health and joint specific functional status assessments determined to be part of the current medical record may be used in abstraction.
- Information can be retrieved from the actual assessment tools or a copy of the assessment tools in the current medical record or references to the tools present in the current medical record.
  Examples:
  - Scanned copies of the VR-12 and the HOOS Jr. assessments are present in the current medical record and dated 2/1/2016. Abstract 2/1/2016.
  - The preadmitting nurse documents “VR-12 and HOOS Jr. assessments completed on 2/1/2016”. Abstract 2/1/2016.
- When the date documented is obviously invalid, e.g., a date after the Discharge Date/Outpatient Departure Date or in an invalid format (12-39-20xx), and if no other documentation is found that provides the correct information, the abstractor should select “UTD.”
  Example:
  - Patient discharged on 02-12-20xx and documentation indicates the Preoperative Assessments Completion Date was 03-12-20xx. Other documentation in the medical record supports the date of discharge as being accurate. Since the Pre-

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operative Assessments Completion Date is outside of the parmeter for care (after the Discharge Date), the abstractor should select "UTD."

- If the Preoperative Assessments Completion Date is incorrect (in error) but it is a valid date and the correct date can be found and supported with other documentation in the medical record, use the correct date for Preoperative Assessments Completion Date. If supporting documentation of the correct date cannot be found, the medical record must be abstracted as documented (at "face value.")
  Example:
  - If the patient's date of surgery is 2/1/2016 and the scanned preoperative general health and joint specific functional status assessments are dated 1/15/2016, however, the preprocedure nursing documentation indicates that the assessments were completed on 1/15/2015, abstract 1/15/2016.

Suggested Data Sources:

- Nursing notes
- Nursing admission assessment
- Progress notes
- Care management notes
- Functional/Health Status Assessment
- General health and joint specific functional status assessments
- Physicians' office notes (in current medical record)
- Preadmitting notes
- Social work notes
- Therapy notes (e.g., physical therapy, occupational therapy, kinesiotherapy)

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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Name: *Preoperative Assessments Completed*

Collected For: THKR-IP-4, THKR-OP-4

Definition: Documentation that the patient completed the general health and joint specific functional status assessments as specified below:

Hips: [VR-12 or PROMIS-Global] AND [HOOS Jr. or HOOS Pain, Function Daily Living Subscales]

Knees: [VR-12 or PROMIS-Global] AND [KOOS Jr. or KOOS Stiffness, Pain, Function Daily Living Subscales]

Question: Was a general health and joint specific functional status assessment completed as specified above?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) The general health and joint specific functional status assessments were completed.

N (No) Both the general health and joint specific functional status assessments were not completed.

Notes for Abstraction:

- Select "No" if unable to determine if both the general health and joint specific functional status assessments were completed.
- When determining if the preoperative general health and joint specific functional status assessments were completed, documentation must be present in the current medical record.
- Information can be retrieved from the actual assessment tools or a copy of the assessment tools in the current medical record or references to the tools present in the current medical record.
  Examples:
  - Scanned copies of the VR-12 and HOOS Jr. assessments are present in the current medical record. Select "Yes".
  - The preadmitting nurse documents "VR-12 and HOOS Jr. assessments completed on 2/1/2016". Select "Yes".

Suggested Data Sources:

- Nursing notes
- Nursing admission assessment
- Progress notes
- Care management notes
- General health and joint specific functional status assessments
- Physicians' office notes (in current medical record)
- Preadmitting notes
- Social work notes
- Therapy notes (e.g., physical therapy, occupational therapy, kinesiotherapy)

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Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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Name: *Prescription for Alcohol or Drug Disorder Medication*

Collected For: SUB-3

Definition: Documentation that an FDA-approved medication for alcohol or drug disorder was prescribed at hospital discharge.

Question: Was one of the FDA approved medications for alcohol or drug disorder prescribed at discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 A prescription for an FDA-approved medication for alcohol or drug disorder was given to the patient at discharge

2 A prescription for an FDA-approved medication for alcohol or drug disorder was offered at discharge and the patient refused

3 The patient:
- is being discharged to a residence outside the USA
- is released to a court hearing and does not return
- is being discharged to jail/law enforcement

4 A prescription for an FDA-approved medication for alcohol or drug disorder was not offered at discharge; or unable to determine from medical record documentation.

Notes for Abstraction:
- In determining whether a medication for alcohol or drug disorder was prescribed at discharge, it is not uncommon to see conflicting documentation among different medical record sources. For example, the discharge summary may list Disulfiram but this is not included in any of the other discharge medications 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 medication for alcohol or drug disorder in one source and it is not mentioned on other sources, it should be interpreted as a discharge medication, select value "1" unless documentation elsewhere in the medical record suggests that it was not prescribed at discharge.
- If documentation is contradictory (physician noted “d/c Antabuse” or “hold Antabuse” in the discharge orders, but Antabuse 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 value "4"
- If the patient does not have a residence in the USA, Value “3” must be selected.

Suggested Data Sources:
- Discharge summary
- Transfer sheet
- Discharge Instruction Sheet
- Medication Reconciliation Form

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- Nursing Discharge notes
- Physician Order Sheets

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Refer to Appendix C, Table 9.2 for a comprehensive list of FDA-approved medications for alcohol and drug dependence	None

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Name: *Prescription for Tobacco Cessation Medication*

Collected For: TOB-3

Definition: Documentation that an FDA-approved tobacco cessation medication was prescribed at hospital discharge.

Question: Was an FDA-approved tobacco cessation medication prescribed at discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 A prescription for an FDA-approved tobacco cessation medication was given to the patient at discharge

2 A prescription for an FDA-approved cessation medication was offered at discharge and the patient refused

3 The patient:
- is being discharged to a residence outside the USA
- is released to a court hearing and does not return
- is being discharged to jail/law enforcement

4 A prescription for an FDA-approved cessation medication was not offered at discharge or Unable to Determine (UTD) from medical record documentation.

Notes for Abstraction:

- All discharge medication documentation available in the chart should be reviewed and taken into account by the abstractor. In determining whether a tobacco cessation medication was prescribed at discharge, it is not uncommon to see conflicting documentation among different medical record sources. For example, the discharge summary may list Varenicline and this is not included in any of the other discharge medication sources (e.g., discharge orders). Select Value "1" unless documentation elsewhere in the medical record suggests that it (tobacco cessation medication) was not prescribed at discharge.
- If documentation is contradictory (physician noted "d/c Varenicline" or "hold Varenicline" in the discharge orders, but Varenicline is listed in the discharge summary's discharge medication list) or after careful examination of circumstance, context, timing, etc., the documentation remains unclear, the case should be deemed unable to determine. Select Value "4."
- If the physician wishes the patient to continue on medication that does not require a prescription (for example, over-the-counter nicotine replacement therapy (NRT) or medication that will be provided by the outpatient counseling or quit line), select Value "1" if the medication is listed on the discharge medication list.
- If NRT or a prescribed FDA-approved tobacco cessation medication is listed as a discharge medication but there is also documentation of refusal by the patient at discharge, select Value "2."
- If the patient does not have a residence in the USA, Value "3" must be selected.

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- If the patient refused tobacco cessation medication during the hospitalization, a prescription must be offered again at the time of discharge. Select Value "4" if documentation reflects that a prescription for cessation medication was not offered at the time of discharge.

Suggested Data Sources:

- Discharge summary
- Transfer sheet
- Discharge Instruction Sheet
- Medication Reconciliation Form
- Nursing Discharge notes
- Physician Orders Sheet

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Refer to Appendix C, Table 9.1 for a comprehensive list of FDA-approved tobacco cessation medications	None

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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.

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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

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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 • History of metroplasty and/or prior removal of vestigial horn with entry into the uterine cavity	• 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

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• Documentation of prior uterine incision with descriptors including "high" or "vertical" or "mid" or "active segment" or "classical".	

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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)

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• (Kcentra) PCC-Human • *Pradaxa (dabigatran) reversal agent:* Praxbind (idarucizumab) • *Xarelto (rivaroxaban)/ Eliquis (apixaban) reversal agent:* Andexxa (andexanet alfa)	

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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.

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.

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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.

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.

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

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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.

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.

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

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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,

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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

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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 or Pacific Islander:** Patient's race is Asian/Pacific Islander.

5 **RETIRED VALUE** (effective 01-01-2021).

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,” “Latino,” and "Spanish" 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, or Spanish 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, or Spanish include Chicano, Cuban, H (for Hispanic), Latin American, Latina, Mexican, Mexican-American, Puerto Rican, and South or Central American.

Suggested Data Sources:
- Emergency department record
- History and physical
- Face sheet
- Nursing admission assessment
- Progress notes

Additional Notes:

Guidelines for Abstraction:

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Inclusion	Exclusion
Black or African American A person having origins in any of the black racial groups of Africa. (e.g., Jamaican, Haitian, Nigerian, Ethiopian, Somali, Negro). **American Indian or Alaska Native** A person having origins in any of the original peoples of North America (including Central America) and who maintains tribal affiliation or community attachment (e.g., any recognized tribal entity in North and Central America, Native American). **Asian or Pacific Islander** 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, the Pacific Islands, Native Hawaiian, Guam, Samoa, Thailand, and Vietnam. **White** A person having origins in any of the original peoples of Europe, the Middle East, or North Africa (e.g., German, Irish, English, Italian, Lebanese, Egyptian).	• None

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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 be-

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cause 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

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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

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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"

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- 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	• 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

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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.	

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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

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Name: *Reason for No Administration of VTE Prophylaxis*

Collected For: VTE-6

Definition: Physician/APN/PA or pharmacist documentation why mechanical AND pharmacological VTE prophylaxis were not administered on the day(s) between arrival and the day before the VTE Diagnostic Test order date. Both mechanical and pharmacological prophylaxis must be addressed.

Question: Is there physician/APN/PA or pharmacist documentation why VTE prophylaxis was not administered on the day(s) between arrival and the day before the VTE Diagnostic Test order date?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is physician/APN/PA or pharmacist documentation why mechanical AND pharmacological VTE prophylaxis were not administered on the day(s) between arrival and the day before the VTE Diagnostic Test order date.

N (No) There is no physician/APN/PA or pharmacist documentation why mechanical AND pharmacological VTE prophylaxis were not administered on the day(s) between arrival and the day before the VTE Diagnostic Test order date, or unable to determine from medical record documentation.

Notes for Abstraction:

- To select "Yes" for this data element, documentation of a reason for not administering mechanical AND pharmacological VTE prophylaxis must be dated between hospital arrival and the day before the VTE Diagnostic Test order date. Refer to the data element VTE Diagnostic Test for a list of acceptable tests.
- Reasons for not prescribing 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 to select "Yes." For example, "patient refused heparin," select "Yes."
  - A validated risk assessment may be documented by a nurse, but should be documented within the same time frame as the reason for no administration of VTE prophylaxis.
  - For patients receiving anticoagulant therapy, including continuous IV heparin infusion, between arrival and the day before the VTE diagnostic test order date, select "Yes." Disregard IV heparin administered to flush/maintain patency of a line or dialysis equipment and IV heparin administered during an interventional procedure, e.g., cardiac cath.
- 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:

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Physician/APN/PA documentation of bleeding risk, review the chart for documentation about reasons for no mechanical AND no pharmacological VTE prophylaxis.

- Documentation that a formal risk assessment was administered, AND the results indicated that there was no risk or low risk for VTE is acceptable as a reason for not administering VTE prophylaxis.
  - If a copy of the validated risk assessment is included in the medical record along with the results, select "Yes."
  - Documentation of a low risk score without a copy of the validated risk assessment is acceptable, if the validated risk assessment tool used is mentioned in the note. See Inclusion Guidelines for Abstraction.
  - Documentation of low risk or no risk without mention of a score and the validated risk assessment tool, select "No."
- If two physicians/APN/PA or pharmacist document conflicting or questionable needs for prophylaxis, select "No."

Suggested Data Sources:

ONLY PHYSICIAN/APN/PA OR PHARMACIST DOCUMENTATION OF A REASON FOR NOT ADMINISTERING VTE PROPHYLAXIS

- Anesthesia record
- Consultation notes
- Emergency department record
- History and physical
- Physician orders
- Physician progress notes
- Transfer form

SUGGESTED DATA SOURCES FOR PATIENT REFUSAL (other than physician/APN/PA or pharmacist) documentation of a reason for not administering VTE prophylaxis as above):

- Medication administration record
- Nurses notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
Explicit documentation that the patient does not need VTE prophylaxis ALL INCLUSIVE VALIDATED RISK ASSESSMENTS: • Caprini DVT Risk Assessment • Padua Prediction Score • International Medical Prevention Registry on Venous Thromboembolism (IMPROVE) LOW RISK SCORES: • Caprini score of 0 (zero) – no need for prophylaxis.	Risk Assessment tools other than Caprini, Padua, and IMPROVE

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• IMPROVE score of 0 (zero) or 1 (one); or a probability of less than 1.5% • Padua score of less than 4 (0-3) Refer to Appendix H, Table 2.7 Anticoagulation Therapy	

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Name: *Reason for No Aldosterone Receptor Antagonist Prescribed in the Outpatient Setting*

Collected For: ACHFOP-03

Definition: Documentation of a reason for not prescribing an aldosterone antagonist in the outpatient setting by a physician/APN/PA or pharmacist.

Question: Did a physician/APN/PA or pharmacist document a contraindication to or a reason against an aldosterone antagonist prescription in the outpatient setting?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation by a physician/APN/PA or pharmacist of a contraindication to or a reason for not prescribing an aldosterone receptor antagonist in the outpatient setting.

N (No) There is no documentation by a physician/APN/PA or pharmacist of a contraindication to or a reason for not prescribing an aldosterone receptor antagonist 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.
- Reasons for not prescribing an aldosterone antagonist must be documented by a physician/APN/PA or pharmacist.
- Reasons for no aldosterone antagonist must be explicitly documented or clearly implied.
  - If reasons are not mentioned in the context of aldosterone antagonist, do not make inferences (e.g., do not assume that an aldosterone antagonist is not prescribed because of the patient's chronic renal disease alone).

    Examples

    - "Cr 2.6 mg/dL – No aldosterone antagonist" * "Severe hyperkalemia with aldosterone antagonist in past"
    - "No aldosterone – patient non-compliant with labs"
    - "Aldosterone antagonist contraindicated"
    - "Supportive care only – no medications"
    - "Aldosterone antagonist therapy not indicated"
    - "No aldosterone antagonist" (reason not given).
- Physician/APN/PA or pharmacist documentation of a hold on an aldosterone antagonist or discontinuation of an aldosterone antagonist constitutes a "clearly implied" reason for not prescribing an aldosterone antagonist.
  - A hold/discontinuation of all p.o. medications counts if an aldosterone antagonist p.o. was on order at the time of the notation.
  - If there is documentation of a plan to initiate/restart an aldosterone antagonist, and the reason/problem underlying the delay in starting/restarting the aldoster-

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one antagonist is also noted, this constitutes a “clearly implied” reason for not prescribing an aldosterone antagonist at discharge.
    - Documentation of a conditional hold/discontinuation of a aldosterone antagonist does not count as a reason for not prescribing a aldosterone antagonist
    - Deferral of an aldosterone antagonist from one physician/APN/PA or pharmacist to another does NOT count as a reason for not prescribing an aldosterone antagonist, unless the problem underlying the deferral is also noted.
- An aldosterone antagonist “allergy” or “sensitivity” documented in the medical record counts as an allergy regardless of what type of reaction might be noted (e.g., “Allergies: aldosterone antagonist – select “Yes”).
    - Documentation of an allergy/sensitivity to one particular aldosterone antagonist is acceptable to take as an allergy to the entire class of aldosterone antagonist (e.g., "Allergic to Spironolactone").
- Aldosterone antagonist (along with ACEI and ARBs) are sometimes described as RAS (reninangiotensin 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 aldosterone antagonist (e.g., "Hold all RAS blockers").
- Documentation that refers to a more general medication class, such as "avoid all nephrotoxic medications" or "Hold BP Meds" is not acceptable as a reason for not prescribing aldosterone antagonist. Reason documentation must mention aldosterone antagonist as a class or a specific aldosterone antagonist medication.

