Long-Term Care Hospital Quality Reporting Program Measure Calculations and Reporting User's Manual

Version 7.0

Prepared for

Centers for Medicare & Medicaid Services
Contract No. 75FCMC18D0012

Development, Maintenance, and Support
for Quality Reporting and Value Based
Purchasing Programs and Nursing
Home Care Compare (PAC Quality)

Prepared by
RTI International
3040 Cornwallis Road
Research Triangle Park, NC 27709

Current as of October 1, 2025

[This page is intentionally left blank.]

LONG-TERM CARE HOSPITAL QUALITY REPORTING PROGRAM MEASURE CALCULATIONS AND REPORTING USER'S MANUAL VERSION 7.0

Table of Contents

List of Tables

Chapter 1
Long-Term Care Hospital Quality Reporting Program Measure Calculations and Reporting User's Manual Organization and Definitions

The purpose of this manual is to present the methods used to calculate quality measures that are included in the Centers for Medicare & Medicaid Services (CMS) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP). Quality measures are tools that help measure or quantify healthcare processes, outcomes, patient or resident perceptions and organizational structure/systems that are associated with the ability to provide high-quality services related to one or more quality goals.[1] This manual provides detailed information for each quality measure, including quality measure definitions, inclusion and exclusion criteria and measure calculation specifications. An overview of the LTCH QRP and additional information pertaining to public reporting is publicly available and can be accessed through the LTCH QRP website.

Section 1.1: Organization

This manual is organized by seven chapters and two appendices. The remainder of this section provides information on the contents of each chapter and an overview of the appendices. **Chapter 1** presents the purpose of the manual, explaining how the manual is organized and defining key terms that are used throughout subsequent chapters. The remaining chapters are organized by quality measure and provide detailed information about measure specifications and reporting components. The chapter also includes a summary of existing quality measures in the LTCH QRP, as well as an overview of the quality measures added or removed in the LTCH QRP and/or finalized for public reporting display updates. **Chapters 2 and 3** identify the Centers for Disease Control and Prevention's (CDC) National Healthcare Safety Network Measures (NHSN) quality measures and the claims-based measures, respectively. The quality measures that rely on LTCH Continuity Assessment Record and Evaluation (CARE) Data Set (LCDS) are presented in **Chapter 4** and record selection criteria are explained for each measure. **Chapter 5** describes two Internet Quality Improvement and Evaluation System (iQIES) data reports for the LCDS quality measures, consisting of the iQIES Review and Correct Report and the iQIES Quality Measure (QM) Reports. The iQIES Review and Correct Report is a single report that contains facility-level quarterly and cumulative rates and its associated patient-level data. The iQIES QM Reports are comprised of two report types, one containing facility-level measure information and a second that includes patient-level data for a user-selected reporting period. Following the discussion of quality measure specifications for each report, information is presented in table format to illustrate the report calculation month, reporting quarters and the months of data that are included in each monthly report. **Chapter 6** presents the measure calculation methodology specific to the LCDS quality measures and **Chapter 7** provides the measure logic specifications for each of the LCDS quality measures, in table format. **Appendix A** provides effective periods for CMS ID updates corresponding to all LTCH QRP measures and current and prior versions of this manual. Lastly, **Appendix B** includes instruction on the use of the associated **Risk-**

[1] Centers for Medicare & Medicaid Services. (September 2024). Quality Measures. Accessed in March 2025. Available at: https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityMeasures/index.html

Adjustment Appendix File, which includes the covariate definitions and intercept and covariate coefficient values that are used to calculate the assessment-based (LCDS) risk-adjusted measures. Additionally, this appendix provides instruction on the use of the associated **Imputation Appendix File (Discharge Function Score and Change in Mobility)**, which includes covariate definitions and model threshold and covariate coefficient values that are used to calculate statistically imputed values for use in Discharge Function Score and Change in Mobility Among Long-Term Care Hospital Patients Requiring Ventilator Support measure calculations.

Section 1.2: LTCH Stay Definitions

LTCH Admission (Start of LTCH Stay): Defined as an Admission assessment (Item A0250 = [01]). The LTCH Admission assessment is required at the start of an LTCH stay when the patient is admitted to the LTCH.

LTCH Discharge (End of LTCH Stay): Defined as a Planned or Unplanned Discharge assessment (Item A0250 = [10, 11] or Expired Record (Item A0250 = [12]). The LTCH Discharge assessment is required at the end of an LTCH stay when the patient is discharged from the LTCH. The LTCH Expired Record is required when a patient expires in an LTCH.

LTCH Stay: An LTCH stay includes consecutive time in the LTCH starting with a patient's admission (Admission assessment (Item A0250 = [01])) through the patient's discharge (Discharge assessment or Expired Record (Item A0250 = [10, 11, 12])). To construct the LTCH stay for the quality measure sample, a matched pair of Admission and Discharge assessments (or Admission assessment and Expired Record) as shown below is required. Assessment selection is described in more detail in Section 4.1.
Target Date: The target dates differ based on assessment type and are defined as follows:

- Admission assessments (Item A0250 Reason for Assessment = [01]): the target date is equal to the Admission Date (Item A0220).
- Planned/Unplanned Discharge assessments (Item A0250 Reason for Assessment = [10, 11]): the target date is equal to the Discharge Date (Item A0270).
- Expired Records (Item A0250 Reason for Assessment = [12]): the target and discharge dates are equal to the date of death.

Target Period: The target period is the span of time that defines the Quality Measure Reporting period for a given measure (e.g., a 12-month period (4 quarters)). The target period and methodology for selecting the LTCH stay-level sample for the LTCH QRP LCDS quality measures is described in Section 4.1.

Section 1.3: Measure-Specific Stay Definitions

The methodology for selecting the stay samples for the following function measures includes identifying complete versus incomplete LTCH stays, described in detail below:

- Functional Outcome Measure: Change in Mobility Among Long-Term Care Hospital Patients Requiring Ventilator Support (CMS ID: L011.06)
- Discharge Function Score (CMS ID: L027.01)

Incomplete LTCH Stay: Incomplete LTCH stays occur when a patient is discharged to another acute care setting (e.g., Short-Term General Hospital, Inpatient Psychiatric Facility, or a different Long-Term Care Hospital (Item A2105)), has an unplanned discharge (Item A0250), is discharged against medical advice (Item A1990), has a stay less than three days (Items A0220, A0270), or dies while in the facility (Item A0250). We refer readers to **Chapter 6** to review the measure specifications to determine what is considered an incomplete LTCH stay for each measure, as applicable.

Complete LTCH Stay: All LTCH stays not meeting the above criteria for incomplete stays will be considered complete LTCH stays.

Section 1.4: QRP Measures

Table 1-1 provides a list of the measures included in the LTCH QRP, the measure IDs, the measure type, and the reference name (short name) for each measure.

Table 1--1
LTCH QRP Quality Measures: CMIT Measure ID, CMS ID, Measure Type, and Measure Reference Name Crosswalk

Quality Measure	CMIT Measure ID # [2]	CMS ID [3]	Measure Type	Measure Reference Name
National Healthcare Safety Network (NHSN) Measures				
National Healthcare Safety Network (NHSN) Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure	00459 (CBE-endorsed)	L006.01	Outcome	CAUTI
National Healthcare Safety Network (NHSN) Central Line-Associated Bloodstream Infection (CLABSI) Outcome Measure	00460 (CBE-endorsed)	L007.01	Outcome	CLABSI
National Healthcare Safety Network (NHSN) Facility-Wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure	00462 (CBE-endorsed)	L014.01	Outcome	CDI
Influenza Vaccination Coverage Among Healthcare Personnel	00390 (CBE-endorsed)	L015.01	Process	HCP Influenza Vaccine
COVID-19 Vaccination Coverage Among Healthcare Personnel (HCP)	00180 (CBE-endorsed)	L024.02	Process	HCP COVID-19 Vaccine

[2] Refer to the Centers for Medicare & Medicaid Services Measures Inventory Tool (https://cmit.cms.gov/cmit/#/) for the CMIT Measure ID, Consensus Based Entity (CBE)-endorsement status, as well as other detailed measure information. 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).
[3] Reflects changes in CMS measure identifiers based on updated measure specifications.

Table 1-1 (continued)
LTCH QRP Quality Measures: CMIT Measure ID Number, CMS ID, and Measure Reference Name Crosswalk

Quality Measure	CMIT Measure ID #	CMS ID	Measure Type	Measure Reference Name
Medicare Claims-Based Measures				
Potentially Preventable 30-Days Post-Discharge Readmission Measure for Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP)	00575 (not endorsed)	L017.01	Outcome	PPR
Discharge to Community – Post-Acute Care (PAC) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP)	00210 (CBE-endorsed)	L018.02	Outcome	DTC
Medicare Spending Per Beneficiary– Post-Acute Care (PAC) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP)	00434 (CBE-endorsed)	L019.01	Cost/Resource	Medicare Spending Per Beneficiary
Assessment-Based Measures				
Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury	00121 (not endorsed)	L021.01	Outcome	Pressure Ulcer/Injury
Application of Percent of Residents Experiencing One or More Falls with Major Injury (Long Stay)	00520[4] (not endorsed)	L012.01	Outcome	Application of Falls
Functional Outcome Measure: Change in Mobility Among Long-Term Care Hospital Patients Requiring Ventilator Support	00275 (CBE-endorsed)	L011.06	Outcome	Change in Mobility

[4] This measure is Consensus Based Entity (CBE)-endorsed for long-stay residents in nursing homes (https://p4qm.org/measures/0674). An application of this quality measure was finalized for reporting by LTCHs under the FY 2014 IPPS/LTCH PPS final rule (78 FR 50874 through 50877) and was finalized as an IMPACT Act measure in the FY 2016 IPPS/LTCH PPS final rule (80 FR 49736 through 49739). The use of the words "resident" and "long stay" in the title of this measure refer to the use of this measure in the SNF/NH setting. CMS' use of these words does not imply that the LTCH patient is a "resident" or that a stay in an LTCH is a "long stay."

Table 1-1 (continued)
LTCH QRP Quality Measures: CMIT Measure ID Number, CMS ID, and Measure Reference Name Crosswalk

Quality Measure	CMIT Measure ID #	CMS ID	Measure Type	Measure Reference Name
Assessment-Based Measures (cont.)				
Drug Regimen Review Conducted with Follow-Up for Identified Issues–Post-Acute Care (PAC) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP)	00225 (not endorsed)	L020.01	Process	DRR
Compliance with Spontaneous Breathing Trial (SBT) by Day 2 of the LTCH Stay	00143 (not endorsed)	L022.02	Process	Compliance with SBT
Ventilator Liberation Rate	00759 (not endorsed)	L023.03	Outcome	Ventilator Liberation
Transfer of Health (TOH) Information to the Provider Post-Acute Care (PAC)	00728 (not endorsed)	L025.01	Process	TOH - Provider
Transfer of Health (TOH) Information to the Patient Post-Acute Care (PAC)	00727 (not endorsed)	L026.02	Process	TOH - Patient
Discharge Function Score	1698 (CBE-endorsed)	L027.01	Outcome	Discharge Function Score
COVID-19 Vaccine: Percent of Patients/Residents Who Are Up to Date	01699 (not endorsed)	L028.02	Process	Patient/Resident COVID-19 Vaccine

Chapter 2
National Healthcare Safety Network Measures

An overview of the NHSN measures and annual reports containing quality measure information can be accessed on the CDC NHSN website. Additionally, quality measure information and quality reporting program details can be found in the FY 2026 IPPS/LTCH PPS final rule. Below are the CDC NHSN quality measures included in the LTCH QRP as of October 1, 2025 and hyperlinks that provide detailed information about each measure on the CDC website, including measure descriptions and definitions, data collection methods, specifications (e.g. numerator, denominator, Standardized Infection Ratio (SIR) calculations), and reporting requirements:

- **National Healthcare Safety Network (NHSN) Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure (CMS ID: L006.01)**
    - This measure calculates the total number of healthcare-associated CAUTI among patients in bedded inpatient care locations, from the total number of indwelling urinary catheter days for each location under surveillance for CAUTI during the associated data period. This measure is risk-adjusted.
        - CDC NHSN: CAUTI
- **National Healthcare Safety Network (NHSN) Central Line-Associated Bloodstream Infection (CLABSI) Outcome Measure (CMS ID: L007.01)**
    - This measure calculates the total number of observed healthcare-associated CLABSI among patients in bedded inpatient care locations, from the total number of central line days for each location under surveillance for CLABSI during the associated data period. This measure is risk-adjusted.
        - CDC NHSN: CLABSI
- **National Healthcare Safety Network (NHSN) Facility-Wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure (CMS ID: L014.01)**
    - This measure calculates the total number of observed hospital-onset CDI Laboratory Identified (LabID) events among all inpatients in the facility, excluding well baby-nurseries and NICUs, from the total number of expected hospital-onset CDI LabID events, determined through the facility's number of inpatient days, bed size, affiliation with a medical school, microbiological test used to identify C. difficile, and community onset CDI admission prevalence rate.
        - CDC NHSN: CDI
- **Influenza Vaccination Coverage Among Healthcare Personnel (CMS ID: L015.01)**
    - This measure identifies the percentage of healthcare personnel (HCP) who receive the influenza vaccination among the total number of healthcare personnel in the facility for at least one working day between October 1 and March 31 of the following year, regardless of clinical responsibility or patient contact.
        - CDC NHSN: HCP Influenza Vaccine

- **COVID-19 Vaccination Coverage Among Healthcare Personnel (HCP) (CMS ID: L024.02)**
    - This measure identifies the percentage of HCP eligible to work in the LTCH setting for at least one day during the reporting period, excluding HCP with contraindications to the COVID-19 vaccine, who are considered up to date, regardless of clinical responsibility or patient contact.
        - CDC NHSN: HCP COVID-19 Vaccine

Chapter 3
Medicare Claims-Based Measures

CMS uses a range of data sources to calculate quality measures. The quality measures listed below were developed using Medicare claims data submitted for Medicare Fee-For-Service (FFS) patients. Below are the measure descriptions for the Medicare claims-based measures included in the LTCH QRP as of October 1, 2024. Measure specifications and calculation methods are available in the LTCH QRP Claims-Based Measures Specifications Manual and accompanying supplemental files posted on the LTCH Quality Reporting Measures Information website.

