MDS 3.0 Quality Measures

USER'S MANUAL

(v16.0)

Effective October 1, 2023

QUALITY MEASURES (QM) USER'S MANUAL CONTENTS

NOTABLE CHANGES TO THE MDS QUALITY MEASURES (QM) USER'S MANUAL V16

Transition from MDS 3.0 V1.17.2 to MDS 3.0 V1.18.11

The MDS 3.0 will transition from version 1.17.2 to version 1.18.11 effective October 1, 2023, and will significantly impact some quality measure specifications. One of the biggest changes involves the transition from Section G: Functional Status to Section GG: Functional Abilities and Goals. As a result, two measures, Percent of Residents Whose Need for Help with Activities of Daily Living Has Increased (Long Stay) (CMS ID: N028.03), and Percent of Residents Whose Ability to Walk Independently Worsened (Long Stay) (CMS ID: N035.04) have been re-specified to account for this transition.

Six other measures used items that underwent a label change in version 1.18.11. These measures were re-specified by replacing the old MDS label with the new label:

- Percent of Residents Who Newly Received an Antipsychotic Medication (Short Stay) (CMS ID: N011.03);
- Percent of Residents Who Lose Too Much Weight (Long Stay) (CMS ID: N029.03);
- Percent of Residents Who Have Depressive Symptoms (Long Stay) (CMS ID: N030.03);
- Percent of Residents Who Received an Antipsychotic Medication (Long Stay) (CMS ID: N031.04);
- Prevalence of Antianxiety/Hypnotic Use (Long Stay) (CMS ID: N033.03); and
- Percent of Residents Who Used Antianxiety or Hypnotic Medication (Long Stay) (CMS ID: N036.03).

However, the measure specifications have either remained intact or have undergone minimal changes.

Removal and Addition of Measures

The following measures have been removed from the Nursing Home Quality Initiative program and have been replaced by new measures:

- The NHQI version of the quality measure Percent of Residents Who Made Improvements in Function (Short Stay) (CMS ID: N037.03), will be replaced with the Discharge Function Score measure (CMS ID: S042.01).
- The Percent of High-Risk Residents With Pressure Ulcers (Long Stay) (CMS ID: N015.03) measure will be replaced with the Percent of Residents With Pressure Ulcers (Long Stay) (CMS ID: N045.01) measure.
- The Percent of Low-Risk Residents Who Lose Control of Their Bowel or Bladder (Long Stay) (CMS ID: N025.02) measure will be replaced with the Percent of Residents With New or Worsened Bowel or Bladder Incontinence (Long Stay) (CMS ID: N046.01) measure.

Chapter 1
QM Sample and Record Selection Methodology

Introduction

The purpose of this chapter is to describe the methodology that is used to select the short and long stay samples as well as the key records that are used to compute the QMs for each of those samples. The first section below will present definitions that are used to describe the selection methodology. The second section describes the selection of the two samples. The third and fourth sections describe the selection of the key records within each of the two samples.

The logic presented below depends upon the concepts of stays and episodes. Detailed specifications for the identification of stays and episodes are presented in Chapter 4 of this document.

Section 1: Definitions

The following definitions are valid for residents with a well-defined assessment data stream. For details on how to identify stays and episodes of care from an assessment stream that is not well-defined, see Chapter 4.

A well-defined data stream obeys the following four rules:

1. The earliest assessment must be an admission assessment.
2. An admission assessment (A0310F = 01) may only be immediately followed by a normal or discharge assessment.
3. A normal assessment (A0310F = 99) may only be immediately followed by a normal or discharge assessment.
4. A discharge assessment (A0310F = 10, 11, or 12) may only be immediately followed by an admission assessment.

Target period. The span of time that defines the QM reporting period (e.g., a calendar quarter).

Influenza Season. Influenza season is July 1 of the current year to June 30 of the following year (e.g., July 1, 2019 through June 30, 2020 for the 2019 – 2020 influenza season).[1]

Stay. The period of time between a resident's entry into a facility and either (a) a discharge, or (b) the end of the target period, whichever comes first. A stay, thus defined, may include interrupted stays lasting 3 calendar days or less. The start of a stay is either:

- An admission entry (A0310F = [01] ***and*** A1700 = [1]), ***or***
- A reentry (A0310F = [01] ***and*** A1700 = [2]).

The end of a stay is the earliest of the following:

[1] This definition is applicable to each of the long- and short-stay influenza vaccination measures. The short-stay measures are identified as the following: CMIT Measure ID: 1189 (CMS IDs: N003.03, N004.03, N005.03, and N006.03). The long-stay measures are identified as the following: CMIT Measure ID: 528 (CMS IDs: N016.03, N017.03, N018.03, and N019.03).

- Any discharge assessment (A0310F = [10, 11]), ***or***
- A death in facility tracking record (A0310F = [12]), ***or***
- The end of the target period.

Interrupted Stay. During a stay the resident had an interruption in their stay and resumed the same stay within three consecutive calendar days. Interrupted stays apply only to Medicare-covered stays and pertain to both short- and long-stay resident episodes.

Episode. A period of time spanning one or more stays. An episode begins with an admission (defined below) and ends with either (a) a discharge, or (b) the end of the target period, whichever comes first. An episode starts with:

- An admission entry (A0310F = [01] ***and*** A1700 = [1]).

The end of an episode is the earliest of the following:

- A discharge assessment with return not anticipated (A0310F = [10]), ***or***
- A discharge assessment with return anticipated (A0310F = [11]) but the resident did not return within 30 days of discharge, ***or***
- A death in facility tracking record (A0310F = [12]), ***or***
- The end of the target period.

Admission. An admission entry record (A0310F = [01] ***and*** A1700 = [1]) is required when ***any one*** of the following occurs:

- Resident has never been admitted to this facility before; ***or***
- Resident has been in this facility previously and was discharged return not anticipated; ***or***
- Resident has been in this facility previously and was discharged return anticipated and did not return within 30 days of discharge.

Reentry. A reentry record (A0310F = [01] and A1700 = [2]) is required when ***all of the following*** occurred prior to this entry; the resident was:

- Discharged return anticipated, ***and***
- Returned to facility within 30 days of discharge.

Cumulative days in facility (CDIF). The total number of days within an episode during which the resident was in the facility. It is the sum of the number of days within each stay included in an episode. If an episode consists of more than one stay separated by periods of time outside the facility (e.g., hospitalizations), and/or one or more stays with interruptions lasting 3 calendar days or less, only those days within the facility would count towards CDIF. Any days outside of the facility (e.g., hospital, home, etc.) would not count towards the CDIF total. The following rules are used when computing CDIF:

- When counting the number of days until the end of the episode, counting stops with (a) the last record in the target period if that record is a discharge assessment (A0310F = [10, 11]), (b) the last record in the target period if that record is a death in facility (A0310F = [12]), ***or*** (c) the end of the target period is reached, whichever is earlier.
- When counting the duration of each stay within an episode, include the day of entry (A1600) but not the day of discharge (A2000) unless the entry and discharge occurred on the same day in which case the number of days in the stay is equal to 1.
    - For example: if a resident is admitted on Monday and discharged the following day (Tuesday), the duration of that episode would be 1 day.
- While death in facility records (A0310F = [12]) end CDIF counting, these records are not used as target records because they contain only tracking information and do not include clinical information necessary for QM calculation.
- **Special rules for influenza vaccination measures.** Influenza vaccination measures are calculated only once per 12-month influenza season, which begins July 1 of a given year and ends on June 30 of the subsequent year. For these measures, the target period begins on October 1 and ends on March 31. This means that the end-of-episode date will be March 31 for an episode that is ongoing at the end of the influenza season and that March 31 should be used as the end date when computing CDIF and for classifying stays as long or short for the influenza vaccination measures.
    - Note, the target period (i.e., October 1 – March 31) is different than the selection period, which begins October 1 and ends June 30 of the following year. The selection period for the influenza vaccination measures is discussed more in Section 3 and Section 4 below.

Short stay. An episode with CDIF less than or equal to 100 days as of the end of the target period. Short stays may include one or more interruptions, indicated by Interrupted Stay (A0310G1 = [1]).

Long stay. An episode with CDIF greater than or equal to 101 days as of the end of the target period. Long stays may include one or more interruptions, indicated by Interrupted Stay (A0310G1 = [1]).

Target date. The event date for an MDS record, defined as follows:

- For an entry record (A0310F = [01]), the target date is equal to the entry date (A1600).
- For a discharge record (A0310F = [10, 11]) ***or*** death-in-facility record (A0310F = [12]), the target date is equal to the discharge date (A2000).
- For all other records, the target date is equal to the Assessment Reference Date (ARD, A2300).

Section 2: Selecting the QM Samples

Two resident samples are selected for computing the QMs: a short-stay sample and a long-stay sample. These samples are selected using the following steps:

1. Select all residents whose latest episode either ends during the target period or is ongoing at the end of the target period. This latest episode is selected for QM calculation.
2. For each episode that is selected, compute the cumulative days in the facility (CDIF).
3. If the CDIF is less than or equal to 100 days, the resident is included in the short-stay sample.
4. If the CDIF is greater than or equal to 101 days, the resident is included in the long-stay sample.

Note that all residents who are selected in Step 1 above will be placed in either the short- or long-stay sample and that the two samples are mutually exclusive. If a resident has multiple episodes within the target period, only the latest episode is used.

Within each sample, certain key records are identified which are used for calculating individual measures. These records are defined in the following sections.

Section 3: Short Stay Record Definitions

ASSESSMENT SELECTED	PROPERTY	SELECTION SPECIFICATIONS
Target assessment	Selection period	Most recent 6 months (the short stay target period).
	Qualifying RFAs[2]	A0310A = [01, 02, 03, 04, 05, 06] ***or*** A0310B = [01] ***or*** A0310F = [10, 11]
	Selection logic	Latest assessment that meets the following criteria: (a) it is contained within the resident's selected episode, (b) it has a qualifying RFA, and (c) its target date is no more than 120 days[3] before the end of the episode.
	Rationale	Records with a qualifying RFA contain all of the items needed to define the QMs. The target assessment need not have a target date within the target period, but it must occur within 120 days before the end of the resident's selected episode (either the target date of a discharge assessment or death in facility record that is the last record in the target period or the end of the target period if the episode is ongoing). 120 days allows 93 days between quarterly assessments plus an additional 27 days to allow for late assessments. The target assessment represents the resident's status at the end of the episode.
Initial assessment	Selection period	First assessment following the admission entry record at the beginning of the resident's selected episode.
	Qualifying RFAs	A0310A = [01] ***or*** A0310B = [01] ***or*** A0310F = [10, 11]
	Selection logic	Earliest assessment that meets the following criteria: (a) it is contained within the resident's selected episode, (b) it has a qualifying RFA, (c) it has the earliest target date that is greater than or equal to the admission entry date starting the episode, and (d) its target date is no more than 130 days prior to the target date of the target record. The initial assessment cannot be the same as the target assessment. If the same assessment qualifies as both the initial and target assessments, it is used as the target assessment and the initial assessment is considered to be missing.
	Rationale	Records with a qualifying RFA contain all of the items needed to define the QMs. The initial assessment need not have a target date within the target period. The initial assessment represents the resident's status as soon as possible after the admission that marks the beginning of the episode. If the initial assessment is more than 130 days prior to the target assessment, it is not used and the initial record is considered to be missing. This prevents the use of an initial assessment for a short stay in which a large portion of the resident's episode was spent outside the facility. 130 days allows for as many as 30 days of a 100-day stay to occur outside of the facility.

(continued)

[2] RFA: Reason For Assessment.

[3] A short stay episode can span more than 100 calendar days because days outside of the facility are not counted in defining a 100-day or less short stay episode.

Short Stay Record Definitions (continued)

ASSESSMENT SELECTED	PROPERTY	SELECTION SPECIFICATIONS
Look-back Scan	Selection period	Scan all qualifying RFAs within the current episode.
	Qualifying RFAs	A0310A = [01, 02, 03, 04, 05, 06] ***or*** A0310B = [01] ***or*** A0310F = [10, 11]
	Selection logic	Include the target assessment and qualifying earlier assessments in the scan. Include an earlier assessment in the scan if it meets all of the following conditions: (a) it is contained within the resident's episode, (b) it has a qualifying RFA, and (c) its target date is on or before the target date for the target assessment. The target assessment and qualifying earlier assessments are scanned to determine whether certain events or conditions occurred during the look-back period. These events and conditions are specified in the definitions of measures that utilize the look-back scan.
	Rationale	Some measures utilize MDS items that record events or conditions that occurred since the prior assessment was performed. The purpose of the look-back scan is to determine whether such events or conditions occurred during the look-back period. All qualifying RFAs with target dates within the episode are examined to determine whether the event or condition of interest occurred at any time during the episode.
Influenza vaccination assessment	Selection period[4]	All assessments with target dates on or after October 1 of the most recently completed influenza season (i.e., the target date must be on or between October 1 of the current year and June 30 of the following year).
	Qualifying RFAs	A0310A = [01, 02, 03, 04, 05, 06] ***or*** A0310B = [01] ***or*** A0310F = [10, 11]
	Selection logic	Select the record with the latest target date that meets all of the following conditions: a) It has a qualifying RFA, ***and*** b) Target date is on or after October 1 of the most recently completed influenza season (i.e., the target date must fall on or between October 1 and June 30), ***and*** c) A1600 (entry date) is on or before March 31 of the most recently completed influenza season.
	Rationale	The selection logic defined above is intended to identify the latest assessment that reports the influenza vaccine status for a resident who was in the facility for at least one day from October 1 through March 31.

[4] The selection period uses a June 30th end date to ensure residents who are vaccinated between October 1 and March 31, but do not have an assessment completed until after March 31, are captured in the measure sample.

Section 4: Long Stay Record Definitions

ASSESSMENT SELECTED	PROPERTY	SELECTION SPECIFICATIONS
Target assessment	Selection period	Most recent 3 months (the long stay target period).
	Qualifying RFAs	A0310A = [01, 02, 03, 04, 05, 06] ***or*** A0310B = [01] ***or*** A0310F = [10, 11]
	Selection logic	Latest assessment that meets the following criteria: (a) it is contained within the resident's selected episode, (b) it has a qualifying RFA, and (c) its target date is no more than 120 before the end of the episode.
	Rationale	Records with a qualifying RFA contain all of the items needed to define the QMs. The target assessment need not have a target date within the target period, but it must occur within 120 days of the end of the resident's episode (either the last discharge in the target period or the end of the target period if the episode is ongoing). 120 days allows 93 days between quarterly assessments plus an additional 27 days to allow for late assessments. The target assessment represents the resident's status at the end of the episode.
Prior assessment	Selection period	Latest assessment that is 46 to 165 days before the target assessment.
	Qualifying RFAs	A0310A = [01, 02, 03, 04, 05, 06] ***or*** A0310B = [01] ***or*** A0310F = [10, 11]
	Selection logic	Latest assessment that meets the following criteria: (a) it is contained within the resident's episode, (b) it has a qualifying RFA, and (c) its target date is contained in the window that is 46 days to 165 days preceding the target date of the target assessment. If no qualifying assessment exists, the prior assessment is considered missing.
	Rationale	Records with a qualifying RFA contain all of the items needed to define the QMs. The prior assessment need not have a target date within the target period, but it must occur within the defined window. The window covers 120 days, which allows 93 days between quarterly assessments plus an additional 27 days to allow for late assessments. Requiring a 45-day gap between the prior assessment and the target assessment insures that the gap between the prior and target assessment will not be small (gaps of 45 days or less are excluded).

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Long Stay Record Definitions (continued)

ASSESSMENT SELECTED	PROPERTY	SELECTION SPECIFICATIONS
Look-back Scan	Selection period	Scan all qualifying RFAs within the current episode that have target dates no more than 275 days prior to the target assessment.
	Qualifying RFAs	A0310A = [01, 02, 03, 04, 05, 06] ***or*** A0310B = [01] ***or*** A0310F = [10, 11]
	Selection logic	Include the target assessment and all qualifying earlier assessments in the scan. Include an earlier assessment in the scan, if it meets all of the following conditions: (a) it is contained within the resident's episode, (b) it has a qualifying RFA, (c) its target date is on or before the target date for the target assessment, and (d) its target date is no more than 275 days prior to the target date of the target assessment. The target assessment and qualifying earlier assessments are scanned to determine whether certain events or conditions occurred during the look-back period. These events and conditions are specified in the definitions of measures that utilize the look-back scan.
	Rationale	Some measures utilize MDS items that record events or conditions that occurred since the prior assessment was performed. The purpose of the look-back scan is to determine whether such events or conditions occurred during the look-back period. These measures trigger if the event or condition of interest occurred any time during a one year period. A 275-day time period is used to include up to three quarterly OBRA assessments. The earliest of these assessments would have a look-back period of up to 93 days, which would cover a total of about one year. All qualifying RFAs with target dates in this time period are examined to determine whether the event or condition of interest occurred at any time during the time interval.