Suggested Data Sources:
- Discharge summary
- Outpatient medical record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Aldactone • Aldactazide (Hydrochlorothiazide + Spironolactone) • Eplerenone • Inspra • Spironolactone	None

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Name: *Reason for No Aldosterone Receptor Antagonist Prescribed at Discharge*

Collected For: CCCIP-02

Definition: Documentation of reasons for not prescribing an aldosterone antagonist at discharge by a physician/APN/PA or pharmacist.

Question: Did a physician/APN/PA or pharmacist document a contraindication to or reason against an aldosterone antagonist prescription at discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation by a physician/APN/PA or pharmacist of a contraindication to or reason against an aldosterone antagonist prescription at discharge.

N (No) There is no documentation by a physician/APN/PA or pharmacist of a contraindication to or reason against an aldosterone antagonist prescription at discharge, 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.
- Reasons for not prescribing an aldosterone antagonist at discharge must be documented by a physician/APN/PA or pharmacist.
- If the patient refuses a prescription for an aldosterone receptor antagonist, answer "Yes"
- Reasons for no aldosterone antagonist must be explicitly documented or clearly implied.
  - If reasons are not mentioned in the context of aldosterone antagonist, do not make inferences (e.g., do not assume that an aldosterone antagonist is not prescribed because of the patient's chronic renal disease alone).

    Examples

    - "Cr 2.6 mg/dL – No aldosterone antagonist" * "Severe hyperkalemia with aldosterone antagonist in past"
    - "No aldosterone – patient non-compliant with labs"
    - "Aldosterone antagonist contraindicated"
    - "Supportive care only – no medications"
    - "Aldosterone antagonist therapy not indicated"
    - Aldosterone antagonist on pre-printed order form is crossed out
    - "No aldosterone antagonist" (reason not given).
- Physician/APN/PA or pharmacist documentation of a hold on an aldosterone antagonist or discontinuation of an aldosterone antagonist that occurs during the hospital stay constitutes a "clearly implied" reason for not prescribing an aldosterone antagonist at discharge.
  - A hold/discontinuation of all p.o. medications counts if an aldosterone antagonist p.o. was on order at the time of the notation.

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- If there is documentation of a plan to initiate/restart an aldosterone antagonist, and the reason/problem underlying the delay in starting/restarting the aldosterone antagonist is also noted, this constitutes a “clearly implied” reason for not prescribing an aldosterone antagonist at discharge.
- Documentation of a conditional hold/discontinuation of a aldosterone antagonist does not count as a reason for not prescribing a aldosterone antagonist at discharge
- Deferral of an aldosterone antagonist from one physician/APN/PA or pharmacist to another does NOT count as a reason for not prescribing an aldosterone antagonist at discharge unless the problem underlying the deferral is also noted.

- Reasons do NOT need to be documented at discharge or otherwise linked to the discharge time frame: documentation of reasons anytime during the hospital stay is acceptable.
- An aldosterone antagonist “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: aldosterone antagonist – select “Yes”).
- Documentation of an allergy/sensitivity to one particular aldosterone antagonist is acceptable to take as an allergy to the entire class of aldosterone antagonist (e.g., "Allergic to Spironolactone").
- Aldosterone antagonist (along with ACEI and ARBs) are sometimes described as RAS (reninangiotensin 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 aldosterone antagonist at discharge (e.g., "Hold all RAS blockers").
- Documentation that refers to a more general medication class, such as "avoid all nephrotoxic medications" or "Hold BP Meds" is not acceptable as a reason for not prescribing aldosterone antagonist at discharge. Reason documentation must mention aldosterone antagonist as a class or a specific aldosterone antagonist medication.

Suggested Data Sources:

- Consultation notes
- History and physical
- Progress notes
- Physician's notes
- Discharge summary

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Aldactone • Aldactazide (Hydrochlorothiazide + Spironolactone) • Eplerenone • Inspra • Spironolactone	• All other aldosterone receptor antagonist medications other than those listed as inclusions.

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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.

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- 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".**

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- 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)

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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).

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- 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

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- "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

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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)

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Name: *Reason for No Cardiac Rehabilitation Enrollment*

Collected For: CCCIP-05, CCCOP-03

Definition: Documentation by a physician/APN/PA/RN in the medical record of a reason why the patient did not attend at least one cardiac rehabilitation session.

Question: Is there documentation by a physician/APN/PA/RN in the medical record of a reason why the patient did not attend at least one cardiac rehabilitation session.

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of a reason why the patient did not attend at least one cardiac rehabilitation session.

N (No) There is no documentation of a reason why the patient did not attend at least one cardiac rehabilitation session or unable to determine from medical record documentation.

Notes for Abstraction:
- Reasons for not attending one cardiac rehabilitation session must be documented by the physician/APN/PA/RN (e.g. patient refused to attend cardiac rehabilitation).
- Patient death within 90 days of discharge is an acceptable reason for no cardiac rehab enrollment.
- When conflicting information is documented in the medical record, select "Yes".

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

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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:

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Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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Name: *Reason for No Regional Anesthesia*

Collected For: THKR-IP-1, THKR-OP-1

Definition: Reasons why regional anesthesia was not used or attempted for the procedure:

- Documentation of previous spinal fusion
- Documentation of patient/family refusal of regional anesthesia
- Other reasons why regional anesthesia was not used or attempted documented by physician/APN/PA

Question: Is there physician/APN/PA documentation why regional anesthesia was not used or attempted for the procedure?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is physician/APN/PA documentation why regional anesthesia was not used or attempted.

N (No) There is no physician/APN/PA documentation why regional anesthesia was not used or attempted or unable to determine from medical record documentation.

Notes for Abstraction:

- To select "Yes" for this data element, documentation of a reason for not using or attempting regional anesthesia must be dated prior to or on the PACU Discharge Date. If the patient did not go to the PACU, documentation must be dated prior to or on the day of surgery.
- If reasons are not mentioned in the context of anesthesia, do not make inferences (e.g., do not assume that regional anesthesia was not used because of a bleeding disorder unless documentation explicitly states so).
  Example:
  - "Bleeding disorder", review the chart for documentation about reason why regional anesthesia was not used or attempted. If no further documentation select "no".
  - "Recommend general anesthesia due to history of spinal fusion", select "yes".
- "Other" reasons for not using or attempting regional anesthesia must be documented by a physician/APN/PA.
- Exceptions to physician/APN/PA documentation of a reason for no regional anesthesia:
  - Patient family refusal may be documented by a nurse, but must be dated prior to or on the PACU Discharge Date (or prior to or on the date of surgery if the patient did not go to the PACU). Patient/family refusal of any form of regional anesthesia is acceptable. Example: Patient refused spinal anesthesia, select "Yes."
  - Historical documentation present at the patient level in the electronic health record indicating the patient had a previous spinal fusion. As electronic data are available at all times during the encounter, it is acceptable to use this data for abstraction purposes.

Suggested Data

- Anesthesia record

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Sources:

- Operative notes
- Procedure notes
- PACU/recovery room record
- Intraoperative Record

SUGGESTED DATA SOURCES FOR PATIENT/FAMILY REFUSAL (other than physician/APN/PA documentation):

- Flowsheet
- Nurses notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Patient Refusal • History of Spinal Fusion	None

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Name: *Reason for No Referral to Outpatient Cardiac Rehabilitation Program*

Collected For: CCCIP-03, CCCIP-04, CCCOP-01, CCCOP-02, CCCOP-03

Definition: Reason for not referring a patient to an outpatient cardiac rehabilitation program.

Question: Is there a documented reason for not referring the patient to an outpatient cardiac rehabilitation program?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of a reason for not referring the patient to an outpatient cardiac rehabilitation program.

N (No) There is no documentation of a reason for not referring the patient to an outpatient cardiac rehabilitation program or unable to determine from medical record documentation.

Notes for Abstraction:

- Reasons that preclude a referral to an outpatient cardiac rehabilitation program may be must be documented by a physician/APN/PA/physical therapist/occupational therapist/case manager/RN. **Examples:**
  - Patient lacks medical coverage for cardiac rehabilitation
  - There is no traditional cardiac rehabilitation program (health care facility-based program) close to the patient's home or the patient does not have access to an alternative model of cardiac rehabilitation (e.g. virtual or home health model).
  - The patient was already participating in a cardiac rehabilitation prior to the current hospitalization or has completed an outpatient cardiac rehabilitation program within the last 12 months
  - The patient has a lack of transportation
  - Patients deemed by a medical provider to have a medically unstable, life-threatening condition or has other cognitive or physical impairments that preclude participation in cardiac rehabilitation
  - Physical therapy documents in their assessment note that they recommend acute rehab for the patient
  - Patient refuses referral to cardiac rehabilitation

Suggested Data Sources:

- Medical Record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion

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Name: *Reason for No Tobacco Cessation Medication During the Hospital Stay*

Collected For: TOB-2

Definition: Reasons for not administering an FDA-approved tobacco cessation medication documented during the patient's hospital stay include:

- Allergy to all of the FDA-approved tobacco cessation medications
- Drug interaction (for all of the FDA-approved medications) with other drugs the patient is currently taking
- Patient is pregnant.
- Other reasons documented by physician, advanced practice nurse(APN), physician assistant (PA), or pharmacist

Question: Is there documentation of a reason for not administering one of the FDA-approved tobacco cessation medications during the hospital stay?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of a reason for not administering an FDA-approved cessation medication during the hospital stay

N (No) There is no documentation of a reason for not administering an FDA-approved cessation medication during the hospital stay or unable to determine from medical record documentation.

Notes for Abstraction:

- Reasons (other than pregnancy) for not administering FDA-approved tobacco cessation medications must be documented by a physician/APN/PA or pharmacist.
- If there is any documentation in the medical record indicating the patient is pregnant, select “Yes.”
- An allergy or adverse reaction to one of the FDA-approved cessation medications would not be a reason for not administering another of the cessation medications.
- In determining whether there is a reason documented by physican/APN/PA or pharmacist for not administering tobacco cessation medications, the reason must be explicitly documented (e.g., “No tobacco cessation medication as patient is post-operative and nicotine may place them at risk for impaired wound healing”) or clearly implied (e.g., “Patient becomes anxious when they take tobacco cessation medication”). If reasons are not mentioned in the context of cessation medication, do not make inferences (e.g., Do not assume that a tobacco cessation medication is not being prescribed because of the patient's history of recent surgery alone).
- When conflicting information is documented in the medical record, select value ""No" for the indicated reasons present for not administering the tobacco cessation medications.
- Documentation by the physician, advanced practice nurse (APN), physician assistant (PA), or pharmacist that the patient refused tobacco cessation medication is not considered a valid reason for no tobacco cessation medication during the hospitalization. If refusal is documented as the reason, select Value “No.”

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Suggested Data Sources:

- Anesthesia record
- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Physician orders
- Discharge summary
- Medication administration record (MAR)
- Transfer Form

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Allergy or sensitivity • Refer to Appendix C, Table 9.1 for a list of FDA-approved tobacco cessation medications	• Medication allergy using a negative modifier or qualifier (questionable, risk of, suspect, etc.)

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Name: *Reason for No Tobacco Cessation Medication at Discharge*

Collected For: TOB-3

Definition: Reasons for not administering an FDA-approved tobacco cessation medication at discharge include:

- Allergy to all of the FDA-approved tobacco cessation medications.
- Drug interaction (for all of the FDA-approved medications) with other drugs the patient is currently taking.
- Patient is pregnant.
- Other reasons documented by physician, advanced practice nurse(APN), physician assistant (PA), or pharmacist.

Question: Is there documentation of a reason for not prescribing one of the FDA-approved tobacco cessation medications at discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of a reason for not prescribing an FDA-approved cessation medication at discharge

N (No) There is no documentation of a reasons for not prescribing an FDA-approved cessation medication at discharge or Unable to Determine (UTD) from medical record documentation

Notes for Abstraction:

- Reasons (other than pregnancy) for not prescribing FDA-approved tobacco cessation medications must be documented by a physician/APN/PA or pharmacist.
- If there is any documentation in the medical record indicating the patient is pregnant, select "Yes."
- An allergy or adverse reaction to one of the FDA-approved cessation medications would not be a reason for not prescribing another of the cessation medications.
- In determining whether there is a reason documented by physician/APN/PA or pharmacist for not prescribing tobacco cessation medications, the reason must be explicitly documented (e.g., "No tobacco cessation medication as patient is post-operative and nicotine may place them at risk for impaired wound healing") or clearly implied (e.g., "Patient becomes anxious when they take tobacco cessation medication"). If reasons are not mentioned in the context of cessation medication, do not make inferences (e.g., Do not assume that a tobacco cessation medication is not being prescribed because of the patient's history of recent surgery alone).
- When conflicting information is documented in the medical record, select Value "No."
- If the reason for not prescribing FDA-approved cessation medication is documented at any time during the hospitalization, additional documentation of the reason at the time of discharge is not required.

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- Documentation by the physician, advanced practice nurse (APN), physician assistant (PA), or pharmacist that the patient refused tobacco cessation medication is not considered a valid reason for no tobacco cessation medication at discharge. If refusal is documented as the reason, select Value "No."

Suggested Data Sources:

- Anesthesia record
- Emergency department record
- History and physical
- Progress notes
- Physician orders
- Discharge summary
- Medication administration record (MAR)
- Consultation record
- Transfer Form

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Allergy or sensitivity • Refer to Appendix C, Table 9.1 for a list of FDA-approved tobacco cessation medications	• Medication allergy using a negative modifier or qualifier (questionable, risk of, suspect, etc.)

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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:

- 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 pharma-

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cological 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].
- 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.
- Graduated compression stockings (GCS) are not sufficient VTE prophylaxis for stroke patients. If GCS only were applied on the day of or day after hospital admission and no other form of prophylaxis administered, then a reason for no pharma-

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cological prophylaxis and a reason for no mechanical prophylaxis must be documented in the medical record.

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.

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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

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- 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

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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”.
- If a procoagulant reversal agent was initiated at a transferring hospital and none given at this hospital because the repeat INR was < 1.4, select "Yes".
- If the patient was not taking warfarin prior to hospital arrival and has no documented history of warfarin use, select "Yes".

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Progress notes
- Discharge summary

Additional Notes:

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Guidelines for Abstraction:

Inclusion	Exclusion
• Patient/family refusal	None

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Name: *Reason for Not Discharging Patient to Home*

Collected For: THKR-IP-3, THKR-OP-3

Definition: Reasons for not discharging the patient to home.

Question: Is there documentation of a medical or social reason for not discharging the patient to home?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of a medical/social reason for not discharging the patient to home.

N (No) There is no documentation of a medical/social reason for not discharging the patient to home or unable to determine from medical record documentation.