- **Potentially Preventable 30-Days Post-Discharge Readmission Measure for Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP) (CMS ID: L017.01)**
    - This measure estimates the risk-standardized rate of unplanned, potentially preventable readmissions for patients who are discharged following an LTCH stay.
- **Discharge to Community –Post-Acute Care (PAC) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP) (CMS ID: L018.02)**
    - This measure reports an LTCH's risk-standardized rate of Medicare FFS patients who are discharged to the community following an LTCH stay, do not have an unplanned readmission to an acute care hospital or LTCH, and who remain alive during the 31 days following discharge. Community, for this measure, is defined as home or self-care, with or without home health services.
- **Medicare Spending Per Beneficiary –Post-Acute Care (PAC) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP) (CMS ID: L019.01)**
    - This measure evaluates LTCH providers' resource use relative to the resource use of the national median LTCH provider. Specifically, the measure assesses the cost to Medicare for services performed by the LTCH provider during a Medicare Spending Per Beneficiary (MSPB)-PAC LTCH episode, which begins at LTCH admission and ends 30 days after LTCH discharge. The measure is calculated as the ratio of the price-standardized, risk-adjusted MSPB-PAC amount for each LTCH divided by the episode-weighted median MSPB-PAC amount across all LTCH providers.

Chapter 4
Stay Selection for Assessment-Based (LCDS) Quality Measures

Section 4.1: Quality Measures Based on the Calendar Year

This section presents the **stay selection** criteria for the assessment-based (LCDS) quality measure calculations. ***Table 4-1*** lists the measures and their respective target periods. Apply the respective quality measure calculations from **Chapter 6** to the eligible target period LTCH stays. Additionally, **Chapter 7** provides the instructions in table format, and the references to the table numbers are included below:

Quality measures with a three-month (one quarter) target period:

- COVID-19 Vaccine: Percent of Patients/Residents Who Are Up to Date (CMS ID: L028.02) ***Table 7-10***

Quality measures with a 12-month target period:

- Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury (CMS ID: L021.01) ***Table 7-1***
- Application of Percent of Residents Experiencing One or More Falls with Major Injury (Long Stay) (CMS ID: L012.01) ***Table 7-2***
- Drug Regimen Review Conducted with Follow-Up for Identified Issues –Post Acute Care (PAC) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP) (CMS ID: L020.01) ***Table 7-4***
- Compliance with Spontaneous Breathing Trial (SBT) by Day 2 of the LTCH Stay (CMS ID: L022.02) ***Table 7-5***
- Ventilator Liberation Rate (CMS ID: L023.03) ***Table 7-6***
- Transfer of Health (TOH) Information to the Provider Post-Acute Care (PAC) (CMS ID: L025.01) ***Table 7-7***
- Transfer of Health (TOH) Information to the Patient Post-Acute Care (PAC) (CMS ID: L026.02) ***Table 7-8***
- Discharge Function Score (L027.01) ***Table 7-9***

Quality measures with a 24-month target period:

- Functional Outcome Measure: Change in Mobility Among Long-Term Care Hospital Patients Requiring Ventilator Support (CMS ID: L011.06) ***Table 7-3***

The eligible LTCH stays for these quality measures are selected as follows:

1. Eligible LTCH stays require a matched pair of Admission and Discharge assessments (or Admission assessment and Expired Record) that are selected as follows:

   - Sort the assessments according to the following:
     - Provider Internal ID
     - Patient Internal ID
     - Item A0220 Admission Date (descending)
     - Target date (descending). This will result in assessments appearing in reverse chronological order so that the most recent assessment appears first. This will also ensure that the Expired Record or Discharge assessment appears prior to the Admission assessment.
     - Item A0250 Reason for Assessment (RFA) (descending). If more than one Discharge assessment or Expired Record shares a target date, this will cause the Expired Record to appear first, followed by the Unplanned Discharge assessment, followed by the Planned Discharge assessment.
     - Assessment ID (descending)
   - For each unique combination of Provider Internal ID, Patient Internal ID, and Admission Date:
     - Select the first Discharge assessment/Expired Record
     - Select the first Admission assessment
   - Match the Admission assessments and Discharge assessments/Expired Records. according to the following:
     - Provider Internal ID
     - Patient Internal ID
     - Admission Date
   - Any Admission assessments that are not matched to a Discharge assessment or any Discharge assessments or Expired Records not matched to an Admission assessment are excluded from the quality measure sample.
   - If the target date for the Discharge assessment/Expired Record is not the same as or later than the target date for the matched Admission assessment, the LTCH stay is excluded.
   - If any LTCH stays for the same Provider Internal ID and Patient Internal ID are overlapping by more than one day (i.e., the admission date of a subsequent assessment is earlier than the discharge date of the prior assessment), remove ***both*** LTCH stays.
   - The assessments included in an ***LTCH stay sample*** could span across quarter(s).

- For quality measure calculation purposes, both the Admission and Discharge assessments (or Expired Record) included in the ***LTCH stay sample*** are assigned to the target period of the Discharge Date (Item A0270).

2. Select all LTCH stays with a Discharge Date (Item A0270) within the data target period.

   - If a patient has multiple LTCH stays with a discharge date within the data target period, then include each eligible LTCH stay in the measure.

Table 4--1
Target Period for all Assessment-Based (LCDS) Quality Measures

Quality Measure	Target Period[5]
Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury (CMS ID: L021.01)	January 1 through December 31
Application of Percent of Residents Experiencing One or More Falls with Major Injury (Long Stay) (CMS ID: L012.01)	January 1 through December 31
Functional Outcome Measure: Change in Mobility Among Long-Term Care Hospital Patients Requiring Ventilator Support (CMS ID: L011.06)	January 1 through December 31 (24 months)
Drug Regimen Review Conducted with Follow-Up for Identified Issues – Post Acute Care (PAC) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP) (CMS ID: L020.01)	January 1 through December 31
Compliance with Spontaneous Breathing Trial (SBT) by Day 2 of the LTCH Stay (CMS ID: L022.02)	January 1 through December 31
Ventilator Liberation Rate (CMS ID: L023.03)	January 1 through December 31
Transfer of Health (TOH) Information to the Provider Post-Acute Care (PAC) (CMS ID: L025.01)	January 1 through December 31
Transfer of Health (TOH) Information to the Patient Post-Acute Care (PAC) (CMS ID: L026.02)	January 1 through December 31
Discharge Function Score (CMS ID: L027.01)	January 1 through December 31
COVID-19 Vaccine: Percent of Patient/Residents Who Are Up To Date (CMS ID: L028.02)	January 1 through March 31 \ April 1 through June 30 \ July 1 through September 30 \ October 1 through December 31

[5] The target period for the assessment-based quality measures is 12 months, with the exception of the *Change in Mobility* measure which is 24 months and the Patient/Resident COVID-19 Vaccine measure which is three months.

Chapter 5
Internet Quality Improvement and Evaluation System (iQIES) Data Selection for Assessment-Based (LCDS) Quality Measures

The purpose of this chapter is to present the data selection criteria for the **iQIES Review and Correct Reports and the iQIES Quality Measure (QM) Reports** for quality measures that are included in the LTCH QRP and are specific to those quality measures calculated using the LCDS. Information about the iQIES reports can be found on the CMS iQIES Reports website.

- **The iQIES Review and Correct Reports** contain facility-level and patient-level measure information and are updated on a quarterly basis with data refreshed weekly as data become available.
    - These reports allow providers to obtain facility-level performance data and its associated patient-level data for the past 12 months (four full quarters) or 24 months (eight full quarters), as appropriate for the measure, **and are restricted to only the assessment-based measures**. Note that, as the COVID-19 Vaccine: Percent of Patients/Residents Who Are Up To Date measure reports only one quarter of data, this measure will have only one quarter of data on the Review and Correct Report. The intent of this report is for providers to have access to data prior to the quarterly data submission deadline to ensure accuracy of their data. This also allows providers to track cumulative quarterly data that includes data from quarters after their respective submission deadlines ("frozen" data).
- **The iQIES QM Reports** are refreshed monthly and separated into two reports: one containing measure information at the facility-level and another at the patient-level, for a single reporting period. The intent of these reports is to enable tracking of quality measure data regardless of quarterly submission deadline ("freeze") dates.
    - The assessment-based (LCDS) measures are updated monthly, at the facility- and patient-level, as data become available. The performance data contain the current quarter (may be partial) and the past three quarters or the past seven quarters as appropriate for the measure. As noted above, the Patient/Resident COVID-19 Vaccine measure will have only one quarter of data.
    - The claims-based measures are updated annually and data are provided at the facility-level only.
    - The CDC NHSN measures are updated quarterly for all measures, except for the HCP Influenza Vaccine measure which is updated annually. The data for these measures are provided at the facility-level only.

The iQIES Review and Correct Reports and the iQIES QM Reports can help identify data errors that affect performance scores. They also allow the providers to use the data for quality improvement purposes.

Section 5.1 contains the data selection criteria for the assessment-based (LCDS) quality measures for the iQIES Review and Correct Reports.

Section 5.2 of this chapter presents data selection information that can be applied to both the iQIES Patient-level QM Reports and the iQIES Facility-level QM Reports, since the criteria and reporting periods for the iQIES QM Reports are consistent across the patient- and facility-level reports.

Section 5.1: iQIES Review and Correct Reports

Below are the specifications for the iQIES Review and Correct Reports for the quality measures presented in **Chapter 4**, **Section 4.1:**

1. Quarterly reports contain quarterly rates and a cumulative rate.
    a. The quarterly rates will be displayed using one quarter of data.
    b. The cumulative rates will be displayed using all data within one target period.
    c. **For all measures, excluding the Change in Mobility measure:** the cumulative rate is derived by dividing the numerator of all eligible LTCH stays in the target period by the denominator of all eligible LTCH stays in the target period.
        - **For the Change in Mobility measure:** the cumulative rate is derived by including all eligible LTCH stays for the target period, calculating the change scores for each LTCH stay, and then calculating the mean of the change scores. For instructions on calculating the change scores, please see **Chapter 6, Section 6.3** for the Change in Mobility measure.
    d. Data submission deadline: data must be submitted by 11:59 p.m. ET on the 15th of August, November, February, or May, 4.5 months after the end of each respective quarter. However, if the 15th of the month falls on a Friday, weekend, or federal holiday, the data submission deadline is delayed until 11:59 p.m. ET on the next business day.
        - For example, the data submission deadline for Quarter 3 (July 1 through September 30) data collection would normally be 11:59 p.m. ET, February 15, which is the 15th day of the month, 4.5 months after the end of the data collection period. However, in 2026, February 15th falls on a Sunday and February 16th is a federal holiday; therefore, the deadline for this data submission will be extended to the next business day, which is February 17, 2026, at 11:59 p.m. ET.
    e. The measure calculations for the quarterly rates and the cumulative rates are refreshed weekly.
2. Complete data (full target period) are available for previously existing quality measures. Only partial data will be available for new measures until a full target period of data has accumulated. Once a target period of data has accumulated, as each quarter advances, the subsequent quarter will be added and the earliest quarter will be removed.
3. Patient-level data will be displayed for each reporting quarter in the report.
4. The illustration of the reporting timeline for the iQIES Review and Correct Reports for the

following quality measures is provided in ***Table 5-2*** for the quarterly rates and ***Table 5-3*** for the cumulative rates:

a. Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury (CMS ID: L021.01)

b. Application of Percent of Residents Experiencing One or More Falls with Major Injury (Long Stay) (CMS ID: L012.01)

c. Drug Regimen Review Conducted with Follow-Up for Identified Issues –Post Acute Care (PAC) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP) (CMS ID: L020.01)

d. Compliance with Spontaneous Breathing Trial (SBT) by Day 2 of the LTCH Stay (CMS ID: L022.02)

e. Ventilator Liberation Rate (CMS ID: L023.03)

f. Transfer of Health (TOH) Information to the Provider Post-Acute Care (PAC) (CMS ID: L025.01)

g. Transfer of Health (TOH) Information to the Patient Post-Acute Care (PAC) (CMS ID: L026.02)

h. Discharge Function Score (CMS ID: L027.01)

i. Functional Outcome Measure: Change in Mobility Among Long-Term Care Hospital Patients Requiring Ventilator Support (CMS ID: L011.06)

j. COVID-19 Vaccine: Percent of Patient/Residents Who Are Up To Date (CMS ID: L028.02)

5. **Data calculation rule**: The calculations include LTCH stays with discharge dates through the end of the quarter.

Table 5-1 defines the discharge dates included for each calendar year quarter.

Table 5-1
Discharge Dates for Each Quarter Defined by Calendar Year

Calendar Year Quarter	Discharge Dates Included in the Report
Quarter 1	January 1 through March 31
Quarter 2	April 1 through June 30
Quarter 3	July 1 through September 30
Quarter 4	October 1 through December 31

Table 5-2 below shows examples of quarterly rates included in the iQIES Review and Correct Reports for existing and for new measures. For new measures, data is accumulated until four quarters have been collected and then rolling quarters occur for subsequent years. For existing measures, data is displayed based on rolling quarters.

- **Example of quarterly rates included in the iQIES Review and Correct Reports for an *existing* measure:** If the requested calendar year quarter end date is Quarter 1, 2026 (end date of March 31st), the four quarters of data that will be provided in this request will include Q2 2025 (April – June), Q3 2025 (July – September), Q4 2025 (October – December), and Q1 2026 (January – March).
- **Example of quarterly rates included in the iQIES Review and Correct Reports for a *new* measure:** If the requested calendar year quarter end date is Q1 2026 (end date of March 31st), the data provided in this request includes Q4 2025 (October-December) and Q1 2026 (January – March).