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Long Stay Record Definitions (continued)

ASSESSMENT SELECTED	PROPERTY	SELECTION SPECIFICATIONS
Influenza vaccination assessment	Selection period[5]	All assessments with target dates on or after October 1 of the most recently completed influenza season (i.e., the target date must be on or between October 1 of the current year and June 30 of the following year).
	Qualifying RFAs	A0310A = [01, 02, 03, 04, 05, 06] ***or*** A0310B = [01] ***or*** A0310F = [10, 11]
	Selection logic	Select the record with the latest target date that meets all of the following conditions: a) It has a qualifying RFA, ***and*** b) Target date is on or after October 1 of the most recently completed influenza season (i.e., the target date must fall on or between October 1 and June 30), ***and*** c) A1600 (entry date) is on or before March 31 of the most recently completed influenza season.
	Rationale	The selection logic defined above is intended to identify the latest assessment that reports the influenza vaccine status for a resident who was in the facility for at least one day from October 1 through March 31.

[5] The selection period uses a June 30th end date to ensure residents who are vaccinated between October 1 and March 31, but do not have an assessment completed until after March 31, are captured in the measure sample.

Section 5: Transition from Improvements in Function to SNF Discharge Function Score Measure

In order to reduce provider burden and duplication of measures, as well as to align measures across the NHQI and the Skilled Nursing Facility (SNF) Quality Reporting Program (QRP), the NHQI version of the quality measure, Percent of Residents Who Made Improvements in Function (Short Stay) (CMS ID: N037.03), will be replaced with the SNF Discharge Function Score measure (CMS ID: S042.01) effective October 1, 2023. The specifications for CMS ID: S042.01 can be found in the Skilled Nursing Facility Quality Reporting Program Measure Calculations and Reporting User's Manual V5.0 on the SNF QRP website[6] under the downloads section at the bottom of the page.

Section 6: Transition from MDS 3.0 V1.17.2 to MDS 3.0 V1.18.11

The MDS 3.0 will transition from version 1.17.2 to version 1.18.11 effective October 1, 2023 and will impact certain quality measure specifications. Since some measures use prior assessments and target assessments in the measure calculation, the MDS transition presents a unique issue during the time of implementation when the old MDS assessment is filled out in prior assessments and the new MDS assessment is filled out in the target assessment.

For prior assessments conducted before the v1.18.11 implementation date of October 1, 2023 and target assessments performed on or after October 1, 2023, the measure calculations will use the old measure specifications (V15.0) regarding items related to prior assessments. Measure calculations will use the new measure specifications (V16.0) regarding items related to the target assessment. Two examples below illustrate this instruction:

- Resident with prior assessment filled out on July 7, 2023, and target assessment on October 5, 2023.
    - Prior assessment(s) would use MDS 3.0 V1.17.2 (old)
    - Target assessment would use MDS 3.0 V1.18.11 (new)
    - Specifications would be based on QM specifications in both the MDS 3.0 QM User's Manual V15.0 for references to the prior assessment(s) and the MDS 3.0 QM User's Manual V16.0 for references to the target assessment.
        - Rationale: The resident has a prior assessment before October 1 using MDS 3.0 V1.17.2, which is associated with the MDS 3.0 QM User's Manual V15.0 instructions.
- Resident admitted to the nursing home on October 1, 2023 with a target assessment on December 30, 2023.
    - Admission (prior) assessment would use MDS 3.0 V1.18.11 (new)
    - Target assessments would use MDS 3.0 V1.18.11 (new)

[6] Please refer to the Skilled Nursing Facility Quality Reporting Program Measure Calculations and Reporting User's Manual V5.0 on the SNF QRP website: https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/Skilled-Nursing-Facility-Quality-Reporting-Program/SNF-Quality-Reporting-Program-Measures-and-Technical-Information.html

- Specifications would be based on QM specifications in the MDS 3.0 QM User's Manual V16.0
    - Rationale: Both the admission (prior) and target assessments use MDS 3.0 V1.18.11 and the specifications refer to MDS 3.0 QM User's Manual V16.0.

One of the biggest changes from the MDS V1.17.2 involves the transition from Section G: Functional Status to Section GG: Functional Abilities and Goals. As a result, two measures, Percent of Residents Whose Need for Help with Activities of Daily Living Has Increased (Long Stay) (CMS ID: N028.03) and Percent of Residents Whose Ability to Walk Independently Worsened (LS) (CMS ID: N035.04) have been re-specified to account for the removal of section G from the MDS v1.18.11. In addition, two new measures, Percent of Residents With Pressure Ulcers (Long Stay) (CMS ID: N045.01) and Percent of Residents With New or Worsened Bowel or Bladder Incontinence (LS) (CMS ID: N046.01) will replace Percent of High-Risk Residents With Pressure Ulcers (LS) (CMS ID: N015.03) and Percent of Low-Risk Residents Who Lose Control of Their Bowel or Bladder (Long Stay) (CMS ID: N025.02), respectively. Since the four abovementioned measures use MDS section GG items on both the prior and target assessments, measure scores are only calculated if both the prior and target assessments take place on or after October 1, 2023. The risk adjustment coefficients for these measures are expected to be published in 2024, or when technically feasible, after enough data are collected. Public reporting of these measures will resume on January 2025 or when technically feasible.

Six other measures used items that underwent a label change in version 1.18.11. These measures were re-specified by replacing the old MDS label with the new label:

- Percent of Residents Who Newly Received an Antipsychotic Medication (Short Stay) (CMS ID: N011.03);
- Percent of Residents Who Lose Too Much Weight (Long Stay) (CMS ID: N029.03);
- Percent of Residents Who Have Depressive Symptoms (Long Stay) (CMS ID: N030.03);
- Percent of Residents Who Received an Antipsychotic Medication (Long Stay) (CMS ID: N031.04)
- Prevalence of Antianxiety/Hypnotic Use (Long Stay) (CMS ID: N033.03); and
- Percent of Residents Who Used Antianxiety or Hypnotic Medication (Long Stay) (CMS ID: N036.03).

However, the measure specifications have either remained intact or have undergone minimal changes. Calculations for these measures will follow the first example described above. Public reporting for these measures will not be interrupted.

Chapter 2

MDS 3.0 Quality Measures Logical Specifications

Section 1: Short Stay (SS) Quality Measures

Table 2-1
Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury
(CMS ID: S038.02) (CMIT Measure ID: 121)[7]

This quality measure is calculated using the SNF Quality Reporting Program measure Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury (CMS ID: S038.02). To review the measure logic specifications for CMS ID: S038.02, please refer to the SNF Quality Reporting Program Measure Calculations and Reporting User's Manual V5.0 on the SNF QRP website[8] under the downloads section at the bottom of the page. The measure logical specifications can be found in **Chapter 8, Table 8-4**.

[7] This measure is used in the Five-Star Quality Rating System.
[8] Please refer to the SNF Quality Reporting Program Measure Calculations and Reporting User's Manual V5.0 on the SNF QRP website: https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/Skilled-Nursing-Facility-Quality-Reporting-Program/SNF-Quality-Reporting-Program-Measures-and-Technical-Information.html

Table 2-2
Percent of Residents Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (SS)
(CMS ID: N003.03) (CMIT Measure ID: 1189)

Measure Description

The measure reports the percent of short-stay residents who are assessed and/or given, appropriately, the influenza vaccination during the most recent influenza season.

Measure Specifications

Numerator

Residents meeting any of the following criteria on the selected influenza vaccination assessment:

1. Resident received the influenza vaccine during the most recent influenza season, either in the facility (O0250A = [1]) ***or*** outside the facility (O0250C = [2]); ***or***
2. Resident was offered and declined the influenza vaccine (O0250C = [4]); ***or***
3. Resident was ineligible due to medical contraindication(s) (O0250C = [3]) (e.g., anaphylactic hypersensitivity to eggs or other components of the vaccine, history of Guillain-Barré Syndrome within 6 weeks after a previous influenza vaccination, bone marrow transplant within the past 6 months).

Denominator

All short-stay residents with a selected influenza vaccination assessment. This includes all residents who have an entry date (A1600) on or before March 31 of the most recently completed influenza season and have an assessment with a target date on or after October 1 of the most recently completed influenza season (i.e., the target date must fall on or between October 1 and June 30), except those with exclusions.

Exclusions

Resident's age on target date of selected target assessment is 179 days or less.

Notes

This measure is only calculated once per 12-month influenza season which begins on July 1 of a given year and ends on June 30 of the subsequent year, and reports data for residents who were in the facility for at least one day during the target period of October 1 through March 31.

Covariates

Not applicable.

Table 2-3
Percent of Residents Who Received the Seasonal Influenza Vaccine (SS)
(CMS ID: N004.03) (CMIT Measure ID: 1189)

Measure Description

The measure reports the percent of short-stay residents who received the influenza vaccination during the most recent influenza season.

Measure Specifications

Numerator

Residents meeting the following criteria on the selected influenza vaccination assessment:

1. Resident received the influenza vaccine during the most recent influenza season, either in the facility (O0250A = [1]) ***or*** outside the facility (O0250C = [2]).

Denominator

All short-stay residents with a selected influenza vaccination assessment. This includes all residents who have an entry date (A1600) on or before March 31 of the most recently completed influenza season and have an assessment with a target date on or after October 1 of the most recently completed influenza season (i.e., the target date must fall on or between October 1 and June 30), except those with exclusions.

Exclusions

Resident's age on target date of selected target assessment is 179 days or less.

Notes

This measure is only calculated once per 12-month influenza season which begins on July 1 of a given year and ends on June 30 of the subsequent year and reports data for residents who were in the facility for at least one day during the target period of October 1 through March 31.

Covariates

Not applicable.

Table 2-4
Percent of Residents Who Were Offered and Declined the Seasonal Influenza Vaccine (SS)
(CMS ID: N005.03) (CMIT Measure ID: 1189)

Measure Description

The measure reports the percent of short-stay residents who are offered and declined the influenza vaccination during the most recent influenza season.

Measure Specifications

Numerator

Residents meeting the following criteria on the selected influenza vaccination assessment:

1. Resident was offered and declined the influenza vaccine during the most recent influenza season (O0250C = [4]).

Denominator

All short-stay residents with a selected influenza vaccination assessment. This includes all residents who have an entry date (A1600) on or before March 31 of the most recently completed influenza season and have an assessment with a target date on or after October 1 of the most recently completed influenza season (i.e., the target date must fall on or between October 1 and June 30), except those with exclusions.

Exclusions

1. Resident's age on target date of selected influenza vaccination assessment is 179 days or less.

Notes

This measure is only calculated once per 12-month influenza season which begins on July 1 of a given year and ends on June 30 of the subsequent year and reports data for residents who were in the facility for at least one day during the target period of October 1 through March 31.

Covariates

Not applicable

Table 2-5
Percent of Residents Who Did Not Receive, Due to Medical Contraindication, the Seasonal Influenza Vaccine (SS) (CMS ID: N006.03) (CMIT Measure ID: 1189)

Measure Description

The measure reports the percent of short-stay residents who did not receive, due to medical contraindication, the influenza vaccination during the most recent influenza season.

Measure Specifications

Numerator

Residents meeting the following criteria on the selected influenza vaccination assessment:

1. Resident was ineligible for the influenza vaccine during the most recent influenza season due to medical contraindication(s) (O0250C = [3]) (e.g., anaphylactic hypersensitivity to eggs or other components of the vaccine, history of Guillain-Barré Syndrome within 6 weeks after a previous influenza vaccination, bone marrow transplant within the past 6 months).

Denominator

All short-stay residents with a selected influenza vaccination assessment. This includes all residents who have an entry date (A1600) on or before March 31 of the most recently completed influenza season and have an assessment with a target date on or after October 1 of the most recently completed influenza season (i.e., the target date must fall on or between October 1 and June 30), except those with exclusions.

Exclusions

1. Resident's age on target date of selected influenza vaccination assessment is 179 days or less.

Notes

This measure is only calculated once per 12-month influenza season which begins on July 1 of a given year and ends on June 30 of the subsequent year and reports data for residents who were in the facility for at least one day during the target period of October 1 through March 31

Covariates

Not applicable

Table 2-6
Percent of Residents Assessed and Appropriately Given the Pneumococcal Vaccine (SS)
(CMS ID: N007.02) (CMIT Measure ID: 1125)

Measure Description

This measure reports the percent of short-stay residents whose pneumococcal vaccine status is up to date during the 12-month reporting period.

Measure Specifications

Numerator

Residents meeting any of the following criteria on the selected target assessment:

1. Pneumococcal vaccine status is up to date (O0300A = [1]); ***or***
2. Were offered and declined the vaccine (O0300B = [2]); ***or***
3. Were ineligible due to medical contraindication(s) (O0300B = [1]) (e.g., anaphylactic hypersensitivity to components of the vaccine; bone marrow transplant within the past 12 months; ***or*** receiving a course of chemotherapy within the past two weeks).

Denominator

All short-stay residents with a selected target assessment.

Exclusions

Resident's age on target date of selected target assessment is less than 5 years (i.e., resident has not yet reached fifth birthday on target date).

Covariates

Not applicable

Table 2-7
Percent of Residents Who Received the Pneumococcal Vaccine (SS)
(CMS ID: N008.02) (CMIT Measure ID: 1125)

Measure Description
This measure reports the percent of short-stay residents who received the pneumococcal vaccine during the 12-month reporting period.
Measure Specifications
Numerator Residents meeting the following criteria on the selected target assessment: 1. Pneumococcal vaccine status is up to date (O0300A = [1]). ***Denominator*** All short-stay residents with a selected target assessment. ***Exclusions*** Resident's age on target date of selected target assessment is less than 5 years (i.e., resident has not yet reached fifth birthday on target date).
Covariates
Not applicable

Table 2-8
Percent of Residents Who Were Offered and Declined the Pneumococcal Vaccine (SS)
(CMS ID: N009.02) (CMIT Measure ID: 1125)

Measure Description
This measure reports the percent of short-stay residents who were offered and declined the pneumococcal vaccine during the 12-month reporting period.
Measure Specifications
Numerator Residents meeting the following criteria on the selected target assessment: 1. Were offered and declined the vaccine (O0300B = [2]). ***Denominator*** All short-stay residents with a selected target assessment. ***Exclusions*** Resident's age on target date of selected target assessment is less than 5 years (i.e., resident has not yet reached fifth birthday on target date).
Covariates
Not applicable.

Table 2-9
Percent of Residents Who Did Not Receive, Due to Medical Contraindication, the Pneumococcal Vaccine (SS)
(CMS ID: N010.02) (CMIT Measure ID: 1125)

Measure Description

This measure reports the percent of short-stay residents who did not receive, due to medical contraindication, the pneumococcal vaccine during the 12-month reporting period.

Measure Specifications

Numerator

Residents meeting the following criteria on the selected target assessment:

1. Were ineligible due to medical contraindication(s) (O0300B = [1]) (e.g., anaphylactic hypersensitivity to components of the vaccine; bone marrow transplant within the past 12 months; ***or*** receiving a course of chemotherapy within the past two weeks).

Denominator

All short-stay residents with a selected target assessment.

Exclusions

Resident's age on target date of selected target assessment is less than 5 years (i.e., resident has not yet reached fifth birthday on target date).

Covariates

Not applicable.

Table 2-10
Percent of Residents Who Newly Received an Antipsychotic Medication (SS)
(CMS ID: N011.03) (CMIT Measure ID: 1183) [9]

Measure Description

This measure reports the percentage of short-stay residents who are receiving an antipsychotic medication during the target period but not on their initial assessment.

Measure Specifications

Numerator

Short-stay residents for whom one or more assessments in a look-back scan (*not including* the initial assessment) indicates that antipsychotic medication was received. This condition is defined as follows:

1. For assessments with target dates on or after 10/01/2023: (N0415A1 = [1]).[10]

Note that residents are excluded from this measure if their initial assessment indicates antipsychotic medication use or if antipsychotic medication use is unknown on the initial assessment (see exclusion 3, below).

Denominator

All short-stay residents who do not have exclusions and who meet all of the following conditions:

1. The resident has a target assessment, ***and***
2. The resident has an initial assessment, ***and***
3. The target assessment is not the same as the initial assessment.

Exclusions

1. The following is true for ***all*** assessments in the look-back scan (excluding the initial assessment):
   1.1. For assessments with target dates on or after 10/01/2023: (N0415A1 = [-]).[10]
2. ***Any*** of the following related conditions are present on ***any*** assessment in a look-back scan:
   2.1. Schizophrenia (I6000 = [1]).
   2.2. Tourette's syndrome (I5350 = [1]).
   2.3. Huntington's disease (I5250 = [1]).