Notes for Abstraction:

- Reasons for not discharging the patient to home must be documented by a physician/APN/PA/nurse/social worker/care manager/discharge planner/physical therapist/occupational therapist.
- Reasons do NOT need to be documented at discharge or otherwise linked to the discharge timeframe: Documentation of reasons anytime during the encounter are acceptable.
  Example:
  - Mid-hospitalization note stating "patient will rehab at SNF due to lack of support at home", select "Yes".
- If reasons are not mentioned in the context of discharge to home, do not make inferences.
  Example:
  - H&P states "patient lives alone", select "no".
  - H&P states "patient lives alone and therefore will rehab at SNF", select "yes".
- In the absence of a medical/social reason documented by the physician/APN/PA/nurse/social worker/care manager/discharge planner/physical therapist/occupational therapist, patient/family/caregiver refusal is not an acceptable stand alone reason for not discharging the patient to home. The healthcare team has an opportunity to educate and influence the patient regarding recuperation at home as this is the safest option for most patients. Additionally, the healthcare team can play a role in assessing the home situation preoperatively and assuring the appropriating resources are in place postoperatively in the home for a safe recovery.

Suggested Data Sources:

- Consultation notes
- History and physical
- Nursing notes
- Nursing admission assessment
- Progress notes
- Physician orders

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- Physician's notes
- Discharge summary
- Care management notes
- Discharge Planning Notes
- Preadmitting notes
- Social work notes
- Therapy notes (e.g., physical therapy, occupational therapy, kinesiotherapy)

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	Patient/Family/Caregiver Refusal

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Name: *Reason for Not Ambulating the Day of Surgery*

Collected For: THKR-IP-2, THKR-OP-2

Definition: Reasons for not ambulating the patient on the day of surgery.

Question: Is there documentation of a reason for not ambulating the patient on the day of surgery?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of a reason for not ambulating the patient on the day of surgery.

N (No) There is no documentation of a reason for not ambulating the patient on the day of surgery or unable to determine from medical record documentation.

Notes for Abstraction:

- To select "Yes" for this data element, documentation of a reason for not ambulating the patient on the day of surgery must be dated on or prior to the PACU Discharge Date. If the patient did not go to the PACU, documentation must be dated prior to or on the day of surgery.
- Reasons for not ambulating the patient must be documented by a physician/APN/PA/nurse/physical therapist/occupational therapist.
- **If reasons are not mentioned in the context of ambulation, do not make inferences.**
  Examples:
  - PA documents hypotensive episode of 90/60 postoperatively on the PACU Discharge Date. No linkage to reason for not ambulating. Select "No".
  - MD writes an order on the PACU Discharge Date, "do not ambulate patient today due to nausea and vomiting". Select "Yes".
  - Physical therapist documents that the patient was wheelchair bound prior to surgery and therefore did not ambulate the day of surgery. Select "Yes".
- If the data element "Postoperative ICU Admit or Transfer" was abstracted as "Yes", select "Yes".
- In the absence of a medical reason documented by the physician/APN/PA/nurse/physical therapist/occupational therapist, patient/family/caregiver refusal is not an acceptable stand alone reason for not ambulating on the day of surgery.

Suggested Data Sources:

- Consultation notes
- Nursing notes
- Progress notes
- Physician orders
- Physician's notes
- Procedure notes
- PACU/recovery room record
- Therapy notes (e.g., physical therapy, occupational therapy, kinesiotherapy)

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Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	Patient/Family/Caregiver Refusal

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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 medica-

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tions," "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:

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- "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.	None

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Name: *Reason for Not Prescribing a High-Intensity Statin*

Collected For: CCCIP-01

Definition: Documentation of a reason for not prescribing a high-intensity statin at hospital discharge by a physician/APN/PA or pharmacist.

Question: Did a physician/APN/PA or pharmacist document a contraindication to or a reason for not prescribing a high-intensity statin at hospital discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation by a physician/APN/PA or pharmacist of a contraindication to or a reason for not prescribing a high-intensity statin at hospital discharge.

N (No) There is no documentation by a physician/APN/PA or pharmacist of a contraindication to or a reason for not prescribing a high-intensity statin at hospital discharge or unable to determine from medical record documentation.

Notes for Abstraction:

- Reasons that precludes prescribing a high-intensity statin must be documented by a physician/APN/PA/or pharmacist.
- If the patient refuses a prescription for a high-intensity statin select 'Yes'.
- Reasons for not prescribing a high-intensity statin must be explicitly documented or clearly implied.
  - Physician/APN/PA or pharmacist documentation of a hold of a high-intensity statin or discontinuation of a high-intensity statin constitutes a “clearly implied” reason for not prescribing a high-intensity statin at hospital discharge.
  - A hold/discontinuation of all p.o. medications counts if the high-intensity statin was on order at the time of the notation.
  - If there is documentation of a plan to initiate/restart a high-intensity statin and the reason/problem underlying the delay in starting/restarting the high-intensity statin is also noted, this constitutes a “clearly implied” reason for not prescribing a high-intensity statin at discharge.
  - Documentation of a conditional hold/discontinuation of a high-intensity statin does NOT count as a reason for NOT prescribing a high-intensity statin.
  - Deferral of prescribing a high-intensity statin from one physician/APN/PA or pharmacist to another does NOT count as a reason for not prescribing a high-intensity statin, unless the problem underlying the deferral is also noted.
- A statin “allergy” or “sensitivity” documented in the medical record counts as an allergy regardless of what type of reaction might be noted.
  - Documentation of an allergy/sensitivity to one particular statin is acceptable to take as an allergy to the entire class of statin medications.

Suggested Data Sources:

- Consultation notes
- History and physical
- Progress notes
- Physician's notes

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- Discharge summary
- ICU notes
- Inpatient medical record

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion

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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
- Hemorrhage due to malignant brain neoplasm
- 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:
  - Nimodipine allergy
  - Non-aneurysmal subarachnoid hemorrhage (SAH)
  - Reversible cerebral vasoconstriction syndrome
  - Cerebral amyloid angiopathy
  - Hemorrhage due to malignant brain neoplasm
- **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:

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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

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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."

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- 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.
- Prasugrel is inadvisable for patients with a history of transient ischemic attack or stroke. If prasugrel was prescribed at discharge, 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

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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.	None

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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".
- Prasugrel is inadvisable for patients with a history of transient ischemic attack or stroke. If prasugrel was administered on the day of or day after hospital arrival, se-

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lect "Yes".

- 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

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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.”

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- 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 anticoagulant 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.

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Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None Refer to Appendix C, Table 8.3 for a comprehensive list of Anticoagulant Medications.	None

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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

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• 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

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Name: *Referral for Addictions Treatment*

Collected For: SUB-3

Definition: Documentation that a referral was made at discharge for addictions treatment by a physician or non-physician (such as nurse, psychologist, or counselor). A referral is defined as an appointment made by the provider either through telephone contact, fax or e-mail. The referral may be to an addictions treatment program, to a mental health program or mental health specialist for follow-up for substance use or addiction treatment, or to a medical or health professional for follow-up for substance use or addiction.

Question: Was a referral for addictions treatment made for the patient prior to discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 The referral to addictions treatment was made by the healthcare provider or health care organization at any time prior to discharge.

2 Referral information was given to the patient at discharge, but the appointment was not made by the provider or health care organization prior to discharge.

3 The patient refused the referral for addictions treatment and the referral was not made.

4 The patient:
- is being discharged to a residence outside the USA
- is released to a court hearing and does not return
- is being discharged to jail/law enforcement

5 A referral for addictions treatment was not offered anytime prior to discharge or Unable to Determine (UTD) from the medical record documentation

Notes for Abstraction:

- If a patient is referred to an addictions treatment provider that does not schedule appointments and the patient was given a specific date and time to present for addictions treatment, select Value "1."
- Value "4" should be selected if the patient:
  - is being discharged to a residence outside the USA
  - is released to a court hearing and does not return
  - is being discharged to jail/law enforcement
- A referral to Alcoholics Anonymous (AA) or similar mutual support groups does not meet the intent of the measure. Select Value "5."
- Select Value "5" if:
  - it cannot be determined that a referral for addictions treatment was made or;
  - it is unclear that the absence of the referral was due to a patient refusal or because the referral was not offered.

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Suggested Data Sources:

- Discharge summary
- Transfer sheet
- Discharge Instruction Sheet
- Nursing Discharge Notes
- Physician Order Sheet

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion

• Group counseling
• Individual counseling
  ○ Addictions counselor
  ○ Personal physician
  ○ Psychiatrist
  ○ Psychologist
	• Self help interventions in the form of printed/electronic/digital media
	• Support groups that are not considered treatment such as Alcoholics Anonymous (AA)

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Name: *Referral for Outpatient Tobacco Cessation Counseling*

Collected For: TOB-3

Definition: Documentation that a referral was made at discharge for ongoing evidence-based counseling with clinicians (physician or non-physician such as nurse, psychologist, counselor). Outpatient counseling may include proactive telephone counseling, group counseling and/or individual counseling. A counseling referral is defined as an appointment made by the healthcare provider or hospital either through telephone contact, fax, the EHR or e-mail. For quitline referrals, the healthcare provider or hospital can either fax or e-mail a quitline referral or assist the patient in directly calling the quitline prior to discharge.

Question: Did the patient receive a referral for Outpatient Tobacco Cessation Counseling?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 The referral to outpatient tobacco cessation counseling treatment was made by the healthcare provider prior to discharge

2 Referral information was given to the patient at discharge but the appointment was not made by the provider prior to discharge

3 The patient refused the referral for outpatient tobacco cessation counseling treatment and the referral was not made

4 The patient:
-is being discharged to a residence outside the USA
-is released to a court hearing and does not return
-is being discharged to jail/law enforcement

5 The referral for outpatient tobacco cessation counseling treatment was not offered at discharge or Unable to Determine (UTD) from the medical record documentation

Notes for Abstraction:

- If a referral is made to a Quitline, defined as a telephone counseling in which at least some of the contact is initiated by the Quitline counselor to deliver tobacco use interventions, select Value "1." If the patient directly calls the Quitline during the hospitalization, documentation must reflect that staff was present during the call to verify that an appointment was set.
- If a patient is referred to an outpatient tobacco cessation counseling provider that does not schedule appointments and the patient was given a specific date and time to present for counseling, select Value "1."
- If the patient is provided with contact information for e-health or internet smoking cessation programs which tailor program content to the tobacco user's needs (by collecting information from the tobacco user and using algorithms to tailor feedback or recommendations, permitting the user to select from various features in-

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cluding extensive information on quitting, tobacco dependence, and related topics) select Value "2." Note that if Value "2" is selected, the case will not pass the measure. Value "2" can be used as part of an internal performance improvement activity in order to determine if any type of referral was made rather than no referral.

- If a referral for outpatient tobacco cessation counseling was offered during the hospitalization and the patient refused, select Value "3." It does not need to be offered again at discharge.
- Value "4" should be selected if the patient:
  - is being discharged to a residence outside the USA
  - is released to a court hearing and does not return
  - is being discharged to jail/law enforcement
- If the patient is provided with self-help materials that are not tailored to the patient's needs and do not provide a structured program, select Value "5."
- Select Value "5" if:
  - it cannot be determined that a referral for outpatient cessation counseling was made or;
  - it is unclear that the absence of the referral was due to a patient refusal or because the referral was not offered.
- If the patient refused practical counseling (Tobacco Use Treatment Practical Counseling) during the hospitalization, a referral for outpatient tobacco cessation counseling must still be offered at the time of discharge. Select Value "5" if a referral for outpatient counseling was not offered at the time of discharge.

Suggested Data Sources:

- Discharge summary
- Transfer sheet
- Discharge Instruction Sheet
- Nursing Discharge Notes
- Physician Order Sheet

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Group counseling • Individual counseling • Quitline	• E-health • Internet structured programs • Self-help interventions in the form of printed/electronic/digital media

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Name: *Referral to Outpatient Cardiac Rehabilitation*

Collected For: CCCIP-03, CCCIP-04, CCCIP-05, CCCOP-01, CCCOP-02, CCCOP-03

Definition: Documentation that a referral was made to an outpatient cardiac rehabilitation program. The referral is defined as a written or electronic communication between the healthcare provider or healthcare system and the cardiac rehabilitation program that includes the patient's enrollment information for the program.

Question: Was a written or electronic referral submitted to the outpatient cardiac rehabilitation program on behalf of the patient?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) A written or electronic referral was submitted to the outpatient cardiac rehabilitation program

N (No) A written or electronic referral was not submitted to the outpatient cardiac rehabilitation program or unable to be determined from medical record documentation

Notes for Abstraction:
- The CR referral can be made by a physician/APN/PA/RN
- Providing the patient with information (written or verbal) about an available cardiac rehabilitation program is not sufficient. A referral/order for cardiac rehabilitation must be sent to the outpatient cardiac rehabilitation facility
- Referral should include the patient's enrollment information for the program

Suggested Data Sources:
- Physician orders

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion

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Name: *Regional Anesthesia*

Collected For: THKR-IP-1, THKR-OP-1

Definition: Documentation that the procedure was performed using regional anesthesia or that regional anesthesia was attempted. Regional anesthesia includes neuraxial anesthesia (spinal and epidural blocks) as well as peripheral nerve blocks.

Question: Was there documentation that the procedure was performed using regional anesthesia?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1. There is documentation that the procedure was performed using regional anesthesia.

2. There is documentation that regional anesthesia was attempted but unsuccessful.

3. There is no documentation that the procedure was performed using regional anesthesia and there is no documentation that regional anesthesia was attempted but unsuccessful or unable to determine from the medical record documentation.

Notes for Abstraction:
- If regional anesthesia was performed/attempted in combination with a modality listed in the Exclusion Guidelines, select “1” or "2" as appropriate.
- If regional anesthesia was attempted but unsuccessful, select “2”.
- If regional anesthesia was not performed or attempted, select "3" even if there is documentation of a reason why it was not performed or attempted.

Suggested Data Sources:
- Anesthesia record
- Operative notes
- Intraoperative Record
- PACU/recovery room record
- Procedure note

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion

This list is not all-inclusive:
• Adductor canal block
• Epidural block
• Fascia Iliaca block
• Femoral block
• Obturator block
• Paravertebral blocks
• Peripheral Nerve blocks (single injection or continuous infusion)
• Psoas block
	• General Anesthesia
	  ○ Endotracheal
	  ○ Inhaled gases
	  ○ Intravenous
	  ○ Laryngeal mask airway or anesthesia (LMA)
	  ○ Total Intravenous Anesthesia (TIVA)
	• Conscious sedation
	• Deep sedation
	• Local with sedation
	• Local with stand-by

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• Saddle block • Sciatic • Spinal block • Subarachnoid blocks	• Monitored anesthesia care (MAC)

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Name: *Resident of Other Health Care Facility*

Collected For: THKR-IP-3, THKR-OP-3

Definition: The patient is currently a resident of an Other Health Care Facility prior to this encounter.

Question: Is the patient currently a resident of an Other Health Care Facility prior to this encounter?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) The patient is currently a resident of an Other Health Care Facility prior to this encounter.

N (No) The patient is not currently a resident of an other health care facility prior to this encounter or unable to determine from medical record documentation if the patient is a resident of an other health care facility.