Table 5-2
iQIES Review and Correct Reports: Quarterly Rates Included in Each Requested Quarter End Date[6]

Requested Calendar Year Quarter End Date[7]	Measure Type	Quarter(s) Included from Previous Year[8]	Quarter(s) Included from User-Requested Year[9]
Quarter 1, YYYY	New	Quarter 4	Quarter 1
	Existing	Quarter 2 Quarter 3 Quarter 4	Quarter 1
Quarter 2, YYYY	New	Quarter 4	Quarter 1 Quarter 2
	Existing	Quarter 3 Quarter 4	Quarter 1 Quarter 2
Quarter 3, YYYY	New	Quarter 4	Quarter 1 Quarter 2 Quarter 3
	Existing	Quarter 4	Quarter 1 Quarter 2 Quarter 3

[6] See *Table 5-1* for discharge dates included for each quarter.
[7] YYYY = User-Requested Year
[8] Calendar year prior to the User-Requested Year
[9] Because the Patient/Resident COVID-19 Vaccine measure is based on one quarter of data, the Review and Correct Report will only display the requested calendar year quarter end date. If a user wants to view data from another calendar year quarter, they must request a report with that quarter's end date.

Requested Calendar Year Quarter End Date[10]	Measure Type	Quarter(s) Included from Previous Year[11]	Quarter(s) Included from User-Requested Year
Quarter 4, YYYY	New	--	Quarter 1 Quarter 2 Quarter 3 Quarter 4
	Existing	--	Quarter 1 Quarter 2 Quarter 3 Quarter 4

Table 5-3 below displays the quarters of data included in the cumulative rate calculation for new and existing measures, by each requested quarter end date.

Table 5-3
iQIES Review and Correct Reports: Data Included in the Cumulative Rate for Each Requested Quarter End Date[12]

Requested Calendar Year Quarter End Date[13],	Measure Type	Data Included from Previous Year[14]	Data Included from User-Requested Year[15]
Quarter 1, YYYY	New	Quarter 4	Quarter 1
	Existing	Quarter 2 through Quarter 4	Quarter 1
Quarter 2, YYYY	New	Quarter 4	Quarter 1 through Quarter 2
	Existing	Quarter 3 through Quarter 4	Quarter 1 through Quarter 2
Quarter 3, YYYY	New	Quarter 4	Quarter 1 through Quarter 3
	Existing	Quarter 4	Quarter 1 through Quarter 3
Quarter 4, YYYY	New	--	Quarter 1 through Quarter 4
	Existing	--	Quarter 1 through Quarter 4

[10] YYYY = User-Requested Year
[11] Calendar year prior to the User-Requested Year
[12] See ***Table 5-1*** for discharge dates included for each quarter.
[13] YYYY = User-Requested Year
[14] Calendar year prior to the User-Requested Year
[15] Because the Patient/Resident COVID-19 Vaccine measure is based on one quarter of data, the cumulative rate only displays the requested calendar year quarter end date, and is not calculated across quarters. If a user wants to view data from another calendar year quarter, they must request a report with that quarter's end date.

Section 5.2: iQIES Quality Measure (QM) Reports

Below are the specifications for the iQIES QM Reports for measures presented in **Chapter 4**, **Section 4.1**:

1. Measures are calculated consistent with the methods in the previous section, **Chapter 5**, **Section 5.1, "iQIES Review and Correct Reports."** Only the cumulative rates will be displayed using all data in the target period.
2. The illustration of reporting timeline for the monthly iQIES QM Reports is provided in ***Table 5-4*** for the following measures:
   a. Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury (CMS ID: L021.01)
   b. Application of Percent of Residents Experiencing One or More Falls with Major Injury (Long Stay) (CMS ID: L012.01)
   c. Drug Regimen Review Conducted with Follow-Up for Identified Issues –Post Acute Care (PAC) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP) (CMS ID: L020.01)
   d. Compliance with Spontaneous Breathing Trial (SBT) by Day 2 of the LTCH Stay (CMS ID: L022.02)
   e. Ventilator Liberation Rate (CMS ID: L023.03)
   f. Transfer of Health (TOH) Information to the Provider Post-Acute Care (PAC) (CMS ID: L025.01)
   g. Transfer of Health (TOH) Information to the Patient Post-Acute Care (PAC) (CMS ID: L026.02)
   h. Discharge Function Score (CMS ID: L027.01)
   i. Functional Outcome Measure: Change in Mobility Among Long-Term Care Hospital Patients Requiring Ventilator Support (CMS ID: L011.06)
   j. COVID-19 Vaccine: Percent of Patients/Residents Who Are Up To Date (CMS ID: L028.02)

   Data calculation rule: The calculations include LTCH stays with discharge dates through the end of the month.

   Table 5-4 below displays the quarters of data included in the cumulative rate calculation for the existing measures, by each calendar requested quarter end date.

Table 5-4
iQIES QM Reports: Data Included in the Cumulative Rate for Each Requested Report End Date

Requested Report End Date[16]	iQIES QM Report Calculation Month	Data Included from Previous Year[17]	Data Included from User-Requested Year[18]
03/31/YYYY (Quarter 1, YYYY)	February	April through December	January
	March	April through December	January through February
	April	April through December	January through March
06/30/YYYY (Quarter 2, YYYY)	May	July through December	January through April
	June	July through December	January through May
	July	July through December	January through June
09/30/YYYY (Quarter 3, YYYY)	August	October through December	January through July
	September	October through December	January through August
	October	October through December	January through September
12/31/YYYY (Quarter 4, YYYY)	November	--	January through October
	December	--	January through November
	January	--	January through December

[16] YYYY = User-Requested Year
[17] Calendar year prior to the User-Requested Year
[18] Because the Patient/Resident COVID-19 vaccine measure is based on one quarter of data, the cumulative rate only displays the requested calendar year quarter end date, and is not calculated across quarters. If a user wants to view data from another calendar year quarter, they must request a report with that quarter's end date.

Chapter 6
Measure Calculations for Assessment-Based (LCDS) Quality Measures

This chapter presents technical details regarding calculating the assessment-based quality measures that are included in the LTCH QRP. In this chapter, each section is specific to an assessment-based (LCDS) quality measure. Within each section, the iQIES Review and Correct Report measure calculations are presented first, followed by the iQIES QM Report measure calculations. If the measure is risk-adjusted for the QM Reports, then additional details regarding the risk-adjusted calculations are provided; otherwise, the Review and Correct Report calculations can be used to calculate the QM Report measure calculation. **Prior to the measure specifications steps in Chapter 6, please refer to Chapter 1, Section 1.2 on instructions to define the LTCH stay for the QM sample and Chapter 4 for the LTCH stay selection criteria.**

Section 6.1: Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury (CMS ID: L021.01)

iQIES Review and Correct Report Measure Calculations for Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury (CMS ID: L021.01)

For the Review and Correct Reports, only the facility-level observed score is computed; the facility's risk-adjusted score is not reported. Using the definitions in ***Table 7-1***, the following steps are used to calculate the quality measure.

1. Identify excluded LTCH stays (Steps 1.1 through 1.2).

    1.1. LTCH stay is excluded if data on new or worsened Stage 2, 3, 4, and unstageable pressure ulcers, including deep tissue injuries, are missing [-] on the planned or unplanned discharge assessment; i.e., (M0300B1 = [-] or M0300B2 = [-]) and (M0300C1 = [-] or M0300C2 = [-]) and (M0300D1= [-] or (M0300D2= [-]) and (M0300E1= [-] or M0300E2=[-]) and (M0300F1= [-] or M0300F2=[-]) and (M0300G1= [-] or M0300G2=[-]).

    1.2. LTCH stay is excluded if the patient died during the LTCH stay (A0250 = [12]).

2. **Determine the denominator count**. Determine the total number of LTCH stays with both an Admission (A0250 = [01]) and Discharge (A0250 = [10, 11]) LCDS assessment with the discharge date in the measure target period, which do not meet the exclusion criteria.

3. **Determine the numerator count**. Determine the total number of LTCH stays for which the Discharge assessment (A0250 = [10, 11]) indicates the presence of one or more new or worsened pressure ulcers (Stage 2−4, or unstageable pressure ulcers compared to admission):

    - Stage 2 (M0300B1) − (M0300B2) > 0, OR
    - Stage 3 (M0300C1) − (M0300C2) > 0, OR
    - Stage 4 (M0300D1) − (M0300D2) > 0, OR

- Unstageable – Non-removable dressing/device (M0300E1) − (M0300E2) > 0, OR
- Unstageable – Slough and/or eschar (M0300F1) − (M0300F2) > 0, OR
- Unstageable – Deep tissue injury (M0300G1) − (M0300G2) > 0

4. **Calculate the facility-level observed score**. Divide the facility's numerator count (Step 3) by its denominator count (Step 2) to obtain the facility-level observed score, and then multiply by 100 to obtain a percent value.
5. **Round the percent value to two decimal places.**

   5.1. If the digit in the third decimal place is 5 or greater, add 1 to the second decimal place, otherwise leave the second decimal place unchanged.

   5.2. Drop all of the digits following the second decimal place.

iQIES QM Report Measure Calculations for Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury (CMS ID: L021.01)

This measure is risk-adjusted for the iQIES QM Reports and therefore an observed (i.e., not risk-adjusted) and a risk-adjusted value are reported. Using the definitions in ***Table 7-1***, the following steps are used to calculate the measure.

1. Calculate the facility-level observed score (Steps 1.1 through 1.2).

   1.1. To calculate the facility-level observed score, complete Steps 1 – 4 from **Chapter 6, Section 6.1**, "iQIES Review and Correct Report Measure Calculations" for Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury.

   1.2. Do not round to the second decimal place. All rounding will be done at the end of the measure calculation.

2. Calculate the national average observed score[19] (Steps 2.1 through 2.3).

   2.1. After excluding LTCH stays based on the criteria listed in ***Table 7-1***, the remaining LTCH stays become the denominator for the national average observed score.

   2.2. Identify LTCH stays in the denominator of the national average observed score that have pressure ulcers that are new or worsened based on the criteria in ***Table 7-1***. These records comprise the numerator of the national average observed score.

   2.3. Divide the numerator (2.2) by the denominator (2.1) to calculate the national average observed score.

Note: Because there is limited public accessibility to national assessment data, this document provides a national average observed score based on the reporting period of the regression intercept and coefficients. The national average observed score can be seen in ***Table RA-2*** *in the Risk-Adjustment Appendix File on the LTCH QRP Measures Information website. Please note that, depending on the reporting period and time of calculation, the national average observed score used in the iQIES QM Report, Provider Preview Report, and on public*

[19] The national average observed score is calculated using the LTCH stay as the unit of analysis.

display on the Care Compare on Medicare.gov website may vary from the national average observed score provided by these documents.

3. Calculate the facility-level expected score for each LTCH stay (Steps 3.1 through 3.2).

    3.1. Determine presence or absence of the pressure ulcer covariates for each LTCH stay.

    3.2. Using the covariate definitions in Table RA-3 in the Risk-Adjustment Appendix File to assign covariate values (COV), either '0' for covariate condition not present or '1' for covariate condition present, for each LTCH stay for each of the four covariates as reported on the Admission assessment.

    Calculate the expected score for each LTCH stay using the following formula:

$$[1]\ \textbf{LTCH stay level expected score} = \frac{1}{[1 + e^{-x}]}$$

Where:

- ***e*** is the base of natural logarithms

X is a linear combination of the constant and the logistic regression coefficients times the covariate values (from Formula [2], below)

$$[2]\ X = \beta_0 + \beta_1 (COV_1) + \beta_2 (COV_2) + \beta_3 (COV_3) + \beta_4 (COV_4)$$

$$[3]\ \text{Probability}(Y = 1) = \text{Logit}(X)$$

Where:

- ***Y*** identifies if the LTCH stay is part of the numerator count (i.e., triggering the quality measure: 1 = yes, 0 = no).
- β_0 is the logistic regression constant or intercept.
- β_1 is the logistic regression coefficient for the first covariate "functional limitation" and COV_1 is the LTCH stay-level covariate value.
- β_2 is the logistic regression coefficient for the second covariate "bowel continence," and COV_2 is the LTCH stay-level covariate value.
- β_3 is the logistic regression coefficient for the third covariate "diabetes or peripheral vascular disease/peripheral artery disease (PVD/PAD)" and COV_3 is the LTCH stay-level covariate value.
- β_4 is the logistic regression coefficient for the fourth covariate "low body mass index (BMI)" and COV_4 is the LTCH stay-level covariate value.

See ***Table RA-3*** and ***Table RA-4*** in the associated **Risk-Adjustment Appendix File** for the regression constant and coefficients as well as detailed LCDS coding

for each risk adjustor.[20] The regression constant and coefficients are values obtained through statistical logistic regression analysis. Please note that the iQIES QM and Provider Preview Reports use fixed regression constants and coefficients based on the target period in ***Table RA-3*** and ***Table RA-4*** in the **Risk-Adjustment Appendix File**.

4. **Calculate the mean facility-level expected score.** Once LTCH stay-level expected scores have been calculated, calculate the mean facility-level expected quality measure score as the mean of the facility's LTCH stay-level expected scores.

5. Calculate the facility-level risk-adjusted score (Steps 5.1 through 5.3).

   5.1. Calculate the facility-level risk-adjusted score based on the:

   - Facility-level observed quality measure score (Steps 1.1 through 1.2)
   - Mean facility-level expected quality measure score (Step 4)
   - National average observed quality measure score (Steps 2.1 through 2.3)
   - The calculation of the risk-adjusted score uses the following equation:

$$[\mathbf{4}]\ Adj\ =\ \frac{1}{1+\ e^{-y}}$$

Where:

- ***e*** is the base of natural logarithms
- ***Adj*** is the facility-level risk-adjusted quality measure score
- ***y*** is the product of the following formula:

$$[\mathbf{5}]\ y = ln\left(\frac{Obs}{1-Obs}\right) - ln\left(\frac{Exp}{1-Exp}\right) + ln\left(\frac{Nat}{1-Nat}\right)$$

Where:

- ***Obs*** is the facility-level observed quality measure score
- ***Exp*** is the mean facility-level expected quality measure score
- ***Nat*** is the national average observed quality measure score
- ***Ln*** indicates a natural logarithm

   5.2. Multiply the risk-adjusted score (Adj) by 100 and round the percent value to two decimal places.

      5.2.1. If the digit in the third decimal place is 5 or greater, add 1 to the second decimal place; otherwise, leave the second decimal place

[20] The regression constant (intercept) and coefficient values have been rounded to four decimal places. When applying these values to the equation to calculate facility-level QM scores, these intercept and coefficient values should be used; do not round to fewer than four decimal places. This is to ensure consistency and accuracy of measure calculations.

unchanged.

