Assisted Living Community Measures

Version 2024A
Assisted Living Community Measures

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- Overview of Measure Information Form and Flowchart Formats
Acknowledgement

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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.

Related Joint Commission Activities

Accreditation Process

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

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

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

- **Research**: Strong scientific evidence demonstrates that performing the evidence-based care process improves health outcomes (either directly or by reducing risk of adverse outcomes).
• **Proximity**: Performing the care process is closely connected to the patient outcome; there are relatively few clinical processes that occur after the one that is measured and before the improved outcome occurs.

• **Accuracy**: The measure accurately assesses whether or not the care process has actually been provided. That is, the measure should be capable of indicating whether the process has been delivered with sufficient effectiveness to make improved outcomes likely.

• **Adverse Effects**: Implementing the measure has little or no chance of inducing unintended adverse consequences.

In 2021, The Joint Commission released the Assisted Living Community accreditation program and applied the same approach to selecting performance measures for the assisted living community setting.

**Direct Data Submission Platform**

The Joint Commission began accepting direct data submission of clinical quality measure data from organizations with the submission of calendar year (CY) 2017. The Direct Data Submission Platform enables an ORYX measure submission process that simplifies operations and reduces the burden for our accredited organizations while ensuring regulatory compliance and security.
Using The Specifications Manual for Joint Commission Assisted Living Community Quality Measures

This portion of The Assisted Living Community (ALC) 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 ALC 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. The Joint Commission ORYX performance measure reporting requirements are available on the Joint Commission website under the Measurement tab.

Section 1: 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 ALC 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 2: Data Dictionary

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

Section 3: Overview of Measure Information Form and Flowchart Formats

The Overview of Measure Information Form and Flowchart Formats explains each of the terms used on the Measure Information Form and provides a brief introduction to flowcharting, including an explanation of flowchart symbols. Each measure and has an associated Measure Information Form and Flowchart (calculation algorithm).
## Assisted Living Community (ALC)

### Set Measures

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Assisted Living Community Initial Population

To improve the quality of life for residents, accredited communities will abstract five standardized performance measures. The measures will allow organizations to track care provided to their residents and improve on that care, where needed.

There are three populations that will be used to determine the initial population for the measure set: total residents, new residents and number of staff positions. For each month, the initial population is the same as the denominator population. The measures with their corresponding denominator population are listed in the table below.

Assisted Living Community Standardized Performance Measures

<table>
<thead>
<tr>
<th>Measure Number</th>
<th>Measure Name</th>
<th>Denominator Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALC-01</td>
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<td>ALC-05</td>
<td>Staff Stability</td>
<td>* Number of Positions</td>
</tr>
</tbody>
</table>
                                                                                      * Number of direct care staff positions
Sampling / Sample Size Requirements

Sampling is not allowed for this measure set.
Measure Information Form

**Measure Set:** Assisted Living Community (ALC)

**Set Measure ID:** ALC-01

**Performance Measure Name:** Off-Label Antipsychotic Drug Use

**Description:** Residents with an off-label antipsychotic drug prescribed.

**Rationale:** Nearly two out of five individuals in assisted living are living with some type of dementia. For these individuals and as illness progresses, behavior often becomes a key form of communication. This can be challenging for families and staff, and too often, antipsychotic medication is used in an attempt to modify behavior.

The use of antipsychotic medication to treat behavior associated with dementia is not supported clinically and is considered off-label by the FDA, which issued a “black box” warning for the elderly with dementia. They increase the risk of death, falls and fractures, hospitalizations, and other complications resulting in poor health and high costs. Additionally, antipsychotic drugs are expensive, costing Medicare hundreds of millions. American Health Care Association/National Center for Assisted Living (AHCA/NCAL).

https://www.ahcancal.org/ncal/quality/qualityinitiative/Pages/Antipsychotics.aspx

**Type Of Measure:** Process

**Improvement Noted As:** Decrease in the rate

**Numerator Statement:** Number of residents with an off-label antipsychotic drug prescribed.

- **Included Populations:** Not applicable
- **Excluded Populations:** Not applicable
- **Data Elements:**
  - Off-Label Antipsychotic Drug Prescribed

**Denominator Statement:** Number of residents who resided in the community on the last day of the month.

- **Included Populations:** Not applicable
- **Excluded Populations:** Not applicable
- **Data Elements:**
  - Assisted Living Community Resident
Risk Adjustment: No.

Data Collection Approach:

Denominator: The total number from the data element Assisted Living Community Resident is the Denominator.

- This number will be entered into the Direct Data Submission Platform (DDSP) tool.

Numerator: Count number of residents with a Yes to Off-Label Antipsychotic Drug Prescribed; the total number is the numerator.

- This number will be entered into the Direct Data Submission Platform (DDSP) tool.

Example: You are abstracting cases for the month of June. On June 30th there are 35 residents living at the assisted living community. Your denominator will be 35. When you look back through the 35 resident’s records, there were 2 residents that were prescribed an antipsychotic for off-label use. Your numerator will be 2.

Denominator = 35
Numerator = 2

Data Accuracy: N/A

Measure Analysis Suggestions: None

Sampling: No.

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

Selected References:

- American Health Care Association/National Center for Assisted Living (AHCA/NCAL)
  https://www.ahcancal.org/ncal/quality/qualityinitiative/Pages/Staff-Stability.aspx

Original Performance Measure Source / Developer: American Health Care Association/National Center for Assisted Living (AHCA/NCAL)
Measure Algorithm:

**ALC-01: Off-Label Antipsychotic Drug Use**

**Numerator:** Number of residents with an off-label antipsychotic drug prescribed.

**Denominator:** Number of residents who resided in the community on the last day of the month.

![Flowchart]

1. **START**
2. Set **Denominator** = Assisted Living Community Resident
3. Review each resident's record
4. If **Off-Label Antipsychotic Drug Prescribed** = Y, set **Numerator** = the count of residents with "Off-Label Antipsychotic Drug Prescribed" = "Y"
5. STOP
ALC-01: Off-Label Antipsychotic Drug Use Algorithm Narrative

**Numerator:** Number of residents with an off-label antipsychotic drug prescribed.

**Denominator:** Number of residents who resided in the community on the last day of the month.

1. Start processing and proceed to set Denominator.

2. Set Denominator equal to Assisted Living Community Resident.
   
   a. Set Assisted Living Community Resident as denominator. Continue processing and proceed to Review each resident’s record.