Notes for Abstraction:

- To select “Yes" the patient must currently be a resident of a facility listed in the Inclusion List prior to this encounter:
  - 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
  - Skilled Nursing Facility (SNF), Sub-Acute Care or Swing Bed
  - Veterans Home
- If the patient is a resident of an assisted living facility (ALF) or assisted living care at a nursing home, intermediate care, or skilled nursing facility, select “No".
- If the patient is a resident of a retirement community, select “No".
- The medical record must be abstracted as documented (taken at “face value”). Inferences should not be made based on internal knowledge. If the medical record identifies the facility where the patient resides by name only (e.g., “Park Meadows”), and does not reflect the type of facility or level of care, select “No".
- If documentation is contradictory, and you are unable to determine if the patient is a resident of an other health care facility, select “No”.

Suggested Data Sources:

- History and physical
- Face sheet
- Nursing notes
- Nursing admission assessment
- Progress notes
- Physician's notes
- Care management notes
- Social work notes
- Therapy notes (e.g., physical therapy, occupational therapy, kinesiotherapy)

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Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• 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 • Skilled Nursing Facility (SNF), Sub-Acute Care or Swing Bed • Veterans Home	• Assisted Living Facilities (ALFs) – ALFs and assisted living care at nursing home, intermediate care, and skilled nursing facilities • Group or personal care homes • Retirement communities

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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.
  - Documentation indicates the patient is Non-binary.

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

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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

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- Progress notes
- Discharge summary
- Diagnostic test reports
- Operative notes
- Procedure notes
- Admitting notes
- Procedure reports

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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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."

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

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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

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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".

- 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.
  - Disregard times associated with unsuccessful access of the artery.
    Example:
    Physician documents 4/20 0350 attempted groin puncture unsuccessful, followed by documentation on 4/20 0356 successful groin puncture. Select 0356.

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

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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

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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 medica-

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tion 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

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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:

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- "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 • Loss of family support • Arrested for drug possession • Sustained bodily harm for failure to pay for drugs • Girlfriend/boyfriend/spouse ended relationship	• None

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• Loss of driver's license • Uncontrolled anger • Attempted suicide • Estranged from family members	

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Name: *Suspected Large Vessel Occlusion (LVO)*

Collected For: STK-OP-1

Definition: Documentation in the medical record of a suspected large vessel cerebral artery occlusion.

Large vessel occlusions (LVO) include documentation of a cerebral occlusion in the Internal Carotid Artery (ICA), ICA terminus(T-lesion; T occlusion), Middle Cerebral Artery (MCA), M1 MCA, M2 MCA, Vertebral Artery, or Basilar Artery.

Question: Is there documentation of a suspected LVO in the medical record?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation of a suspected LVO.

N (No) There is no documentation of a suspected LVO, OR unable to determine from the medical record documentation.

Notes for Abstraction:

- If there is **ANY** documentation of LVO prior to transfer to another hospital, select "Yes". The percentage or degree of occlusion or stenosis is not needed to select "Yes" for this data element, e.g., "the patient has a LVO and requires transfer."
  - Documentation of LVO alone without the location of a specific cerebral artery is sufficient to select "Yes".
  - Disregard qualifiers describing the degree of occlusion, e.g., minimal/mild/moderate/high.
- Documentation of suspected LVO, select "Yes".
  Acceptable examples (select "Yes"):
  - Possible LVO requiring further evaluation.
  - High probability of left side ELVO.
  - Worrisome for ICA LVO.
  - Suspicious for left MCA territory ischemic CVA.
- If an occlusion is documented in any of the following cerebral arteries, select "Yes": Internal Carotid Artery (ICA), ICA terminus (T-lesion; T occlusion), Middle Cerebral Artery (MCA), M1 MCA, M2 MCA, Vertebral Artery, or Basilar Artery.
  - A brain imaging report is not needed to select "Yes", but may be used for abstraction. Findings / impression documented by a radiologist may be used for abstraction as well as other documentation available in the medical record.
  - The term LVO does not need to be linked with the cerebral artery.
- If there is documentation in one source that indicates the patient has a LVO, AND there is documentation in another source that indicates the patient is NOT LVO (e.g., neurology report states positive for LVO, but radiology report states negative for LVO), the source that indicates the patient has LVO would be used for this data element. Contradictory or conflicting documentation, select "Yes".
- If after careful examination of circumstances, context, etc., documentation of LVO is still unclear, the case should be deemed "unable to determine" (select "No").

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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
• Evolving large vessel occlusion (ELVO) • Hyperdensity or hyperdense sign in a defined location. • Opacification • Sylvian occlusion	None

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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:

1. Yes, there is documentation that the newborn was at term or >= 37 completed weeks of gestation at the time of birth.

2. No, there is documentation that the newborn was not at term or >= 37 completed weeks of gestation at the time of birth.

3. UTD, 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

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- 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

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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

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- 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."
- 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

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(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.

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- "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 • Syncope • Seizure **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

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Name: *Tobacco Use Status*

Collected For: TOB-2, TOB-3

Definition: Documentation within the first day of admission (by the end of Day 1) of the adult patient's tobacco use status. Tobacco use includes all forms of tobacco including cigarettes, smokeless tobacco products, pipe, and cigars.

Question: What is the patients tobacco use status?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 Current everyday tobacco user

2 Current some day tobacco user

3 Former tobacco user

4 Never tobacco user

5 The patient refused the tobacco use screen

6 Tobacco use status unknown

7 The patient was not screened for tobacco use within the first day of admission (by end of Day 1) because of cognitive impairment.

Notes for Abstraction:

- The tobacco use status screening must have occurred within the first day of admission (by the end of Day 1). This includes the day of admission which is defined as Day 0, and the day after admission which is defined as Day 1
  Exception
  If the screening was performed within 3 days prior to admission, i.e., at the transferring facility, in another inpatient hospital unit, emergency department or observation unit, the screening documentation must be present in the current medical record.
- There is no requirement to capture volume of use.
- If there is documentation that the patient uses any amount or any type of tobacco product on a daily basis, select Value "1."
- Current some day tobacco user is defined as tobacco use that is infrequent, sporadic, use that is not on a daily basis. This is regardless of volume or occurrence of tobacco use.
- If there is documentation that the patient is not a current tobacco user but used tobacco at any time in the past, regardless of date of last tobacco use, select Value "3."
- If the patient was not screened for tobacco use within the first day of admission (by the end of Day 1) or unable to determine the patient's tobacco use status from medical record documentation, select Value "6."

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- If there is any conflicting documentation about the patient's tobacco use status, where there is documentation of both tobacco use and no tobacco use, e.g., RN assessment states patient does not use any tobacco products but there is also physician documentation in the H & P that the patient is a "smoker," select Value "6" since tobacco use status is unable to be determined.
- When both daily and sporadic ("some day") tobacco use are documented, select Value "1".
- Documentation of "nicotine" use is not acceptable to determine tobacco use status. The documentation of "nicotine" use needs to be supported by language showing it was in the form of cigarettes, smokeless tobacco products, pipe, and cigars.
- For the History and Physical (H&P) source, use only the H&P report for the current admission. The H&P may be a dictated report, a handwritten report on an H&P form, or a separate entry labeled as the H&P in the progress notes.
- Classify a form as a nursing admission assessment if the content is typical of nursing admission assessment (e.g., med/surg/social history, current meds, allergies, physical assessment) AND the form is completed/reviewed by a nurse or labeled as a "nursing form."
- Cognition refers to mental activities associated with thinking, learning, and memory. Cognitive impairment for the purposes of this measure set is related to documentation that the patient cannot be screened for tobacco use due to the impairment (e.g., comatose, obtunded, confused, memory loss) within the first day of admission (by end of Day 1).
- If there is documentation within the first day of admission (by end of Day 1) that the patient was psychotic, symptoms of psychosis, e.g., hallucinating, non-communicative, catatonic, etc., must also be documented for the patient to be considered cognitively impaired.
- If there is documentation to "rule out" a condition/diagnosis related to cognitive impairment, Value "7" cannot be selected unless there is documentation of symptoms.

  Examples:
  - Patient actively hallucinating, rule out psychosis. (Select Value "7").
  - Rule out psychosis. (Cannot select Value "7").
- If there is documentation of any of the examples of cognitive impairment below within the first day of admission (by the end of Day 1), select Value "7" regardless of conflicting documentation.

  Examples of cognitive impairment include:
  - Altered Level of Consciousness (LOC)
  - Altered Mental Status
  - Cognitive impairment
  - Cognitively impaired
  - Cognitive impairment due to acute substance use; overdose, acute intoxication
  - Confused
  - Dementia
  - Intubation and patient is intubated through the end of Day 1
  - Memory loss
  - Mentally handicapped

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    - Obtunded
    - Psychotic/psychosis with documented symptoms
    - Sedation
- Documentation of cognitive impairment overrides documentation of a tobacco screen and therefore would not be considered "conflicting documentation." Even if the family or others tell staff the patient uses tobacco, the patient could not be appropriately screened and subsequently counseled due to cognitive impairment. Select Value "7."

Suggested Data Sources:

- Emergency department record
- History and physical
- Nursing admission assessment
- Nursing admission notes
- Physician progress notes
- Respiratory therapy notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Chewing (spit) Tobacco • Dry snuff • Moist snuff • Plug tobacco • Redman • Smokeless Tobacco • Snus • Twist	• E-cigarettes • Hookah pipe • Marijuana use only • Nicotine delivery system • Vaping or nicotine vaporizer use

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Name: *Tobacco Use Treatment FDA-Approved Cessation Medication*

Collected For: TOB-2

Definition: The FDA-approved tobacco cessation medications may be referenced in Appendix C on Table 9.1.

Question: Did the patient receive one of the FDA-approved tobacco cessation medications during the hospital stay?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 The patient received one of the FDA-approved tobacco cessation medications during the hospital stay

2 The patient refused the FDA-approved tobacco cessation medications during the hospital stay

3 FDA-approved tobacco cessation medications were not offered to the patient during the hospital stay or Unable to Determine (UTD) from medical record documentation.

Notes for Abstraction:
- If nicotine replacement therapy (NRT) is ordered PRN and the patient does not receive any doses during the hospital stay, select value 2 (the patient refused the FDA-approved tobacco cessation medications during the hospital stay).

Suggested Data Sources:
- Physician orders
- Medication administration record (MAR)

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Refer to Appendix C Table 9.1 for the list of FDA-approved tobacco cessation medications	• None

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Name: *Tobacco Use Treatment Practical Counseling*

Collected For: TOB-2

Definition: Practical counseling requires a one-on-one interaction with the patient to address at a minimum the following three components: recognizing danger situations, developing coping skills, and providing basic information about quitting.

Question: Did the patient receive all of the components of practical counseling prior to discharge?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 The patient received all components of practical counseling during the hospital stay.

2 The patient refused/declined practical counseling during the hospital stay.

3 Practical counseling was not offered to the patient during the hospital stay or Unable to Determine (UTD) if tobacco use treatment was provided from medical record documentation

Notes for Abstraction:

- A referral to the Quitline may be considered a component of practical counseling (providing basic information about quitting), however, handing the patient a phone number to call for the quit line will not meet the intent of practical counseling. There must be interaction between the patient and the caregiver.
- A pamphlet with basic information about quitting, recognizing danger situations and how to develop coping skills may be given to the patient; however, the caregiver must still document what was discussed with the patient from the pamphlet. Giving the patient a pamphlet alone does not constitute practical counseling which requires a one-on-one interaction with the patient.
- Danger situations covered in practical counseling might include alcohol use during the first month after quitting, being around smoke and/or other smokers, or times/situations when the patient routinely smoked (in the car, on break at work, with coffee, after a meal, upon waking up, social events, etc.)Triggers and/or roadblocks are the same as danger situations.
- Coping skills covered in practical counseling might include learning new ways to manage stress, exercising, relaxation breathing, changing routines and distraction techniques to prevent tobacco use.
- Basic information on quitting covered in practical counseling might include the benefits of quitting tobacco, how to quit techniques and available resources to support quitting.
- If there is no documentation that practical counseling was given to the patient, select value '3'
- Select value "3" (UTD) if the documentation provided is not explicit enough to determine if the counseling provided contained all components or if the counseling

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meets the intent of the measure.

Suggested Data Sources:

- Respiratory therapy notes
- Nursing notes
- Medication administration record (MAR)
- Physician progress notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
• Referral to Quitline	• None

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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.

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.

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

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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.

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.

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

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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).

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- 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

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- 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

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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.

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- 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

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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.”

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- 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 • History of mental disorders, particularly clinical depression • Feelings of hopelessness • Impulsive and/or aggressive tendencies	• None

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• 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	

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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

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- "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

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Name: *VTE Confirmed*

Collected For: VTE-6

Definition: Documentation by a physician/APN/PA that a diagnosis of new/acute VTE [deep vein thrombosis (DVT) and/or pulmonary embolism (PE)] was confirmed in a defined location on the day of arrival or anytime during the hospitalization.

Question: Is there physician/APN/PA documentation that a new/acute VTE was confirmed in one of the defined locations on the day of arrival or anytime during the hospitalization?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is physician/APN/PA documentation that a new/acute VTE was confirmed in one of the defined locations on the day of arrival or anytime during the hospitalization.

N (No) There is no physician/APN/PA documentation that a new/acute VTE was confirmed in one of the defined locations on the day of arrival or anytime during the hospitalization, or unable to determine from medical record documentation.

Notes for Abstraction:

- If the patient had a new or acute VTE in one of the defined locations which was confirmed by a physician/APN/PA following an acceptable VTE Diagnostic Test, select "Yes." Refer to the data element VTE Diagnostic Test for a list of acceptable tests.
  Examples:
  - Physician/ APN/PA documentation states that PE was confirmed with a VQ scan on Day 4 of the hospital stay, select "Yes."
  - Physician/APN/PA documentation states that the patient arrived without prior DVT confirmation, but two days after admission, there is documentation based on a venous Doppler that the patient has an acute right popliteal DVT, select "Yes."
  - Physician/APN/PA documentation states that a CT abdomen with IV contrast was done during the hospital stay and noted an extensive IVC thrombus, select "Yes."
  - Physician/APN/PA documentation states that the patient had an MRI of the lower extremity leg veins which confirmed the development of the VTE during the hospital stay without mention of the VTE location, select "No."
- If the patient was transferred from another acute care hospital with a VTE, and there is no documentation indicating the VTE location, select "No."
- Physician/APN/PA documentation of VTE described as either occlusive or non-occlusive is acceptable.

In cases where VTE is documented in a defined location, consider it a new or acute VTE unless described as otherwise, e.g., chronic. The terms "new" or "acute" do not need to be explicitly documented to select "Yes."

- Recurrent, chronic, sub-acute, indeterminate age, or history of VTE, select "No."
  Example:
  Venous Doppler is performed on the day of admission. The results document DVT

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in the right popliteal vein which appears to be chronic. MD note states "no calf tenderness or swelling." No other documentation of a new or acute VTE in the medical record, select "No."

EXCEPTION:

Documentation of an acute or new VTE in a defined location is also present in the medical record.

Example:

If a patient had a history of lower extremity DVT, but vascular ultrasound done after hospital admission found a new DVT in the popliteal vein of the right lower extremity, select "Yes."

- If more than one acceptable VTE Diagnostic Test was performed, review the chart for the earliest acceptable VTE Diagnostic Test that confirmed the VTE in one of the defined locations.