5.2.2. Drop all of the digits following the second decimal place.

5.3. Facility-level recoding instructions.

5.3.1. If the facility-level observed score (Step 1) equals 0, then the facility-level observed percent and the facility-level risk-adjusted percent values are set to 0.00.

5.3.2. If the facility-level observed score (Step 1) equals 1, then the facility-level observed percent and the facility-level risk-adjusted percent values are set to 100.00.

National Average Calculation for Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury (CMS ID: L021.01)

To calculate the LTCH stay-level (i.e. prevalence) national average, refer to Step 2 under the iQIES QM Report Measure Calculations for this measure.

Section 6.2: Application of Percent of Residents Experiencing One or More Falls with Major Injury (Long Stay) (CMS ID: L012.01)

iQIES Review and Correct Report Measure Calculations for Application of Percent of Residents Experiencing One or More Falls with Major Injury (Long Stay) (CMS ID: L012.01)

Since this measure is not risk-adjusted or stratified, only the facility-level observed score is computed and the following steps can be applied to both the iQIES Review and Correct Report measure calculation and the iQIES QM report measure calculation. Using the measure specifications from ***Table 7-2***, the following steps are used to calculate the measure.

1. **Identify excluded LTCH stays** (Step 1.1): LTCH stay is excluded if the number of falls with major injury was not coded (J1900C (Falls with Major Injury) = [-]) for the planned/unplanned, Discharge assessments or Expired Records.
2. **Determine the denominator count**. Determine the total number of LTCH stays with a planned or unplanned Discharge assessment or Expired Record (A0250 = [10, 11 or 12]) in the measure target period, which do not meet the exclusion criteria.
3. **Determine the numerator count**. Determine the total number of LTCH stays with a planned or unplanned Discharge assessment or Expired Record during the selected time window that recorded one or more falls that resulted in major injury (J1900C = [1] or [2]).
4. **Calculate the facility-level observed score**. Divide the facility's numerator count (Step 3) by its denominator count (Step 2) to obtain the facility-level observed score, and then multiply by 100 to obtain a percent value.
5. Round the percent value to two decimal places.

5.1. If the digit in the third decimal place is 5 or greater, add 1 to the second decimal place; otherwise, leave the second decimal place unchanged.

5.2. Drop all of the digits following the second decimal place.

iQIES QM Report Measure Calculations for Application of Percent of Residents Experiencing One or More Falls with Major Injury (Long Stay) (CMS ID: L012.01)

As previously stated, this measure is not risk-adjusted or stratified. The steps to calculate the iQIES Review and Correct Report can be applied to calculate the iQIES QM Report. Follow the steps provided above for the iQIES QM Report measure calculations for the Application of Percent of Residents Experiencing One or More Falls with Major Injury (Long Stay) (CMS ID: L012.01) measure.

National Average Calculation for Application of Percent of Residents Experiencing One or More Falls with Major Injury (Long Stay) (CMS ID: L012.01)

Use the following steps to calculate the LTCH stay-level (i.e. prevalence) national average:

1. Determine the total number of LTCH stays in the nation after applying the exclusion criteria. This is the denominator for the national average.
2. Identify LTCH stays in the denominator of the national average that are included in the numerator for this measure. This is the numerator for the national average.
3. Divide the numerator (Step 2) by the denominator (Step 1), then multiply by 100 and round the percent value to two decimal places to obtain the national average.

    3.1. If the digit in the third decimal place is 5 or greater, add 1 to the second decimal place, otherwise leave the second decimal place unchanged.

    3.2. Drop all of the digits following the second decimal place.

Section 6.3: Functional Outcome Measure: Change in Mobility among Long-Term Care Hospital Patients Requiring Ventilator Support (CMS ID: L011.06)

iQIES Review and Correct Report Measure Calculations for Functional Outcome Measure: Change in Mobility among Long-Term Care Hospital Patients Requiring Ventilator Support (CMS ID: L011.06)

For the Review and Correct Reports, only the facility-level observed score is computed; the facility's risk-adjusted score is not reported. Using the definitions in ***Table 7-3***, the following steps are used to calculate the measure.

1. Calculate the admission mobility score (Steps 1.1 through 1.5).

1.1. Calculate the admission mobility score using the admission mobility items and valid codes and incorporating imputed item values. Please note there are different items used if the patient does not walk at both admission and discharge (Step 1.1) than for the remaining patients (Step 1.2). For patients who are coded as 07, 09, 10, or 88 for the Walk 10 feet item at both admission (GG0170I1) and discharge (GG0170I3), and who are coded between 01 and 06 for Wheel 50 Feet with two turns (GG0170R) either at admission or at discharge, the following assessment items are used for admission mobility score calculations:

- GG0170A1. Roll left and right
- GG0170C1. Lying to sitting on side of bed
- GG0170D1. Sit to stand
- GG0170E1. Chair/bed-to-chair transfer
- GG0170F1. Toilet transfer
- GG0170R1. Wheel 50 feet with two turns*

* Please count the value from this item twice; 7 items are used to calculate a patients' mobility score (scores range from 7 to 42).

1.2. For the remaining patients, the following assessment items are used for the admission mobility score calculations:

- GG0170A1. Roll left and right
- GG0170C1. Lying to sitting on side of bed
- GG0170D1. Sit to stand
- GG0170E1. Chair/bed-to-chair transfer
- GG0170F1. Toilet transfer
- GG0170I1. Walk 10 feet
- GG0170J1. Walk 50 feet with two turns

Valid codes and their definitions for the admission mobility items are:

- 06 – Independent
- 05 – Setup or clean-up assistance
- 04 – Supervision or touching assistance
- 03 – Partial/moderate assistance
- 02 – Substantial/maximal assistance
- 01 – Dependent
- 07 – Patient refused
- 09 – Not applicable

- 10 – Not attempted due to environmental limitations
- 88 – Not attempted due to medical condition or safety concerns
- ^ – Skip pattern (only valid for items GG0170J1 through GG0170K1)
- - – Not assessed/no information (dash)

1.3. To obtain the admission mobility score, use the following procedure:

- If code is between 01 and 06, then use code as the value.
- If code is 07, 09, 10, 88, dashed (-), skipped (^), or missing (all henceforth referred to as NA), then use statistical imputation to estimate the code for that item and use this code as the value. See Step 1.4 for more details on the statistical imputation approach.

1.4. Calculate the imputed values for items with NA codes. To obtain the imputed values, use the procedure below. (Note that these steps first describe imputing the value for a single item at admission and then describe the relevant modifications for the other items.)

1.4.1. Start with Roll left and right (GG0170A). For each LTCH stay where the item has a NA code at admission, calculate *z*, a continuous variable that represents a patient's underlying degree of independence on this item, using the imputation coefficients specific to the GG0170A admission model:

[1] $z = \gamma_1 x_1 + \ldots + \gamma_m x_m$

Where:

γ_1 through γ_m are the imputation regression coefficients for the covariates specific to the GG0170A admission model. (See Imputation Appendix File (Discharge Function Score and Change in Mobility). Note that the coefficients used in this calculation do not include the thresholds described in Step 1.4.2.)

$x_1 - x_m$ are the imputation risk adjustors specific to the GG0170A admission model.

1.4.2. Calculate the probability for each possible item value, had the GG item been assessed, using z (Step 1.4.1) and the equations below.

[2] $\Pr(z \le \alpha_1) = \Phi(\alpha_1 - z)$,

$\Pr(\alpha_1 < z \le \alpha_2) = \Phi(\alpha_2 - z) - \Phi(\alpha_1 - z)$,

$\Pr(\alpha_2 < z \le \alpha_3) = \Phi(\alpha_3 - z) - \Phi(\alpha_2 - z)$,

$\Pr(\alpha_3 < z \le \alpha_4) = \Phi(\alpha_4 - z) - \Phi(\alpha_3 - z)$,

$\Pr(\alpha_4 < z \le \alpha_5) = \Phi(\alpha_5 - z) - \Phi(\alpha_4 - z)$,

$\Pr(z > \alpha_5) = 1 - \Phi(\alpha_5 - z)$,

Where:

- $\Phi(.)$ is the standard normal cumulative distribution function.

  $\alpha_1 \ldots \alpha_5$ represent thresholds of levels of independence that are used to assign a value of 1-6 based on *z* for the GG0170A admission model (see Imputation Appendix File (Discharge Function Score and Change in Mobility)).

1.4.3. Compute the imputed value of the GG item using the six probabilities determined in Step 1.5 and the equation below.

[3] $Imputed\ value\ of\ GG\ item = \Pr(z \le \alpha_1) + 2 * \Pr(\alpha_1 < z \le \alpha_2) + 3 * \Pr(\alpha_2 < z \le \alpha_3) + 4 * \Pr(\alpha_3 < z \le \alpha_4) + 5 * \Pr(\alpha_4 < z \le \alpha_5) + 6 * \Pr(z > \alpha_5)$

Repeat Steps 1.4.1-1.4.3 to calculate imputed values for each GG item included in the observed admission mobility score that was coded as NA, replacing the Roll left and right (GG0170A) item with each applicable GG item.

See ***Table IA-6***, and ***Table IA-7*** in the associated **Imputation Appendix File (Discharge Function Score and Change in Mobility)** for the imputation coefficients and thresholds, as well as detailed LCDS coding for each risk adjustor.[21] The imputation coefficients and thresholds for each GG item are values obtained through ordered probit model analyses of all eligible LTCH stays where the item value is not missing (i.e., had a value 01-06) at admission, and covariates includes the predictors used in risk adjustment (See Step 3) and values on all GG items available in LCDS. The admission mobility scores are included in the covariates and calculated using the same procedure as the observed admission mobility scores, including the replacement of NA codes with imputed values.[22] Please note that the iQIES QM and Provider Preview Reports use fixed regression coefficients and thresholds based on the target period in ***Table IA-6***, and ***Table IA-7*** in the associated **Imputation Appendix File (Discharge Function Score and Change in Mobility)**.

[21] The imputation coefficient and threshold values have been rounded to four decimal places. When applying these values to the equation to calculate imputed item values, these coefficient and threshold values should be used; do not round to fewer than four decimal places. This is to ensure consistency and accuracy of measure calculations.

[22] To calculate imputed values for GG items at admission, repeat Steps 1.4.1-1.4.4, replacing the word "discharge" with the word "admission."

1.5. Sum the values of the seven admission mobility items to create an admission mobility score for each LTCH stay. The admission mobility score can range from 7-42, with a higher score indicating greater functional ability. A score of 42 represents a value of 6 (independence) for all 7 mobility items.

2. **Calculate the discharge mobility score** (Steps 2.1 through 2.4) using the discharge mobility items and valid codes and incorporating imputed item values. Please note there are different items used if the patient does not walk at both admission and discharge (Step 2.1) than for the remaining patients (Step 2.2).

2.1. For patients who are coded as 07, 09, 10, or 88 for the Walk 10 feet item at both admission (GG0170I1) and discharge (GG0170I3), and who are coded between 01 and 06 for Wheel 50 Feet with two turns (GG0170R) either at admission or at discharge, the following assessment items are used for admission mobility score calculations:

- GG0170A1. Roll left and right
- GG0170C1. Lying to sitting on side of bed
- GG0170D1. Sit to stand
- GG0170E1. Chair/bed-to-chair transfer
- GG0170F1. Toilet transfer
- GG0170R1. Wheel 50 feet with two turns*

* Please count the value from this item twice; 7 items are used to calculate a patients' mobility score (scores range from 7 to 42).

2.2. For the remaining patients, the following assessment items are used for the admission mobility score calculations:

- GG0170A3. Roll left and right
- GG0170C3. Lying to sitting on side of bed
- GG0170D3. Sit to stand
- GG0170E3. Chair/bed-to-chair transfer
- GG0170F3. Toilet transfer
- GG0179I3. Walk 10 feet
- GG0170J3. Walk 50 feet with two turns

Valid codes and their definitions for the discharge mobility items are:

- 06 – Independent
- 05 – Setup or clean-up assistance
- 04 – Supervision or touching assistance
- 03 – Partial/moderate assistance

- 02 – Substantial/maximal assistance
- 01 – Dependent
- 07 – Patient refused
- 09 – Not applicable
- 10 – Not attempted due to environmental limitations
- 88 – Not attempted due to medical condition or safety concerns
- ^ – Skip pattern (only valid for items GG0170J3 through GG0170K3)
- - – Not assessed/no information

To obtain the score, use the following procedure:

- If code is between 01 and 06, then use code as the value.

If code is 07, 09, 10, 88, dashed (-), skipped (^), or missing (all henceforth referred to as NA), then use statistical imputation to estimate the code for that item and use this code as the value.

2.3. Using the discharge data, follow Steps 1.3 through 1.5 to impute data.

2.4. Sum the values of the seven discharge mobility items to create a discharge mobility score for each LTCH stay. The discharge mobility score can range from 7-42, with a higher score indicating greater functional ability. A score of 42 represents a value of 6 (independence) for all 7 mobility items.

3. **Identify excluded LTCH stays**. LTCH stays from Step 1 are excluded if any of the following are true (Step 3.1 through 3.6).

3.1. Incomplete LTCH stays:

3.1.1. Patient was discharged to a Short-Term General Hospital (A2105 = [04]), Inpatient Psychiatric Facility (A2105 = [07]), or Critical Access Hospital (CAH) (A2105 = [11]).