[9] This measure is used in the Five-Star Quality Rating System
[10] For assessments with target dates before 10/01/2023, please refer to the MDS 3.0 Quality Measures User's Manual Version 15.

Measure Specifications Continued
3. The resident's initial assessment indicates antipsychotic medication use or antipsychotic medication use is unknown: 3.1. For initial assessments with target dates on or after 10/01/2023: (N0415A1 = [1 , -]).[10]
Covariates
Not applicable

Table 2-11
Discharge Function Score
(CMS ID: S042.01) (CMIT Measure ID: 1698)[11]

This quality measure is calculated using the SNF Quality Reporting Program measure Discharge Function Score (CMS ID: S042.01). To review the measure logic specifications for CMS ID: S042.01, please refer to the SNF Quality Reporting Program Measure Calculations and Reporting User's Manual V5.0 on the SNF QRP website[12] under the downloads section at the bottom of the page. The measure logical specifications can be found in **Chapter 8, Table 8-11**.

[11] This measure is used in the Five-Star Quality Rating System.

[12] Please refer to the SNF Quality Reporting Program Measure Calculations and Reporting User's Manual V5.0 on the SNF QRP website: https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/Skilled-Nursing-Facility-Quality-Reporting-Program/SNF-Quality-Reporting-Program-Measures-and-Technical-Information.html

Table 2-12
Percent of Residents Experiencing One or More Falls with Major Injury (LS)
(CMS ID: N013.02) (CMIT Measure ID: 520)[13]

Measure Description
This measure reports the percent of long-stay residents who have experienced one or more falls with major injury reported in the target period or look-back period.
Measure Specifications
Numerator Long-stay residents with one or more look-back scan assessments that indicate one or more falls that resulted in major injury (J1900C = [1, 2]). ***Denominator*** All long-stay nursing home residents with one or more look-back scan assessments except those with exclusions. ***Exclusions*** Resident is excluded if the following is true for ***all*** look-back scan assessments: 1. The number of falls with major injury was not coded (J1900C = [-]).
Covariates
Not applicable.

[13] This measure is used in the Five-Star Quality Rating System.

Table 2-13
Percent of Residents Assessed and Appropriately Given the Seasonal Influenza Vaccine (LS)
(CMS ID: N016.03) (CMIT Measure ID: 528)

Measure Description

The measure reports the percent of long-stay residents who are assessed and/or given, appropriately, the influenza vaccination during the most recent influenza season.

Measure Specifications

Numerator

Residents meeting **any** of the following criteria on the selected influenza vaccination assessment:

1. Resident received the influenza vaccine during the most recent influenza season, either in the facility (O0250A= [1]) ***or*** outside the facility (O0250C = [2]); ***or***
2. Resident was offered and declined the influenza vaccine (O0250C = [4]); ***or***
3. Resident was ineligible due to medical contraindication(s) (O0250C = [3]) (e.g., anaphylactic hypersensitivity to eggs or other components of the vaccine, history of Guillain-Barré Syndrome within 6 weeks after a previous influenza vaccination, bone marrow transplant within the past 6 months).

Denominator

All long-stay residents with a selected influenza vaccination assessment. This includes all residents who have an entry date (A1600) on or before March 31 of the most recently completed influenza season and have an assessment with a target date on or after October 1 of the most recently completed influenza season (i.e., the target date must fall on or between October 1 and June 30), except those with exclusions.

Exclusions

Resident's age on target date of selected influenza vaccination assessment is 179 days or less.

Notes

This measure is only calculated once per 12-month influenza season which begins on July 1 of a given year and ends on June 30 of the subsequent year and reports data for residents who were in the facility for at least one day during the target period of October 1 through March 31.

Covariates

Not applicable.

Table 2-14
Percent of Residents Who Received the Seasonal Influenza Vaccine (LS)
(CMS ID: N017.03) (CMIT Measure ID: 528)

Measure Description

The measure reports the percent of long-stay residents who received the influenza vaccination during the most recent influenza season.

Measure Specifications

Numerator

Residents meeting the following criteria on the selected influenza vaccination assessment:

1. Resident received the influenza vaccine during the most recent influenza season, either in the facility (O0250A = [1]) ***or*** outside the facility (O0250C = [2]).

Denominator

All long-stay residents with a selected influenza vaccination assessment. This includes all residents who have an entry date (A1600) on or before March 31 of the most recently completed influenza season and have an assessment with a target date on or after October 1 of the most recently completed influenza season (i.e., the target date must fall on or between October 1 and June 30), except those with exclusions.

Exclusions

Resident's age on target date of selected influenza vaccination assessment is 179 days or less.

Notes

This measure is only calculated once per 12-month influenza season which begins on July 1 of a given year and ends on June 30 of the subsequent year and reports data for residents who were in the facility for at least one day during the target period of October 1 through March 31.

Covariates

Not applicable.

Table 2-15
Percent of Residents Who Were Offered and Declined the Seasonal Influenza Vaccine (LS)
(CMS ID: N018.03) (CMIT Measure ID: 528)

Measure Description

The measure reports the percent of long-stay residents who are offered and declined the influenza vaccination during the most recent influenza season.

Measure Specifications

Numerator

Residents meeting the following criteria on the selected influenza vaccination assessment:

1. Resident was offered and declined the influenza vaccine during the most recent influenza season (O0250C = [4]).

Denominator

All long-stay residents with a selected influenza vaccination assessment. This includes all residents who have an entry date (A1600) on or before March 31 of the most recently completed influenza season and have an assessment with a target date on or after October 1 of the most recently completed influenza season (i.e., the target date must fall on or between October 1 and June 30), except those with exclusions.

Exclusions

Resident's age on target date of selected influenza vaccination assessment is 179 days or less.

Notes

This measure is only calculated once per 12-month influenza season which begins on July 1 of a given year and ends on June 30 of the subsequent year and reports data for residents who were in the facility for at least one day during the target period of October 1 through March 31.

Covariates

Not applicable.

Table 2-16
Percent of Residents Who Did Not Receive, Due to Medical Contraindication, the Seasonal Influenza Vaccine (LS)
(CMS ID: N019.03) (CMIT Measure ID: 528)

Measure Description

The measure reports the percent of long-stay residents who did not receive, due to medical contraindication, the influenza vaccination during the most recent influenza season.

Measure Specifications

Numerator

Residents meeting the following criteria on the selected influenza vaccination assessment:

1. Resident was ineligible for the influenza vaccine during the most recent influenza season due to medical contraindication(s) (O0250C = [3]) (e.g., anaphylactic hypersensitivity to eggs or other components of the vaccine, history of Guillain-Barré Syndrome within 6 weeks after a previous influenza vaccination, bone marrow transplant within the past 6 months).

Denominator

All long-stay residents with a selected influenza vaccination assessment. This includes all residents who have an entry date (A1600) on or before March 31 of the most recently completed influenza season and have an assessment with a target date on or after October 1 of the most recently completed influenza season (i.e., the target date must fall on or between October 1 and June 30), except those with exclusions.

Exclusions

Resident's age on target date of selected influenza vaccination assessment is 179 days or less.

Notes

This measure is only calculated once per 12-month influenza season which begins on July 1 of a given year and ends on June 30 of the subsequent year and reports data for residents who were in the facility for at least one day during the target period of October 1 through March 31.

Covariates

Not applicable.

Table 2-17
Percent of Residents Assessed and Appropriately Given the Pneumococcal Vaccine (LS)
(CMS ID: N020.02) (CMIT Measure ID: 519)

Measure Description

This measure reports the percent of long-stay residents whose pneumococcal vaccine status is up to date.

Measure Specifications

Numerator

Residents meeting any of the following criteria on the selected target assessment:

1. Have an up to date pneumococcal vaccine status (O0300A = [1]); ***or***
2. Were offered and declined the vaccine (O0300B = [2]); ***or***
3. Were ineligible due to medical contraindication(s) (e.g., anaphylactic hypersensitivity to components of the vaccine; bone marrow transplant within the past 12 months; ***or*** receiving a course of chemotherapy within the past two weeks) (O0300B = [1]).

Denominator

All long-stay residents with a selected target assessment.

Covariates

Not applicable.

Table 2-18
Percent of Residents Who Received the Pneumococcal Vaccine (LS)
(CMS ID: N021.02) (CMIT Measure ID: 519)

Measure Description
This measure reports the percent of long-stay residents who received the pneumococcal vaccine during the 12-month reporting period.
Measure Specifications
Numerator Residents meeting the following criteria on the selected target assessment: 1. Pneumococcal vaccine status is up to date (O0300A = [1]). ***Denominator*** All long-stay residents with a selected target assessment.
Covariates
Not applicable.

Table 2-19
Percent of Residents Who Were Offered and Declined the Pneumococcal Vaccine (LS)
(CMS ID: N022.02) (CMIT Measure ID: 519)

Measure Description
This measure reports the percent of long-stay residents who were offered and declined the pneumococcal vaccine during the 12-month reporting period.
Measure Specifications
Numerator Residents meeting the following criteria on the selected target assessment: 1. Were offered and declined the vaccine (O0300B = [2]). ***Denominator*** All long-stay residents with a selected target assessment.
Covariates
Not applicable.

Table 2-20
Percent of Residents Who Did Not Receive, Due to Medical Contraindication, the Pneumococcal Vaccine (LS)
(CMS ID: N023.02) (CMIT Measure ID: 519)

Measure Description
This measure reports the percent of long-stay residents who did not receive, due to medical contraindication, the pneumococcal vaccine during the 12-month reporting period.
Measure Specifications
Numerator Residents meeting the following criteria on the selected target assessment: 1. Were ineligible due to medical contraindication(s) (O0300B = [1]) (e.g., anaphylactic hypersensitivity to components of the vaccine; bone marrow transplant within the past 12 months; ***or*** receiving a course of chemotherapy within the past two weeks). ***Denominator*** All long-stay residents with a selected target assessment.
Covariates
Not applicable.

Table 2-21
Percent of Residents with a Urinary Tract Infection (LS)
(CMS ID: N024.02) (CMIT Measure ID: 532)[14]

Measure Description
The measure reports the percentage of long stay residents who have a urinary tract infection.
Measure Specifications
Numerator Long-stay residents with a selected target assessment that indicates urinary tract infection within the last 30 days (I2300 = [1]). ***Denominator*** All long-stay residents with a selected target assessment, except those with exclusions. ***Exclusions*** 1. Target assessment is an admission assessment (A0310A = [01]) ***or*** a PPS 5-Day assessment (A0310B = [01]). 2. Urinary tract infection value is missing (I2300 = [-]).
Covariates
Not applicable.

[14] This measure is used in the Five-Star Quality Rating System.

Table 2-22
Percent of Residents Who Have/Had a Catheter Inserted and Left in Their Bladder (LS)
(CMS ID: N026.03) (CMIT Measure ID: 523)[15]

Measure Description

This measure reports the percentage of residents who have had an indwelling catheter in the last 7 days.

Measure Specifications

Numerator

Long-stay residents with a selected target assessment that indicates the use of indwelling catheters (H0100A = [1]).

Denominator

All long-stay residents with a selected target assessment, except those with exclusions.

Exclusions

1. Target assessment is an admission assessment (A0310A = [01]) ***or*** a PPS 5-Day assessment (A0310B = [01]).
2. Target assessment indicates that indwelling catheter status is missing (H0100A = [-]).
3. Target assessment indicates neurogenic bladder (I1550 = [1]) ***or*** neurogenic bladder status is missing (I1550 = [-]).
4. Target assessment indicates obstructive uropathy (I1650 = [1]) ***or*** obstructive uropathy status is missing (I1650 = [-]).

Covariates

Covariates used to risk-adjust this measure include:

1. Frequent bowel incontinence on prior assessment (H0400 = [2, 3]).
   - 1.1. Covariate = [1] if (H0400 = [2, 3]).
   - 1.2. Covariate = [0] if (H0400 = [0, 1, 9, -]).
2. Pressure ulcers at stages II, III, or IV on prior assessment:
   - 2.1. Covariate = [1] if ***any*** of the following are true:
     - 2.1.1. (M0300B1 = [1, 2, 3, 4, 5, 6, 7, 8, 9]), ***or***
     - 2.1.2. (M0300C1 = [1, 2, 3, 4, 5, 6, 7, 8, 9]), ***or***
     - 2.1.3. (M0300D1 = [1, 2, 3, 4, 5, 6, 7, 8, 9]).

[15] This measure is used in the Five-Star Quality Rating System.

Covariates Continued
2.2. Covariate = [0] if the following is true: 2.2.1. (M0300B1 = [0, -, ^]) ***and*** 2.2.2. (M0300C1 = [0, -, ^]) ***and*** 2.2.3. (M0300D1 = [0, -, ^]). 3. All covariates are missing if no prior assessment is available.

Table 2-23
Percent of Residents Who Were Physically Restrained (LS)
(CMS ID: N027.02) (CMIT Measure ID: 529)

Measure Description

This measure reports the percent of long-stay nursing facility residents who are physically restrained on a daily basis.

Measure Specifications

Numerator

Long-stay residents with a selected target assessment that indicates daily physical restraints,
where:

1. Trunk restraint used in bed (P0100B = [2]), ***or***
2. Limb restraint used in bed (P0100C = [2]), ***or***
3. Trunk restraint used in chair or out of bed (P0100E = [2]), ***or***
4. Limb restraint used in chair or out of bed (P0100F = [2]), ***or***
5. Chair prevents rising used in chair or out of bed (P0100G) = [2]).

Denominator

All long-stay residents with a target assessment, except those with exclusions.

Exclusions

Resident is not in numerator and any of the following is true:

1. (P0100B = [-]), ***or***
2. (P0100C = [-]), ***or***
3. (P0100E = [-]), ***or***
4. (P0100F = [-]), ***or***
5. (P0100G = [-]).

Covariates

Not applicable.

Table 2-24
Percent of Residents Whose Need for Help with Activities of Daily Living Has Increased (LS)
(CMS ID: N028.03) (CMIT Measure ID: 531)[16]

Measure Description

This measure reports the percent of long-stay residents whose need for help with late-loss Activities of Daily Living (ADLs) has increased when compared to the prior assessment.

Measure Specifications

Numerator

Long-stay residents with selected target and prior assessments that indicate the need for help with late-loss Activities of Daily Living (ADLs) has increased when the selected assessments are compared. The four late-loss ADL items are Sit to Lying (GG0170B), Sit to Stand (GG0170D), Eating (GG0130A), and Toilet Transfer (GG0170F).

An increase in need for help is defined as a decrease in two or more coding points in one late-loss ADL item ***or*** one point decrease in coding points in two or more late-loss ADL items. Note that for each of these four ADL items, if the value is equal to [07, 09, 10, 88] on either the target or prior assessment, then recode the item to equal [01] to allow appropriate comparison.

Residents meet the definition of increased need of help with late-loss ADLs if ***either*** of the following are true: [17]

1. ***At least one*** of the following is true:
   - 1.1 Sit to Lying: [Level at target assessment (GG0170B) - Level at prior assessment (GG0170B)] < [-1], ***or***
   - 1.2 Sit to Stand: [Level at target assessment (GG0170D) - Level at prior assessment (GG0170D)] < [-1], ***or***
   - 1.3 Eating: [Level at target assessment (GG0130A) - Level at prior assessment (GG0130A)] < [-1], ***or***
   - 1.4 Toilet Transfer: [Level at target assessment (GG0170F) - Level at prior assessment (GG0170F)] < [-1].
2. ***At least two*** of the following are true:
   - 2.1 Sit to Lying: [Level at target assessment (GG0170B) - Level at prior assessment GG0170B)] < [0], ***or***
   - 2.2 Sit to Stand: [Level at target assessment (GG0170D) - Level at prior assessment (GG0170D)] < [0], ***or***
   - 2.3 Eating: [Level at target assessment (GG0130A) - Level at prior assessment (GG0130A)] < [0], ***or***
   - 2.4 Toilet Transfer: [Level at target assessment (GG0170F) - Level at prior assessment (GG0170F)] < [0].

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[16] This measure is used in the Five-Star Quality Rating System.

[17] For all GG items:
If A0310A = [01] ***or*** A0310B = [01] on the prior or target assessment, use Admission items (e.g. GG0170B1).
If A0310F = [10, 11] ***or*** A0310H = [1] on the prior or target assessment, use Discharge items (e.g. GG0170B3).
If A0310A = [02, 03, 04, 05, 06] ***and*** A0310B = [99], ***or*** A0310B = [08] on the prior or target assessment, OBRA/Interim items (e.g. GG0170B5)

Measure Specifications Continued

Denominator

All long-stay residents with a selected target and prior assessment, except those with exclusions.