  Example:

  Patient had CT of chest with contrast in the emergency department on 02/01/20xx for shortness of breath, no PE confirmed. The patient was admitted on 02/02/20XX. The patient had venous ultrasound with confirmed proximal left common iliac DVT on 02/04/20XX. Select "Yes."
- If conflicting documentation between providers is present, select "Yes."

  Example:

  PCP documents acute deep femoral DVT but oncologist states that DVT appears to be chronic.
- For patients with radiology reports that state "low probability" or "inconclusive test results" on any of the acceptable VTE Diagnostic Tests, select "No."
- For patients with a nuclear medicine VQ scan to rule-out PE; if the result was documented as "high probability," select "Yes." For all other impressions (e.g., "low probability," "intermediate," "intermediate to high probability" or "inconclusive test results"), select "No."
- If there is questionable physician/APN/PA documentation regarding whether the patient had VTE, select "Yes."

  Example:

  If the radiologist interpretation of the exam did not confirm DVT, but there is documentation of a DVT in physician's progress notes, select "Yes."
- If there is physician/APN/PA documentation that the patient had a VTE, select "Yes."
- If the record indicates ONLY a radiology report, and that report is questionable regarding whether the patient had a VTE, select "No."

  Examples:

  - If the radiology report of a CTA indicates, "possible" or "suggestive of" common femoral clot, select "No."
  - If the radiology report of an angiogram indicates, distal vein clot that may extend into the greater saphenous vein, select "No."

Documentation in sources other than radiology reports:

- The physician/APN/PA documentation must indicate the clinician's confirmation of an acute VTE in a defined location.

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Examples:

- Physician Notes: Venous Doppler on day of admission positive for DVT left popliteal vein clot, select "Yes."
- Emergency Notes: Venogram positive for VTE, select "No."

- The physician/APN/PA documentation must reflect the time frame from arrival to hospital discharge.

Suggested Data Sources:

PHYSICIAN/APN/PA DOCUMENTATION ONLY

- Admission notes
- Consult notes
- Discharge summary
- Emergency Department record
- History and physical
- Physician notes
- Radiology report

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
THIS LIST IS ALL INCLUSIVE VTE Location *VTE Confirmed* is defined as: Pulmonary Emboli (PE), pulmonary artery embolism, pulmonary trunk embolism, saddle embolism Or DVT Located in: • Common femoral vein • Common Iliac • External Iliac vein • Femoral/superficial femoral vein • Inferior vena cava (IVC) • Infrarenal IVC • Intrahepatic IVC • Internal iliac • Popliteal vein • Profunda / deep femoral vein • Saphenofemoral junction WITH extension into the common femoral vein • Tumor thrombus in the IVC or another defined location	**Patients with VTE in the following areas:** • Confirmed sites of venous thrombosis without a proximal leg DVT or PE also involved. • History of VTE without documentation of a new/acute event • Not in the defined locations • Amniotic fluid embolism / emboli • Anterior tibial vein • Cement embolism / emboli • Cerebral venous thrombosis (CVT) • Chronic thromboembolic pulmonary hypertension (CTEPH) • Gastrocnemius vein • Hepatic/portal/splenic/mesenteric thrombosis • Ovarian vein thrombosis • Peroneal vein • Posterior tibial vein • Renal vein thrombosis • Saphenofemoral junction • Saphenofemoral junction WITHOUT extension into the common femoral vein • Septic emboli • Soleal vein • Stroke / ischemic stroke • Thrombus in the heart • Upper extremity thrombosis

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Name: *VTE Diagnostic Test*

Collected For: VTE-6

Definition: Documentation that a diagnostic test was performed during the hospitalization.

Question: Is there documentation that a diagnostic test was performed on the day of arrival or anytime during the hospitalization?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation that a diagnostic test was performed on the day of arrival or anytime during the hospitalization.

N (No) There is no documentation that a diagnostic test was performed on the day of arrival or anytime during the hospitalization, or unable to determine from medical record documentation.

Notes for Abstraction:

- The time frame for this data element includes patients who had one of the acceptable diagnostic tests performed on arrival or anytime during hospitalization.
  Acceptable Examples:
  - Patient arrives on 01/01/20XX and documentation indicates a CT of chest with contrast was performed earlier that same day.
  - Patient arrived on 01/01/20XX and documentation indicates that the patient was admitted on 01/02/20XX. A VQ scan was performed on 01/04/20XX.
    Unacceptable Example:
  - Patient transferred on 01/05/20XX with documentation from a transferring hospital indicating vascular ultrasound was performed on 01/02/20XX."
- If a diagnostic test was performed that is not on the inclusion list, select "No."
  Example:
  Patient admitted on 01/01/20XX. 2D Echo done on 01/05/20XX. Physician notes indicate that the test confirmed a PE, select "No."

Documentation in sources other than radiology reports:

- Documentation other than radiology reports must confirm one of the acceptable tests was performed.
  Examples:
  - Physician Notes: Venous Doppler positive for DVT left popliteal, select "Yes."
  - Emergency Notes: Patient to CT without contrast, select "No."
- The physician/APN/PA documentation must reflect the time frame from arrival to hospital discharge.

Suggested Data Sources:

- Admission notes
- Consult notes
- Discharge summary
- Emergency Department record
- History and physical
- Physician notes

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- Radiology report

Additional Notes: **Diagnostic testing includes the following:**
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- Compression Ultrasound of lower extremities
- Venous Ultrasound of lower extremities
- Duplex Ultrasound (DUS) of lower extremities
- Venous Doppler of lower extremities
- Vascular vein mapping of the lower extremities
- Computed tomography angiography (CTA) / Angiogram of Chest
- Computed tomography angiography (CTA) / Pulmonary Angiogram of Chest
- Computed tomography (CT) of thorax (chest) with IV contrast
- Computed tomography angiography (CTA) / Angiogram of the abdomen
- Computed tomography (CT) of the abdomen/abdominal aorta with IV contrast
- Computed tomography (CT) of the pelvis with IV contrast
- Computed tomography angiography (CTA) / Angiogram of the pelvis
- Computed tomography (CT) of the lower extremity leg veins with IV contrast
- CT pulmonary angiogram (CTPA) / CTPA Scan / CT pulmonary embolism (CTPE)
- Magnetic resonance imaging (MRI or MRV) of the thorax (chest, cardiac)
- Magnetic resonance imaging (MRI or MRV) of the abdomen
- Magnetic resonance imaging (MRI or MRV) of the pelvis
- Magnetic resonance imaging (MRI or MRV) of the lower extremity leg veins
- Nuclear Medicine Pulmonary Scan/ventilation/perfusion (V/Q) lung scan
- Pulmonary arteriography/angiography/angiogram
- Cavagram/cavogram
- Inferior venocavagram
- Venography/Venogram of pelvis using IV contrast material
- Venography/Venogram of femoral using IV contrast material
- Venography/Venogram of other lower extremity veins using IV contrast material

Guidelines for Abstraction:

Inclusion	Exclusion
	• Patients with VTE confirmation by only D-dimer tests • Patients with VTE diagnosed by tests not listed

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Name: *VTE Present at Admission*

Collected For: VTE-6

Definition: Documentation by a physician/APN/PA that VTE was diagnosed or suspected on arrival to the day after admission.

Question: Was there any documentation by the physician/APN/PA that VTE was diagnosed or suspected on arrival to the day after admission?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation by the physician/APN/PA that VTE was diagnosed or suspected from hospital arrival to the day after admission.

N (No) There is no documentation by the physician/APN/PA that VTE was diagnosed or suspected from hospital arrival to the day after admission or unable to determine from medical record documentation.

Notes for Abstraction:

- The time frame for this data element includes any documentation dated from hospital arrival to the day after admission. It is not necessary to review documentation outside of this time frame to answer this data element.
- Documentation of suspicion or a diagnosis of a pulmonary embolism (PE) or venous thromboembolism (VTE) in a confirmed location is acceptable. Only accept terms identified in the list of inclusions.
  Note: It is not necessary for a VTE Diagnostic Test to be linked with the physician/APN/PA documented diagnosis of PE or VTE.
  Acceptable Examples:
  - A patient arrived on 10/1/20xx with shortness of breath. On 10/2/20XX, there is physician documentation that a PE is suspected, select "Yes."
  - Results of a venous Doppler performed the day after admission are positive for VTE in the common femoral vein, select "Yes."
  - Results of a Doppler are positive for an acute nonocclusive LLE thrombus on the day after admission, select "Yes."
  - Day of admission physician includes PE on the problem list, select "Yes."
  - Patient admitted with a diagnosis of left popliteal deep vein thrombus, select "Yes."
  - Patient arrived on 01/05/20XX with documentation from an outside transferring hospital indicating vascular ultrasound was performed on 01/02/20XX and positive for VTE, select "Yes."
  - Physician documents in H&P on day of admission, "DVT right lower extremity," select "Yes."

  Unacceptable Examples:
  - H&P on day of admission notes that the patient has an occlusion of the subclavian vein. Subclavian vein is not a defined location, select "No."
  - A patient arrives to the hospital emergency department with C/O severe headache. Differential diagnosis on the day of arrival includes cerebral venous

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thrombosis (CVT) versus SAH, select "No."
    - Physician admitting note documents DVT prophylaxis under the treatment plan, select "No."
    - Patient admitted with a diagnosis of left upper extremity deep vein thrombus, select "No."
    - Patient has a CT chest with IV contrast on the day of arrival to R/O PE and test results are negative and received by 2359 the day after admission, select "No."
- An order for a VTE diagnostic test is acceptable ONLY if it is explicitly documented that VTE/PE is the reason for the test. Only accept terms identified in the list of inclusions. If an acceptable test is ordered for a PE or VTE indication and results are documented as negative by 2359 the day after admission, then suspicion of PE or VTE has been ruled out. Select "No."

  Acceptable Examples:
    - A patient presents to the hospital emergency department with a chief complaint of pain and swelling in the right calf. A vascular ultrasound of the lower extremities is ordered to R/O DVT, select "Yes" UNLESS results are negative and received by 2359 the day after admission.
    - Bilateral venous Doppler of the lower extremities is ordered on the day after admission for redness and swelling left calf, select "Yes."
    - A patient arrives on 06/01/20XX. Admitting diagnosis is fever. On 06/02/20XX patient admitted and physician documents "if cough continues may require evaluation for PE." On 06/03/20XX, CTA chest is ordered and positive for PE. Select "Yes."

  Unacceptable Examples:
    - Physician orders a bilateral lower extremity arterial duplex on the day after admission. Arterial duplex is not an acceptable test. Select "No" for VTE Present on Admission.
    - Patient presents to the emergency room with complaints of pain all over after sustaining a fall. ED MD orders multiple tests including a CT of the chest with IV contrast. ED MD documents fall as the reason for the test. No mention of PE/VTE, select "No."
    - A patient is admitted after a motor vehicle accident. On arrival, a CT of the abd/pelvis with IV contrast was done to R/O internal injuries. No mention of PE/VTE, select "No."
    - Bilateral venous Doppler of the lower extremities is ordered on the day of arrival for redness and swelling left calf. Results returned the same day document no acute VTE in left common femoral vein or popliteal vein, select "No."
- Patients who are under treatment and receiving anticoagulation therapy for PE/VTE at the time of hospital arrival, select "Yes."

  Examples:
    - Patient admitted 04/30/20XX. Physician documents on 04/30/20XX that Coumadin was started on 04/20/20XX for a recently diagnosed PE, select "Yes."
    - Patient presents with a documented diagnosis of PE on the day of arrival. Coumadin placed on hold to evaluate for GI bleed, select "Yes."
- Patients on anticoagulation therapy for another condition (e.g., atrial fibrillation, mitral valve replacement) at the time of hospital arrival, select "Yes."

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Examples:

- Patient with a history of stroke and taking dabigatran as a home medication prior to arrival, select "YES."
- H&P documents chronic VTE. Taking Coumadin, select "Yes."
  EXCEPTION:
  Patient on apixaban prior to arrival for a history of atrial fibrillation. Apixaban discontinued on arrival for surgery the day after admission, select "No".

- For patients with only a past history of VTE documented, select "No."
  Example:
  - Problem list includes PE 199X, select "No."
- Recurrent, chronic, sub-acute, indeterminate age, select "No," unless there is also documentation of an acute or new VTE.
- If the patient was admitted and had surgery on day of or day after hospital admission or ICU admission and there was no documentation of diagnosed/suspected VTE prior to surgery, the VTE is not considered present on admission. Select "No."
- Disregard diagnostic procedures performed, e.g., cardiac catheterization, endoscopy, ERCP.

Suggested Data Sources:

PHYSICIAN/APN/PA DOCUMENTATION ONLY

- Consultation notes
- Discharge summary
- Emergency Department record
- History and physical
- Radiology report
- Observation notes
- Outpatient surgery notes
- Physician notes

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
THIS LIST IS ALL INCLUSIVE VTE Location *VTE Confirmed* is defined as: Pulmonary Emboli (PE), pulmonary artery embolism, pulmonary trunk embolism, saddle embolism Or DVT Located in: • Common femoral vein • Common Iliac • External Iliac vein • Femoral/superficial femoral vein • Inferior vena cava (IVC) • Infrarenal IVC • Intrahepatic IVC • Internal iliac • Popliteal vein • Profunda / deep femoral vein	**VTE Confirmed:** • History of PE or VTE without documentation of a new/acute event • VTE not in a defined location • Chronic thromboembolic pulmonary hypertension (CTEPH) **VTE Diagnostic Test:** Patients with PE or VTE diagnosed by tests not listed

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- Saphenofemoral junction WITH extension into the common femoral vein
- Tumor thrombus in the IVC or another defined location

VTE Diagnostic test:

THIS LIST IS ALL INCLUSIVE

- Compression Ultrasound of lower extremities
- Venous Ultrasound of lower extremities
- Duplex Ultrasound (DUS) of lower extremities
- Venous Doppler of lower extremities
- Vascular vein mapping of the lower extremities
- Computed tomography angiography (CTA) / Angiogram of Chest
- Computed tomography angiography (CTA) / Pulmonary Angiogram of Chest
- Computed tomography (CT) of thorax (chest) with IV contrast
- Computed tomography angiography (CTA) / Angiogram of the abdomen
- Computed tomography (CT) of the abdomen/abdominal aorta with IV contrast
- Computed tomography (CT) of the pelvis with IV contrast
- Computed tomography angiography (CTA) / Angiogram of the pelvis
- Computed tomography (CT) of the lower extremity leg veins with IV contrast
- CT pulmonary angiogram (CTPA) / CTPA Scan / CT pulmonary embolism (CTPE)
- Magnetic resonance imaging (MRI or MRV) of the thorax (chest, cardiac)
- Magnetic resonance imaging (MRI or MRV) of the abdomen
- Magnetic resonance imaging (MRI or MRV) of the pelvis
- Magnetic resonance imaging (MRI or MRV) of the lower extremity leg veins
- Nuclear Medicine Pulmonary Scan/ventilation/perfusion (V/Q) lung scan
- Pulmonary arteriography/angiography/angiogram
- Cavagram/cavogram
- Inferior venocavagram
- Venography/Venogram of pelvis using IV contrast material
- Venography/Venogram of femoral using IV contrast material

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• Venography/Venogram of other lower extremity veins using IV contrast material Refer to Appendix H, Table 2.7 **Anticoagulation Therapy** for a list of acceptable anticoagulant medications	

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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 time-frame 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.”