3.1.2. Patient transferred to another LTCH facility (A2105 = [05]).

3.1.3. Patient discharged against medical advice (A1990 = [1]).

3.1.4. Patient had an unplanned discharge or expired (A0250 = [11, 12]). Note: discharges against medical advice are considered an unplanned discharge.

3.1.5. Length of stay is less than 3 days: Discharge Date (A0270) – Admission Date (A0220) < 3 days.

3.2. Patient is younger than 18 years: Truncate (Admission Date (A0220) – Birth Date (A0900)). Use exact values in calculating age; do not round to nearest whole number.

3.3. Patient is discharged to hospice (A2105 = [09, 10]).

3.4. Patient is in a coma, persistent vegetative state, has complete tetraplegia, or locked-in syndrome.

3.4.1. Items used to identify these LTCH stays (on admission assessment):

- Comatose (B0100 = [1])
- Complete Tetraplegia (I5101 = [1])
- Locked-In State (I5460 = [1])
- Severe Anoxic Brain Damage, Cerebral Edema, or Compression of Brain (I5470 = [1])

3.5. Patient has a progressive neurological condition, including amyotrophic lateral sclerosis, multiple sclerosis, Parkinson's disease, or Huntington's chorea.

3.5.1. Items used to identify these LTCH stays (on admission assessment):

- Multiple Sclerosis (I5200 = [1]
- Huntington's Disease (I5250 = [1]
- Parkinson's Disease (I5300 = [1])
- Amyotrophic Lateral Sclerosis (I5450 = [1])

3.6. Patient is coded as independent on <u>all</u> mobility items on admission.

3.6.1. Items used to identify these LTCH stays:

- Roll left and right (GG0170A1 = [06])
- Lying to sitting on side of bed (GG0170C1 = [06])
- Sit to stand (GG0170D1 = [06])
- Chair/bed-to-chair transfer (GG0170E1 = [06])
- Toilet transfer (GG0170F1 = [06])
- Walk 10 feet (GG0170I1 = [06])
- Walk 50 feet with two turns (GG0170J1 = [06])

4. **Identify and count the included LTCH stays (target population)**. Calculate the total number of LTCH stays with the discharge date in the measure target period and require ventilator support at the time of LTCH admission. LTCH stays not requiring ventilator support are excluded from this measure. Identify LTCH stays requiring invasive ventilator support at the time of LTCH admission using the following item:

- Invasive Mechanical Ventilation Support: (O0150A = [1])

5. **Calculate the observed change in mobility score for each LTCH stay**. For each LTCH stay included, calculate the difference between the discharge mobility score (Step 2) and admission mobility score (Step 1) to create a change in mobility score for each LTCH stay.

6. **Calculate the facility-level average observed change in mobility score**. Calculate an average observed change in mobility score for each LTCH as the mean of the observed change in mobility scores for all LTCH stays in the facility that are not excluded.

7. Round the score to two decimal places.

    7.1. If the digit in the third decimal place is 5 or greater, add 1 to the second decimal place; otherwise, leave the second decimal place unchanged.

    7.2. Drop all of the digits following the second decimal place.

iQIES QM Report Measure Calculations for Functional Outcome Measure: Change in Mobility among Long-Term Care Hospital Patients Requiring Ventilator Support (CMS ID: L011.06)

This measure is risk-adjusted for the iQIES QM Reports. Using the definitions in ***Table 7-3*** , the following steps are used to calculate the measure.

1. Calculate the facility-level average observed change in mobility score (Steps 1.1 through 1.2).

    1.1. To calculate the facility-level average observed change in mobility score, complete Steps 1 – 6 from **Chapter 6**, **Section 6.3**, "iQIES Review and Correct Report Measure Calculations for Functional Outcome Measure: Change in Mobility among Long-Term Care Hospital Patients Requiring Ventilator Support (CMS ID: L011.06)."

    1.2. Do not round to the second decimal place. All rounding will be done at the end of the measure calculation.

2. **Calculate the national average change in mobility score**[23] as the mean of the observed change in mobility scores for all LTCH stays calculated from Steps 1 – 5 from **Chapter 6, Section 6.3**. This will be used in Step 4 to calculate the risk-adjusted average change in mobility score.

    Note: Because there is limited public accessibility to national assessment data, this document provides a national average observed score based on the reporting period of the regression intercept and coefficients. The national average observed score can be seen in ***Table RA-2*** *in the Risk-Adjustment Appendix File on the LTCH QRP Measures Information website. Please note that, depending on the reporting period and time of calculation, the national average observed score used in the iQIES QM Report, Provider Preview Report, and on public display on the Compare Website may vary from the national average observed score provided by these documents.*

3. Calculate the stay-level expected discharge mobility scores.

[23] The national average observed score is calculated using the LTCH stay as the unit of analysis.

3.1. For each LTCH stay, use the intercept and regression coefficients to calculate the expected discharge mobility score using the formula below.

[4] *Expected discharge mobility score* $= \beta_0 + \beta_1 x_1 + \ldots + \beta_n x_n$

Where:

- ***Expected discharge mobility score*** estimates an expected discharge mobility score
- β_0 is the regression constant or intercept
- β_1 ***through*** β_n are the regression coefficients for the covariates (see **Risk-Adjustment Appendix File**).

See ***Table RA-5*** and ***Table RA-6*** in the associated **Risk-Adjustment Appendix File** for the regression constant and coefficients as well as detailed LCDS coding for each risk adjustor.[24] The regression constant and regression coefficients are values obtained through regression analysis. Please note that the iQIES QM and Provider Preview Reports use fixed regression constants and coefficients based on the target period in ***Table RA-5*** and ***Table RA-6*** in the **Risk-Adjustment Appendix File**.

4. Calculate the risk-adjusted average change in mobility score (Steps 4.1 through 4.4)

4.1. Calculate an expected change in mobility score for each LTCH stay as the difference between the observed admission mobility score and the expected discharge mobility score (expected discharge score minus the observed admission mobility score).

4.2. Calculate the facility-level average expected change in mobility score for all LTCH stays in the facility as the mean of the expected change in mobility scores determined in Step 4.1.

4.3. Calculate the difference between the facility-level average observed change in mobility score (Step 1) and the facility-level average expected change in mobility score (Step 4) to create an observed minus expected difference.

- A value that is 0 indicates the observed score and expected score are equal.
- A value that is greater than 0 indicates that the observed change in score is greater (better) than the expected score.
- A value that is less than 0 indicates that the observed change in score is less (worse) than the expected score.

4.4. Add each LTCH's difference score to the national average change in mobility score (Step 2). This is the risk-adjusted average mobility score.

5. Round the score to two decimal places.

[24] The regression constant (intercept) and coefficient values have been rounded to four decimal places. When applying these values to the equation to calculate facility-level QM scores, these intercept and coefficient values should be used; do not round to fewer than four decimal places. This is to ensure consistency and accuracy of measure calculations.

5.1. If the digit in the third decimal place is 5 or greater, add 1 to the second decimal place; otherwise, leave the second decimal place unchanged.

5.1.1. Drop all of the digits following the second decimal place.

National Average Calculation for Functional Outcome Measure: Change in Mobility among Long-Term Care Hospital Patients Requiring Ventilator Support (CMS ID: L011.06)

To calculate the LTCH stay-level national average, refer to Step 2 under the iQIES QM Report Measure Calculations for this measure.

Section 6.4: Drug Regimen Review Conducted with Follow-Up for Identified Issues –Post Acute Care (PAC) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP) (CMS ID: L020.01)

iQIES Review and Correct Report Measure Calculations for Drug Regimen Review Conducted with Follow-Up for Identified Issues –Post Acute Care (PAC) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP) (CMS ID: L020.01)

Since this measure is not risk-adjusted or stratified, only the facility-level observed score is computed and the following steps can be applied to both the iQIES Review and Correct Report measure calculation and the iQIES QM Report measure calculation. Using the definitions from ***Table 7-4***, the following steps are used to calculate the measure.

1. **Determine the denominator count**. Select any LTCH stays with a planned or unplanned Discharge assessment or Expired Record (A0250 = [10, 11, 12]) during the reporting period.
2. **Determine the numerator count.** Include the total number of LTCH stays in the numerator count if both of the following criteria (2.1 and 2.2) are met:

    2.1. The facility conducted a drug regimen review on admission which resulted in one of the three following scenarios:

        2.1.1. No potential and actual clinically significant medication issues were found during the review (N2001 = [0]); or

        2.1.2. Potential and actual clinically significant medication issues were found during the review (N2001 = [1]) AND a physician (or physician-designee) was contacted and prescribed/recommended actions were completed by midnight of the next calendar day (N2003 = [1]); or

        2.1.3. The patient was not taking any medications (N2001 = [9])

    2.2. Appropriate follow-up occurred each time a potential or actual clinically significant medication issue was identified during the LTCH stay (N2005 = [1]); or no potential or actual clinically significant medications issues were identified since the admission or patient was not taking any medications (N2005 = [9]).

3. **Calculate the facility-level observed score**. Divide the facility's numerator count (Step 2) by its denominator count (Step 1) to obtain the facility-level observed score, and then multiply by 100 to obtain a percent value.

4. Round the percent value to two decimal places.

    4.1. If the digit in the third decimal place is 5 or greater, add 1 to the second decimal place; otherwise, leave the second decimal place unchanged.

    4.2. Drop all the digits following the second decimal place.

iQIES QM Report Measure Calculations for Drug Regimen Review Conducted with Follow-Up for Identified Issues –Post Acute Care (PAC) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP) (CMS ID: L020.01)

As previously stated, this measure is not risk-adjusted or stratified. The steps to calculate the iQIES Review and Correct Report can be applied to calculate the iQIES QM Report. Follow the steps provided above for the iQIES QM Report measure calculation for the Drug Regimen Review Conducted with Follow-Up for Identified Issues –Post Acute Care (PAC) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP) (CMS ID: L020.01) measure.

National Average Calculation for Drug Regimen Review Conducted with Follow-Up for Identified Issues –Post Acute Care (PAC) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP) (CMS ID: L020.01)

Use the following steps to calculate the LTCH stay-level (i.e., prevalence) national average:

1. Determine the total number of LTCH stays in the nation meeting the denominator criteria. This is the denominator for the national average.

2. Identify LTCH stays in the denominator of the national average that are included in the numerator for this measure. This is the numerator for the national average.

3. Divide the numerator (Step 2) by the denominator (Step 1) then multiply by 100, and round the percent value to two decimal places to obtain the national average.

    3.1. If the digit in the third decimal place is 5 or greater, add 1 to the second decimal place; otherwise, leave the second decimal place unchanged.

    3.2. Drop all of the digits following the second decimal place.

Section 6.5: Compliance with Spontaneous Breathing Trial (SBT) by Day 2 of the LTCH Stay (CMS ID: L022.02)

iQIES Review and Correct Report Measure Calculations for Compliance with Spontaneous Breathing Trial (SBT) by Day 2 of the LTCH Stay (CMS ID: L022.02)

Since this measure is not risk-adjusted or stratified, only the facility-level observed score is computed and the following steps can be applied to both the iQIES Review and Correct Report measure calculation and the iQIES QM Report measure calculation. Using the definitions from ***Table 7-5***, the following steps are used to calculate the measure.

1. Identify excluded LTCH stays (Steps 1.1 through 1.3).

For LTCH stays with admission date <u>on or after 10/01/2022</u>:

1.1. LTCH stay is excluded if it is missing data to calculate the measure (O0150A = [-] or O0150A2 = [-]).

1.2. LTCH stay is excluded if the patient is not on invasive mechanical ventilation support upon admission to the LTCH (O0150A = [0]).

1.3. LTCH stay is excluded if the patient is admitted to the LTCH during the reporting period, is on invasive mechanical ventilation support upon admission to the LTCH, and weaning attempts are not expected or anticipated at admission (O0150A= [1] AND O0150A2 = [0]).

This measure consists of two components which will be computed and reported separately:

- Component 1: Percentage of LTCH Stays in Which Patients Were Assessed for Readiness for SBT by Day 2 of the LTCH Stay
- Component 2: Percentage of LTCH Stays in Which Patients Were Ready for SBT and Received SBT by Day 2 of the LTCH Stay

Component 1, Percentage of LTCH Stays in Which Patients Were Assessed for Readiness for SBT by Day 2 of LTCH Stay

2. Determine the denominator count for Component 1.

   For LTCH stays with admission date <u>on or after 10/01/2022</u>:
   Of patients who were on invasive mechanical ventilation support upon admission to the LTCH, determine the total number of LTCH stays for which weaning attempts were expected or anticipated at admission (O0150A = [1] AND O0150A2 = [1]).

3. **Determine the numerator count for Component 1.** Determine the total number of LTCH stays for which the Admission assessment indicates assessment for readiness for SBT by day 2 of the LTCH stay and which were also deemed medically ready for an SBT by day 2 of the LTCH stay or deemed medically unready, with documentation of reason(s).

   - O0150B = [1], *and*
   - O0150C = [1] *or* O0150D = [1]

4. **Calculate the facility-level observed score for Component 1.** Divide the facility's Component 1 numerator count (Step 3) by its Component 1 denominator count (Step 2), and then multiply by 100 to obtain a percent value.

5. Round the percent value to two decimal places.

   5.1. If the digit in the third decimal place is 5 or greater, add 1 to the second decimal place; otherwise, leave the second decimal place unchanged.