Exclusions

1. All four of the late-loss ADL items indicate dependence or activity was not attempted on the prior assessment, as indicated by:[17]
   1.1. Sit to Lying (GG0170B) = [01, 07, 09, 10, 88] ***and***
   1.2. Sit to Stand (GG0170D) = [01, 07, 09, 10, 88] ***and***
   1.3. Eating (GG0130A) = [01, 07, 09, 10, 88] ***and***
   1.4. Toilet Transfer (GG0170F) = [01, 07, 09, 10, 88].
2. Three of the late-loss ADLs indicate dependence (value [01]) or activity was not attempted (values [07, 09, 10, 88]) on the prior assessment, as in exclusion 1 AND the fourth late-loss ADL indicates substantial/maximal assistance (value [02]) on the prior assessment.
3. Comatose or missing data on comatose (B0100 = [1, -]) on the target assessment.
4. Prognosis of life expectancy is less than 6 months (J1400 = [1, -]) on the target assessment.
5. Hospice care (O0110K1b = [1, -]) on the target assessment.
6. The resident is not in the numerator ***and***
   6.1. Sit to Lying (GG0170B) = [-]) on the prior or target assessment, ***or***
   6.2. Sit to Stand (GG0170D = [-]) on the prior or target assessment, ***or***
   6.3. Eating (GG0130A) = [-]) on the prior or target assessment, ***or***
   6.4. Toilet Transfer (GG0170F) = [-]) on the prior or target assessment.[17]
7. No prior assessment is available to assess prior function.
8. Prior or target assessment date before 10/01/2023.[18]

Covariates

Not applicable.

[18] For assessments with target dates before 10/01/2023, please refer to the MDS 3.0 Quality Measures User's Manual Version 15.

Table 2-25
Percent of Residents Who Lose Too Much Weight (LS)
(CMS ID: N029.03) (CMIT Measure ID: 524)

Measure Description

The measure captures the percentage of long-stay residents who had a weight loss of 5% or more in the last month or 10% or more in the last 6 months who were not on a physician prescribed weight-loss regimen noted in an MDS assessment during the selected quarter.

Measure Specifications

Numerator

Long-stay nursing home residents with a selected target assessment which indicates a weight loss of 5% or more in the last month or 10% or more in the last 6 months who were not on a physician prescribed weight-loss regimen (K0300 = [2]).

Denominator

Long-stay nursing home residents with a selected target assessment except those with exclusions.

Exclusions

1. Target assessment is an OBRA Admission assessment (A0310A = [01]) ***or*** a PPS 5-Day assessment (A0310B = [01])
2. Prognosis of life expectancy is less than 6 months (J1400 = [1]) or the Prognosis item is missing (J1400 = [-]) on the target assessment.
3. Receiving Hospice care (O0110K1b = [1]) or the Hospice care item is missing (O0110K1b = [-]) on the target assessment.
4. Weight loss item is missing (K0300 = [-]) on the target assessment.

Covariates

Not applicable.

Table 2-26
Percent of Residents Who Have Depressive Symptoms (LS)
(CMS ID: N030.03) (CMIT Measure ID: 524)

Measure Description

The measure reports the percentage of long-stay residents who have had symptoms of depression during the 2-week period preceding the MDS 3.0 target assessment date.

Measure Specifications

Numerator

Long-stay residents with a selected target assessment where the target assessment meets ***either*** of the following two conditions:

CONDITION A (The resident mood interview must meet Part 1 ***and*** Part 2 below):

PART 1:

- Little interest or pleasure in doing things half or more of the days over the last two weeks (D0150A2 = [2, 3]).

or

- Feeling down, depressed, or hopeless half or more of the days over the last two weeks (D0150B2 = [2, 3]).

PART 2:

The resident interview total severity score indicates the presence of depression (D0160 ≥ [10] and D0160 ≤ [27]).

CONDITION B (The staff assessment of resident mood must meet Part 1 ***and*** Part 2 below):

PART 1:

- Little interest or pleasure in doing things half or more of the days over the last two weeks (D0500A2 = [2, 3]).

or

- Feeling or appearing down, depressed, or hopeless half or more of the days over the last two weeks (D0500B2 = [2, 3]).

PART 2:

The staff assessment total severity score indicates the presence of depression (D0600 ≥ [10] and D0600 ≤ [30]).

Denominator

All long-stay residents with a selected target assessment, except those with exclusions.

Exclusions

1. Resident is comatose or comatose status is missing (B0100 = [1, -]).
2. Resident is not included in the numerator (the resident did not meet the depression symptom conditions for the numerator) AND both of the following are true:

   2.1. D0150A2 = [^, -] ***or*** D0150B2 = [^, -] ***or*** D0160 = [99, ^, -].

Measure Specifications Continued
2.2. D0500A2 = [^, -] ***or*** D0500B2 = [^, -] ***or*** D0600 = [^, -].
Covariates
Not applicable.

Table 2-27
Percent of Residents Who Received an Antipsychotic Medication (LS)
(CMS ID: N031.04) (CMIT Measure ID: 5236)[19]

Measure Description

This measure reports the percentage of long-stay residents who are receiving antipsychotic drugs in the target period.

Measure Specifications

Numerator

Long-stay residents with a selected target assessment where the following condition is true: antipsychotic medications received. This condition is defined as follows:

1. For assessments with target dates on or after 10/01/2023: (N0415A1 = [1]).[20]

Denominator

Long-stay nursing home residents with a selected target assessment except those with exclusions.

Exclusions

1. The resident did not qualify for the numerator and ***any*** of the following is true:
   1.1. For assessments with target dates on or after 10/01/2023: (N0415A1 = [-]).[20]
2. ***Any*** of the following related conditions are present on the target assessment (unless otherwise indicated):
   2.1. Schizophrenia (I6000 = [1]).
   2.2. Tourette's syndrome (I5350 = [1]).
   2.3. Tourette's syndrome (I5350 = [1]) on the prior assessment if this item is not active on the target assessment and if a prior assessment is available.
   2.4. Huntington's disease (I5250 = [1]).

Covariates

Not applicable.

[19] This measure is used in the Five-Star Quality Rating System.
[20] For assessments with target dates before 10/01/2023, please refer to the MDS 3.0 Quality Measures User's Manual Version 15.

Table 2-28
Percent of Residents Whose Ability to Walk Independently Worsened (LS)
(CMS ID: N035.04) (CMIT Measure ID: 530)[21]

Measure Description

This measure reports the percent of long-stay residents who experienced a decline in independence of locomotion during the target period.

Measure Specifications

Numerator

Long-stay residents with a selected target assessment and at least one qualifying prior assessment who have a decline in locomotion when comparing their target assessment with the prior assessment. Decline identified by:

1. Recoding all values (GG0170I = [07, 09, 10, 88]) to (GG0170I = [01]).
2. A decrease of one or more points on the "Walk 10 feet" item between the target assessment and prior assessment (GG0170I on target assessment – GG0170I on prior assessment ≤ -1).[22]

Denominator

Long-stay residents who have a qualifying target assessment and at least one qualifying prior assessment, except those with exclusions.

Exclusions

Residents satisfying any of the following conditions:

1. Comatose or missing data on comatose (B0100 = [1, -]) at the prior assessment.
2. Prognosis of less than 6 months at the prior assessment as indicated by:
   - 2.1. Prognosis of less than six months of life (J1400 = [1]), ***or***
   - 2.2. Hospice use (O0110K1b = [1]), ***or***
   - 2.3. Neither indicator for being end-of-life at the prior assessment (J1400 ≠ [1] ***and*** O0110K1b ≠ [1]) ***and*** a missing value on either indicator (J1400 = [-] ***or*** O0110K1b = [-]).
3. Resident dependent or activity was not attempted during locomotion on prior assessment (GG0170I = [01, 07, 09, 10, 88]).[22]
4. Missing data on locomotion on target ***or*** prior assessment (GG0170I = [-]).

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[21] This measure is used in the Five-Star Quality Rating System.

[22] If A0310A = [01], A0310B=[01], ***or*** A0310E = [01] on the prior assessment, use GG0170I1.
If A0310H = [01] on the prior or target assessment, use GG170I3.
If A0310A = [02, 03, 04, 05, 06] ***and*** A0310B = [99], ***or*** A0310B = [08] on the prior or target assessment, use OBRA/Interim items GG0170I5.

Measure Specifications Continued

5. Prior assessment is a discharge with or without return anticipated (A0310F = [10, 11]).
6. No prior assessment is available to assess prior function.
   6.1. Target assessment is an OBRA Admission assessment (A0310A = [01]), a PPS 5-Day assessment (A0310B = [01]), or the first assessment after an admission (A0310E = [1]).
7. Prior or target assessment dates before 10/01/2023.[23]

Covariates

Covariates used to risk-adjust this measure include:

1. Eating from prior assessment. [24]
   1.1 Needs Help Covariate = [1] if (GG0130A = [02, 03, 04]) ***and*** Covariate = [0] if (GG0130A = [-, 01, 05, 06, 07, 09, 10, 88]).
   1.2 Dependence Covariate = [1] if (GG0130A = [01, 07, 09, 10, 88)] ***and*** Covariate = [0] if (GG0130A = [-, 02, 03, 04, 05, 06]).
2. Toilet Transfer from prior assessment.[24]
   2.1 Needs Help Covariate = [1] if (GG0170F = [02, 03, 04]) ***and*** Covariate = [0] if (GG0170F = [-, 01, 05, 06, 07, 09, 10, 88]).
   2.2 Dependence Covariate = [1] if (GG0170F = [01, 07, 09, 10, 88]) ***and*** Covariate = [0] if (GG0170F = [-, 02, 03, 04, 05, 06]).
3. Sit to Stand from prior assessment.[24]
   3.1 Needs Help Covariate = [1] if (GG0170D = [02, 03, 04]) ***and*** Covariate = [0] if (GG0170D = [-, 01, 05, 06, 07, 09, 10, 88]).
   3.2 Dependence Covariate = [1] if (GG0170D = [01, 07, 09, 10, 88]) ***and*** Covariate = [0] if (GG0170D = [-, 02, 03, 04, 05, 06]).
4. Walk 10 Feet from prior assessment.[24]
   4.1 Independence Covariate = [1] if (GG0170I = [05, 06]) ***and*** Covariate = [0] if (GG0170I = [-, 01, 02, 03, 04, 07, 09, 10, 88]).
   4.2 Needs Some Help Covariate = [1] if (GG0170I = [03,04]) ***and*** Covariate = [0] if (GG0170I = [-, 01, 02, 05, 06, 07, 09, 10, 88]).
   4.3 Needs More Help Covariate = [1] if (GG0170I = [02]) ***and*** Covariate = [0] if (GG0170I = [-, 01, 03, 04, 05, 06, 07, 09, 10, 88]).
5. Severe cognitive impairment from prior assessment.
   5.1 Covariate = [1] if (C1000 = [3] ***and*** C0700 = [1]) ***or*** BIMS summary score (C0500 ≤ [7]).
   5.2 Covariate = [0] if either of the following criteria are met:
      5.2.1 (C1000 = [0, 1, 2] ***or*** C0700 = [0, ^, -]) ***and*** (C0500 = [>7, ^, -, 99]).
      5.2.2 (C0500 > [7]) ***and*** (C1000 = [0, 1, 2, ^, -] ***or*** C0700 = [0, ^, -]).

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[23] For prior or target assessment dates before 10/01/2023, please refer to the MDS 3.0 Quality Measures User's Manual Version 15.

[24] For all GG items:
If A0310A=[01] ***or*** A0310B=[01], use Admission items (e.g. GG0130A1).
If A0310F = [10, 11] ***or*** A0310H = [1], use Discharge items (e.g. GG0130A3).
If A0310A = [02, 03, 04, 05, 06] ***and*** A0310B = [99], ***or*** A0310B = [08], use OBRA/Interim items (e.g. GG0130A5).

Covariates Continued

5.3 If Covariate has not been set to [1] or [0] based on logic in 5.1 and 5.2, then Covariate = [0].

6. Linear Age.

If (MONTH(A2300) > MONTH(A0900)) ***or*** (MONTH(A2300) = MONTH(A0900) ***and*** DAY(A2300) >= DAY(A0900)) ***then*** Linear Age = YEAR(A2300)-YEAR(A0900), ***else*** Linear Age = YEAR(A2300)-YEAR(A0900)-1

7. Gender.
   - 7.1 Covariate = [1] if (A0800= [2]) (Female).
   - 7.2 Covariate = [0] if (A0800= [1]) (Male).

8. Vision.
   - 8.1 Covariate = [1] if B1000 change score >0 with change score calculated from B1000 on the prior assessment to B1000 on the latest assessment with non-missing after the prior assessment.
   - 8.2 Covariate = [0] if either of the following criteria are met:
     - 8.2.1 B1000 change score ≤ 0 with change score calculated from B1000 on the prior assessment to B1000 on the latest assessment with non-missing B1000 after prior assessment.
     - 8.2.2 B1000 is not missing on the prior assessment, B1000 is missing on the target assessment, and no intermediate assessment has a non-missing value for B1000.
   - 8.3 If Covariate has not been set to [1] or [0] based on logic in 8.1 and 8.2, then Covariate = [0].

9. Oxygen use.
   - 9.1 Covariate = [1] where (O0110C1b = [0]) on prior and (O0110C1b = [1]) on the latest assessment with non-missing O0110C1b after prior assessment.
   - 9.2 Covariate = [0] if (O0110C1b = [0]) on the latest assessment with non-missing O0110C1b after prior assessment or O0110C1b is not missing on the prior assessment, O0110C1b is missing on the target assessment, and no intermediate assessment has a non-missing value for O0110C1b.
   - 9.3 If Covariate has not been set to [1] or [0] based on logic in 9.1 and 9.2, then Covariate = [0].

10. All covariates are missing if no prior assessment is available.

Table 2-29
Percent of Residents Who Used Antianxiety or Hypnotic Medication (LS)
(CMS ID: N036.03) (CMIT Measure ID: 527)

Measure Description
This measure reports the prevalence of antianxiety or hypnotic medication use (long stay) during the target period.
Measure Specifications
Numerator Long-stay residents with a selected target assessment where any of the following conditions are true: 1. For assessments with target dates on or after 10/01/2023.[25] 1.1 Antianxiety medications received (N0415B1 = [1]), ***or*** 1.2 Hypnotic medications received (N0415D1 = [1]). ***Denominator*** Long-stay residents with a selected target assessment, except those with exclusions. ***Exclusions*** 1. The resident did not qualify for the numerator and ***any*** of the following is true: 1.1. For assessments with target dates on or after 10/01/2023: (N0415B1 = [-] ***or*** N0415D1 = [-]).[25] 2. Any of the following related conditions are present on the target assessment (unless otherwise indicated): 2.1. Life expectancy of less than 6 months (J1400 = [1]). 2.2. Hospice care while a resident (O0110K1b = [1]).
Covariates
Not applicable.

[25] For assessments with target dates before 10/01/2023, please refer to the MDS 3.0 Quality Measures User's Manual Version 15.

Table 2-30
Percent of Residents With Pressure Ulcers (LS)
(CMS ID: N045.01) (CMIT Measure ID: 512)[26]

Measure Description
This measure captures the percentage of long-stay residents with Stage II-IV or unstageable pressure ulcers.

Measure Specifications
Numerator All long-stay residents with a selected target assessment that meet the following condition: 1. Stage II-IV or unstageable pressure ulcers are present, as indicated by ***any*** of the following six conditions: 1.1. (M0300B1 = [1, 2, 3, 4, 5, 6, 7, 8, or 9]) ***or*** 1.2. (M0300C1 = [1, 2, 3, 4, 5, 6, 7, 8, or 9]) ***or*** 1.3. (M0300D1 = [1, 2, 3, 4, 5, 6, 7, 8, or 9]) ***or*** 1.4. (M0300E1 = [1, 2, 3, 4, 5, 6, 7, 8, or 9]) ***or*** 1.5. (M0300F1 = [1, 2, 3, 4, 5, 6, 7, 8, or 9]) ***or*** 1.6. (M0300G1 = [1, 2, 3, 4, 5, 6, 7, 8, or 9]). ***Denominator*** All long-stay residents with a selected target assessment except those with exclusions. ***Exclusions*** 1. Target assessment is an ORBA Admission assessment (A0310A = [01]) or a PPS 5-Day assessment (A0310B = [01]). 2. If the resident is not included in the numerator and any of the following conditions are true: 2.1. (M0300B1 = [-]) ***or*** 2.2. (M0300C1 = [-]) ***or*** 2.3. (M0300D1 = [-]) ***or*** 2.4. (M0300E1 = [-]) ***or*** 2.5. (M0300F1 = [-]) ***or*** 2.6. (M0300G1 = [-]).

[26] This measure is used in the Five-Star Quality Rating System.