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- 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

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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

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Name: *VTE Prophylaxis Status*

Collected For: VTE-6

Definition: Documentation of VTE prophylaxis (mechanical or pharmacologic) administration between the hospital arrival date and the day before the *VTE Diagnostic Test* order date.

Question: Was VTE prophylaxis administered between the arrival date and the day before the *VTE Diagnostic Test* order date?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) There is documentation that VTE prophylaxis was administered between the day of arrival and the day before the *VTE Diagnostic Test* order date.

N (No) There is no documentation that VTE prophylaxis was administered between the day of arrival and the day before the *VTE Diagnostic Test* order date or unable to determine from medical record documentation.

Notes for Abstraction:

- If **ANY** VTE prophylaxis was administered within the specified time frame above, select "Yes."
- If more than one acceptable *VTE Diagnostic Test* was ordered to rule out VTE and both confirmed VTE, select the earliest diagnostic test ordered that confirmed VTE to determine if the patient received VTE prophylaxis.
  Example:
  Patient arrived on 11/1/20XX. A venous Doppler of lower extremities was ordered 11/4/20xx and confirmed a DVT of the right lower extremity. In addition, a CT scan with contrast was ordered on 11/5/20xx and confirmed a PE. Determine if any prophylaxis was administered any time between the hospital arrival date of 11/1/20XX and 11/3/20xx. If no prophylaxis was given, select "No."
- If the *VTE Diagnostic Test* was ordered the day of or the day after the arrival date, select "Yes."
- If the patient was admitted and had surgery on day of or day after hospital admission or ICU admission and VTE prophylaxis was administered before the VTE Diagnostic Test was ordered, select "Yes."
  Example:
  MVA arrives 10/09. Lovenox ordered and held for surgery 10/10. Lovenox administered 10/11 at 0140. CTA abdomen ordered 10/11 2100.
- If the record contains questionable information regarding the administration of VTE prophylaxis the day before the VTE Diagnostic Test was ordered, select "No."
- Application of mechanical prophylaxis may be documented by any personnel.
  Example:
  Nursing assistant documentation of IPC application during the allowable time frame is acceptable.
- Evaluate prophylaxis with documentation of administration only.
  Example:

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The only documentation of prophylaxis is in the physician progress notes under assessment/Plan: "DVT prophylaxis – IPC," select "No" because there is no documentation of administration.

- If one pharmacological medication is ordered and another medication is substituted (such as per pharmacy formulary substitution or protocol), select "Yes" if the substitution medication was administered.
  Note: No copy of the formulary or protocol is required in the medical record.
  Example:
  Lovenox is ordered but not administered, and is substituted with Arixtra, which is administered. Select "Yes."
- Aspirin is only acceptable as VTE prophylaxis in total hip replacement and total knee replacement surgery.

Suggested Data Sources:

- Circulator notes
- Emergency department record
- Graphic/flow sheets
- Medication administration record
- Nursing notes
- Operative notes
- Physician notes
- Preoperative nursing notes
- Progress notes
- Radiology reports

Additional Notes:

Guidelines for Abstraction:

Inclusion	Exclusion
A list of the ONLY acceptable diagnostic tests is found in the data element *VTE Diagnostic Test.* Refer to Appendix H, Table 2.1 VTE Prophylaxis Inclusion Table.	

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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. Therefore, a case with UTD for these elements would require re-evaluation to ensure the correct value is entered, if available.
- 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 of 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 the software; 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.

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    - 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

Missing and invalid data must be corrected and reprocessed in order for it to be processed correctly against the measure algorithm for expected outcome. This is important as data aggregation uses the measure outcome for each patient included in the measure's sample or 100% of patients if the measure is not sampled.

- The measures have been structured with the precondition that the majority of general data elements which are missing data cause the EOC and event records to be rejected before processing against the measure. These data elements for *Discharge measure* include but are not limited to *Admission Date*, *Birthdate*, *Discharge Date*, and *ICD-10-CM Principal Diagnosis Codes*. For *Event measures* such general data elements include but are not limited to *event-type*, *event-date*, *Admission Date*, and *Birthdate*. For outpatient measures such general data elements include but are 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 these data elements.
- Measure-specific data elements that are missing data will 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 will cause the EOC and events record to be rejected.

Abstraction Software Skip Logic and Missing Data

Skip logic allows hospitals to minimize abstraction burden by using the 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 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. 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

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software incorrectly saves or processes the value as a “null” instead of the correct value for a data element. An “UTD” allowable value is not considered missing data.

Population and Sampling:

For more information concerning aggregate data required for accreditation reporting, including population and sampling information, refer to documentation available on the Joint Commission’s Direct Data Submission (DDS) Platform. This documentation includes details on the specific aggregate data required for each chart-based measure and information concerning how to calculate the data.

For certification purposes, hospitals do not submit their initial patient population or sampling data.

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 Unable To Determine, “UTD” is present for the data element.

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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 or CPT® Code (For Outpatients only). 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 Exclusive Breast Milk Feeding measure in PC-Newborns sub-populations) 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.

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Each hospital is ultimately responsible that sampling techniques applied for their hospital adhere to the sampling requirements outlined in this manual.

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, subpopulation or sampling group. For measures requiring medical record abstraction, sampling must be done using available databases that contain all discharges for the method of sampling being used (i.e, monthly versus quarterly).

Notes:

- **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.
- The exemption for not submitting patient-level data when the hospital has five or fewer discharges that fit the denominator criteria for the calendar quarter is no longer applicable for chart-abstracted measures as hospitals are only submitting aggregate data. Hospitals are required to submit aggregate measure data applicable to their patient population and services offered to meet ORYX® Performance Measurement Requirements.

Order of Data Flow

The sampling methodology defined in the *Specifications Manual for Joint Commission National 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 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

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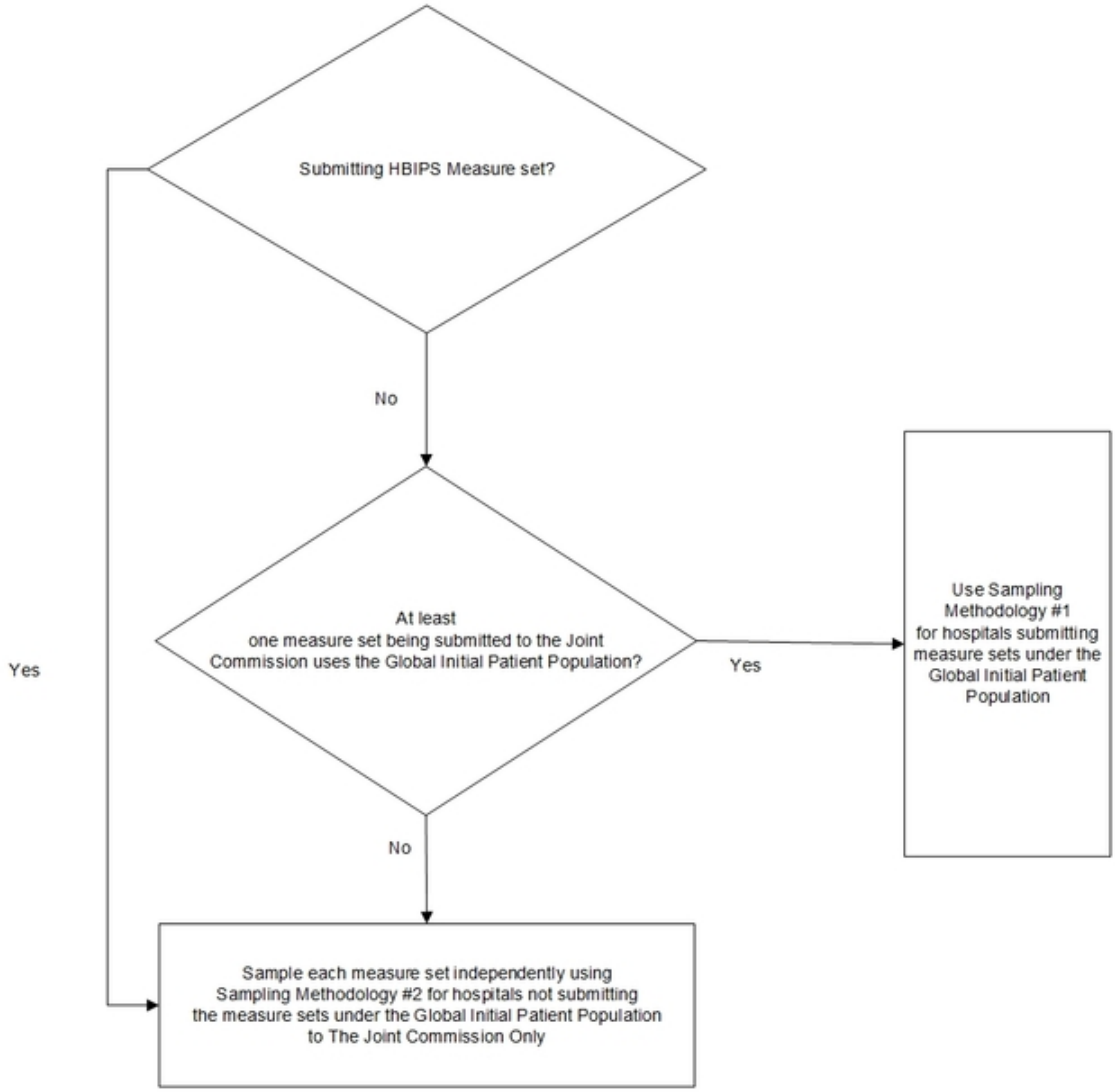

1. Hospitals Submitting Measure Sets Under the Global Initial Patient Population

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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 being aggregated and submitted to the Joint Commission, 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 in this manual. 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 section in this manual.
- 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 sampling 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 Initial Patient Population discussion of any of the measure sets, refer to the Measure Information section of this manual. 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 (*M*) identified above and pull the sample of medical records for the measure set, strata or sub-population using the "Sample Size Requirements" in each of the measures sets in the Measure Information section.
- 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

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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.

- 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 each measure set. 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 sub-populations. 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 Exclusive Breast Milk Feeding cases from PC-Newborns sub-populations.

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 in PC-Mothers, or from PC-Newborns sub-populations cases that met the initial patient population criteria for the specific measure set. If there are enough PC-Mothers, and PC-Newborns 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 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 Exclusive Breast Milk Feeding measure is 37, an additional 32 cases would need to be pulled from the PC-Newborns Initial Patient Population.

Note: 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.

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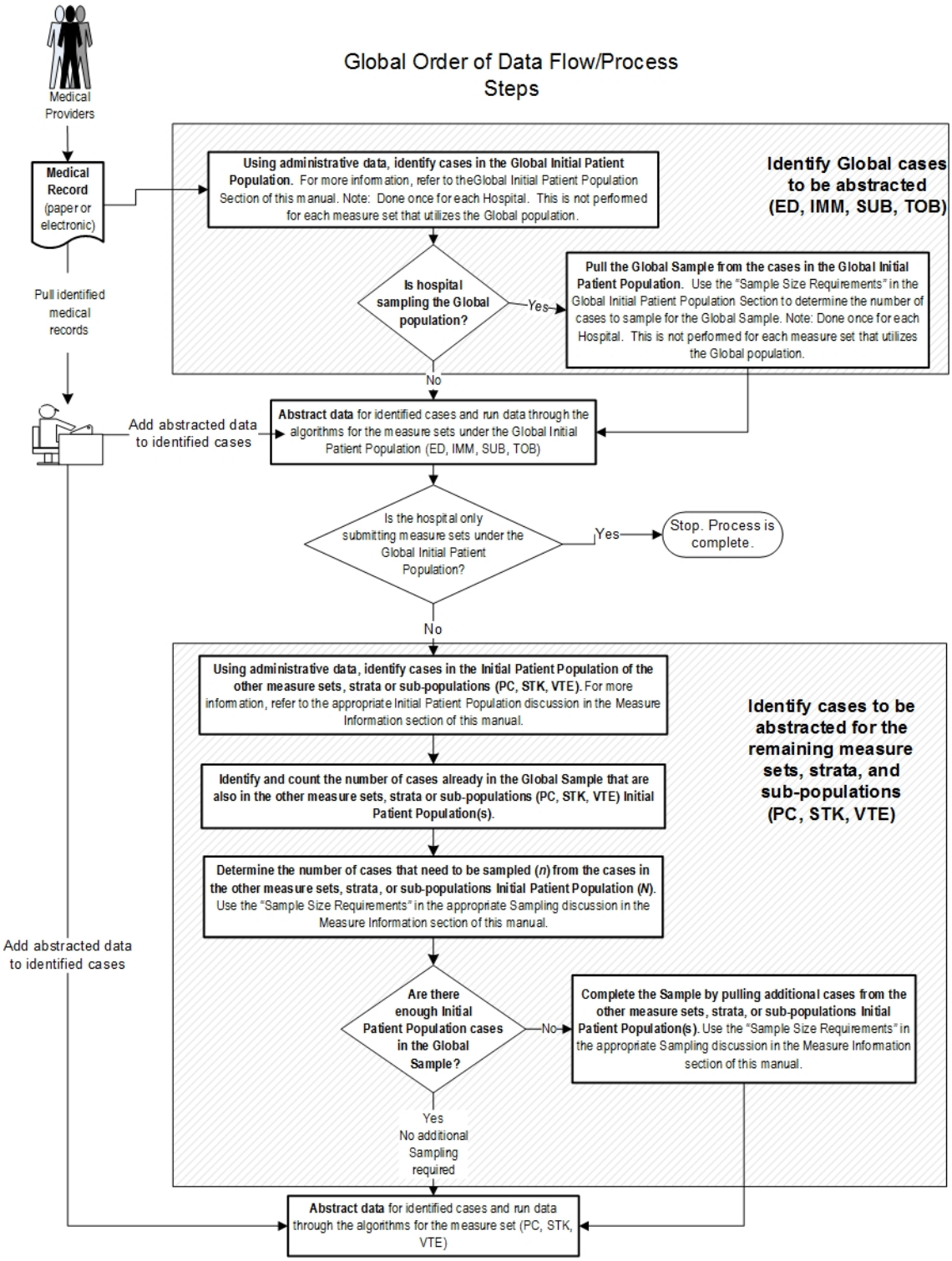

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2. Hospitals Submitting HBIPS or Hospitals Not Submitting the Measure Sets Under the Global Initial Patient Population to The Joint Commission

For hospitals submitting HBIPS or hospitals not submitting the measure sets under the Global Initial Patient Population to The Joint Commission, an independent sample pull should be used to pull the sample for the applicable measure sets (e.g., PC, HBIPS, STK, 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 aggregated and submitted to the Joint Commission. 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.

- 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.
- 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.