   5.2. Drop all of the digits following the second decimal place.

Component 2, Percentage LTCH Stays in Which Patients Were Ready for SBT and Received SBT by Day 2 of the LTCH Stay

6. **Determine the denominator count for Component 2.** Determine the total number of LTCH stays for which the Admission assessment indicates completed assessment for readiness for SBT by day 2 of the LTCH stay and which were also deemed medically ready for a SBT by day 2 of the LTCH stay. This is a subset of the Component 1 numerator calculated in Step 3 above.
    - O0150B = [1], and
    - O0150C = [1]
7. **Determine the numerator count for Component 2.** Determine the total number of LTCH stays for which the LTCH Admission assessment indicates SBT was performed by day 2 of the LTCH stay, (O0150E = [1]).
8. **Calculate the facility-level observed score for Component 2.** Divide the facility's Component 2 numerator count (Step 7) by its Component 2 denominator count (Step 6), and then multiply by 100 to obtain a percent value.
9. Round the percent value to two decimal places.
    9.1. If the digit in the third decimal place is 5 or greater, add 1 to the second decimal place; otherwise, leave the second decimal place unchanged.
    9.2. Drop all of the digits following the second decimal place.

iQIES QM Report Measure Calculations for Compliance with Spontaneous Breathing Trial (SBT) by Day 2 of the LTCH Stay (CMS ID: L022.02)

As previously stated, this measure is not risk-adjusted or stratified. The steps to calculate the iQIES Review and Correct Report can be applied to calculate the iQIES QM Report. Follow the steps provided above for the iQIES QM Report measure calculation for the Compliance with Spontaneous Breathing Trial (SBT) by Day 2 of the LTCH Stay (CMS ID: L022.02) measure.

National Average Calculation for Compliance with Spontaneous Breathing Trial (SBT) by Day 2 of the LTCH Stay (CMS ID: L022.02)

Use the following steps to calculate the LTCH stay-level (i.e., prevalence) national average:

1. Determine the total number of LTCH stays in the nation after applying the exclusion criteria. This is the denominator for the national average.
2. Identify LTCH stays in the denominator of the national average that are included in the numerator for this measure. This is the numerator for the national average.
3. Divide the numerator (Step 2) by the denominator (Step 1) then multiply by 100, and round the percent value to two decimal places to obtain the national average.
    3.1. If the digit in the third decimal place is 5 or greater, add 1 to the second decimal place; otherwise, leave the second decimal place unchanged.

3.2. Drop all of the digits following the second decimal place.

Section 6.6: Ventilator Liberation Rate (CMS ID: L023.03)

iQIES Review and Correct Report Measure Calculations for Ventilator Liberation Rate (CMS ID: L023.03)

For the Review and Correct Reports, only the facility-level observed score is computed. Using the definitions in ***Table 7-6***, the following steps are used to calculate the measure.

1. Identify excluded LTCH stays (Steps 1.1 through 1.3).

   For LTCH stays with admission date on or after 10/01/2022:

   1.1. LTCH stay is excluded if it is missing data to calculate the measure (O0150A = [-] or O0150A2 = [-]).

   1.2. LTCH stay is excluded if the patient is not on invasive mechanical ventilation support upon admission to the LTCH (O0150A = [0]).

   1.3. LTCH stay is excluded if the patient is admitted to the LTCH during the reporting period, is on invasive mechanical ventilation support upon admission to the LTCH, and weaning attempts are not expected or anticipated at admission (O0150A= [1] AND O0150A2 = [0]).

2. Determine the facility-level denominator count.

   For LTCH stay records with admission date on or after 10/01/2022:
   Determine the total number of LTCH stays for which the LTCH admission assessment indicates that weaning attempts are expected or anticipated (O0150A = [1] AND O0150A2 = [1]).

3. **Determine the facility-level numerator count.** Determine the total number of LTCH stays for which the LTCH planned or unplanned Discharge assessment indicates the patient is alive and fully liberated (weaned), (O0200A = [1]).

4. **Calculate the facility-level observed score.** Divide the facility's numerator count (Step 3) by its denominator count (Step 2) to obtain the facility-level observed score, and then multiply by 100 to obtain a percent value.

5. Round the percent value to two decimal places.

   5.1. If the digit in the third decimal place is 5 or greater, add 1 to the second decimal place; otherwise, leave the second decimal place unchanged.

   5.2. Drop all of the digits following the second decimal place.

iQIES QM Report Measure Calculations for Ventilator Liberation Rate (CMS ID: L023.03)

This measure is risk-adjusted for the iQIES QM Reports and therefore an observed (i.e., not risk-adjusted) and a risk-adjusted value are reported. Using the definitions in ***Table 7-6***, the following steps are used to calculate the measure.

1. Calculate the facility-level observed score (Steps 1.1 through 1.2).

    1.1. To calculate the facility-level observed score, complete Steps 1 – 4 from **Chapter 6, Section 6.6**, "iQIES Review and Correct Report Measure Calculations" for this measure.

    1.2. Do not multiply by 100 or round to the second decimal place. All rounding will be done at the end of the measure calculation.

2. **Calculate the national average observed score**[25] as the mean ventilator liberation rate for all LTCH stays calculated using Steps 1 – 3 from **Chapter 6, Section 6.6**. This will be used in Step 6 to calculate the facility-level risk-adjusted ventilator liberation rate.

    Note: Because there is limited public accessibility to national assessment data, this document provides a national average observed score based on the reporting period of the regression intercept and coefficients. The national average observed score can be seen in ***Table RA-2*** *in the Risk-Adjustment Appendix File on the LTCH QRP Measures website. Please note that, depending on the reporting period and time of calculation, the national average observed score used in the iQIES QM Report, Provider Preview Report, and on public display on the Compare Website may vary from the national average observed score provided by these documents.*

3. Calculate the facility-level expected ventilator liberation rate (Steps 3.1 through 3.4).

    3.1. Determine the presence or absence of the measure covariates for each LTCH stay.

    3.2. Using the covariate definitions in ***Table RA-8*** in the associated **Risk-Adjustment Appendix** File to assign covariate values (COV), either '0' for covariate condition not present or missing, or '1' for covariate condition present, for each LTCH stay for each of the covariates as reported on the admission assessment.

    3.3. Calculate the expected score for each LTCH stay using the following formula:

$$\text{Expected score} = \frac{1}{[1+e^{-Y}]} \quad [1]$$

Where:

- ***Expected score*** identifies the expected liberation probability of ventilator liberation for each LTCH stay.
- ***e*** is the base of natural logarithms.
- ***Y*** is calculated as follows:

$$Y = \beta_0 + \beta_1(COV_1) + \ldots + \beta_n(COV_n) \quad [2]$$

Where:

[25] The national average observed score is calculated using the LTCH stay as the unit of analysis.

- β_0 is the logistic regression constant (also known as the intercept).
- β_1 ***through*** β_n are the regression coefficients for the covariates (see **Risk-Adjustment Appendix File**).

See ***Table RA-8*** and ***Table RA-9*** the associated **Risk-Adjustment Appendix File** for the regression constant and coefficients as well as detailed LCDS coding for each risk adjustor. The regression constant and regression coefficients are values obtained through logistic regression analysis. Please note that the iQIES QM and Provider Preview Reports use fixed regression constants and coefficients based on the target period in ***Table RA-8*** and ***Table RA-9*** in the associated **Risk-Adjustment Appendix File**.

3.4. Calculate the expected ventilator liberation rate (exp_j) for each LTCH as the mean of the expected score for all LTCH stays in the facility.

4. **Calculate the facility-level observed-to-expected ratio.** Calculate the facility-level standardized risk ratio (SRRj) using the following equation:

$$SRR_j = \frac{obs_j}{exp_j} \quad [3]$$

Where:

- obs_j = the observed ventilator liberation rate for each LTCH, as calculated in Step 3.4.
- exp_j = the expected ventilator liberation rate for each LTCH, as calculated in Step 3.3.

5. **Calculate the LTCH risk-adjusted ventilator liberation rate**. Calculate the LTCH risk-adjusted ventilator liberation rate by multiplying the facility-level observed-to-expected ratio (Step 5) by the national average observed score (Step 2), and then multiply by 100 to obtain a percent value.

6. Round the percent value to two decimal places.

6.1. If the digit in the third decimal place is 5 or greater, add 1 to the second decimal place; otherwise, leave the second decimal place unchanged.

6.2. Drop all of the digits following the second decimal place.

National Average Calculation for Ventilator Liberation Rate (CMS ID: L023.03)

To calculate the LTCH stay-level (i.e., prevalence) national average, refer to Step 2 under the iQIES QM Report Measure Calculations for this measure.

Section 6.7: Transfer of Health (TOH) Information to the Provider Post-Acute Care (PAC) (CMS ID: L025.01)

iQIES Review and Correct Report Measure Calculations for Transfer of Health (TOH) Information to the Provider Post-Acute Care (PAC) (CMS ID: L025.01)

Since this measure is not risk-adjusted or stratified, only the facility-level observed score is computed and the following steps can be applied to both the iQIES Review and Correct Report measure calculation and the iQIES QM Report measure calculation. Using the definitions from ***Table 7-7***, the following steps are used to calculate the measure.

1. **Determine the denominator count**. Select all LTCH stays regardless of payer within the reporting period with a planned/unplanned discharge to a subsequent provider as determined by discharge location (Item A2105= [02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12]).
2. **Determine the numerator count.** Include the total number of LTCH stays in the numerator count if a reconciled medication list was transferred (A2121 = [1]).
3. **Calculate the facility-level observed score.** Divide the facility's numerator count (Step 2) by its denominator count (Step 1) to obtain the facility-level observed score, and then multiply by 100 to obtain a percent value.
4. Round the percent value to two decimal places.
    4.1. If the digit in the third decimal place is 5 or greater, add 1 to the second decimal place; otherwise, leave the second decimal place unchanged.
    4.2. Drop all the digits following the second decimal place.

iQIES QM Report Measure Calculations for Transfer of Health (TOH) Information to the Provider Post-Acute Care (PAC) (CMS ID: L025.01)

As previously stated, this measure is not risk-adjusted or stratified. The steps to calculate the iQIES Review and Correct Report can be applied to calculate the iQIES QM Report. Follow the steps provided above for the iQIES QM Report measure calculation for the Transfer of Health Information to the Provider Post-Acute Care (PAC) (CMS ID: L025.01) measure.

National Average Calculation for Transfer of Health (TOH) Information to the Provider Post-Acute Care (PAC) (CMS ID: L025.01)

Use the following steps to calculate the LTCH stay-level (i.e., prevalence) national average:

1. Determine the total number of LTCH stays in the nation meeting the denominator criteria. This is the denominator for the national average.
2. Identify LTCH stays in the denominator of the national average that are included in the numerator for this measure. This is the numerator for the national average.
3. Divide the numerator (Step 2) by the denominator (Step 1) then multiply by 100, and round the percent value to two decimal places to obtain the national average.
    3.1. If the digit in the third decimal place is 5 or greater, add 1 to the second decimal place; otherwise, leave the second decimal place unchanged.
    3.2. Drop all of the digits following the second decimal place.

Section 6.8: Transfer of Health (TOH) Information to the Patient Post-Acute Care (PAC) (CMS ID: L026.02)

iQIES Review and Correct Report Measure Calculations for Transfer of Health (TOH) Information to the Patient Post-Acute Care (PAC) (CMS ID: L026.02)

Since this measure is not risk-adjusted or stratified, only the facility-level observed score is computed and the following steps can be applied to both the iQIES Review and Correct Report measure calculation and the iQIES QM Report measure calculation. Using the definitions from ***Table 7-8***, the following steps are used to calculate the measure.

1. **Determine the denominator count**. Select all LTCH stays regardless of payer within the reporting period with a planned/unplanned discharge to Home/Community (private home/apartment, board and care home, assisted living, group home, transitional living, or other residential arrangements) as determined by discharge location (Item A2105= [01, 99]).
2. **Determine the numerator count.** Include the total number of LTCH stays in the numerator count if a reconciled medication list was provided to the patient, family, and/or caregiver. (A2123 = [1]).
3. **Calculate the facility-level observed score**. Divide the facility's numerator count (Step 2) by its denominator count (Step 1) to obtain the facility-level observed score, and then multiply by 100 to obtain a percent value.
4. Round the percent value to two decimal places.
    4.1. If the digit in the third decimal place is 5 or greater, add 1 to the second decimal place; otherwise, leave the second decimal place unchanged.
    4.2. Drop all the digits following the second decimal place.

iQIES QM Report Measure Calculations for Transfer of Health (TOH) Information to the Patient Post-Acute Care (PAC) (CMS ID: L026.02)

As previously stated, this measure is not risk-adjusted or stratified. The steps to calculate the iQIES Review and Correct Report can be applied to calculate the iQIES QM Report. Follow the steps provided above for the iQIES QM Report measure calculation for the Transfer of Health Information to the Patient Post-Acute Care (PAC) (CMS ID: L026.02) measure.

National Average Calculation for Transfer of Health (TOH) Information to the Patient Post-Acute Care (PAC) (CMS ID: L026.02)

Use the following steps to calculate the LTCH stay-level (i.e., prevalence) national average:

1. Determine the total number of LTCH stays in the nation meeting the denominator criteria. This is the denominator for the national average.
2. Identify LTCH stays in the denominator of the national average that are included in the numerator for this measure. This is the numerator for the national average.
3. Divide the numerator (Step 2) by the denominator (Step 1) then multiply by 100, and round the percent value to two decimal places to obtain the national average.

3.1. If the digit in the third decimal place is 5 or greater, add 1 to the second decimal place; otherwise, leave the second decimal place unchanged.

3.2. Drop all of the digits following the second decimal place.

Section 6.9: Discharge Function Score (CMS ID: L027.01)

iQIES Review and Correct Report Measure Calculations for Discharge Function Score (CMS ID: L027.01)

This measure requires risk-adjusted data for the Review and Correct Reports since it estimates the percent of LTCH stays in which patients meet or exceed an expected discharge function score. Using the definitions from ***Table 7-9***, the following steps are used to calculate the quality measure.

1. **Identify excluded LTCH stays**. The LTCH stay is excluded if any of the following are true (Steps 1.1 through 1.4).

1.1. Incomplete LTCH stays:

- Patient was discharged to a Short-Term General Hospital (A2105 = [04]), Inpatient Psychiatric Facility (A2105 = [07]), or Critical Access Hospital (CAH) (A2105 = [11]).
- Patient transferred to another LTCH facility (A2105 = [05]).
- Patient discharged against medical advice? (A1990 = [1]).
- Patient had an unplanned discharge or expired (A0250 = [11, 12]). Note: discharges against medical advice are considered an unplanned discharge.
- Length of stay is less than 3 days: Discharge Date (A0270) – Admission Date (A0220) < 3 days.