Measure Specifications Continued

3. Assessments with target dates before 10/01/2023.

Covariates

Covariates used to risk-adjust this measure include:

1. Impaired Functional Mobility: Lying to Sitting on Side of Bed on target assessment.[27]
   1.1. Covariate = [1] if GG0170C = [01, 02, 07, 09, 10, 88].
   1.2. Covariate = [0] if GG0170C = [03, 04, 05, 06, -].
2. Bowel Incontinence on target assessment.
   2.1. Covariate = [1] if H0400 = [1, 2, 3].
   2.2. Covariate = [0] if H0400 = [0, 9, -].
3. Diabetes Mellitus, Peripheral Vascular Disease or Peripheral Arterial Disease on target assessment.
   1.1 Covariate = [1] if I0900 = [1] or I2900 = [1], else covariate = [0].
2. Indicator of low body mass index based on height (K0200A) and weight (K0200B) on target assessment.
   2.1 Covariate = [1] if BMI >= [12.0] ***and*** BMI<= [19.0].
   2.2 Covariate = [0] if [0] < BMI < [12.0] ***or*** BMI > [19.0].
   2.3 If Covariate has not been set to [1] or [0] based on logic in 4.1 and 4.2, then Covariate = [0].
3. Malnutrition or at risk of malnutrition on target assessment.
   3.1 Covariate = [1] if I5600 = [1], else covariate = [0].
4. Dehydrated on target assessment.
   4.1 Covariate = [1] if J1550C= [1], else covariate = [0].
5. Infections: Septicemia, Pneumonia, Urinary Tract Infection or Multidrug-Resistant Organism on target assessment.
   5.1 Covariate = [1] if I2100 = [1] ***or*** I2000 = [1] ***or*** I2300 = [1] ***or*** I1700 = [1], else covariate = [0].
6. Moisture Associated Skin Damage on target assessment.
   6.1 Covariate = [1] if M1040H = [1], else covariate = [0].
7. Hospice Care on target assessment.
   7.1 Covariate = [1] if O0110K1b = [1], else covariate = [0].

[27] If A0310F = [10, 11] ***or*** A0310H = [1], use GG0170C3.
If A0310A = [02, 03, 04, 05, 06] ***and*** A0310B = [99], ***or*** A0310B = [08], use GG0170C5.

Table 2-31
Percent of Residents With New or Worsened Bowel or Bladder Incontinence (LS)
(CMS ID: N046.01) (CMIT Measure ID: 514)

Measure Description

This measure reports the percent of long-stay residents with new or worsened bowel or bladder incontinence between the prior assessment and target assessment.

Measure Specifications

Numerator

Long-stay residents with selected target and prior assessments that indicate a new or worsened case of bowel (H0400) or bladder (H0300) incontinence has occurred when the selected assessments are compared.

Residents meet the definition of new or worsened bowel or bladder incontinence if ***any*** of the following conditions are true:

CONDITION A:

A new case of bowel incontinence is defined as an increase in one or more coding points on the bowel continence item (H0400) from always continent to either occasionally, frequently, or always incontinent. Residents meet the definition of a new case of bowel incontinence if the following is true:

- Level at prior assessment (H0400 = [0]); Level at target assessment (H0400 = [1, 2, 3]).

CONDITION B:

A worsened case of bowel incontinence is defined as an increase in one or two coding points on the bowel continence item (H0400) from occasionally incontinent to frequently or always incontinent or from frequently incontinent to always incontinent. Residents meet the definition of a worsened case of bowel incontinence if any of the following are true:

- Level at prior assessment (H0400 = [1]); Level at target assessment (H0400 = [2, 3]) or
- Level at prior assessment (H0400 = [2]); Level at target assessment (H0400 = [3]).

CONDITION C:

A new case of bladder incontinence is defined as an increase in one or more coding points on the bladder continence item (H0300) from always continent or occasionally incontinent to frequently or always incontinent. Residents meet the definition of a new case of bladder incontinence if the following is true:

- Level at prior assessment (H0300 = [0, 1]); Level at target assessment (H0300 = [2, 3]).

CONDITION D:

A worsened case of bladder incontinence is defined as an increase in one coding point on the bladder continence item (H0300) from frequently incontinent to always incontinent. Residents meet the definition of a worsened case of bladder incontinence if the following is true:

- Level at prior assessment (H0300 = [2]); Level at target assessment (H0300 = [3]).

Measure Specifications Continued

Denominator

All long-stay residents with a selected target and prior assessment, except those with exclusions.

Exclusions

1. Target assessment is an admission assessment (A0310A = [01]) or a PPS 5-Day assessment (A0310B = [01]).
2. Resident is not in numerator and H0300 = [-] or H0400 = [-] on the prior assessment or on the target assessment.
3. Resident is comatose (B0100 = [1]) or comatose status is missing (B0100 = [-]) on the prior assessment, or on the target assessment.
4. Resident has an indwelling catheter (H0100A = [1]) or indwelling catheter status is missing (H0100A = [-]) on the prior assessment, or on the target assessment.
5. Resident has an ostomy (H0100C = [1]) or ostomy status is missing (H0100C = [-]) on the prior assessment, or on the target assessment.
6. No prior assessment is available to assess prior function.
7. Prior or target assessments with dates before 10/01/2023.

Covariates

Covariates used to risk-adjust this measure include:

1. Severe cognitive impairment on target assessment.
   - 1.1 Covariate = [1] if C1000 = [3] ***and*** C0700 = [1] ***or*** BIMS summary score C0500 [≤ 07].
   - 1.2 Covariate = [0] if C1000 = [0, 1, 2, -, ^] ***or*** C0700 = [0] ***and*** C0500 [> 07, 99].
2. Sit to Lying on prior assessment.[28]
   - 2.1 Covariate = [1] if GG0170B= [01, 07, 09, 10, 88]
   - 2.2 Covariate = [0] if GG0170B = [02, 03, 04, 05, 06, -]
3. Sit to Stand on prior assessment.[28]
   - 3.1 Covariate = [1] if GG0170D = [01, 07, 09, 10, 88]
   - 3.2 Covariate = [0] if GG0170D = [02, 03, 04, 05, 06, -]

[28] For all GG items:
If A0310A = [01] ***or*** A0310B=[01], use Admission items (e.g. GG0170B1).
If A0310F = [10, 11] ***or*** A0310H = [1], use Discharge items (e.g. GG0170B3).
If A0310A = [02, 03, 04, 05, 06] ***and*** A0310B = [99], ***or*** A0310B = [08], use OBRA/Interim items (e.g. GG0170B5).

Covariates Continued
4. Walk 10 Feet or Wheel 50 Feet with Two Turns on prior assessment, depending on the resident's wheelchair use.[28] For residents who do not use a wheelchair: 4.1 Covariate = [1] if GG0170Q = [0] ***and*** GG0170I = [01, 07, 09, 10, 88] 4.2 Covariate = [0] if GG0170Q = [0] For residents who use a wheelchair: 4.3 Covariate = [1] if GG0170Q = [1] ***and*** GG0170R = [01, 07, 09, 10, 88] 4.4 Covariate = [0] if GG0170Q = [1] ***and*** GG0170R = [02, 03, 04, 05, 06, -] 5. Covariates in 2-4 are missing if no prior assessment is available.

Table 2-32
Prevalence of Falls (LS)
(CMS ID: N032.02) (CMIT Measure ID: None)[29]

Measure Description
This measure reports the percentage of long-stay residents who have had a fall during their episode of care.
Measure Specifications
Numerator Long-stay residents with one or more look-back assessments that indicate the occurrence of a fall (J1800 = [1]). ***Denominator*** All long-stay nursing home residents with one or more look-back scan assessments except those with exclusions. ***Exclusions*** Resident is excluded if the following is true for all of the look-back scan assessments: 1. The occurrence of falls was not assessed (J1800 = [-]).
Covariates
Not applicable.

[29] This measure is a state surveyor measure, and is not part of NHQI. As such, it is not reported on Care Compare and is only available on the iQIES QM reports.

Table 2-33
Prevalence of Antianxiety/Hypnotic Use (LS)
(CMS ID: N033.03) (CMIT Measure ID: None)[30]

Measure Description

This measure reports the percentage of long-stay residents who are receiving antianxiety medications or hypnotics but do not have evidence of psychotic or related conditions in the target period.

Measure Specifications

Numerator

Long-stay residents with a selected target assessment where any of the following conditions are true:

1. For assessments with target dates on or after 10/01/2023.[31]
    1.1. Antianxiety medications received (N0415B1 = [1]), ***or***
    1.2. Hypnotic medications received (N0415D1 = [1]).

Denominator

Long-stay residents with a selected target assessment, except those with exclusions.

Exclusions

1. The resident did not qualify for the numerator and ***any*** of the following is true:
    1.1. For assessments with target dates on or after 10/01/2023: (N0415B1 = [-] ***or*** N0415D1 = [-]).[31]
2. **Any** of the following related conditions are present on the target assessment (unless otherwise indicated):
    2.1. Schizophrenia (I6000 = [1]).
    2.2. Psychotic disorder (I5950 = [1]).
    2.3. Bipolar Disorder (I5900 = [1]).
    2.4. Tourette's syndrome (I5350 = [1]).
    2.5. Tourette's syndrome (I5350 = [1]) on the prior assessment if this item is not active on the target assessment and if a prior assessment is available.
    2.6. Huntington's disease (I5250 = [1]).
    2.7. Hallucinations (E0100A = [1]).

[30] This measure is a state surveyor measure, and is not part of NHQI. As such, it is not reported on Care Compare and is only available on the iQIES QM reports.
[31] For assessments with target dates before 10/01/2023, please refer to the MDS 3.0 Quality Measures User's Manual Version 15.

Measure Specifications Continued
2.8. Delusions (E0100B = [1]). 2.9. Anxiety disorder (I5700 = [1]). 2.10. Post-traumatic stress disorder (I6100 = [1]). 2.11. Post-traumatic stress disorder (I6100 = [1]) on the prior assessment if this item is not active on the target assessment and if a prior assessment is available
Covariates
Not applicable.

Table 2-34
Prevalence of Behavior Symptoms Affecting Others (LS)
(CMS ID: N034.02) (CMIT Measure ID: None)[32]

Measure Description

This measure reports the percentage of long-stay residents who have behavior symptoms that affect others during the target period.

Measure Specifications

Numerator

Long-stay residents with a selected target assessment where ***any*** of the following conditions are true:

1. The presence of physical behavioral symptoms directed towards others (E0200A = [1, 2, 3]), ***or***
2. The presence of verbal behavioral symptoms directed towards others (E0200B = [1, 2, 3]), ***or***
3. The presence of other behavioral symptoms not directed towards others (E0200C = [1, 2, 3]), ***or***
4. Rejection of care (E0800 = [1, 2, 3]), ***or***
5. Wandering (E0900 = [1, 2, 3]).

Denominator

All residents with a selected target assessment, except those with exclusions.

Exclusions

Resident is not in numerator and ***any*** of the following is true:

1. The target assessment is a discharge (A0310F = [10, 11].
2. E0200A is equal to [-, ^].
3. E0200B is equal to [-, ^].
4. E0200C is equal to [-, ^].
5. E0800 is equal to [-, ^].
6. E0900 is equal to [-, ^].

Covariates

Not applicable.

[32] This measure is a state surveyor measure, and is not part of NHQI. As such, it is not reported on Care Compare and is only available on the iQIES QM reports.

Chapter 3
Quality Measures (QM) Technical Details

Section 1: Introduction

This chapter presents technical details regarding the calculation of the nursing home quality measures (QMs), including the methodology used for risk adjustment.

Overview of QM Calculations

The QMs are created from counts of nursing facility long stay residents or short stay residents who have certain conditions or problems (e.g., falls resulting in major injury). For example, facility-level scores for the long stay falls QM are computed by: 1) counting residents in the facility who had a fall resulting in major injury and 2) computing the percent of residents in the facility who had valid MDS data and who experienced such a fall. The detailed logic for defining the resident-level outcomes for each QM is presented in the QM Sample and Record Selection Methodology section and in the Quality Measure Logic Specifications section of this manual. This logic is listed under the "Numerator" entry for each QM.

A Note on Risk Adjustment

Risk adjustment refines raw QM scores to better reflect the prevalence of problems that facilities should be able to address. Two complementary approaches to risk adjustment are applied to the QMs.

One approach involves exclusion of residents whose outcomes are not under nursing facility control (e.g., outcome is evidenced on admission to the facility) or the outcome may be unavoidable (e.g., the resident has end-stage disease or is comatose). All of the QMs, except the vaccination LS pneumococcal vaccination QMs, are shaped by one or more exclusions. For each QM, the prevalence of the outcome across all residents in a nursing facility, after exclusions, is the *facility-level observed QM score*.

A second approach involves adjusting QM scores directly, using logistic regression. This method of adjustment employs *resident-level covariates* that are found to increase the risks of an outcome. Detailed specifications for resident-level covariates are presented in the Risk-Adjustment Appendix File which can be accessed on the Nursing Home Quality Initiative website. For more information on the Risk-Adjustment Appendix File see Section 5 of this chapter. This approach to risk-adjustment involves the following steps:

- First, resident-level covariates were used in a logistic regression model to calculate a *resident-level expected QM score* (the probability that the resident will evidence the outcome, given the presence or absence of characteristics measured by the covariates). Section 3 of this chapter presents the details for calculating expected scores for residents.
- Then, an average of all resident-level expected QM scores for the nursing facility was calculated to create a *facility-level expected QM score.*
- The final *facility-level adjusted QM score* was based on a calculation which combines the *facility-level expected score* and the *facility-level observed score*. The details for calculating facility-level adjusted scores are presented in Section 4 of this chapter. The parameters used for each release of the QMs are presented in the Risk-Adjustment Appendix File.

Only six QMs are adjusted using resident level covariates for public reporting:

- S038.02: Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury
- S042.01: Discharge Function Score
- N026.03: Percent of Residents Who Have/Had a Catheter Inserted and Left in Their Bladder (Long Stay)
- N035.04: Percent of Residents Whose Ability to Move Independently Worsened (Long Stay)
- N045.01: Percent of Residents with Pressure Ulcers (Long Stay)
- N046.01: Percent of Residents With New or Worsened Bowel or Bladder Incontinence (Long Stay).

The remaining QMs are not adjusted using resident-level covariates. For these measures, facility-level observed QM scores are reported.

Section 2: Steps Used in National QM Calculation

Introduction

This section outlines the processing steps used to calculate QMs. The description below uses Q1 2019 as the target period. The dates associated with these steps would be updated, as appropriate, for subsequent quarterly releases of the QMs. It is important to note two items that recurred throughout the process:

Every step in file construction and QM calculation proceeded in parallel for two samples of residents and facilities: a "Long stay" (LS) sample and a "Short stay" (SS) sample.

- Two "target periods" were defined:
    - a "Current Period" which was one quarter, Q1 2019, for LS residents and two quarters, Q4 2018 and Q1 2019, for SS patients. Data from the current periods were used as the target period for final QM reporting;
    - a "Current Year", Q2 2018 through Q1 2019, of data were used to estimate logistic regressions for risk adjustment.

Processing Steps:

1. ***MDS Selection.*** All MDS records for U.S. nursing facilities in Q2 2018 through Q1 2019 were selected.

2. ***Episode Creation.*** Using the definitions contained elsewhere in this document, episodes were created from the available data. Each episode, which may include one or more interruptions, indicated by Interrupted Stay (A0310G1 = [1]), was classified as either long or short stay depending upon the number of cumulative days in the facility. Only the latest episode was retained for each resident.

3. ***Sampling for LS QMs.*** Nursing facilities and residents were sampled to provide data for LS QM and covariate calculations.

    a. "Current Period" LS resident sample: residents were included in this sample if they had a long stay episode that ended within the last quarter of the target period (i.e., Q1 2019).

    b. "Current Year" LS resident sample: residents were included in this sample if they had a long stay episode in the target period (Q2 2018 through Q1 2019).

    c. "Influenza Season" LS resident sample: includes residents with an influenza vaccination target assessment for the most recently completed influenza season, which begins on July 1 of a given year and ends on June 30 of the subsequent year. Only sampled once a year for the annual calculation of the influenza vaccination QMs, which occurs after the most recent influenza season has been completed (i.e., after the end of June).

4. ***Sampling for SS QMs.*** Nursing facilities and residents were sampled to provide data for SS QM and covariate calculations.

    a. "Current Period" SS resident sample: residents were included in this sample if they had a short stay episode that ended within the last two quarters of the target period (i.e., Q4 2018 and Q1 2019).

    b. "Current Year" SS resident sample: residents were included in this sample if they had a short stay episode in the target period (Q2 2018 through Q1 2019).

    c. "Influenza Season" SS resident sample: includes residents with an influenza vaccination target assessment for the most recently completed influenza season, which begins on July 1 of a given year and ends on June 30 of the subsequent year. Only sampled once a year for the annual calculation of the influenza vaccination QMs, which occurs after the most recent influenza season has been completed (i.e., after the end of June).