3. Review each resident’s record.
   
   a. Review each resident’s record. Continue processing and proceed to Off-Label Antipsychotic Drug Prescribed.

   
   b. If Off-Label Antipsychotic Drug Prescribed equals “Y”. Continue processing and proceed to Set Numerator.

5. Set Numerator.
   
   a. Set Numerator equal to the count of residents with Off-Label Antipsychotic Drug Prescribed equal to “Y”. Stop processing.
Measure Information Form

Measure Set: Assisted Living Community (ALC)

Set Measure ID: ALC-02

Performance Measure Name: Resident Falls

Description: Number of residents who fall and are transferred to the hospital.

Rationale: The effort to monitor the prevalence of falls at the facility level with transfer to the hospital is very important for protecting the health of facility residents. Studies show that such falls can leave up to 50%–65% of residents with fears that impact both their functional abilities and social activities (Magaziner et al., 1997). Identifying falls risk factors can help facilities reduce incidence of falls among their residents through clinical and non-clinical practices (Arling et al., 2014). Studies have shown that falls account for 10% of visits to the emergency department and six percent of urgent hospitalizations among elderly people (Tinetti, 2003).

Type Of Measure: Outcome

Improvement Noted As: Decrease in the rate

Numerator Statement: Residents who fall and are transferred to the hospital, per month.

- Included Populations: Not applicable
- Excluded Populations: Not applicable
- Data Elements:
  - Fall With Transfer to Hospital

Denominator Statement: Number of residents who resided in the community on the last day of the month.

- Included Populations: Not applicable
- Excluded Populations: Not applicable
- Data Elements:
  - Assisted Living Community Resident

Risk Adjustment: No.

Data Collection Approach:
Denominator: The total number from the data element *Assisted Living Community Resident* is the Denominator.

- This number will be entered into the Direct Data Submission Platform (DDSP) tool.

Numerator: Count the number of residents with a 'Yes' to the data element *Fall With Transfer to Hospital*, the total number is the numerator.

- This number will be entered into the Direct Data Submission Platform (DDSP) tool.

Example: You are abstracting cases for the month of August. On August 31st there are 85 residents living at the assisted living community. Your denominator will be 85. When you look back through the 85 resident’s records, there were 4 residents that fell and were transferred to the hospital. Your numerator will be 4.

Denominator = 85
Numerator = 4

**Data Accuracy:** None

**Measure Analysis Suggestions:** None

**Sampling:** No.

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

**Selected References:**

Measure Algorithm:

**ALC-02: Resident Falls**

**Numerator:** Residents who fall and are transferred to the hospital, per month.

**Denominator:** Number of residents who resided in the community on the last day of the month.

```
START

Set Denominator = Assisted Living Community Resident

Review each resident's record

Fall with Transfer to Hospital

= Y

Set Numerator = the count of residents with "Fall with Transfer to Hospital" = "Y"

STOP
```

```
ALC-02: Resident Falls Algorithm Narrative

**Numerator:** Residents who fall and are transferred to the hospital, per month.

**Denominator:** Number of residents who resided in the community on the last day of the month.

1. Start processing and proceed to set Denominator.

2. Set Denominator equal to Assisted Living Community Resident.
   
   a. Set Assisted Living Community Resident as denominator. Continue processing and proceed to Review each resident’s record.

3. Review each resident’s record.
   
   a. Review each resident’s record. Continue processing and proceed to Off-Label Antipsychotic Drug Prescribed.

4. Check Fall with Transfer to Hospital.
   
   a. If Fall with Transfer to Hospital equals "N". Stop processing.
   
   b. If Fall with Transfer to Hospital equals "Y". Continue processing and proceed to Set Numerator.

5. Set Numerator.

   a. Set Numerator equal to the count of residents with Fall with Transfer to Hospital equal to "Y". Stop processing.
Measure Information Form

Measure Set: Assisted Living Community (ALC)

Set Measure ID: ALC-03

Performance Measure Name: Resident Preferences and Goals of Care

Description: Assisted living residents with documentation of preferences and goals of care.

Rationale: Residents who are given the opportunity to express preferences and goals are more likely to receive care consistent with their values, and resident and family satisfaction outcomes improve. Use of the resident preferences quality measure will improve attention to this important practice, in order to enhance resident autonomy, facilitate resident-centered decision-making, and communicate resident preferences.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Residents who have documentation in their record of their preferences and goals of care.

Included Populations: Not applicable

Excluded Populations: Not applicable

Data Elements:

- Resident Preferences and Goals of Care

Denominator Statement: Number of residents who are new to the assisted living community each month.

Included Populations: Not applicable

Excluded Populations: Not applicable

Data Elements:

- New Resident

Risk Adjustment: No.

Data Collection Approach:
Denominator: The total number from the data element *New Resident* is the Denominator.

- This number will be entered into the Direct Data Submission Platform (DDSP) tool.

Numerator: Count the number of residents with 'Yes' to the data element *Resident Preferences and Goals of Care*; the total number is the numerator.

- This number will be entered into the Direct Data Submission Platform (DDSP) tool.

Example: You are abstracting cases for the month of November. On November 30th there were 6 new residents living at the assisted living community. Your denominator will be 6. When you look back through the 6 resident’s records, all 2 had documentation of their preference and goals of care; this is the numerator.

Denominator = 6
Numerator = 2

**Data Accuracy:** None

**Measure Analysis Suggestions:** None

**Sampling:** No.

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

**Selected References:**

- Institute for Healthcare Improvement [http://www.ihi.org/Engage/Initiatives/Age-Friendly-Health-Systems/Pages/default.aspx](http://www.ihi.org/Engage/Initiatives/Age-Friendly-Health-Systems/Pages/default.aspx)
Measure Algorithm:

**ALC-03: Resident Preferences and Goals of Care**

**Numerator:** Residents who have documentation in their record of their preferences and goals of care.

**Denominator:** Number of residents who are new to the assisted living community each month.

1. **START**
2. Set Denominator = New Residents
3. Review each new resident's record
4. **Resident Preferences and Goals of Care**
   - If = Y, Set Numerator = the count of residents with "Resident Preferences and Goals of Care" = "Y"
   - If = N, STOP
ALC-03: Resident Preferences and Goals of Care Algorithm Narrative

**Numerator**: Residents who have documentation in their record of their preferences and goals of care.  
**Denominator**: Number of residents who are new to the assisted living community each month.

1. Start processing and proceed to set Denominator.

2. Set Denominator equal to New Residents.
   
   a. Set New Residents as denominator. Continue processing and proceed to Review each new resident’s record.

3. Review each new resident’s record.
   
   a. Review each new resident’s record. Continue processing and proceed to Resident Preferences and Goals of Care.

4. Check Resident Preferences and Goals of Care.
   
   a. If Resident Preferences and Goals of Care equals “N”. Stop processing.
   b. If Resident Preferences and Goals of Care equals “Y”. Continue processing and proceed to Set Numerator.

5. Set Numerator.
   
   a. Set Numerator equal to the count of residents with Resident Preferences and Goals of Care equal to “Y”. Stop processing.
Measure Information Form

Measure Set: Assisted Living Community (ALC)

Set Measure ID: ALC-04

Performance Measure Name: Advanced Care Plan/ Surrogate Decision Maker

Description: Residents who have documentation of an advance care plan or surrogate decision maker in their record.

Rationale: This measure addresses advance care planning as one facet of high-quality care for older adults. The aim of advance care planning is to ensure that care near the end of life aligns with the patient’s wishes (IOM, 2014). Advanced care planning is associated with improved health outcomes for older adults, including reducing hospitalizations, intensive care unit (ICU) admissions, and hospital and ICU lengths of stay (Brinkman-Stoppeleburg, 2014; Hall et al., 2011; Khandelwal et al., 2015; Martin et al., 2016). However, most older adults do not have advance care planning conversations with their clinicians even though there is consensus among diverse stakeholders that advance care planning is a key component of high-quality care (NQF 2006; IOM, 2014).

The intent of this measure is to promote advance care planning discussions and documentation of that discussion in the resident’s record. As people age, consideration should be given to their treatment wishes in the event that they lose the ability to manage their care. A large discrepancy exists between the wishes of dying patients and their actual end-of-life care. Advance directives (AD) are widely recommended as a strategy to improve compliance with patient wishes at the end of life, and thereby ensure appropriate use of health care resources at the end of life.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Residents who have an advance care plan or surrogate decision maker documented in their record or documentation that an advance care plan was discussed but the resident did not wish or was not able to name a surrogate decision maker or provide an advance care plan per month.

Included Populations:

- Residents that declined to discuss an advance care plan or surrogate decision maker.

Excluded Populations: Not applicable