1.2. Patient is younger than 18 years: Truncate (Admission Date (A0220) – Birth Date (A0900)). Use exact values in calculating age; do not round to nearest whole number.

1.3. Patient is discharged to hospice (A2105 = [09, 10]).

1.4. Patient is in a coma, persistent vegetative state, or locked-in syndrome, or has complete tetraplegia.

- Items used to identify these LTCH stays (on admission assessment):
- Comatose (B0100 = [1])
- Complete Tetraplegia (I5101 = [1])
- Locked-In State (I5460 = [1])
- Severe Anoxic Brain Damage, Cerebral Edema, or Compression of Brain (I5470 = [1])

2. **Calculate the observed discharge function score** (Steps 2.1 through 2.5) using the discharge function items and valid codes identified below and incorporating imputed item values. Please note there are different items used if the patient does not walk at both admission and discharge (Step 2.1) than for the remaining patients (Step 2.2):

    2.1. For patients who are coded as 07, 09, 10, or 88 for the Walk 10 feet item at both admission (GG0170I1) and discharge (GG0170I3), and who are coded between 01 and 06 for either Wheel 50 Feet with two turns (GG0170R) or Wheel 150 Feet (GG0170S) either at admission or at discharge, the following assessment items are used for discharge function score calculations:

- GG0130A3. Eating
- GG0130B3. Oral hygiene
- GG0130C3. Toileting hygiene
- GG0170A3. Roll left and right
- GG0170C3. Lying to sitting on side of bed
- GG0170D3. Sit to stand
- GG0170E3. Chair/bed-to-chair transfer
- GG0170F3. Toilet transfer
- GG0170R3. Wheel 50 feet with two turns*

**Please count the value for this item twice; 10 items are used to calculate a patient's score (scores range from 10 – 60).*

    2.2. For the remaining patients, the following assessment items are used for discharge function score calculations:

- GG0130A3. Eating
- GG0130B3. Oral hygiene
- GG0130C3. Toileting hygiene
- GG0170A3. Roll left and right
- GG0170C3. Lying to sitting on side of bed
- GG0170D3. Sit to stand
- GG0170E3. Chair/bed-to-chair transfer
- GG0170F3. Toilet transfer
- GG0170I3: Walk 10 Feet
- GG0170J3: Walk 50 Feet with two turns

Valid codes and their definitions for the discharge function items are:

- 06 – Independent

- 05 – Setup or clean-up assistance
- 04 – Supervision or touching assistance
- 03 – Partial/moderate assistance
- 02 – Substantial/maximal assistance
- 01 – Dependent
- 07 – Patient refused
- 09 – Not applicable
- 10 – Not attempted due to environmental limitations
- 88 – Not attempted due to medical condition or safety concerns
- ^ – Skip pattern
- – Not assessed/no information

2.3. To obtain the score, use the following procedure:

- If code is between 01 and 06, use the code as the value.
- If code is 07, 09, 10, 88, dashed (-), skipped (^), or missing (all henceforth referred to as NA), then use statistical imputation to estimate the code for that item and use this code as the value. See Step 2.4 for more details on the statistical imputation approach.

2.4. Calculate the imputed values for items with NA codes. To obtain the imputed values, use the procedure below. (Note that these steps first describe imputing the value for a single item at discharge and then describe the relevant modifications for the other items.)

2.4.1. Start with Eating (GG0130A). For each LTCH stay where the item has a NA code at discharge, calculate *z*, a continuous variable that represents a patient's underlying degree of independence on this item, using the imputation coefficients specific to the GG0130A discharge model:

[1] $z = \gamma_1 x_1 + \ldots + \gamma_m x_m$

Where:

2.4.1.1. $\boldsymbol{\gamma}_1$ through $\boldsymbol{\gamma}_m$ are the imputation regression coefficients for the covariates specific to the GG0130A discharge model. (See Imputation Appendix File (Discharge Function Score and Change in Mobility). Note that the coefficients used in this calculation do not include the thresholds described in Step 2.4.2.)

2.4.1.2. $\boldsymbol{x_1 - x_m}$ are the imputation risk adjustors specific to the GG0130A discharge model.

2.4.2. Calculate the probability for each possible item value, had the GG item been assessed, using *z* (Step 2.4.1) and the equations below.

[2]

$$\Pr(z \le \alpha_1) = \Phi(\alpha_1 - z),$$
$$\Pr(\alpha_1 < z \le \alpha_2) = \Phi(\alpha_2 - z) - \Phi(\alpha_1 - z),$$
$$\Pr(\alpha_2 < z \le \alpha_3) = \Phi(\alpha_3 - z) - \Phi(\alpha_2 - z),$$
$$\Pr(\alpha_3 < z \le \alpha_4) = \Phi(\alpha_4 - z) - \Phi(\alpha_3 - z),$$
$$\Pr(\alpha_4 < z \le \alpha_5) = \Phi(\alpha_5 - z) - \Phi(\alpha_4 - z),$$
$$\Pr(z > \alpha_5) = 1 - \Phi(\alpha_5 - z),$$

Where:

- $\Phi(.)$ is the standard normal cumulative distribution function.
- $\alpha_1 \ldots \alpha_5$ represent thresholds of levels of independence that are used to assign a value of 1-6 based on *z* for the GG0130A discharge model (see Imputation Appendix File (Discharge Function Score and Change in Mobility)).

2.4.3. Compute the imputed value of the GG item using the six probabilities determined in Step 2.4.2 and the equation below.

[3]

$$\textit{Imputed value of GG item} = \Pr(z \le \alpha_1) + 2 * \Pr(\alpha_1 < z \le \alpha_2) + 3 * \Pr(\alpha_2 < z \le \alpha_3) + 4 * \Pr(\alpha_3 < z \le \alpha_4) + 5 * \Pr(\alpha_4 < z \le \alpha_5) + 6 * \Pr(z > \alpha_5)$$

2.4.4. Repeat Steps 2.4.1-2.4.3 to calculate imputed values for each GG item included in the observed discharge function score that was coded as NA, replacing the Eating (GG0130A) item with each applicable GG item.

See ***Table IA-1***, ***Table IA-4***, and ***Table IA-5*** in the associated **Imputation Appendix File (Discharge Function Score and Change in Mobility)** for the imputation coefficients and thresholds, as well as detailed LCDS coding for each risk adjustor.[26] The imputation coefficients and thresholds for each GG item are values obtained through ordered probit model analyses of all eligible LTCH stays where the item value is not missing (i.e., had a value 01-06) at discharge, and covariates includes the predictors used in risk adjustment (See Step 3) and values on all GG items available in LCDS. The admission function scores are included in the covariates and calculated using the same procedure as the observed discharge function scores, including the replacement of NA codes with imputed values.[27] Please note that the iQIES QM and Provider Preview Reports use fixed regression coefficients and thresholds based on the target period in ***Table IA-1***, ***Table IA-4***, and ***Table IA-5*** in the associated **Imputation**

[26] The imputation coefficient and threshold values have been rounded to four decimal places. When applying these values to the equation to calculate imputed item values, these coefficient and threshold values should be used; do not round to fewer than four decimal places. This is to ensure consistency and accuracy of measure calculations.

[27] To calculate imputed values for GG items at admission, repeat Steps 2.4.1-2.4.4, replacing the word "discharge" with the word "admission."

2.5. Sum the values of the discharge function items to calculate the observed discharge function score for each LTCH stay. Scores can range from 10 to 60, with a higher score indicating greater independence.

3. Calculate the **expected discharge function score.** For each LTCH stay: use the intercept and regression coefficients to calculate the expected discharge function score using the formula below:

[4] $Expected\ discharge\ function\ score = \beta_0 + \beta_1 x_1 + \ldots + \beta_n x_n$

Where:

- ***Expected discharge function score*** estimates an expected discharge function score.
- β_0 is the regression intercept.
- β_1 through β_n are the regression coefficients for the covariates (see Risk Adjustment Appendix File).
- $x_1 - x_n$ are the risk adjustors.

Note that any expected discharge function score greater than the maximum should be recoded to the maximum score (i.e., 60).
See ***Table RA-5*** and ***Table RA-7*** in the associated **Risk-Adjustment Appendix File** for the regression intercept and coefficients as well as detailed LCDS coding for each risk adjustor.[28] The admission function values are included in the covariates and calculated using the same procedure as the observed discharge function scores, including the replacement of NA codes with imputed values.[29] The regression intercept and coefficients are values obtained through ordinary least squares linear regression analysis on all eligible LTCH stays. Please note that the iQIES QM and Provider Preview Reports use fixed regression intercepts and coefficients based on the target period in ***Table RA-5*** and ***Table RA-7*** in the **Risk-Adjustment Appendix File**.

4. **Calculate the difference in observed and expected discharge function scores**. For each LTCH stay which does not meet the exclusion criteria, compare each patient's observed discharge function score (Step 2) and expected discharge function score (Step 3) and classify the difference as one of the following:

4.1. Observed discharge function score is equal to or greater than the expected discharge function score.

4.2. Observed discharge function score is less than the expected discharge function score.

[28] The regression constant (intercept) and coefficient values have been rounded to four decimal places. When applying these values to the equation to calculate facility-level QM scores, these intercept and coefficient values should be used; do not round to fewer than four decimal places. This is to ensure consistency and accuracy of measure calculations.
[29] To calculate imputed values for GG items at admission, repeat Steps 2.4.1-2.4.4, replacing the word "discharge" with the word "admission."

5. **Determine the denominator count**. Determine the total number of LTCH stays with a LCDS discharge date in the measure target period, which do not meet the exclusion criteria.
6. **Determine the numerator count**. The numerator is the number of LTCH stays in which the observed discharge function score is the same as or greater than the expected discharge function score (Step 4.1).
7. **Calculate the facility-level discharge function percent**. Divide the facility's numerator count (Step 6) by its denominator count (Step 5) to obtain the facility-level discharge function proportion, and then multiply by 100 to obtain a percent value.
8. Round the percent value to two decimal places.
    8.1. If the digit in the third decimal place is 5 or greater, add 1 to the second decimal place; otherwise, leave the second decimal place unchanged.
    8.2. Drop all digits following the second decimal place.

iQIES QM Report Measure Calculations for Discharge Function Score CMS ID: L027.01)

This measure requires risk-adjustment for the iQIES QM Reports. Follow the steps provided above for the iQIES Review and Correct Report measure calculations for the Discharge Function Score (CMS ID: L027.01) measure.

National Average Calculation for Discharge Function Score (CMS ID: L027.01)

Use the following steps to calculate the LTCH stay-level (i.e., prevalence) national average:

1. Determine the total number of LTCH stays in the nation after applying the exclusion criteria. This is the denominator for the national average.
2. Identify LTCH stays in the denominator of the national average that are included in the numerator for this measure. This is the numerator for the national average.
3. Divide the numerator (Step 2) by the denominator (Step 1). Then, multiply by 100 and round the percent value to two decimal places to obtain the national average.
    3.1. If the digit in the third decimal place is 5 or greater, add 1 to the second decimal place; otherwise, leave the second decimal place unchanged.
    3.2. Drop all of the digits following the second decimal place.

Section 6.10: COVID-19 Vaccine: Percent of Patients/Residents Who Are Up To Date (CMS ID: L028.02)

iQIES Review and Correct Report Measure Calculations for COVID-19 Vaccine: Percent of Patients/Residents Who Are Up to Date (CMS ID: L028.02)

Since this measure is not risk-adjusted or stratified, only the facility-level observed score is computed and the following steps can be applied to both the iQIES Review and Correct Report measure calculation and the iQIES QM report measure calculation. Using the measure specifications from ***Table 7-10***, the following steps are used to calculate the measure.

1. **Determine the denominator count**. Determine the total number of LTCH stays with planned or unplanned Discharge Assessment (A0250 = [10 or 11] in the measure target period.

2. **Determine the numerator count.** Determine the total number of LTCH stays with a planned or unplanned Discharge assessment during measure target period in which patients were up to date with the COVID-19 vaccine; (O0350 = [1]).

3. **Calculate the facility-level observed score**. Divide the facility's numerator count (Step 2) by its denominator count (Step 1) to obtain the facility-level observed score, and then multiply by 100 to obtain a percent value.

4. Round the percent value to two decimal places.

    4.1. If the digit in the third decimal place is 5 or greater, add 1 to the second decimal place; otherwise, leave the second decimal place unchanged.

    4.2. Drop all of the digits following the second decimal place.

iQIES QM Report Measure Calculations for COVID-19 Vaccine: Percent of Patients/Residents Who Are Up to Date (CMS ID: L028.02)

As previously stated, this measure is not risk-adjusted or stratified. The steps to calculate the iQIES Review and Correct Report can be applied to calculate the iQIES QM Report. Follow the steps provided above for the iQIES QM Report measure calculations for the COVID-19 Vaccine: Percent of Patients/Residents Who Are Up To Date (CMS ID: L028.02) measure.

National Average Calculation for Patient/Resident COVID-19 Vaccine (CMS ID: L028.02)

Use the following steps to calculate the LTCH stay-level (i.e. prevalence) national average.

1. Determine the total number of LTCH stays in the nation meeting the denominator criteria. This is the denominator for the national average.

2. Identify LTCH stays in the denominator of the national average that are included in the numerator for this measure. This is the numerator for the national average.

3. Divide the numerator (Step 2) by the denominator (Step 1). Then, multiply by 100 and round the percent value to two decimal places to obtain the national average.

    3.1. If the digit in the third decimal place is 5 or greater, add 1 to the second decimal place, otherwise leave the second decimal place unchanged.