5. ***Resident-level QM Calculation Files.*** At this point, resident-level QM calculation files were created, separately for each LS resident sample and each SS resident sample, using the specified target, prior, initial, and influenza vaccination assessments for each resident record as appropriate.

6. ***Resident-level QM and Covariate Calculation Files.*** Next, resident-level QM scores were calculated (and covariate values were calculated for the risk-adjusted QMs), separately for each LS resident and SS resident.

    a. Resident-level QM calculation (all QMs):

        i. Resident exclusions: For each QM, excluded residents were assigned a missing value for that QM. Residents with missing covariate values were also assigned a missing value for that QM.

        ii. QM values: does the resident "trigger" the QM?

            1. If "Yes", then store a value of 1 for that QM in the resident-level QM calculation record appropriate to that resident for a sample.

            2. If "No", then store a value of 0 for that QM in the resident-level QM calculation record appropriate to that resident for a sample.

    b. Resident-level covariate calculation (risk-adjusted QMs):

        i. Resident exclusions: For each QM, excluded residents were assigned a missing value for that QM. Residents with missing covariate values were also assigned a missing value for that QM.

        ii. Covariate: does the resident "trigger" the covariate?

            1. If "Yes", then store a value of 1 for that covariate in the resident-level QM calculation record appropriate to that resident for a sample.

            2. If "No", then store a value of 0 for that covariate in the resident-level QM calculation record appropriate to that resident for a sample.

7. ***Logistic Regressions.*** With the resident-level files complete, and all relevant exclusions applied, logistic regressions for the risk-adjusted QMs were estimated using the Current Year LS and SS samples (Q2 2018 through Q1 2019).

    a. Input: LS or SS resident-level file.

    b. Dependent variable: was the QM triggered? (yes = 1, no = 0).

    c. Predictors: resident-level covariates.

    d. Calculation of logistic regressions: (See Section 3 of this chapter).

    e. Output values: logistic regression constant term and resident-level covariate coefficients for each of the risk-adjusted QMs. The resulting values are given in the Risk Adjustment Appendix File.

    The logistic regression results calculated for Q1 2019 will remain in effect for QM calculation in subsequent quarters. Recalculation may occur sometime in the future if deemed appropriate.

8. ***Resident-level Expected QM Scores.*** For the QMs that were risk adjusted, resident-level expected QM scores were calculated for each resident for the Current Period LS and SS samples. (See Section 3 for calculation formulas).

    a. Input: logistic regression constant term and resident-level covariate coefficients from the previous step for each adjusted QM.

    b. Output values: resident-level expected QM scores for each resident, for each of the risk-adjusted QMs.

9. ***National Mean QMs.*** National mean observed QMs were needed for calculating the facility-level adjusted QM scores below. The overall national mean observed QM scores for the Current Period LS and SS samples were calculated, for each risk adjusted QM:

    a. Numerator: for each QM, count the total number or residents that triggered the QM and sum for the nation.

    b. Denominator: for each QM, count the total number of residents retained after exclusions and sum for the nation. Note that the sample will include only those residents with non-missing data for the component covariates.

    c. Overall national mean observed QM score: divide the numerator by the denominator.

10. ***Facility-level Observed QM Scores.*** For all QMs, the facility-level observed QM scores were calculated for the Current Period LS and SS samples – for the QMs that were not risk adjusted, these are the measures that will be publicly reported.

    a. Numerator: for each QM, count the total number of residents who triggered the QM in each facility and sum for the nursing facility.

b. Denominator: for each QM, count the total number of residents retained after exclusions for each facility and sum for the nursing facility. Note that the sample will include only those residents with non-missing data for the component covariates.

c. Facility-level observed QM scores: divide the numerator by the denominator for each QM and nursing facility.

11. ***Facility-level Expected QM Scores.*** For the risk-adjusted QMs, the facility-level expected QM scores are calculated for the Current Period LS and SS samples. This is done by averaging the resident-level expected QM scores for each QM within each nursing facility. Note that the sample will include only those residents with non-missing data for the component covariates.

12. ***Facility-level Adjusted QM Scores.*** Finally, for the risk-adjusted QMs, the facility-level adjusted QM scores were calculated for the Current Period LS and SS samples.

    a. Input for each of the risk-adjusted QMs:
        i. Facility-level observed QM scores
        ii. Facility-level expected QM scores
        iii. National mean observed QM scores
    b. Calculation: (See Section 4 for calculation formulas)
    c. Output: Facility-level adjusted QM scores for the four risk-adjusted QMs

13. ***Final Facility-level Output File.*** The final facility-level output files for the Current Period LS and SS QMs contained the following:

    a. For all QMs:
        i. Facility numerator counts
        ii. Facility denominator counts
        iii. Facility-level observed QM scores (publicly reported for the unadjusted QMs)
    b. For the risk-adjusted QMs: Facility-level adjusted QM scores (publicly reported scores)

Section 3: Calculation of the Expected QM Score

For the QMs adjusted with resident-level covariates, the resident-level expected QM score was calculated as an intermediate step to obtaining an adjusted QM score for the facility. This section describes the technical details referred to in Section 2 of this chapter.

Calculating Resident-level Expected QM Scores

The resident-level expected score for a QM is an estimate of the risk that a resident will trigger the QM. This estimate is based on consideration of the resident-level covariates associated with the QM.

For each of the risk-adjusted QMs, a resident-level logistic regression was estimated. Data came from the short stay and long stay samples described in the prior section of this appendix. The resident-level observed QM score was the dependent variable. The predictor variables were one or more resident-level covariates associated with the QM. Calculation of the QM and covariate scores is described in Section 2 (Step 5) of this chapter.

Each logistic regression had the following form:

$$[1]\ \text{QM triggered (yes} = 1; \text{no} = 0) = \ B_0 + B_1 * COV_A + B_2 * COV_B + \cdots + B_N * COV_N$$

where B_0 is the logistic regression constant, B_1 is the logistic regression coefficient for the first covariate, COV_A is the resident-level score for the first covariate, B_2 is the logistic regression coefficient for the second covariate (where applicable), and COV_B is the resident-level score for the second covariate (where applicable), and so on.

Each resident's expected QM score could then be calculated with the following formula:

$$[2]\ \text{Resident-level expected QM Score} = \frac{1}{[1 + \ e^{-X}]}$$

where e is the base of natural logarithms and $\mathbf{X}$ is a linear combination of the constant and the logistic regression coefficients times the covariate scores (from Formula [1], above). A covariate score will be 1 if the covariate is triggered for that resident, and 0 if not.

As an example, consider the actual calculation used for the expected score for the LS "Percent of residents who have/had a catheter inserted and left in their bladder" QM (N026.03). The covariates for that QM are indicators of bowel incontinence and pressure ulcers at stages II – IV on the prior assessment. The equation used for this QM is:

$$[3]\ N026.03 = \frac{1}{[1 + e^{-(B_0 + B_1 * \text{BowInc} + B_2 * \text{PresUlcer})}]}$$

where B_0 is the logistic regression constant, B_1 is the logistic regression coefficient for BowInc, the resident-level covariate indicating bowel incontinence, and B_2 is the logistic regression coefficient for PresUlcer, the resident-level covariate indicating pressure ulcers at stages II – IV.

The N026.03 score for a resident who triggers the bowel incontinence and pressure ulcers at stages II – IV covariates (covariate scores = [1]) is expected to be:

$$[4]\ 0.1359 = \frac{1}{[1 + e^{-(-4.354 + 0.4475 * 1 + 2.1378 * 1)}]}$$

For a resident who does not trigger the bowel incontinence or pressure ulcers at stages II – IV covariates (covariate scores = [0]), the N026.03 score is expected to be:

$$[5]\ 0.0117 = \frac{1}{[1 + e^{-(-4.354 + 0.4475 * 0 + 2.1378 * 0)}]}$$

Thus, a resident who is bowel incontinent and has pressure ulcers at stages II – IV (i.e. covariates = [1]) is over ten times as likely to report having a catheter inserted and left in their bladder (13.59 percent) compared to a resident who is not bowel incontinent and does not have pressure ulcers at stages II – IV (1.17 percent).

For a resident who triggers only the bowel incontinence covariate (covariate score = [1]) and not the pressure ulcers at stages II – IV covariate (covariate score = [0]), the N026.03 score is expected to be:

$$[6]\ 0.0182 = \frac{1}{[1 + e^{-(-4.354 + 0.4475 * 1 + 2.1378 * 0)}]}$$

For a resident who does not trigger the bowel incontinence covariate (covariate score = [0]) and triggers only the pressure ulcers at stages II – IV covariate (covariate score = [1]), the N026.03 score is expected to be:

$$[7]\ 0.0913 = \frac{1}{[1 + e^{-(-4.354+0.4475*0+2.1378*1)}]}$$

Thus, a resident who has pressure ulcers at stages II – IV (i.e. covariates = [1]) is about five times as likely to report having a catheter inserted and left in their bladder (9.13 percent) compared to a resident who is bowel incontinent (1.82 percent). The parameters used for calculating the resident-level expected QM scores are presented in the "Catheter" tab of the Risk-Adjustment Appendix File.

Calculating Facility-level Expected QM Scores

Once an expected QM score has been calculated for all residents at risk, the facility-level expected QM score is simply the average of all resident-level scores for each of the risk-adjusted QMs.

Section 4: Calculation of the Adjusted QM Score

The risk-adjusted QM score is a facility-level QM score adjusted for the specific risk for that QM in the nursing facility. The risk-adjusted QM score can be thought of as an estimate of what the nursing facility's QM rate would be if the facility had residents with average risk.

The facility-level adjusted score is calculated using the following scores:

- The facility-level observed QM score,
- The facility-level average expected QM score, and
- The national average observed QM score.

The actual calculation of the adjusted score uses the following equation:

$$[8]\ \text{Adj} = \frac{1}{[1 + e^{-y}]}$$

where

Adj is the facility-level adjusted QM score, and

$$y = \left(\text{Ln}\left(\frac{\text{Obs}}{1 - \text{Obs}}\right) - \text{Ln}\left(\frac{\text{Exp}}{1 - \text{Exp}}\right) + \text{Ln}\left(\frac{\text{Nat}}{1 - \text{Nat}}\right)\right)$$

Obs is the facility-level observed QM rate,
Exp is the facility-level expected QM rate,
Nat is the national observed QM rate, and
Ln indicates a natural logarithm.
e is the base of natural logarithms

Note that the adjusted QM rate (Adj) is calculated differently in two special cases:

1. When Obs equals 0.00, then Adj is set to 0.00 (without using the equation).
2. When Obs equals 1.00, then Adj is set to 1.00 (without using the equation).

The adjusted QM score equation will produce adjusted scores in the range of 0 to 1. These adjusted scores can then be converted to percentages for ease of interpretation.

These adjusted score calculations are applied to QMs that use expected scores based on resident-level covariates (See Section 3 of this chapter). The national average observed QM rates, required for these calculations are presented in the Risk-Adjustment Appendix File.

Section 5: Risk-Adjustment Appendix Overview

The intercept and logistic regression coefficient values used in the risk adjustment calculations that were applied to the risk-adjusted QMs are available in the Risk-Adjustment Appendix File, which can be accessed on the NHQI website. This Risk-Adjustment Appendix File contains current and historical intercept and coefficient values and the risk-adjustment schedule including applicable discharge dates for each update to the intercept and coefficient values.

Excel Worksheets in the Risk-Adjustment Appendix File:

Overview*:* Brief description of the document and its content.

Schedule*:* The risk-adjustment schedule for each quality measure.

- *Quality Measure Name*: Full measure name as referenced throughout this MDS 3.0 Quality Measures User's Manual.
- *Measure Reference Name:* Abbreviated name for the quality measure.
- *Risk-Adjustment Update ID:* Number assigned to the initial and subsequent updates of the coefficient and intercept values for a unique risk-adjusted quality measure.
- *QM User's Manual Specification Version:* Number assigned to the initial and subsequent versions of the MDS 3.0 Quality Measures User's Manual, located on the title page.
- *QM User's Manual Specification Posting Date:* Month and year of the MDS 3.0 Quality Measures User's Manual posting on the Nursing Home Quality Initiative website.
- *Measure Calculation Application Dates:* Target assessment dates associated with the intercept and coefficient values for each Risk-Adjustment Update ID.

National Average: This tab provides a national average observed score for each Risk-Adjustment Update ID to be used for applicable risk-adjusted quality measures. Values are provided because there is limited public accessibility to national assessment data. Please note that, depending on the reporting period and time of calculation, the national average observed score used in the iQIES QM Reports, Provider Preview Reports, and on public display on the Compare Website may vary from the national average observed score provided by the Risk-Adjustment Appendix File.

Quality Measure Specific Tabs*:* Lists each covariate and its associated coefficient value for each risk-adjustment update ID.

Chapter 4
Episode and Stay Determination Logic

Introduction

Several CMS applications are based upon the identification of stays and episodes using MDS 3.0 data. This chapter provides definitions and detailed logic that can be used by these applications.

This chapter begins with definitions of key terms and concepts. It then explains how stays and episodes are identified in a well-defined assessment data stream (i.e., when all assessment completion and submission rules are followed). It concludes with detailed logic that handles exceptional cases (e.g., missing entry or discharge records).

Definitions

An episode consists of one or more stays, and a stay is the period of time between a resident's entry into a facility and either (a) a discharge, or (b) the end of the target period, whichever comes first. A stay may include one or more interruptions lasting 3 calendar days or less. Because an episode is built from a set of one or more stays, the episode can be identified if the stays have been built properly. Therefore, this section will describe how to build stays.

Three properties of each stay must be determined:

- The starting date.
- The ending date.
- The stay type (admission or reentry).

The starting date is the date the resident entered the facility (either for the first time or after a previous discharge). The ending date is either (a) the discharge date, or (b) the end of the target period, whichever is earlier. The stay type is defined as follows:

Admission. An admission occurs when ***any one*** of the following conditions apply:

- The resident has never been admitted to this facility before; ***or***
- The resident has been in this facility previously and was discharged return not anticipated; ***or***
- The resident has been in this facility previously and was discharged return anticipated and did not return within 30 days of discharge.

Reentry. A reentry occurs when ***both of the following*** conditions apply:

- The resident has a discharge return anticipated, ***and***
- The resident returned to the facility within 30 days of discharge.

Rules for a Well-Constructed Data Stream

In a well-constructed data stream (where all records are submitted and correctly coded), the following logic will correctly determine the starting date, ending date, and type for each stay. This logic assumes that the resident's records have been sorted in reverse chronological order (see the

end of this section for sorting details). Stays and episodes must be contained within a single facility, so the following logic applies to the records for a single facility.

1. If the first (latest) record that is on or before the end of the reporting period is a discharge (A0310F = [10, 11, 12]), then the **stay end date** is equal to the discharge date (A2000). Otherwise, the stay is ongoing and the **stay end date** is equal to the end of the reporting period.

2. If the **stay end date** of the resident's latest stay chronologically precedes the beginning of the target period [33], then the episode is not included in the sample. If the stay is ongoing or if the discharge occurs within the target period, then continue.

3. Scan backwards chronologically until an entry record (A0310F = [01]) is encountered. The **stay start date** is equal to the entry date (A1600) on the entry record.

4. Look at the chronologically preceding record. The stay type is defined as follows:

    4.1. If a chronologically preceding record is found and if it is a discharge return anticipated (A0310F = [11]) ***and*** if the discharge date of the discharge record is within 30 days of the stay start date defined above, then the stay type is a reentry. Otherwise, the stay type is an admission. Admissions occur under ***any*** of the following conditions:

        4.1.1. No chronologically preceding record is found.

        4.1.2. A chronologically preceding record is found and it is a discharge return not anticipated (A0310F = [10]).

        4.1.3. A chronologically preceding record is found and it is a discharge return anticipated (A0310F = [11]) and the discharge date is 31 days or more before the stay start date.

5. If the stay was classified as an admission stay, then scanning would stop because this would mark the beginning of the episode. If the stay was a reentry, then the scan logic would continue with the stay that ended with the record found in Step #4 (if any). Stays would continue to be scanned and classified until one of the following conditions occurred:

    5.1. An admission stay was identified, ***or***

    5.2. No more records were found for the same resident and facility, ***or***

    5.3. An application-specific rule was met. For example, for short stay Quality Measures (QMs), processing stops when the number of cumulative days in the facility (CDIF) exceeded 100 days (CDIF is the sum of the number of days within each of the stays that are contained in the episode).

[33] The span of time that defines the application's reporting period (e.g., a calendar quarter).