Data Elements:

- Advanced Care Plan/Surrogate Decision Maker

Denominator Statement: Number of residents who are new to the assisted living community each month.
Included Populations: Not applicable

Excluded Populations: Not applicable

Data Elements:
- New Resident

Risk Adjustment: No.

Data Collection Approach:

Denominator: The total number from the data element New Resident is the Denominator.
- This number will be entered into the Direct Data Submission Platform (DDSP) tool.

Numerator: Count number of residents with a 'Yes' to the data element Advanced Care Plan/Surrogate Decision Maker; the total number is the numerator.
- This number will be entered into the Direct Data Submission Platform (DDSP) tool.

Example: You are abstracting cases for the month of March. On March 31st there are 4 new residents who moved into the assisted living community. Your denominator will be 4. When you look back through the 4 resident’s records, all 4 had documentation of an advanced care plan/surrogate decision maker present in the resident’s record or the resident refuses; this is the numerator.

Denominator = 4
Numerator = 4

Data Accuracy: None

Measure Analysis Suggestions: None

Sampling: No.

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

Selected References:


Original Performance Measure Source / Developer: Adopted from National Committee for Quality Assurance measure.
Measure Algorithm:

**ALC-04: Advanced Care Plan/ Surrogate Decision Maker**

**Numerator:** Residents who have an advance care plan or surrogate decision maker documented in their record or documentation that an advance care plan was discussed but the resident did not wish or was not able to name a surrogate decision maker or provide an advance care plan per month.

**Denominator:** Number of residents who are new to the assisted living community each month.

![Flowchart Diagram](image-url)
ALC-04: Advanced Care Plan / Surrogate Decision Maker Algorithm Narrative

**Numerator:** Residents who have an advance care plan or surrogate decision maker documented in their record or documentation that an advance care plan was discussed but the resident did not wish or was not able to name a surrogate decision maker or provide an advance care plan per month.

**Denominator:** Number of residents who are new to the assisted living community each month.

1. Start processing and proceed to set Denominator.

2. Set Denominator equal to New Residents.
   a. Set New Residents as denominator. Continue processing and proceed to Review each resident's record.

3. Review each new resident's record.
   a. Review each new resident's record. Continue processing and proceed to Advance Care Plan / Surrogate Decision Maker.

4. Check Advance Care Plan / Surrogate Decision Maker.
   a. If Advance Care Plan / Surrogate Decision Maker equals "N". Stop processing.
   b. If Advance Care Plan / Surrogate Decision Maker equals "Y". Continue processing and proceed to Set Numerator.

5. Set Numerator.
   a. Set Numerator equal to the count of residents with Advance Care Plan / Surrogate Decision Maker equal to "Y". Stop processing.
Measure Information Form

Measure Set: Assisted Living Community (ALC)

Set Measure ID: ALC-05

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<td>Overall</td>
</tr>
<tr>
<td>ALC-05b</td>
<td>Direct Care Staff</td>
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</table>

Performance Measure Name: Staff Stability

Description: Improve staff stability through tracking turnover among assisted living community staff.

Rationale: Those who work most closely with residents are at the core of providing quality care. Research shows that satisfied staff contributes to greater quality of life of the residents in assisted living communities and provide better quality of care.

With a more satisfied, well-trained, and committed staff, providers see increased retention rates and fewer work-related incidents and injuries to the workforce, all of which contribute to better overall performance of the community. The more consistent and dedicated the staff is, the more they understand and are able to effectively respond to each person’s needs – reinforcing the long term care profession’s commitment to delivering person-centered care.

American Health Care Association/National Center for Assisted Living (AHCA/NCAL)
https://www.ahcancal.org/ncal/quality/qualityinitiative/Pages/Staff-Stability.aspx

Type Of Measure: Process

Improvement Noted As: Decrease in the rate

Numerator Statement:

- ALC-05a: Total number of staff who left the assisted living community, during this month.
- ALC-05b: Total number of direct care staff who left the assisted living community, during this month.

Included Populations: Not applicable

Excluded Populations: Not applicable

Data Elements:
• Number of Direct Care Staff Employed
• Number of Staff Employed

Denominator Statement:

• ALC-05a: Number of positions/employees who were employed on the last day of the month per month, including all direct and non-direct.
• ALC-05b: Number of direct care staff positions/employees who were employed on the last day of the month, per month.

Included Populations: Not applicable

Excluded Populations: Not applicable

Data Elements:

• Number of Direct Care Staff Positions
• Number of Positions

Risk Adjustment: No.

Data Collection Approach:

ALC-05a:

Denominator: Total number from the data element Number of Positions is the denominator.

• This number will be entered into the Direct Data Submission Platform (DDSP) tool.

Numerator: Total number from the data element Number of Staff Employed minus the total Number of Positions is the Numerator.

• The total Number of Staff Employed will be entered into the Direct Data Submission Platform (DDSP) tool, and the tool will calculate the Numerator.

ALC-05b:

Denominator: Total number from the data element Number of Direct Care Staff Positions is the denominator.

Numerator: Total number from the data element Number of Direct Care Staff Employed minus the total Number of Direct Care Staff Positions is the Numerator.

• The total Number of Direct Care Staff Employed will be entered into the Direct Data Submission Platform (DDSP) tool, and the tool will calculate the Numerator.
Example: You are abstracting ALC-05a for the month of June. On June 30th there are 15 employees who were employed on the last day of the month. Your denominator will be 15. The total number of employees who worked anytime this month was 18.

18-15 = 3 (Numerator)
Formula to calculate the rate is: Numerator divided by Denominator, times 100 = rate
3/15 = 0.2 or 20%
Note: The data collection tool will do this calculation

Data Accuracy: None

Measure Analysis Suggestions: None

Sampling: No.

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

Selected References:
- American Health Care Association/National Center for Assisted Living (AHCA/NCAL)

https://www.ahcanca.org/ncal/quality/qualityinitiative/Pages/Staff-Stability.aspx

Original Performance Measure Source/Developer: American Health Care Association/National Center for Assisted Living (AHCA/NCAL)
Measure Algorithm:

**ALC-05a: Staff Stability (Overall)**

**Numerator**: Total number of staff who left the assisted living community during this month.

**Denominator**: Number of positions/employees who were employed on the last day of the month per month, including all direct and non-direct.