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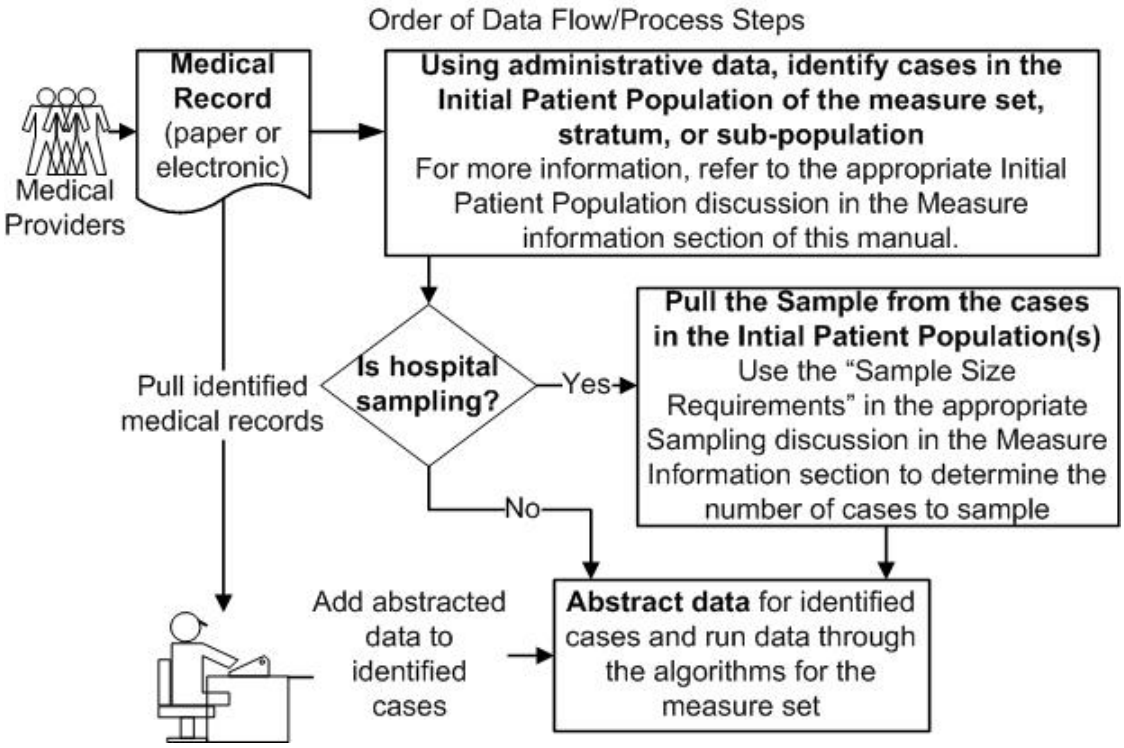

Sample Size Requirements

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 process 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 processed against the measure submitted to The Joint Commission.

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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 process the patient level data against the measure. For the event measures (e.g., HBIPS-2, and 3), hospitals must process the patient level data 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	Patient level data must be processed in order to submit your aggregate data. Submission of aggregate data is still required. The required quarterly sample size would be 100% of the patient population or 5 cases for the quarter.

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).

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- A hospital's ABC Initial Patient Population is 5 patients during the first quarters. Using the above table, processing patient level data is required to allow for submission of aggregate 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 process 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 process patient level data. If the hospital chooses to process 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.

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- 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

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.

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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

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Hospital's Measures	
Average Quarterly Initial Patient Sampling Group Size "N"	Minimum Required Sampling Group Sample Size "n"
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

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Hospital's Measures	
Average Quarterly Initial Patient Sampling Group Size "N"	Minimum Required Sampling Group Sample Size "n"
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.

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- 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"
≥ 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.

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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:

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- 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
< 10	No sampling; 100% Initial Patient Population required

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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).

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- 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.

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:

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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.

Aggregation of Initial Patient Population and Sample Data Elements

For accreditation purposes, The Joint Commission requires reporting of the Initial Patient Population and sample count data. The 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.

For more information concerning aggregate data required for accreditation reporting, refer to documentation available on the Joint Commission's Direct Data Submission (DDS) Platform. This documentation includes details on the specific aggregate data required for each chart-based measure and information concerning how to calculate the data.

For certification purposes, hospitals do not submit their initial patient population or sampling count data.

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Joint Commission National Quality Measures Data Processing

Data Processing

Introduction

This section of the manual is provided to highlight the unique data specifications for The Joint Commission national quality measure data.

The Data Processing section provides information related to the national quality measure data submitted to the Joint Commission.

The Data Processing Flow contains information regarding the order in which the Joint Commission recommends evaluation of the national hospital quality measures. In addition, it highlights the decision points as to when cases should be rejected from further processing.

The Joint Commission National Quality Measure Data

Overview

The Joint Commission no longer receives patient level data for the chart-based national quality measures.

For accreditation purposes, the data can only be submitted as aggregated numbers through the Joint Commission's Direct Data Submission Platform (DDSP). For more information concerning aggregate data required for accreditation reporting, refer to documentation available on the DDSP. This documentation includes details on the specific aggregate data required for each chart-based measure and information concerning how to calculate the data.

For certification purposes, hospitals will manually enter their aggregate numerator and denominator data on the Certification Measure Information Process (CMIP) application available on JC Connect®. Submit your questions concerning the CMIP application and the certification process to your Joint Commission Certification Account Executive.

Data submission for different Stroke certification programs

Following table depicts the measures that are required for each certification program:

Joint Commission Stroke Certification Measure Table

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	Primary Stroke Center (PSC)	Thrombectomy-capable Stroke Center (TSC)	Comprehensive Stroke Center (CSC)	Acute Stroke Ready (ASR)
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			X
STK-OP-1a	Not Reported			Not Reported
STK-OP-1b	X			X
STK-OP-1c *(Retired effective July 1, 2021)*	Not Reported			Not Reported
STK-OP-1d	X			X
STK-OP-1e	X			X
STK-OP-1f	X			X
STK-OP-1g	X			X
STK-OP-1h	X			X
STK-OP-1i	X			X
CSTK-01	X	X	X	
CSTK-02		X		
CSTK-03 (Overall) CSTK-03a CSTK-03b			X	
CSTK-04			X	
CSTK-05 (Overall) CSTK-05a CSTK-05b		X	X	
CSTK-06			X	

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	Primary Stroke Center (PSC)	Thrombectomy-capable Stroke Center (TSC)	Comprehensive Stroke Center (CSC)	Acute Stroke Ready (ASR)
CSTK-08		X	X	
CSTK-09 (Overall) CSTK-09a CSTK-09b		X	X	
CSTK-10 (Overall) CSTK-10a CSTK-10b CSTK-10c CSTK-10d			X	
CSTK-11			X	
CSTK-12			X	
ASR-IP-1				X
ASR-IP-2				X
ASR-IP-3				X
ASR-OP-1				X
ASR-OP-2 *(Retired effective July 1, 2021)*				Not Reported
ASR-OP-2a				Not Reported
ASR-OP-2b				Not Reported
ASR-OP-2c				Not Reported
ASR-OP-2d				Not Reported

Submission of CSTK 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. CSTK data 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 after their first discharge visit, but **Primary Stroke Center (PSC)** Certification does not require a follow-up.

Sites with CSC certification

Following points provide the detail of how a CSTK file is expected and processed, specifically for CSC certification:

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a. All CSTK measures with the exception of CSTK-10 must be reported for the month the patient was discharged. CSTK-10 must be reported for the month that patient follow-up occurred to obtain the Modified Rankin Score (mRS).

b. 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 mRS in the specific timeframe window (i.e., 75 to 105 days after the discharge date).

c. The aggregate numbers for CSTK-10, must be submitted for the month that follow-up happened.

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.

Example:
The CSTK-10 measure flow assigns E if the follow-up date is between 75 to 105 days after the discharge date and assigns D to any follow-up date before or after the window (before 75 days or after 105 days) of the discharge date.

The following scenario should clarify the details of the follow-up data submission for such a CSTK case:

a. Case 1 has been discharged from a CSC certified site with a discharge date of January 1st, 2020. The case is processed and aggregated for CSTK-05 for January submission. Assuming CSTK-05 result is E, 75-105 days later, a follow-up is required.

b. Jan 1st + 75= March 17th, 2020, is the earliest expected date of follow-up and Jan 1st+105= April 16th, 2020 is the latest expected date of follow-up.

c. If the follow-up occurred on March 17th, then it happened in the same quarter (1Q2020) as the Jan 1st discharge date. In this scenario, CSTK-10 measure result is E since the follow-up happened within the 75-105 day window. This case should be counted and aggregated for the month of March.

Sites with TSC certification

The data processing for TSC certification is similar to data processing for CSC certification as discussed above, except for the following:

- When these sites report a discharged CSTK case, they should only report the results for 4 of the 10 CSTK measures. (i.e., CSTK-01, CSTK-05, CSTK-08, CSTK-09).
- The follow-up measure for TSC is CSTK-02.

Sites with PSC certification

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The data processing for PSC certification is similar to data processing for CSC certification as discussed above, except for the following:

• When these sites report a discharged CSTK case, they should only report the results for the CSTK-01 measure.

STK data section

Starting from 1Q2019 discharged data, STK patient can be inpatient or outpatient.

• STK inpatient measures (STK-01, 02, 03, 04, 05, 06, 08 and 10)
• STK outpatient measure (STK-OP-1)
• A patient cannot be an inpatient and outpatient at the same time, therefore the same patient cannot be counted in both the inpatient and outpatient STK measures.

ASR data section

Starting from 3Q2021 discharged data, ASR patient can be inpatient or outpatient.

• ASR inpatient measures (ASR-IP-1, 2 and 3)
• ASR outpatient measure (ASR-OP-1)
• STK Outpatient measure (STK-OP-1)
• A patient cannot be an inpatient and outpatient at the same time, therefore the same patient cannot be counted in both the inpatient and outpatient ASR measures.

CCC data section

Data submission for different Cardiac programs

The following are the standardized performance measures abstracted for the Comprehensive Cardiac Care (CCC) certification program:

Joint Commission Comprehensive Cardiac Center Certification Measure Table

	Mandatory Comprehensive Cardiac Center Certification Performance Measures
CCCIP-01	High-Intensity Statin Prescribed at Discharge
CCCIP-02	Aldosterone Antagonist Prescribed at Discharge
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-06	Post-Discharge Evaluation for Heart Failure Patients

	Optional Inpatient Comprehensive Cardiac Center Certification Performance Measures
CCCIP-03	Cardiac Rehabilitation Referral from an Inpatient Setting

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	Optional Inpatient Comprehensive Cardiac Center Certification Performance Measures
CCCIP-04	Cardiac Rehabilitation Referral for Heart Failure Patients with Reduced Ejection Fraction from Inpatient Setting
CCCIP-05	Cardiac Rehabilitation Enrollment - Inpatient

	Optional Outpatient Comprehensive Cardiac Center Certification Performance Measures
CCCOP-01	Cardiac Rehabilitation Referral from an Outpatient Setting
CCCOP-02	Cardiac Rehabilitation Referral for Heart Failure patients with Reduced Ejection Fraction from an Outpatient Setting
CCCOP-03	Cardiac Rehabilitation Enrollment - Outpatient
ACHFOP-03	Hospital Outpatient Aldosterone Receptor Antagonists Prescribed for LVSD
ACHFOP-06	Hospital Outpatient Discussion of Advance Directives/Advance Care Planning

Additional Measures Processing Information

Risk Adjustment:
Note: Risk adjustment has been suspended as of January 1st, 2020. The Joint Commission risk adjustment information is available in the Risk Adjustment Guide.

• For assistance with the national quality measure risk guide, please contact the Joint Commission's performance measurement statistical support staff at http://manual.jointcommission.org and click on Statistical Support.

Missing Data Policy
Abstracted cases 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, should not be used in data aggregation for any of the measures in the measure set for that record. These cases should be reviewed by the provider and re-evaluated for 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 should not be counted in the aggregation of the measure.

Calculating Patient Age
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 calen-

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dar 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.

Abstraction Software Skip Logic and Missing Data

Skip logic allows hospitals to minimize abstraction burden by using the 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 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. 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 or Outpatient Aggregate Data

For accreditation purposes, hospitals must submit to The Joint Commission the aggregate population and sample counts for each of the measure sets. For more information concerning aggregate data, including population and sample counts, required for accreditation reporting, refer to documentation available on the Joint Commission's Direct Data Submission (DDS) Platform. This documentation includes details on the specific aggregate data required for each chart-based measure and information concerning how to calculate the data.

For certification purposes, hospitals do not submit their initial patient population or sampling data.

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Joint Commission Clinical Data Processing Flow

Introduction

This section contains information regarding the order in which the Joint Commission recommends processing the Joint Commission's national quality core measures. However, no support or further suggestion is provided on each hospital's processing system.

The data processing flow ensures that only valid data are used in the measure algorithms. Each case that fails to pass the data validation performed by the process as recommended in this document should not be evaluated against the measure algorithm.

Data Processing Flow for the Joint Commission

Note HBIPS:
HBIPS contains two Initial Patient Populations, discharges and events. All events of the same type occurring on the same day are reported as one measure (i.e., added as total). However, different types of events occurring on the same day are reported as different measures (i.e., different numbers).

Note PC:
The PC measure set contains 2 sub-populations, PC-Mother and PC-Newborn. Cases that meet the PC-Mother sub-population will be reported for the PC-01, and PC-02 measures. All cases that meet the PC-Newborn sub-population should be reported for the PC-06 measure. The cases that meet the PC-Newborn sub-population criteria may be sampled and reported for PC-05 measure.

Note CSTK:
Cases reported for the CSTK-05 measure are expected to be reported for the CSTK-02 and CSTK-10 measures: CSTK-02 (TSC Certification Only) and CSTK-10 (CSC Certification Only). The case should be followed-up within 75-105 days after the discharge date and reported for the month that the follow-up happened, corresponding with the Modified Rankin Score (MRS) Date.

All processed data should have gone through the following steps:

1. Data are evaluated to ensure patient has been discharged or the event date has passed and the patient's record is complete.

2. The general data elements, as defined in the Introduction to the Data Dictionary section, should be 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 "meas-

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ure set specific" data element for the discharge measures and a "general" data element for the event measures. See #4 for information concerning the processing of "measure set specific" data elements.

- If any general data elements fall outside of the data integrity checks, the system should reject the case and stop processing it.
- If any general data element is missing or invalid, the system should reject the case and stop processing it.
- If all general data elements exist and contain valid allowable values, the system should continue processing the case further for measure evaluation.

3. 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 case 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.

4. The *Measure Set* specific data elements are evaluated to ensure they contain valid allowable values.
    - If any of the measure set specific data elements fall outside of the data integrity checks, the system should reject the case and stop processing it.
    - If any of the measure set specific data elements are invalid, the system should reject the case and stop processing it.
    - If all measure set specific data elements contain valid allowable values, the system should continue processing the case further for measure evaluation.

5. If appropriate for the *Measure Set*, grid data elements are evaluated to ensure each row does not contain missing data.
    - If any row of the grid is missing data, the system should reject the case and stop processing it.
    - If the grid is empty or all data elements exist in each row, continue processing.

6. Execute the algorithm for the measures the hospital will be reporting.
    - If any measure for the case evaluates with a Measure Category Assignment = "X", "reject" the case and do not use it to aggregate the final measure rate.
    - If all measures for the case evaluate with Measure Category Assignments = "B", "D", "E", "U", and/or "Y", include the case in the aggregation of each measure's rate.

7. Before aggregating each measure's monthly data, ensure that the month or quarter is closed, depending on your hospital's sampling methodology, and all patients for that time period has been processed through the above steps.