Handling Missing Records

Exceptions to the rules will occur when entry and/or discharge records are missing from a resident's data stream. When this occurs, starting and/or ending dates must be imputed and the stay type must be determined as accurately as possible. The following rules will describe how these situations are handling. This discussion will refer to three types of records:

- Entry record (where A0310F = [01]).
- Discharge record (where A0310F = [10, 11, 12]).
- A normal assessment (where A0310F = [99]).

Missing Entry Records

In the scan logic described above, if a normal assessment is immediately preceded chronologically by a discharge record or if there is no chronologically preceding record, then an entry record is missing. In this case the stay start date and type must be imputed. The imputation rules are as explained below. In these rules, the assessment that is preceded chronologically by a discharge or that has no preceding record is termed the "problem assessment".

The table below is used to impute the entry date when there is a missing entry record.

Table 4-1: Possible Entry Dates When Entry Record is Missing

Type of Problem Assessment	Reasons for Assessment	Possible Entry Dates	
		Earliest Date	Latest Date
PPS 5-Day	A0310B = [01]	A2300 - 7 days	A2300
OBRA Admission	A0310A = [01]	A2300 - 13 days	A2300
Other OBRA	A0310A = [02,03,04,05,06]	A2300 - 106 days	A2300
Discharge	A0310F = [10,11,12]	A1600	A1600

The table above lists various types of problem assessments and shows the earliest and latest possible entry dates that are associated with each one. The following steps explain how to use this table to impute an entry date and stay type when a problem assessment is chronologically preceded by a discharge assessment or where no record precedes the problem assessment.

1. Use the table above to classify the problem assessment. Classify the assessment using the reason for assessment items indicated in the table. If the problem assessment qualifies for more than one of the rows in the table, use the first (top-most) row for which it qualifies.

2. Determine the earliest and latest entry date associated with the selected row.

3. Determine the entry date (A1600) that is reported on the problem assessment.

4. Determine a tentative entry date, as follows:

4.1. If the entry date (A1600) on the problem assessment falls between the earliest and latest entry date in the table, set the tentative entry date equal to this value of A1600.

4.2. Otherwise, set the tentative entry date equal to the date that is listed in the "earliest date" column of the table.

5. Determine a final imputed entry date, as follows:

5.1. If the problem assessment is chronologically preceded by a discharge record, add one day to the discharge date (A2000) on the discharge record and compare the resulting date with the tentative entry date (A1600 from the assessment). Set the final imputed entry date equal to the later of these two dates.

5.2. If there is no record that chronologically precedes the problem assessment, then set the final imputed entry date equal to the tentative entry date.

6. Determine the stay type, as follows:

6.1. If the problem assessment is chronologically preceded by a discharge record, determine the stay type using the normal logic described above.

6.2. If there is no record that chronologically precedes the problem assessment, then set the stay type as an admission stay.

Missing Discharge Records

In the scan logic described above, if an entry record is immediately preceded chronologically by a normal assessment, then a discharge record is missing. In this case, the end date of the chronologically preceding stay and the stay type of the current stay must be imputed. The imputation rules are as follows. In these rules, the assessment that chronologically precedes the entry record is termed the "ending index assessment". The "current stay" is the stay that begins with the entry record. The "chronologically preceding stay" is the stay that contains the ending index assessment.

1. The end date of the chronologically preceding stay is set equal to the assessment reference date that is recorded on the ending index assessment.

2. Set the stay type of the current stay as follows:

2.1. Determine the value of A1700 that is recorded on the entry record of the current stay.

2.2. If A1700 is equal to [1] (admission), then set the stay type for the current stay to "admission".

2.3. If A1700 is equal to [2] (reentry), then set the stay type for the current stay to "reentry".

Multiple Entry Records

If there are two or more entry records which are adjacent to one another in the resident's data stream, keep the latest entry record and ignore the earlier adjacent entry record(s).

Multiple Discharge Records

If there are two or more discharge records which are adjacent to one another in the resident's data stream, keep the latest discharge record and ignore the earlier adjacent discharge record(s).

Identifiers and Sorting Rules

To obtain stays from the records for a given resident and facility, create a resident identifier and a unique facility identifier. The resident identifier is defined as *"'State ID'_'Resident Internal ID'"*, and the unique facility identifier is defined as "'*State ID*'_'*Facility Internal ID'"*, using the following items from the MDS:

- State ID: the 2-digit state abbreviation code
- Facility Internal ID: the facility identification number for SNFs
- Resident Internal ID: the resident identification number assigned by the iQIES system.

Sorting criteria must be applied to handle the case where there is more than one record on a given target date. The exact sorting criteria are as follows:

1. Facility identifier +
2. Resident identifier +
3. Target date (descending) +
4. Record type (descending) +
5. Assessment internal ID (descending)

Note that record type (record_type) is defined as follows:

1. If A0310F = [01] (the record is an entry record), then record_type = [1].
2. Else if A0310F = [99] (the record is not an entry or discharge), then:
   a. If the item subset code[34] is equal to NC (comprehensive assessment), then record_type = [7].
   b. Else if the item subset code is equal to NQ (quarterly assessment), then record_type = [6].
   c. Else if the item subset code is equal to NP (PPS assessment), then record_type = [5].
   d. Else record_type = [2].
3. Else if A0310F = [10] (discharge, return not anticipated), then record_type = [8].
4. Else if A0310F = [11] (discharge, return anticipated), then record_type = [9].

[34] The item subset code is contained in the field ITM_SBST_CD.

5. Else if A0310F = [12] (death in facility), then record_type = [10].

Also note that the assessment internal ID is used as the final tie-breaker on the assumption that records that should be later in the sort sequence will be submitted and processed later than the other records. The record processing timestamp would be a slightly better field to use for this purpose. However, it is available only to users who have direct access to the iQIES database. The assessment internal ID was therefore adopted as a reasonable substitute for the timestamp so that all users would have access to the same sorting fields.

Chapter 5
Specifications for the Facility Characteristics Report

Specifications for Facility Characteristics Report

Record Selection

The Facility Characteristics Report is populated using data from records selected using the standard QM episode and record selection logic as given in the QM User's Manual. The Facility Characteristics measures can be processed with the QM measures. Each Facility Characteristic measure is computed using all residents (both short-stay and long-stay residents).

Most of the Facility Characteristics measures are populated using data from a look-back scan of the assessment records selected for each resident. For each resident, the look-back scan begins with the target assessment selected for QM processing. The resident's records are scanned in reverse chronological order (by ARD) and all data items required for the Facility Characteristics report are populated from data that are available from each assessment. As assessments are scanned, each required item is initially populated with the item value from the target assessment. If the value from the target assessment is a valid (non-missing) value, then the scan for that item stops. If the value for the target assessment is not a valid value (a missing value), then the scan continues with the earlier assessments in reverse chronological order. Once a valid value is found for an item, that value is used for the report (i.e., the value is not changed if additional values are present in earlier records).

A "valid value" is any value that is one of the "normal" responses to an item. Missing non-valid values are:

1. A dash ("-") indicating that the item was not assessed.
2. A caret ("^") indicating that the item was skipped.
3. A null (.) indicating that the item is inactive.

Note that the diagnosis code items (I8000A through I8000J) are not used in the measure specifications below and are therefore not included in the look-back scan.

For each resident, the look-back scan continues until any of the following conditions is satisfied:

- All required items have been populated with valid values, as defined above, ***or***
- All selected records for a resident have been scanned.

Note that scanning stops for a resident as soon as ***either*** of these conditions is satisfied.

Measure Specifications

The definitions in the following table are applied to a look-back scan of the records selected for a resident as described in the prior section on *Record Selection*. Counts of the number of residents within each facility that meet the numerator criteria for each measure below are used as the numerator to produce facility percentages for the report.

The denominator used to produce the facility percentages in the report will vary for different

measures, depending on missing data. If missing data precludes determination of the status for a measure as indicated in the "Exclusions" section, then the resident is excluded from both the numerator and denominator in the facility percentage.

Table 5-1: Facility Characteristics Report Measure Definitions

Measure	Description and Definition[35]
Gender	
Male	**Description:** Resident is included if Item A0800 (Gender) is equal to **1** (Male). Records with dashes (not assessed) in A0800 are excluded from the male/female counts. **Numerator:** A0800 = [1] (Male). **Exclusions:** A0800 missing
Female	**Description:** Resident is included if Item A0800 (Gender) is equal to **2** (Female). Records with dashes (not assessed) in A0800 are excluded from the male/female counts. **Numerator:** A0800 = [2] (Female). **Exclusions:** A0800 missing
Age	
	Calculation of Age, based on Items A0900 (Birth Date) and A2300 (Assessment Reference Date ARD): IF (MONTH(A2300) > MONTH(A0900)) OR (MONTH(A2300) = MONTH(A0900) AND DAY(A2300) >= DAY(A0900)) THEN Age = YEAR(A2300)-YEAR(A0900) ELSE Age = YEAR(A2300)-YEAR(A0900)-1
<25 years old	**Description:** Age less than 25 years old. **Numerator:** Record triggers if age < 25.
25-54 years old	**Description:** Age of 25 through 54 years old. **Numerator:** Record triggers if age ≥ 25 and ≤ 54.
55-64 years old	**Description:** Age of 55 through 64 years old. **Numerator:** Record triggers if age ≥ 55 and ≤ 64.
65-74 years old	**Description:** Age of 65 to 74 years old. **Numerator:** Record triggers if age ≥ 65 and ≤ 74.

(continued)

[35] These definitions reflect new items added in MDS item set v1.18.11, which only apply for qualifying MDS records with target dates on or after 10/01/2023. For target assessments before 10/01/2023, please refer to Table 5-1 of the MDS 3.0 Quality Measures User's Manual Version 15.

Table 5-1: Facility Characteristics Report Measure Definitions (continued)

Measure	Description and Definition[35]
75-84 years old	**Description:** Age of 75 through 84 years old. **Numerator:** Record triggers if age ≥ 75 and ≤ 84.
85+ years old	**Description:** Age of 85 years of age or older. **Numerator:** Record triggers if age ≥ 85.
Ethnicity	
Not of Hispanic, Latino/a, or Spanish origin	**Description:** Resident is included if Item A1005A (No, not of Hispanic, Latino/a, or Spanish origin) is checked. **Numerator:** A1005A is checked (=[1]). **Exclusions:** A1005A missing
Mexican, Mexican American, Chicano/a	**Description:** Resident is included if Item A1005B(Yes, Mexican, Mexican American, Chicano/a) is checked. **Numerator:** A1005B is checked (=[1]). **Exclusions:** A1005B missing
Puerto Rican	**Description:** Resident is included if Item A1005C (Yes, Puerto Rican) is checked. **Numerator:** A1005C is checked (=[1]). **Exclusions:** A1005C missing
Cuban	**Description:** Resident is included if Item A1005D (Yes, Cuban) is checked. **Numerator:** A1005D is checked (=[1]). **Exclusions:** A1005D missing
Another Hispanic, Latino/a, or Spanish origin	**Description:** Resident is included if Item A1005E (Yes, another Hispanic, Latino/a, or Spanish origin) is checked. **Numerator:** A1005E is checked (=[1]). **Exclusions:** A1005E missing

(continued)

Table 5-1: Facility Characteristics Report Measure Definitions (continued)

Measure	Description and Definition[35]
Resident unable to respond	**Description:** Resident is included if Item A1005X (Resident unable to respond) is checked. **Numerator:** A1005X is checked (=[1]). **Exclusions:** A1005X missing
Resident declines to respond	**Description:** Resident is included if Item A1005Y (Resident declines to respond) is checked. **Numerator:** A1005Y is checked (=[1]). **Exclusions:** A1005Y missing
Race	
White	**Description:** Resident is included if Item A1010A (White) is checked. **Numerator:** A1010A is checked (=[1]). **Exclusions:** A1010A missing
Black or African American	**Description:** Resident is included if Item A1010B (Black or African American) is checked. **Numerator:** A1010B is checked (=[1]). **Exclusions:** A1010B missing
American Indian or Alaska Native	**Description:** Resident is included if Item A1010C (American Indian or Alaska Native) is checked. **Numerator:** A1010C is checked (=[1]). **Exclusions:** A1010C missing
Asian Indian	**Description:** Resident is included if Item A1010D (Asian Indian) is checked. **Numerator:** A1010D is checked (=[1]). **Exclusions:** A1010D missing
Chinese	**Description:** Resident is included if Item A1010E (Chinese) is checked. **Numerator:** A1010E is checked (=[1]). **Exclusions:** A1010E missing

(continued)

Table 5-1: Facility Characteristics Report Measure Definitions (continued)

Measure	Description and Definition[35]
Filipino	**Description:** Resident is included if Item A1010F (Filipino) is checked. **Numerator:** A1010F is checked (=[1]). **Exclusions:** A1010F missing
Japanese	**Description:** Resident is included if Item A1010G (Japanese) is checked. **Numerator:** A1010G is checked (=[1]). **Exclusions:** A1010G missing
Korean	**Description:** Resident is included if Item A1010H (Korean) is checked. **Numerator:** A1010H is checked (=[1]). **Exclusions:** A1010H missing
Vietnamese	**Description:** Resident is included if Item A1010I (Vietnamese) is checked. **Numerator:** A1010I is checked (=[1]). **Exclusions:** A1010I missing
Other Asian	**Description:** Resident is included if Item A1010J (Other Asian) is checked. **Numerator:** A1010J is checked (=[1]). **Exclusions:** A1010J missing
Native Hawaiian	**Description:** Resident is included if Item A1010K (Native Hawaiian) is checked. **Numerator:** A1010K is checked (=[1]). **Exclusions:** A1010K missing
Guamanian or Chamorro	**Description:** Resident is included if Item A1010L (Guamian or Chamorro) is checked. **Numerator:** A1010L is checked (=[1]). **Exclusions:** A1010L missing
Samoan	**Description:** Resident is included if Item A1010M (Samoan) is checked. **Numerator:** A1010M is checked (=[1]). **Exclusions:** A1010M missing

(continued)

Table 5-1: Facility Characteristics Report Measure Definitions (continued)

Measure	Description and Definition[35]
Other Pacific Islander	**Description:** Resident is included if Item A1010N (Guamian or Chamorro) is checked. **Numerator:** A1010N is checked (=[1]). **Exclusions:** A1010N missing
Resident unable to respond	**Description:** Resident is included if Item A1010X (Resident unable to respond) is checked. **Numerator:** A1010X is checked (=[1]). **Exclusions:** A1010X missing
Resident declines to respond	**Description:** Resident is included if Item A1010Y (Resident declines to respond) is checked. **Numerator:** A1010Y is checked (=[1]). **Exclusions:** A1010Y missing
None of the above	**Description:** Resident is included if Item A1010Z (None of the above) is checked. **Numerator:** A1010Z is checked (=[1]). **Exclusions:** A1010Z missing
Diagnostic Characteristics	
Psychiatric Diagnosis	**Description:** Resident is included as having a psychiatric diagnosis if any of the following is true: • Any psychiatric mood disorders are checked in items I5700 through I6100, ***or*** • Item I5350 (Tourette's Syndrome) is checked, ***or*** • Item I5250 (Huntington's Disease) is checked. **Numerator:** Any of the following items are checked (= [1]): I5250, I5350, I5700 through I6100. **Exclusions:** No value I5250, I5350, I5700 through I6100 = [1] and ***any*** value I5250, I5350, I5700 through I6100 is missing

(continued)

Table 5-1: Facility Characteristics Report Measure Definitions (continued)

Measure	Description and Definition[35]
Intellectual Disability (ID) (Mental retardation as defined at 483.45(a)) or Developmental Disability (DD)	**Description:** Resident is counted as having ID/DD if ***any*** of the following items are checked (= [1]): • A1550A (Down syndrome). • A1550B (Autism). • A1550C (Epilepsy). • A1550D (Other organic condition related to ID/DD). • A1550E (ID/DD with no organic condition). **Numerator:** A1550A, B, C, D, or E is checked (= [1]). **Exclusions:** No value A1550A, B, C, D, or E = [1] and ***any*** value A1550A, B, C, D, or E missing
Hospice	**Description:** Resident is included if Item O0100K1b (Hospice care) is checked. **Numerator:** O0100K1b is checked (=[1]). **Exclusions:** O0100K1b missing
Prognosis	
Life expectancy of less than 6 months	**Description:** Resident is included if item J1400 (Prognosis) is coded **1** (Yes). **Numerator:** J1400 = [1] (Yes). **Exclusions:** J1400 missing
Discharge Plan	
Discharge planning IS NOT already occurring for the resident to return to the community.	**Description:** Resident is included if Item Q0400A (Discharge Plan) is coded **0** (No). **Numerator:** Q0400A = [0] (No). **Exclusions:** Q0400A missing
Discharge planning IS already occurring for the resident to return to the community.	**Description:** Resident is included if Item Q0400A (Discharge Plan) is coded **1** (Yes). **Numerator:** Q0400A = [1] (Yes). **Exclusions:** Q0400A missing
Referral	
Referral HAS NOT been made to the Local Contact Agency (LCA)	**Description:** Resident is included if Item Q0610 (Referral) is coded **0** (No - Referral has not been made). **Numerator:** Q0610 = [0] (No). **Exclusions:** Q0610 missing