```
START

Number of Positions
(Number of employees who were employed on the last day of this month, including direct care staff and non-direct care staff)

Set Denominator = Number of Positions

Number of Staff Employed
(Number of staff employed at any time by the assisted living community)

Set Numerator = Number of Staff Employed minus (\*) Number of Positions

STOP
```

(*) Note: Subtract the number of positions from the number of staff employed to get the numerator for the Staff Stability measure.
ALC-05b: Staff Stability (Direct Care Staff)

**Numerator:** Total number of direct care staff who left the assisted living community, during this month.

**Denominator:** Number of direct care staff positions/employees who were employed on the last day of the month, per month.

```
START

Number of Direct Care Staff Positions
(Number of direct care staff who were employed on the last day of this month)

Set Denominator = Number of Direct Care Staff Positions

Number of Direct Care Staff Employed
(Number of direct care staff employed at any time by the assisted living community)

Set Numerator = Number of Direct Care Staff Employed minus (-) Number of Direct Care Staff Positions

STOP
```
ALC-05a: Staff Stability (Overall) Algorithm Narrative

**Numerator:** Total number of staff who left the assisted living community, during this month.

**Denominator:** Number of positions, per month, including all direct and non-direct.

1. Start processing and proceed to Number of Positions.

2. Check Number of Positions (Number of employees who were employed on the last day of this month, including direct care staff and non-direct care staff).
   
   a. Set Denominator equal to Number of Positions. Stop processing.
   
   b. Continue processing and proceed to Number of Staff Employed.

3. Check Number of Staff Employed (Number of staff employed at any time during the month by the assisted living community).
   
   a. Collect Number of Staff Employed. Continue processing and proceed to Set Numerator.

4. Set Numerator.
   
   a. Set Numerator equal to Number of Staff Employed minus (-) Number of Positions. Stop processing.
   
   b. If Off-Label Antipsychotic Drug Prescribed equals “Y”. Continue processing and proceed to Set Numerator.

5. Set Numerator.
   
   a. Set Numerator equal to the count of residents with Off-Label Antipsychotic Drug Prescribed equal to “Y”. Stop processing.

ALC-05b: Staff Stability (Direct Care Staff) Algorithm Narrative

**Numerator:** Total number of direct care staff who left the assisted living community, during this month.

**Denominator:** Number of direct care staff positions, per month.

1. Start processing and proceed to Number of Direct Care Staff Positions.

2. Check Number of Direct Care Positions (Number of direct care staff who were employed on the last day of this month).
   
   a. Set Denominator equal to Number of Direct Care Staff Positions. Stop processing.
   
   b. Continue processing and proceed to Number of Direct Care Staff Employed.
3. Check Number of Direct Care Staff Employed (Number of direct care staff employed at any time during the month by the assisted living community).

   a. Collect Number of Direct Care Staff Employed. Continue processing and proceed to Set Numerator.

4. Set Numerator.

   a. Set Numerator equal to Number of Direct Care Staff Employed minus (-) Number of Direct care Staff Positions. Stop processing.
Data Dictionary Introduction

Introduction

This section of the manual describes the data elements that are required for collection for the The Joint Commission's Assisted Living Center (ALC) measures. It includes information necessary for defining and formatting the data elements, as well as the allowable values for each data element.

It is of primary importance that all organizations using the measures gather and utilize the data elements as defined in this section. This will ensure that the data are standardized and comparable across organizations.

Data Element Dictionary Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>DataElement Name:</td>
<td>A short phrase identifying the data element. For each of identification the data element name is italicized.</td>
</tr>
<tr>
<td>Collected For:</td>
<td>Identifies the measure(s) that utilize this data element or specifies that the data element is used for data processing or verification.</td>
</tr>
<tr>
<td>Definition:</td>
<td>A detailed explanation of the data element. Data collection software may include this information.</td>
</tr>
<tr>
<td>Suggested Data Collection Question:</td>
<td>A suggested wording for a data element question in a data abstraction tool.</td>
</tr>
</tbody>
</table>
| Format:                     | **Length** = number of characters or digits allowed for the data element
|                             | **Type** = type of information the data element contains (e.g., numeric, alphanumeric, date, character, or time)
|                             | **Occurs** = the number of times the data element occurs in a single episode of care record |
| Allowable Values:           | A list of acceptable responses for this data element |
| Notes for Abstraction:      | Provided to assist abstractor in the selection of appropriate value for a data element |
| Suggested Data Sources:     | Source document from which data can be identified such as the resident record. |
| Guidelines for Abstraction: | Designed to assist abstractors in determining how a data element should be answered |
## Alphabetical List of All Data Elements

<table>
<thead>
<tr>
<th>Data Element Name</th>
<th>Collection Notes</th>
<th>Associated Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Care Plan/Surrogate Decision Maker</td>
<td></td>
<td>ALC-04</td>
</tr>
<tr>
<td>Assisted Living Community Resident</td>
<td></td>
<td>ALC-01, ALC-02</td>
</tr>
<tr>
<td>Fall With Transfer to Hospital</td>
<td></td>
<td>ALC-02</td>
</tr>
<tr>
<td>New Resident</td>
<td></td>
<td>ALC-03, ALC-04</td>
</tr>
<tr>
<td>Number of Direct Care Staff Employed</td>
<td></td>
<td>ALC-05</td>
</tr>
<tr>
<td>Number of Direct Care Staff Positions</td>
<td></td>
<td>ALC-05</td>
</tr>
<tr>
<td>Number of Positions</td>
<td></td>
<td>ALC-05</td>
</tr>
<tr>
<td>Number of Staff Employed</td>
<td></td>
<td>ALC-05</td>
</tr>
<tr>
<td>Off-Label Antipsychotic Drug Prescribed</td>
<td></td>
<td>ALC-01</td>
</tr>
<tr>
<td>Resident Preferences and Goals of Care</td>
<td></td>
<td>ALC-03</td>
</tr>
</tbody>
</table>
Name: Advanced Care Plan/Surrogate Decision Maker

Collected For: ALC-04

Definition: Documentation of an advanced care plan or a surrogate decision maker in the resident's record. An advance care plan includes instructions given by individuals specifying what actions should be taken for their health if 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: Is there documentation of an advanced care plan/surrogate decision maker in the resident's record?

Format:

- Length: 1
- Type: Alphanumeric
- Occurs: 1

Allowable Values:

Y (Yes) Documentation of an advanced care plan/surrogate decision maker was present in the resident's record or the resident refuses.

N (No) There was no documentation of an advanced care plan/surrogate decision maker in the resident's record, or unable to determine from medical record documentation.

Notes for Abstraction:

- If the resident is given written information on resources to formulate an advanced directive, select 'Yes'.