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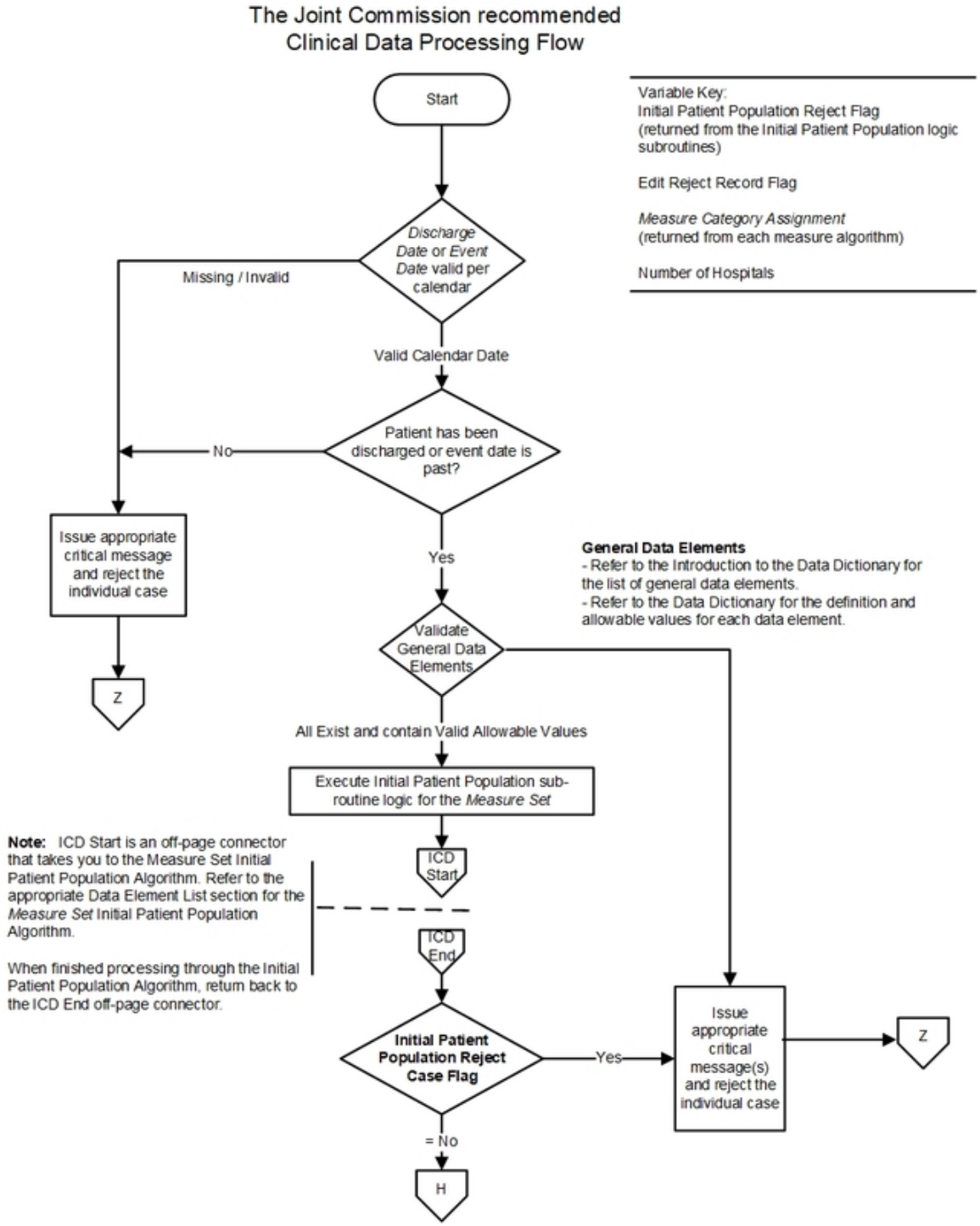
Clinical Data Processing Flow



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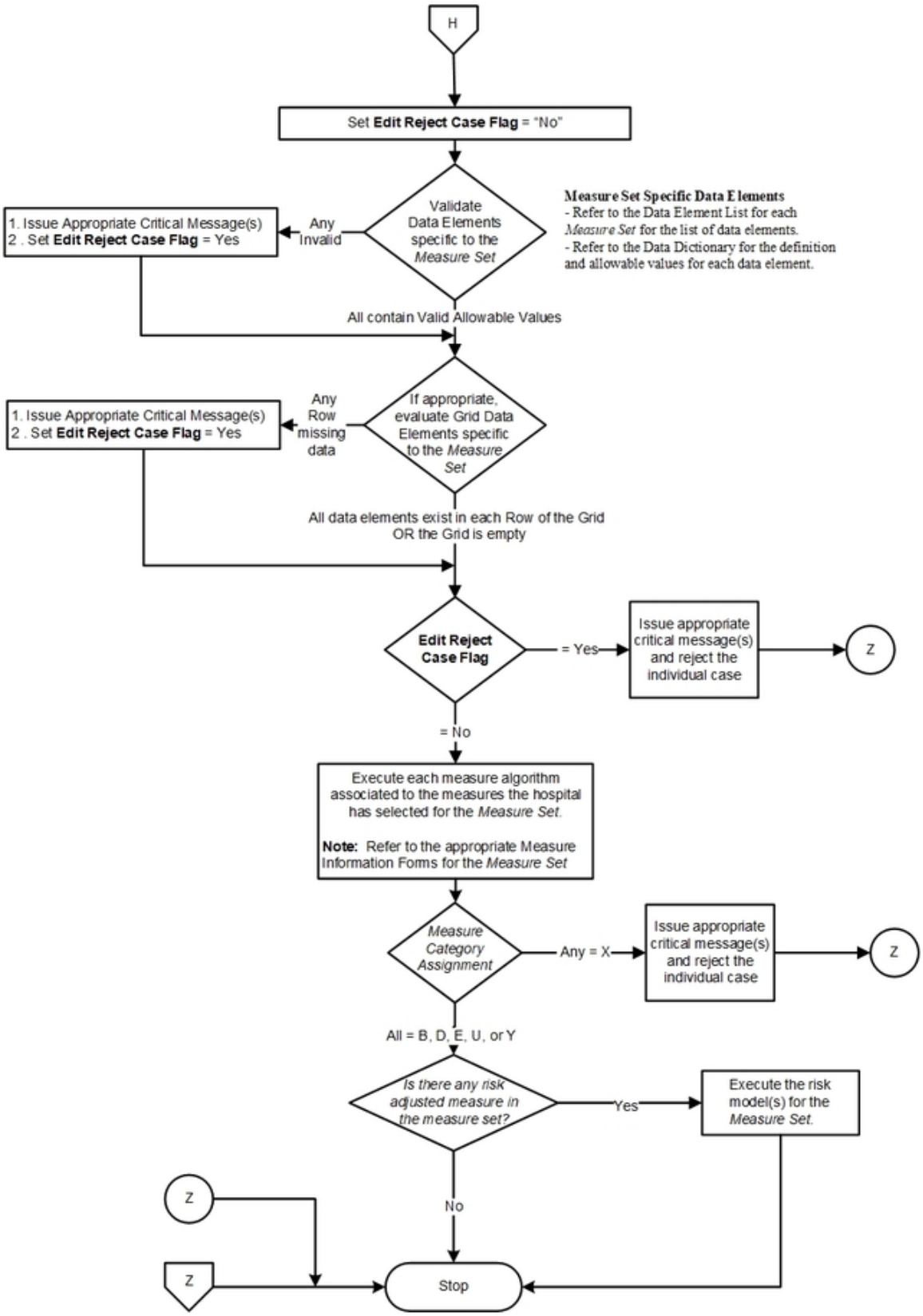

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Appendix C
Medication Tables

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

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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

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Medication
UNIRETIC
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

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Medication
EXFORGE
HYZAAR
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

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Medication
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
Pravastatin
Rosuvastatin
Simvastatin
Simvastatin/ezetimibe
Vytorin
Zocor

Table Number 8.2: Antithrombotic Medications - Stroke

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Medication
ASA
ASA Baby
ASA Baby Chewable
ASA Baby Coated
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
Alka-Seltzer
Alka-Seltzer Morning Relief
Anacin
Apixaban
Argatroban
Arixtra
Arthritis Foundation Aspirin
Arthritis Pain Ascriptin
Arthritis Pain Formula
Ascriptin
Aspir-10
Aspir-Low

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Medication
Aspir-Lox
Aspir-Mox
Aspir-Trin
Aspirbuf
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

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Medication
Bayer Low Strength
Bayer Plus
Brilinta
Buffered ASA
Buffered Aspirin
Buffered Baby ASA
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

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Medication
Eliquis
Empirin
Enoxaparin
Entab
Entaprin
Entercote
Enteric Coated Aspirin
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

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Medication
Norwich Aspirin
Pain Relief (Effervescent)
Pain Relief with Aspirin
Plavix
Pradaxa
Refludan
Rivaroxaban
Savaysa
Sloprin
St. Joseph Aspirin
Stanback Analgesic
Therapy Bayer
Ticagrelor
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

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Medication
Argatroban
Arixtra
Coumadin
Dabigatran
Dabigatran etexilate
Dalteparin
Edoxaban
Eliquis
Enoxaparin
Fondaparinux
Fragmin
Heparin I.V.
Hirudin
Jantoven
Lepirudin
Lovenox
Pradaxa
Refludan
Rivaroxaban
Savaysa
Warfarin
Warfarin Sodium
Xarelto

Table Number 9.1: FDA-Approved Tobacco Cessation Medications

Medication
Bupropion

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Medication
Chantix
Commit Lozenge
Habitrol Patch
NTS (nicotine transdermal system, step 2 and 3)
Nicoderm CQ
Nicorelief
Nicorelief gum
Nicorelief lozenge
Nicorette DS (double strength) gum
Nicorette gum
Nicorette lozenge
Nicotine Polacrilex
Nicotine Polacrilex gum
Nicotine Polacrilex lozenge
Nicotine Step 1
Nicotine Step 2
Nicotine Step 3
Nicotine TD
Nicotine Transdermal System
Nicotine gum
Nicotine inhaler
Nicotine nasal spray
Nicotrol NS
Nicotrol TD
Nicotrol inhaler
Varenicline
Varenicline tabs

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Medication
Wellbutrin
Zyban

Table Number 9.2: FDA-Approved Medications for Alcohol and Drug Dependence

Medication
Acamprosate
Antabuse
Buprenorphine
Campral
Disulfiram
Methadone
Naltrexone
Revia oral
Suboxone
Vivitrol injection

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

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Medication	Generic
Aristada Injectable-Long Acting	Aripiprazole Lauroxil
Asenapine	Asenapine
Chlorpromazine Oral Solution	Chlorpromazine
Chlorpromazine Oral Syrup	Chlorpromazine
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

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Medication	Generic
Lurasidone	Lurasidone
Mellaril Tablets	Thioridazine
Mesoridazine	Mesoridazine
Navane Capsules	Thiothixene
Olanzapine + Fluoxetine Capsules	Olanzapine + Fluoxetine
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

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Medication	Generic
Seroquel Tablets	Quetiapine
Seroquel XR Tablets	Quetiapine
Stelazine Tablets	Trifluoperazine
Symbyax Capsules	Olanzapine + Fluoxetine
Thioridazine HCL Tablets	Thioridazine
Thiothixene Capsules	Thiothixene
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

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Medication	Generic
Prolixin Injectable- Short Acting	Fluphenazine
Thorazine Injectable- Short Acting	Chlorpromazine
Ziprasidone Mesylate Injectable- Short Acting	Ziprasidone
Zyprexa Injectable- Short Acting	Olanzapine

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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).

aggregate risk-adjusted data elements Aggregate data elements derived from episode of care (EOC) records that result from the application of risk adjustment models.

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.

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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 performance measure This is a method or instrument to estimate or monitor the extent to which the actions of a health care practitioner or provider conform to practice guidelines, medical review criteria, or standards of quality.

CMS Certification Number This is Hospital's six digit acute care CMS Certification Number (CCN). CCN is collected for CMS by hospitals for each patient record. Currently, CCN number in used for eCQM data reporting in the Direct Data Submission platform, but it’s not reported in the Direct Data Submission platform, chart-

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abstracted module. The first two digits in CCN 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).

comparison group The group of health care organizations to which an individual health care organization is compared.

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*.

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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.

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 determine (or establish) 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.

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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 accreditation or certification (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.

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.

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Health Care Organization Identifier This is a unique, up to 6-digit 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.

hospital An institution primarily engaged in providing, by or under the supervision of physicians, inpatient diagnostic and therapeutic services or rehabilitation services.

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 inpatient 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 doctor who primarily takes care of patients when they are in the hospital. This doctor will take over your care from your primary doctor when you are in the hospital, keep your primary doctor informed about your progress, and will return you to the care of your primary doctor when you leave the hospital.

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.

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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 The data element value falls outside of the range of defined allowable values. 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-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.

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Measurement Value This data element is used to store the calculated results of the measurements that are outputs from continuous variable measure algorithms. This is used in conjunction with Measure Category Assignment when its allowable value = “D” (In Measure Population). One Measurement Value is expected per episode of care (EOC) for every continuous variable measure that a hospital is participating in. This number is reported or calculated per measure per month for the Joint Commission's aggregate data.

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 A missing value occurs when the abstractor does not select an answer for a data element (leaves it blank) or the data incorrectly contains a “null” instead of the correct value for a data element. 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 newborn infant or neonate is a child from birth to <28 days.

next level of care (see aftercare) Inpatient or outpatient care that the patient will receive after discharge from the hospital.

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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.

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 pregnancies reaching 20 weeks and 0 days of gestation or beyond, regardless of the number of fetuses or outcomes.

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.

perinatal care (PC) Care for maternal, fetal, and newborn health.

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.

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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 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.

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).

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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.

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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.

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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 and PC-02) and newborns (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.

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.

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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.

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.

Selected References:

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Appendix E

Overview of Measure Information Form and Flow-chart 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.

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- **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.

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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

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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.

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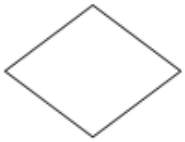
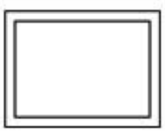
Measure algorithms serve two purposes. First, they evaluate and identify which episode of care (EOC) records contain missing and/or invalid data that will prohibit the ability to properly evaluate the measure. Second, they determine if:

- 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.

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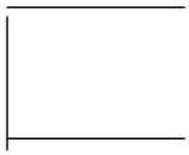
Symbol	Explanation
	Symbol to represent comments that should be taken into account when programming flowchart.
	This symbol is placed along side the Process box to which they are applicable. Comments are used to expand upon information contained within the process box, such as how to properly calculate 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.

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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 Joint Commission National Quality Measures, please contact the Department of Quality Measurement at at http://manual.jointcommission.org/

Vendors
If you are a software vendor with questions about Joint Commission National Quality Measures, please contact the Department of Quality Measurement 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.

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Appendix H

Miscellaneous Tables

Table 2.1 VTE Prophylaxis Inclusion Table

VTE Prophylaxis	Inclusion/Synonyms
Coumadin/Warfarin	Coumadin Jantoven Warfarin Warfarin Sodium
Graduated Compression Stockings (GCS) -Knee or Thigh High	Anti-Embolism stockings Anti-thrombosis stockings Elastic support hose Graduated compression elastic stockings Surgical hose White hose Thrombosis stockings
Factor Xa Inhibitor	Arixtra Fondaparinux sodium
Oral Factor Xa Inhibitor	Apixaban[1] 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

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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) for the prevention of venous thromboembolism (VTE) in hospitalized acutely ill medical patients at risk for thromboembolic complications who are not at high risk of bleeding. It is additionally approved: to reduce the risk of deep vein thrombosis (DVT) and pulmonary embolism (PE) following knee or hip replacement surgery; 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.

Table 2.7 Anticoagulation Therapy Table

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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

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