(continued)

Table 5-1: Facility Characteristics Report Measure Definitions (continued)

Measure	Description and Definition[35]
Referral HAS been made to the Local Contact Agency (LCA)	**Description:** Resident is included if Item Q0610 (Referral) is coded **1** (Yes – Referral has been made). **Numerator:** Q0610 = [1] (Yes). **Exclusions:** Q0610 missing
Type of Entry	
Admission	**Description:** Resident is included if Item A1700 (Type of Entry) is coded **1** (Admission). **Numerator:** A1700 = [1] (Admission). **Exclusions:** A1700 missing
Reentry	**Description:** Resident is included if Item A1700 (Type of Entry) is coded **2** (Reentry). **Numerator:** A1700 = [2] (Reentry). **Exclusions:** A1700 missing
Entered Facility From	
Home/Community (private home/apartment, board/care, assisted living, group home, transitional living other residential care arrangements)	**Description:** Resident is included if Item A1805 (Entered From) is coded **01** (Home/Community). **Numerator:** A1805 = [01] (Home/Community). **Exclusions:** A1805 missing
Nursing Home (long-term care facility)	**Description:** Resident is included if Item A1805 (Entered From) is coded **02** (Nursing Home). **Numerator:** A1805 = [02] (Nursing Home). **Exclusions:** A1805 missing
Skilled Nursing Facility (SNF, swing bed)	**Description:** Resident is included if Item A1805 (Entered From) is coded **03** (Skilled Nursing Facility (SNF, swing bed)). **Numerator:** A1805 = [03] (Skilled Nursing Facility (SNF, swing bed)). **Exclusions:** A1805 missing
Short-Term General Hospital (acute hospital, IPPS)	**Description:** Resident is included if Item A1805 (Entered From) is coded **04** (Short-Term General Hospital (acute hospital, IPPS)l). **Numerator:** A1805 = [04] (Short-Term General Hospital (acute hospital, IPPS)). **Exclusions:** A1805 missing

(continued)

Table 5-1: Facility Characteristics Report Measure Definitions (continued)

Measure	Description and Definition[35]
Long-Term Care Hospital (LTCH)	**Description:** Resident is included if Item A1805 (Entered From) is coded **05** (Long-Term Care Hospital (LTCH)). **Numerator:** A1805 = [05] (Long-Term Care Hospital (LTCH)). **Exclusions:** A1805 missing
Inpatient rehabilitation facility (IRF, free standing facility or unit)	**Description:** Resident is included if Item A1805 (Entered From) is coded **06** (Inpatient rehabilitation facility (IRF, free standing facility or unit)).). **Numerator:** A1805 = [06] (Inpatient rehabilitation facility (IRF, free standing facility or unit)). **Exclusions:** A1805 missing
Inpatient Psychiatric Facility (psychiatric hospital or unit)	**Description:** Resident is included if Item A1805 (Entered From) is coded **07** (Inpatient Psychiatric Facility (psychiatric hospital or unit)). **Numerator:** A1805 = [07] (Inpatient Psychiatric Facility (psychiatric hospital or unit)). **Exclusions:** A1805 missing
Intermediate Care Facility (ID/DD facility)	**Description:** Resident is included if Item A1805 (Entered From) is coded **08** (Intermediate Care Facility (ID/DD facility)). **Numerator:** A1805 = [08] (Intermediate Care Facility). **Exclusions:** A1805 missing
Hospice (home/non-institutional)	**Description:** Resident is included if Item A1805 (Entered From) is coded **09** (Hospice (home/non-institutional)). **Numerator:** A1805 = [09] (Hospice (home/non-institutional)). **Exclusions:** A1805 missing
Hospice (institutional facility)	**Description:** Resident is included if Item A1805 (Entered From) is coded **10** (Hospice (institutional facility)). **Numerator:** A1805 = [10] (Hospice (institutional facility)). **Exclusions:** A1805 missing
Critical Access Hospital (CAH)	**Description:** Resident is included if Item A1805 (Entered From) is coded **11** (Critical Access Hospital (CAH)). **Numerator:** A1805 = [11] (Critical Access Hospital (CAH)). **Exclusions:** A1805 missing

(continued)

Table 5-1: Facility Characteristics Report Measure Definitions (continued)

Measure	Description and Definition[35]
Home under care of organized home health service organization.	**Description:** Resident is included if Item A1805 (Entered From) is coded **12** (Home under care of organized home health service organization. **Numerator:** A1805 = [12] (Home under care of organized home health service organization.). **Exclusions:** A1805 missing
Not listed	**Description:** Resident is included if Item A1805 (Entered From) is coded **99** (Not listed). **Numerator:** A1805 = [99] (Not listed). **Exclusions:** A1805 missing

MDS 3.0 Quality Measures USER'S MANUAL

APPENDIX A

Quality Measure Identification Number by CMS Reporting Module

Effective: October 1, 2023

Quality Measure Identification Number by CMS Reporting Module V1.8

The table below documents CMS quality measures (QM) calculated using MDS 3.0 data and reported in a CMS reporting module. A unique CMS identification number (ID) is specified for each QM. The table serves two purposes:

1. The table indicates which QMs are associated with a CMS reporting module.
2. The table documents the CMS ID—the link to QM specification detail in the CMS' *MDS* 3.0 *QM User's Manual*. As various QM specifications are revised, the QM is given a new CMS ID and the older QM logical version (i.e., CMS ID) is retained. This allows for the possibility of a transition period when more than one version of the same QM can be reported simultaneously across reporting modules (e.g., a MDS 3.0 item set update). The CMS Measures Inventory Tool (CMIT) identification number is included for reference.

The following CMS reporting modules are included:

Internet Quality Improvement and Evaluation System (iQIES) Reporting Quality Measure Reports contain quality measure information at the national, state, facility and resident level for a single reporting period. Users are able to specify the reporting time frame. State and National comparison group data are calculated monthly on the first day of the month. Data calculation is delayed by two months in order to allow for submission of late and corrected assessments. Comparison data are not recalculated if assessments with target dates that fall in periods for which comparison group data were already calculated. Quality Measure data are calculated weekly for the assessments accepted into the national database since the previous week's data calculation.

Note: Quality measure reports available to facilities through CMS's iQIES reporting system are also available to State Surveyors.

Care Compare (CC), CMS' website contains quality measure information (as well as other details) for Medicare and Medicaid-certified US nursing homes. (Note: information for those nursing homes reporting less than 20 residents for both short stay and long stay quality measures for the reporting period is not included.). The QM information is updated and posted quarterly. NHC reports the average adjusted QM values across the most recent four quarters.

Five-Star Quality Rating System contains information on health inspections, staffing and quality measures. QMs are updated and posted quarterly. The Five Star module reports the weighted average adjusted QM values across the most recent four quarters.

Provider and Resident Quality Measure Preview Reports, available in the facility's shared folders on CMS' iQIES website, display the quarterly numerator, denominator and reported percent values for each of the publicly reported MDS 3.0 quality measures and also displays the list of residents who triggered one or more of the publicly reported MDS 3.0 Quality Measures. The preview reports allow the provider to see their measure percent values prior to being posted on the Care Compare website. The preview reports indicate the measure values for the most recent quarter (i.e., the QM value is based on a

one quarter look back period). The quality measure data correspond with the Care Compare reporting cycle.

QMs by CMS Reporting Module—Column Headers

Quality Measure Label: A brief definition of the quality measure. The label refers to the one sentence definition of the QM as reported in the MDS 3.0 QM User's Manual. The QM label wording may not be identical across reporting modules. The User should refer to the CMS ID for QM cross-reference among reporting modules.

Short or Long Stay: Refers to the nursing home (NH) population used to calculate the quality measure. The short stay quality measure specifications are based on NH residents whose episode is less than or equal to 100 cumulative days in the nursing home at the end of the target period. The long stay quality measure specifications are based on NH residents whose episode is greater than or equal to 101 cumulative days in the NH at of the end of the target period.

CMS ID: the unique CMS identification number depicted as

S = provider type (N = Nursing Home)
nnn = three-digit QM ID
vv = logic version number for a QM (e.g., 01, 02, 03)

Examples of incrementing the CMS ID:

N123.01 – first logic version of the nursing home measure 123
N123.02– second logic version of nursing home measure 123

CMIT Measure ID: Specifies the Centers for Medicare & Medicaid Services Measures Inventory Tool (CMIT) measure identification number (formerly the measure family ID). The CMIT contains (https://cmit.cms.gov/cmit/#/) detailed measure information, as well as Consensus Based Entity (CBE)-endorsement status. CBE-endorsement status is determined by the CMS CBE, which endorses quality measures through a transparent, consensus-based process that incorporates feedback from diverse groups of stakeholders to foster health care quality improvement. The CMS CBE endorses measures only if they pass a set of measure evaluation criteria. For more information, refer to the document titled CMS CBE Endorsement and Maintenance (https://mmshub.cms.gov/sites/default/files/Blueprint-CMS-CBE-Endorsement-Maintenance.pdf).

Effective Date: Specifies the date the QM was first implemented (i.e., effective).

iQIES: Internet Quality Improvement and Evaluation System (iQIES) Quality Measure reports. For further details, refer to the Report User Manual available in the iQIES application: https://qtso.cms.gov/providers/nursing-home-mdsswing-bed-providers/reference-manuals.

CC: CMS' Care Compare website contains detailed information about all Medicare and Medicaid-certified nursing homes in the US, including quality measures. For further details

refer to the Nursing Home Compare website: https://www.medicare.gov/care-compare/?providerType=NursingHome&redirect=true

Five-Star: CMS' Five-Star Quality Rating System contains information on health inspections, staffing and quality measures. For further details see the Care Compare Five-Star Quality Rating System Technical Users' Guide: https://www.cms.gov/medicare/provider-enrollment-and-certification/certificationandcomplianc/downloads/usersguide.pdf.

Specifications for all CMS ID quality measures are contained in Chapter 2 of this user's manual.

Table A-1: Quality Measures (QMs) by CMS Reporting Module – Short Stay

Quality Measure (QM) Label	CMS ID	CMIT Measure ID	Effective Date	iQIES[36]	CC	Five-Star	Provider Preview
SHORT STAY QMs							
Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury	S038.02	121 (not endorsed)	10/1/20	**YES**	**YES**	**YES**	**YES**
Percent of Residents Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine	N003.03	1189 (CBE-endorsed)	10/1/12	NO	**YES**	NO	**YES**
Percent of Residents Who Received the Seasonal Influenza Vaccine	N004.03	1189 (CBE-endorsed)	10/1/12	NO	NO	NO	**YES**
Percent of Residents Who Were Offered and Declined the Seasonal Influenza Vaccine	N005.03	1189 (CBE-endorsed)	10/1/12	NO	NO	NO	**YES**
Percent of Residents Who Did Not Receive, Due to Medical Contraindication, the Seasonal Influenza Vaccine	N006.03	1189 (CBE-endorsed)	10/1/12	NO	NO	NO	**YES**
Percent of Residents Assessed and Appropriately Given the Pneumococcal Vaccine	N007.02	1125 (endorsement withdrawn)	10/1/12	NO	**YES**	NO	**YES**
Percent of Residents Who Received the Pneumococcal Vaccine	N008.02	1125 (endorsement withdrawn)	10/1/12	NO	NO	NO	**YES**
Percent of Residents Who Were Offered and Declined the Pneumococcal Vaccine	N009.02	1125 (endorsement withdrawn)	10/1/12	NO	NO	NO	**YES**

[36] The quality measure reports available to facilities through iQIES are also available to State Surveyors.

Quality Measure (QM) Label	CMS ID	CMIT Measure ID	Effective Date	iQIES[36]	CC	Five-Star	Provider Preview
SHORT STAY QMs							
Percent of Residents Who Did Not Receive, Due to Medical Contraindication, the Pneumococcal Vaccine	N010.02	1125 (endorsement withdrawn)	10/1/12	NO	NO	NO	**YES**
Percent of Residents Who Newly Received an Antipsychotic Medication	N011.03	1183 (not endorsed)	4/1/12	**YES**	**YES**	**YES**	**YES**
Discharge Function Score	S042.01	1698 (not endorsed)	10/1/23	**YES**	**YES**	**YES**	**YES**

Table A-2: Quality Measures (QMs) by CMS Reporting Module – Long Stay

Quality Measure (QM) Label	CMS ID	CMIT Measure ID	Effective Date	iQIES[37]	CC	Five-Star	Provider Preview
LONG STAY QMs							
Percent of Residents Experiencing One or More Falls with Major Injury	N013.02	520 (CBE-endorsed)	10/1/10	**YES**	**YES**	**YES**	**YES**
Percent of Residents Assessed and Appropriately Given the Seasonal Influenza Vaccine	N016.03	528 (endorsement withdrawn)	10/1/10	NO	**YES**	NO	**YES**
Percent of Residents Who Received the Seasonal Influenza Vaccine	N017.03	528 (endorsement withdrawn)	10/1/10	NO	NO	NO	**YES**
Percent of Residents Who Were Offered and Declined the Seasonal Influenza Vaccine	N018.03	528 (endorsement withdrawn)	10/1/10	NO	NO	NO	**YES**
Percent of Residents Who Did Not Receive, Due to Medical Contraindication, the Seasonal Influenza Vaccine	N019.03	528 (endorsement withdrawn)	10/1/10	NO	NO	NO	**YES**
Percent of Residents Assessed and Appropriately Given the Pneumococcal Vaccine	N020.02	519 (endorsement withdrawn)	10/1/10	NO	**YES**	NO	**YES**
Percent of Residents Who Received the Pneumococcal Vaccine	N021.02	519 (endorsement withdrawn)	10/1/10	NO	NO	NO	**YES**
Percent of Residents Who Were Offered and Declined the Pneumococcal Vaccine	N022.02	519 (endorsement withdrawn)	10/1/10	NO	NO	NO	**YES**

[37] The quality measure reports available to facilities through iQIES are also available to State Surveyors.

Quality Measure (QM) Label	CMS ID	CMIT Measure ID	Effective Date	iQIES[37]	CC	Five-Star	Provider Preview
Percent of Residents Who Did Not Receive, Due to Medical Contraindication, the Pneumococcal Vaccine	N023.02	519 (endorsement withdrawn)	10/1/10	NO	NO	NO	**YES**
Percent of Residents with a Urinary Tract Infection	N024.02	532 (CBE-endorsed)	10/1/10	**YES**	**YES**	**YES**	**YES**
Percent of Residents Who Have/Had a Catheter Inserted and Left in Their Bladder	N026.03	523 (CBE-endorsed)	10/1/10	**YES**	**YES**	**YES**	**YES**
Percent of Residents Who Were Physically Restrained	N027.02	529 (CBE-endorsed)	10/1/10	**YES**	**YES**	NO	**YES**
Percent of Residents Whose Need for Help with Activities of Daily Living Has Increased	N028.03	531 (endorsement withdrawn)	10/1/10	**YES**	**YES**	**YES**	**YES**
Percent of Residents Who Lose Too Much Weight	N029.02	524 (CBE-endorsed)	10/1/10	**YES**	**YES**	NO	**YES**
Percent of Residents Who Have Depressive Symptoms	N030.03	522 (endorsement withdrawn)	10/1/10	**YES**	**YES**	NO	**YES**
Percent of Residents Who Received an Antipsychotic Medication	N031.04	526 (not endorsed)	4/1/12	**YES**	**YES**	**YES**	**YES**
Percent of Residents Whose Ability to Walk Independently Worsened	N035.04	530 (not endorsed)	10/1/16	**YES**	**YES**	**YES**	**YES**
Percent of Residents Who Used Antianxiety or Hypnotic Medication	N036.03	527 (not endorsed)	4/27/16	**YES**	**YES**	NO	**YES**
Percent of Residents with Pressure Ulcers	N045.01	512 (not endorsed)	10/1/23	**YES**	**YES**	**YES**	**YES**

Quality Measure (QM) Label	CMS ID	CMIT Measure ID	Effective Date	iQIES[37]	CC	Five-Star	Provider Preview
Percent of Residents With New or Worsened Bowel or Bladder Incontinence	N046.01	514 (not endorsed)	10/1/23	**YES**	**YES**	NO	**YES**
Prevalence of Falls	N032.02	NA	10/1/10	**YES**	NO	NO	NO
Prevalence of Antianxiety/Hypnotic Use	N033.03	NA	10/1/10	**YES**	NO	NO	NO
Prevalence of Behavior Symptoms Affecting Others	N034.02	NA	10/1/10	**YES**	NO	NO	NO