- If there is documentation of a discussion initiated by the assisted living community staff, but the resident declined the discussion, select 'Yes'.
- If there is documentation that the resident has an advanced care plan, but a copy is not present in their record, select 'No'.
- See inclusion list for acceptable documentation of an advanced care plan.

Suggested Data Sources:

Additional Notes:

Guidelines for Abstraction:

<table>
<thead>
<tr>
<th>Inclusion</th>
<th>Exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Advance care plan</td>
<td>- Do Not Resuscitate (DNR) Orders</td>
</tr>
<tr>
<td>- Advance decision</td>
<td></td>
</tr>
<tr>
<td>- Advance directive</td>
<td></td>
</tr>
<tr>
<td>- Advance healthcare directive</td>
<td></td>
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<tr>
<td>- Health care proxy</td>
<td></td>
</tr>
<tr>
<td>- Living will</td>
<td></td>
</tr>
<tr>
<td>- MOLST (Medical Orders for Life-Sustaining Treatment)</td>
<td></td>
</tr>
<tr>
<td>- Personal directive</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td>----------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td></td>
<td>POLST (Physician Orders for Life-Sustaining Treatment)</td>
</tr>
<tr>
<td></td>
<td>Power of attorney for healthcare</td>
</tr>
</tbody>
</table>
Name: Assisted Living Community Resident
Collected For: ALC-01, ALC-02
Definition: Resident of an assisted living community.
Question: Number of residents who were a resident of the community on the last day of the month?
Format: Length: 3
Type: Numeric
Occurs: 1
Allowable Values: Number 0-199 or UTD
Notes for Abstraction:
Suggested Data Sources:
Additional Notes:
Guidelines for Abstraction:

<table>
<thead>
<tr>
<th></th>
<th>Inclusion</th>
<th>Exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
Name: Fall With Transfer to Hospital

Collected For: ALC-02

Definition: Residents who fall and are transferred to the hospital, per month.

Question: Did the resident experience a fall and were they transferred to the hospital?

Format: Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) The resident experienced a fall and was transferred to the hospital.

N (No) The resident experienced a fall but was not transferred to the hospital or the resident did not experience a fall and was not transferred to the hospital.

Notes for Abstraction: • Abstract ‘Yes’ for any resident that falls and is transferred to the hospital, even if they are not admitted to the hospital.

Suggested Data Sources:

Additional Notes:

Guidelines for Abstraction:

<table>
<thead>
<tr>
<th>Inclusion</th>
<th>Exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
**Name:** New Resident  
**Collected For:** ALC-03, ALC-04  
**Definition:** Number of new residents who moved in during the month being reviewed.  
**Question:** What is the number of new residents at the assisted living community at the end of the month?  
**Format:**  
Length: 3  
Type: Numeric  
Occurs: 1  

**Allowable Values:**  
Number 0-199 or UTD  

**Notes for Abstraction:**  
- Generate a list of new residents who moved into the assisted living community during the month that is being reviewed.  
- Use this list to complete the denominator number of residents who are new to the assisted living community each month.  
- This list will also be the records reviewed for the data element Resident Preferences and Goals of Care that will be the numerator.  

**Suggested Data Sources:**  
- Billing records  
- Move-in logs  

**Additional Notes:**  

**Guidelines for Abstraction:**

<table>
<thead>
<tr>
<th></th>
<th>Inclusion</th>
<th>Exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
Name: Number of Direct Care Staff Employed

Collected For: ALC-05

Definition: Number of direct care staff employed at any time by the assisted living community.

Question: What was the total number of direct care staff employed at any time by the assisted living community, during this month?

Format: Length: 3
Type: Alphanumeric
Occurs: 1

Allowable Values: 0-199

Notes for Abstraction: • Direct care staff positions include registered nurse (RN), licensed practical nurse (LPN), and aides that are both certified and not certified (e.g. CNA).
• Unless most staff in the category are contract staff, only report traditional employment; otherwise include both contract and traditional employment.
• Count all direct care staff regardless of full-time or part-time status (submit only whole numbers).
• Count all direct care staff who were employed at any time during this month.

Suggested Data Sources:

Additional Notes:

Guidelines for Abstraction:

<table>
<thead>
<tr>
<th>Inclusion</th>
<th>Exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
Name:  Number of Direct Care Staff Positions

Collected For:  ALC-05

Definition:  Number of direct care staff positions/employees who were employed on the last day of the month, per month.

Question:  What was the total number of direct care staff positions/employees who were employed on the last day of this month?

Format:  
- Length:  3
- Type:  Numeric
- Occurs:  1

Allowable Values:  0-199

Notes for Abstraction:  
- Direct care staff positions include registered nurse (RN), licensed practical nurse (LPN), and aides that are both certified and not certified (e.g. CNA).
- Count only direct care staff who were employed on the last day of this month.
- Unless most staff in the category are contract staff, only report traditional employment; otherwise include both contract and traditional employment.
- Count all direct care staff regardless of full-time or part-time status (submit only whole numbers).

Suggested Data Sources:

Additional Notes:

Guidelines for Abstraction:

<table>
<thead>
<tr>
<th>Inclusion</th>
<th>Exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
Name: Number of Positions  
Collected For: ALC-05  
Definition: Number of positions/employees who were employed on the last day of the month per month, including all direct and non-direct.  
Question: What was the total number of positions/employees who were employed on the last day of this month?  
Format: Length: 3  
Type: Numeric  
Occurs: 1  
Allowable Values: 0-199  
Notes for Abstraction:  
• Include both direct care staff positions and non-direct care staff positions.  
• Count only those employees who were employed on the last day of this month.  
• Count all positions regardless of full-time or part-time status (submit only whole numbers).  
• Unless most staff in the category are contract staff, only report traditional employment; otherwise include both contract and traditional employment.  

Suggested Data  
Sources:  
Additional Notes:  

Guidelines for Abstraction:  

<table>
<thead>
<tr>
<th>Inclusion</th>
<th>Exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
Name:  
Number of Staff Employed

Collected For:  
ALC-05

Definition:  
Number of staff employed at any time by the assisted living community.

Question:  
What was the total number of staff employed at any time by the assisted living community, during this month?

Format:  
Length:  3
Type:  Numeric
Occurs:  1

Allowable Values:
0-199

Notes for Abstraction:
• Unless most staff in the category are contract staff, only report traditional employment; otherwise include both contract and traditional employment.
• Count all positions regardless of full-time or part-time status (submit only whole numbers).
• Count all employees who were employed at any time during this month.

Suggested Data Sources:

Additional Notes:

Guidelines for Abstraction:

<table>
<thead>
<tr>
<th>Inclusion</th>
<th>Exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
Name: Off-Label Antipsychotic Drug Prescribed

Collected For: ALC-01

Definition: Off-label use of antipsychotic drugs.

Question: Has the resident been prescribed an antipsychotic for off-label use?

Format: Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes) The resident been prescribed an antipsychotic for off-label use.

N (No) The resident has not been prescribed an antipsychotic listed for off-label use.

Notes for Abstraction:

- FDA Approved Uses for antipsychotics are listed in the table below. Select yes when the resident is prescribed an antipsychotic for purposes other than those described in the table below.
  - Select yes if the antipsychotic is prescribed as a PRN.
  - Example: resident given haldol for aggressive behavior, select ‘Yes’.

### Antipsychotics Table

<table>
<thead>
<tr>
<th>Conventional Antipsychotics (Generic Name)</th>
<th>FDA Approved Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haldol (Haloperidol)</td>
<td>Schizophrenia, Tourette's Disorder</td>
</tr>
<tr>
<td>Loxitane (Loxapine)</td>
<td>Schizophrenia</td>
</tr>
<tr>
<td>Navane (Thiothixene)</td>
<td>Schizophrenia</td>
</tr>
<tr>
<td>Oraj (Pimozide)</td>
<td>Tourette’s Disorder</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Atypical Antipsychotics (Generic Name)</th>
<th>FDA Approved Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abilify (Aripiprazole)</td>
<td>Schizophrenia, Bipolar Disorder, Major Depressive Disorder, Irritability associated with autistic disorder</td>
</tr>
<tr>
<td>Atypical Antipsychotics (Generic Name)</td>
<td>FDA Approved Uses</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Saphris (Asenapine)</td>
<td>Schizophrenia, Bipolar Disorder</td>
</tr>
<tr>
<td>Clozaril or Fazaclor (Clozapine)</td>
<td>Schizophrenia</td>
</tr>
<tr>
<td>Fanapt (Iloperidone)</td>
<td>Schizophrenia</td>
</tr>
<tr>
<td>Zyprexa (Olanzapine)</td>
<td>Schizophrenia, Bipolar Disorder, Treatment of resistant depression</td>
</tr>
<tr>
<td>Invega (Paliperidone)</td>
<td>Schizophrenia, Schizoaffective Disorder</td>
</tr>
<tr>
<td>Seroquel (Quetiapine)</td>
<td>Schizophrenia, Bipolar Disorder, Major Depressive Disorder</td>
</tr>
<tr>
<td>Risperdal (Risperidone)</td>
<td>Schizophrenia, Bipolar Disorder, Irritability associated with autistic disorder</td>
</tr>
<tr>
<td>Geodon (Ziprasidone)</td>
<td>Schizophrenia, Bipolar Disorder</td>
</tr>
</tbody>
</table>

**Suggested Data Sources:**

**Additional Notes:**

**Guidelines for Abstraction:**

<table>
<thead>
<tr>
<th>Inclusion</th>
<th>Exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
Name: Resident Preferences and Goals of Care

Collected For: ALC-03

Definition: There is documentation in the resident’s record that the assisted living care team discussed or attempted to discuss the resident’s preferences and goals for care. Documentation should include a discussion on preferences and goals including, but not limited to:

- Hospitalization or transfer preference
- Medication management
- Wound care
- Activity planning
- Dietary services

Question: Is there documentation in the resident’s record that the assisted living care team discussed or attempted to discuss the resident’s preferences and goals for care?

Format:

- Length: 1
- Type: Alphanumeric
- Occurs: 1
Allowable Values:

Y (Yes) There is documentation in the resident’s record that the assisted living care team discussed or attempted to discuss the resident’s preferences and goals for care.

N (No) There is no documentation in the resident’s record that the assisted living care team discussed or attempted to discuss the resident’s preferences and goals for care or unable to determine.

Notes for Abstraction:

- A discussion about preferences and goals of care can be initiated by any member of the assisted living care team.
- Documentation must include the specific preferences discussed.
  - Example: “discussed hospitalization and if needed Mr. Smith does not wish to be transferred to the hospital.
- Goals of care are related to quality of life and may include rehabilitation or comfort care.
- Facilities should have a conversation with the resident about their preferences and goals of care. The measure is not capturing the number of preferences/goals discussed.
- For the purpose of this resident-centered measure, the documentation should indicate that the resident, family or surrogate was involved in the discussion of preferences and goals of care and care planning (i.e. that it was not completed solely by the clinician without input by the resident).
- Preferences and goals of care should be derived based upon the residents expressed preferences, values, needs, concerns and/or desires, through clinician-led discussion, professional guidance and support for resident and family decision making.
- Family is determined by the resident. Family may be defined as a person or persons who play a significant role in an individual’s life.
- 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 resident or family declines to discuss the goals of care, and the documentation reflects this, select ‘Yes’.

Suggested Data Sources:

- Resident Records

Additional Notes:

Guidelines for Abstraction:

<table>
<thead>
<tr>
<th>Inclusion</th>
<th>Exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
Appendix E

Overview of Measure Information Form and Flowchart Formats for collected measures

Measure Information Form Introduction

Measure Set

The specific national hospital quality measure set to which an individual measure belongs (e.g., acute myocardial infarction, stroke).

Set Measure ID #

A unique alpha-numeric identifier assigned to a measure. Information associated with a measure is identified by this unique alpha-numeric number.

Performance Measure Name

A brief title that uniquely identifies the measure.

Description

A brief explanation of the measure’s focus, such as the activity or the area on which the measure centers attention (e.g., ischemic stroke patients prescribed antithrombotic therapy at hospital discharge)

Rationale

The reason for performing a specified process to improve the quality of care outcomes. This may include specific literature references, evidence based information, expert consensus, etc.

Type of Measure
Indicates whether the measure is used to examine a process or an outcome over time.

- **Process**: A measure used to assess a goal directed, interrelated series of actions, events, mechanisms, or steps, such as measure of performance that describes what is done to, for, or by patients, as in performance of a procedure.
- **Outcome**: A measure that indicates the result of performance (or non-performance) of a function(s) or process(es).

**Improvement Noted As**

Describes how improvement would be indicated by the measure.

- An increase in the rate/score/number of occurrences (for example, immunizations)
- A decrease in the rate/score/number of occurrences (for example, potentially preventable venous thromboembolism)
- Either an increase or a decrease in the rate/score/number of occurrences, depending upon the context of the measure (for example, utilization)

**Numerator Statement**

Represents the portion of the denominator population that satisfies the conditions of the performance measure to be an indicator event.

Note: If the measure is reported as a rate (proportion or ratio), the Numerator and Denominator Statement are completed. If a performance measure does not have both a numerator and a denominator, then a Continuous Variable Statement is completed.

**Included Population in Numerator**: Specific information describing the population(s) comprising the numerator, not contained in the numerator statement, or not applicable

**Excluded Population in Numerator**: Specific information describing the population(s) that should not be included in the numerator, or none

**Data Elements**: Those data elements necessary or required to determine (or establish) the numerator.

**Denominator Statement**

Represents the population evaluated by the performance measure.

Note: If measure is reported as a rate (proportion or ratio), the Numerator and Denominator Statement are completed. If a performance measure does not have both a numerator and a denominator, then a Continuous Variable Statement is completed.
**Included Population in Denominator** Specific information describing the population(s) comprising the denominator, not contained in the denominator statement or not applicable

**Excluded Population in Denominator** Specific information describing the population(s) that should not be included in the denominator, or none

**Data Elements** Those data elements required to determine (or establish) the denominator

**Continuous Variable Statement**

Describes an aggregate data measure in which the value of each measurement can fall anywhere along a continuous scale.

Note: If measure is reported as a central tendency, Continuous Variable Statement is completed. This item is only completed when the performance measure does not have numerator and denominator statements.

**Included Population in Continuous Variable** Specific information describing the population(s) comprising the performance measure, not contained in the continuous variable statement or not applicable

**Excluded Population in Continuous Variable** Specific information describing the population(s) that should not be included in the performance measure or none

**Date Elements** Those data elements required to determine (or establish) the measure for a continuous variable

**Risk Adjustment**

Indicates whether a measure is subject to the statistical process for reducing, removing, or clarifying the influences of confounding factors to allow more useful comparisons.

**Data Collection Approach**

Recommended timing for when data should be collected for a measure. Data collection approaches include retrospective, concurrent or prospective data collection. **Retrospective** data collection involves collecting data for events that have already occurred. **Concurrent** data collection is the process of gathering data on how a process works or is working while a patient is in active treatment. **Prospective** data collection is data collection in anticipation of an event or occurrence.

**Data Accuracy**

Recommendations to reduce identifiable data errors, to the extent possible.
Measure Analysis Suggestions

Recommendations to assist in the process of interpreting data and drawing valid conclusions.

Sampling

Indicates whether or not a measure can be sampled. Sampling is a process of selecting a representative part of a population in order to estimate the organization's performance, without collecting data for the entire population.

Data Reported As

Indicates how data will be reported for a measure.

- Aggregate rate generated from count data reported as a proportion (for example, rate-based measures which report summary data generated from the number of Cesarean sections as a proportion of deliveries).
- Aggregate rate generated from count data reported as a ratio (e.g., bloodstream infection per 1,000 line days).
- Aggregate measures of central tendency (e.g., continuous variables which report means and medians such as length of stay).

Calculation Model

A description of the steps or statistical calculations (computations) used to derive the numerator and denominator or continuous variable values required for a measure. Measure Information Forms in this manual will include either an algorithm or calculation model.

Selected References

Specific literature references that are used to support the importance of the performance measure.

Algorithm Introduction

Each measure's initial patient population and the measure is described by a unique algorithm. An algorithm is a predefined set of rules that help to break down complex processes into simple, repetitive steps.
Measure algorithms serve two purposes. First, they evaluate and identify which episode of care (EOC) records contain missing and/or invalid data that will prohibit the ability to properly evaluate the measure. Second, they determine if:

- For rate-based measures, the patient’s EOC record belongs in the measure population of interest described by the denominator, and if the patient experienced the event described in the numerator.
- For continuous variable measures, the patient’s EOC record belongs in the patient population described in the measure’s statement and, if so, to define and calculate the measurement value.

This section contains some standard flow-charting conventions used to develop each algorithm:

- **Flow lines** are used to guide the reader to different parts of the algorithm, with arrows denoting the direction of movement. Generally, movement is from the top to the bottom of the chart.
- **Symbols** used in each algorithm flow charts are described later in this section under Flow Chart Symbols.
- **Temporary variables** within the algorithm are noted in the variable key at the top of each page.

### Flowchart Symbols

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Start/Stop Symbol" /></td>
<td>Start/Stop denotes the beginning or end of an algorithm</td>
</tr>
<tr>
<td><img src="image2" alt="Diamond Symbol" /></td>
<td>Diamonds represent &quot;If...Then&quot; 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.</td>
</tr>
<tr>
<td><img src="image3" alt="Rectangle Symbol" /></td>
<td>Rectangles or process boxes show when computation or manipulation of the data are required, such as a calculation or summarization.</td>
</tr>
<tr>
<td><img src="image4" alt="Circle Symbol" /></td>
<td>Circle or &quot;On-page: connectors, labeled with a letter, show a link to sections of the algorithm which are continued on the same page.</td>
</tr>
<tr>
<td><img src="image5" alt="Five-sided Symbol" /></td>
<td>Five-sided or &quot;Off-page&quot; 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.</td>
</tr>
<tr>
<td><img src="image6" alt="Outcome Box Symbol" /></td>
<td>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.</td>
</tr>
<tr>
<td><img src="image7" alt="Comment Symbol" /></td>
<td>Symbol to represent comments that should be taken into account when programming flowchart.</td>
</tr>
<tr>
<td>Symbol</td>
<td>Explanation</td>
</tr>
<tr>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td><img src="image1" alt="Symbol" /></td>
<td>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.</td>
</tr>
<tr>
<td><img src="image2" alt="Symbol" /></td>
<td>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.</td>
</tr>
</tbody>
</table>