    3.2. Drop all of the digits following the second decimal place.

Chapter 7
Measure Logic Specifications for Assessment-Based (LTCH CARE Data Set) Quality Measures

Table 7-1
Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury
(CMS ID: L021.01)[30]

Measure Description
This measure reports the percentage of LTCH stays in which patients have stage 2-4 pressure ulcers, or unstageable pressure ulcers due to slough/eschar, non-removable dressing/device, or deep tissue injury, that are new or worsened since admission. The measure is calculated by review of a patient's discharge assessment for reports of Stage 2-4 pressure ulcers, or unstageable pressure ulcers due to slough/eschar, non-removable dressing/device, or deep tissue injury, that were not present or were at a lesser stage at the time of admission.

Measure Specifications[31]

Numerator

The numerator is the total number of LTCH stays for which the Discharge assessment (A0250 = [10, 11]) indicates one or more new or worsened Stage 2-4 pressure ulcers, or unstageable pressure ulcers compared to admission:

1. Stage 2 (M0300B1) - (M0300B2) > 0, OR
2. Stage 3 (M0300C1) - (M0300C2) > 0, OR
3. Stage 4 (M0300D1) - (M0300D2) > 0, OR
4. Unstageable – Non-removable dressing/device (M0300E1) - (M0300E2) > 0, OR
5. Unstageable – Slough and/or eschar (M0300F1) - (M0300F2) > 0, OR
6. Unstageable – Deep tissue injury (M0300G1) - (M0300G2) > 0

Denominator

The denominator is the total number of LTCH stays with both an Admission (A0250 = [01]) and planned or unplanned Discharge (A0250 = [10, 11]) LTCH CARE Data Set assessment with the discharge date in the measure target period, except those that meet the exclusion criteria.

(continued)

[30] This measure was finalized for reporting by LTCHs under the FY 2017 IPPS/LTCH PPS final rule (81 FR 25215).
[31] Effective on October 1, 2024, the LTCH CARE Data Set Version 5.1 is used to collect and submit assessment data for the LTCH QRP. A copy of the LTCH CARE Data Set Version 5.1 is available for download on the CMS LCDS and LTCH QRP Manual website.

Table 7-1 (continued)
Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury
(CMS ID: L021.01)

Measure Specifications[32]

Exclusions

LTCH stay is excluded if:

- **Data on new or worsened Stage 2, 3, 4, and unstageable pressure ulcers, including deep tissue injuries, are missing [-] on the planned or unplanned discharge assessment:**
  (M0300B1 = [-] or M0300B2 = [-]) and (M0300C1 = [-] or M0300C2 = [-]) and (M0300D1 = [-] or (M0300D2 = [-]) and (M0300E1 = [-] or M0300E2 = [-]) and (M0300F1 = [-] or M0300F2 = [-]) and (M0300G1 = [-] or M0300G2 = [-]).
- **Patient died during the LTCH stay:**
  A0250 (Reason for Assessment) = [12]

Covariates

Data for each covariate are derived from the admission assessment included in the target LTCH stay records.

1. **Functional Limitation Admission Performance:** Supervision/touching assistance or more for the functional mobility item Lying to Sitting on Side of Bed
2. **Bowel Continence**
3. **Peripheral Vascular Disease (PVD) / Peripheral Arterial Disease (PAD) or Diabetes Mellitus**
4. **Low body mass index (BMI), based on height (K0200A) and weight (K0200B) on the Admission assessment**

See covariate details in ***Table RA-3*** and ***Table RA-4*** in the associated **Risk-Adjustment Appendix File**.

[32] Effective on October 1, 2024, the LTCH CARE Data Set Version 5.1 is used to collect and submit assessment data for the LTCH QRP. A copy of the LTCH CARE Data Set Version 5.1 is available for download on the CMS LCDS and LTCH QRP Manual website.

Table 7-2
Application of Percent of Residents Experiencing One or More Falls with Major Injury (Long Stay) (CMS ID: L012.01)[33]

Measure Description
This quality measure reports the percentage of LTCH stays in which patients experience one or more falls with major injury (includes bone fractures, joint dislocations, closed head injuries with altered consciousness, or subdural hematoma) during the LTCH stay.
Measure Specifications[34]
Numerator Total number of LTCH stays in the denominator with planned or unplanned Discharge assessment or Expired Record during the selected time window that experienced one or more falls that resulted in major injury: J1900C = [1] or [2]. ***Denominator*** The total number of LTCH stays with a planned or unplanned Discharge assessment or Expired Record (A0250 = [10, 11, 12]) in the measure target period, which do not meet the exclusion criteria. ***Exclusions*** LTCH stay is excluded if the number of falls with major injury was not coded: J1900C (Falls with Major Injury) = [-].
Covariates
None.

[33] The application of the Percent of Residents Experiencing One or More Falls with Major Injury (Long Stay) measure is finalized for reporting by LTCHs under the FY 2014 IPPS/LTCH PPS final rule (78 FR 50874 through 50877) and FY 2016 IPPS/LTCH PPS final rule (80 FR 49736 through 49739).

[34] Effective on October 1, 2024, the LTCH CARE Data Set Version 5.1 is used to collect and submit assessment data for the LTCH QRP. A copy of the LTCH CARE Data Set Version 5.1 is available for download on the CMS LCDS and LTCH QRP Manual website.

Table 7-3
Functional Outcome Measure: Change in Mobility among Long-Term Care Hospital Patients Requiring Ventilator Support (CMS ID: L011.06)[35]

Measure Description
This measure estimates the risk-adjusted change in mobility score between admission and discharge among LTCH stays in which patients require ventilator support at admission. The change in mobility score is calculated as the difference between the discharge mobility score and the admission mobility score. This measure only includes LTCH stays in which patients require invasive mechanical ventilator support at admission.

Measure Specifications[36]
Mobility items and rating scale:
The following mobility items are collected at admission and discharge: GG0170A: Roll left and right GG0170C: Lying to sitting on side of bed GG0170D: Sit to stand GG0170E: Chair/bed-to-chair transfer GG0170F: Toilet transfer GG0170I: Walk 10 feet* GG0170J: Walk 50 feet with two turns* GG0170R. Wheel 50 feet with two turns*
* Count Wheel 50 Feet with two turns (GG0170R) value twice to calculate the total observed discharge function score for stays where (i) Walk 10 Feet (GG0170I) has an activity not attempted (ANA) code at both admission and discharge and (ii) Wheel 50 Feet with two turns (GG0170R) has a code between 01 and 06 at either admission or discharge. The remaining stays use Walk 10 Feet (GG0170I) + Walk 50 Feet with two turns (GG0170J) to calculate the total observed discharge function score. In either case, 7 items are used to calculate the total observed mobility score for a stay and scores range from 7 – 42.
Each mobility item is coded using a 6-point scale, as follows: 06 (Independent) 05 (Setup or clean-up assistance) 04 (Supervision or touching assistance) 03 (Partial/moderate assistance) 02 (Substantial/maximal assistance) 01 (Dependent)

(continued)

[35] This measure is finalized for reporting by LTCHs under the FY 2015 IPPS/LTCH PPS final rule (79 FR 50298 through 50301).
[36] Effective on October 1, 2024, the LTCH CARE Data Set Version 5.1 is used to collect and submit assessment data for the LTCH QRP. A copy of the LTCH CARE Data Set Version 5.1 is available for download on the CMS LCDS and LTCH QRP Manual website.

Table 7-3 (continued)
Functional Outcome Measure: Change in Mobility among Long-Term Care Hospital Patients Requiring Ventilator Support (CMS ID: L011.06)

Measure Specifications[37]

If an item is not attempted, an 'activity not attempted' code may be used:

- 07 (Patient refused)
- 09 (Not applicable)
- 10 (Not attempted due to environmental limitations)
- ^ (skip pattern only valid for items GG0170J1/J3 through GG0170K1/K3)
- - (Not assessed/no information, dash)
- 88 (Not attempted due to medical condition or safety concerns).

If code is between 01 and 06, then use code as the value.

If code is 07, 09, 88, 10 then then use statistical imputation to estimate the item value for that item and use this code as the value.

If the mobility item is skipped (^), dashed (–), or missing, then then use statistical imputation to estimate the item value for that item and use this code as the value.

Risk-adjusted change in mobility score

The facility-level risk-adjusted change in mobility score is calculated as follows:

(Facility-level observed change score - Facility-level expected change score) + National average change score.

Target population

Patients with an admission assessment (A0250=01) and a planned discharge assessment (A0250=10) that define a LTCH stay during the target period, who require invasive ventilator support at the time of admission O0150A = [1] on admission assessment on or after 10/01/2022.

Exclusions

LTCH stay is excluded if:

Patient is younger than 18 years:

Age (A0220 minus A0900) < 18 years (Age is calculated based on the truncated difference between admission date (A0220) and birth date (A0900); i.e., the difference is not rounded to nearest whole number.)

Patient had an unplanned discharge or expired:

A0250 (Reason for Assessment) = [11, 12] (Note: Discharges against medical advice are considered an unplanned discharge.)

(continued)

[37] Effective on October 1, 2024, the LTCH CARE Data Set Version 5.1 is used to collect and submit assessment data for the LTCH QRP. A copy of the LTCH CARE Data Set Version 5.1 is available for download on the CMS LCDS and LTCH QRP Manual website.

Table 7-3 (continued)
Functional Outcome Measure: Change in Mobility among Long-Term Care Hospital Patients Requiring Ventilator Support (CMS ID: L011.06)

Measure Specifications[38]
Patient discharged against Medical Advice:
A1990 (Discharged Against Medical Advice) = [1]
Patient was discharged to short-term general hospital, long-term care hospital, inpatient psychiatric hospital or unit, hospice, or critical access hospital:
A2105 (Discharge Location) = [04, 05, 07, 09, 10, 11]
Length of stay is less than 3 days:
A0270 (Discharge Date) minus A0220 (Admission Date) < 3 days
Patient is in a coma, persistent vegetative state, complete tetraplegia, or locked-in syndrome:
B0100 (Comatose) = [1] (checked)
I5101 (Complete Tetraplegia) = [1] (checked)
I5460 (Locked-In State) = [1] (checked)
I5470 (Severe Anoxic Brain Damage, Cerebral Edema, or Compression of Brain) = [1] (checked)
Patient has a progressive neurological condition, including amyotrophic lateral sclerosis, multiple sclerosis, Parkinson's disease, or Huntington's chorea:
I5200 (Multiple Sclerosis) = [1] (checked)
I5250 (Huntington's Disease) = [1] (checked)
I5300 (Parkinson's Disease) = [1] (checked)
I5450 (Amyotrophic Lateral Sclerosis) = [1] (checked)

(continued)

[38] Effective on October 1, 2024, the LTCH CARE Data Set Version 5.1 is used to collect and submit assessment data for the LTCH QRP. A copy of the LTCH CARE Data Set Version 5.1 is available for download on the CMS LCDS and LTCH QRP Manual website.

Table 7-3 (continued)
Functional Outcome Measure: Change in Mobility among Long-Term Care Hospital Patients Requiring Ventilator Support (CMS ID: L011.06)

Measure Specifications[39]
Patient is independent on <u>all</u> mobility items at admission: GG0170A1 = [06], and GG0170C1 = [06], and GG0170D1 = [06], and GG0170E1 = [06], and GG0170F1 = [06], and GG0170I1 = [06], and GG0170J1 = [06]
Covariates

[39] Effective on October 1, 2024, the LTCH CARE Data Set Version 5.0 is used to collect and submit assessment data for the LTCH QRP. A copy of the LTCH CARE Data Set Version 5.1 is available for download on the CMS LCDS and LTCH QRP Manual website.

Measure Specifications[39]

Data for each covariate are derived from the admission assessment included in the target LTCH stay records.

1. **Age groups (< 55 years, 55-64 years, 65-74 years, 75-84 years, ≥ 85 years)**
2. **Admission mobility – continuous**[40]
3. **Bladder continence**
4. **Bowel continence**
5. **Communication impairment**
6. **Prior functioning: indoor ambulation**
7. **Prior mobility device/aids**
8. **Primary medical condition category**
9. **Interaction between admission function and primary medical condition category**
10. **Stage 2 pressure ulcer**
11. **Stage 3, 4, or unstageable pressure ulcer/injury**
12. **High BMI**
13. **Low BMI**
14. **Nutritional approaches**
15. **Comorbidities**

Covariates

See covariate details in ***Table RA-5*** and ***Table RA-6*** in the associated **Risk-Adjustment Appendix File**.

[40] Admission mobility is the sum of admission values for mobility items included in the discharge score. NAs coded on admission items are treated the same way as NAs coded on discharge items, with NAs replaced with imputed values. Walking items and the wheeling item are used in the same manner as in the discharge score.

Table 7-4
Drug Regimen Review Conducted with Follow-Up for Identified Issues –Post Acute Care (PAC) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP)
(CMS ID: L020.01)[41]

Measure Description
This measure reports the percentage of LTCH stays in which a drug regimen review was conducted at the time of admission and timely follow-up with a physician occurred each time potential clinically significant medication issues were identified throughout that stay.

Measure Specifications[42]

Numerator

Total number of LTCH stays in the denominator meeting each of the following two criteria:

1. The facility conducted a drug regimen review on admission which resulted in one of the three following scenarios:
    a. No potential and actual clinically significant medication issues were found during the review (N2001 = [0]); or
    b. Potential and actual clinically significant medication issues were found during the review (N2001 = [1]) and then a physician (or physician- designee) was contacted and prescribed/recommended actions were completed by midnight of the next calendar day (N2003 = [1]); or
    c. The patient was not taking any medications (N2001 = [9])
2. Appropriate follow-up occurred each time a potential or actual clinically significant medication issue was identified during the stay (N2005 = [1]); or no potential or actual clinically significant medications issues were identified since the admission or patient was not taking any medications (N2005 = [9]).

Denominator

Any LTCH stays with a planned or unplanned Discharge assessment or Expired Record (A0250 = [10, 11, 12]) during the reporting period.

Exclusions

There are no denominator exclusions for this measure.

Covariates
None.

[41] This measure was finalized for reporting by LTCHs under the FY 2017 IPPS/LTCH PPS final rule (81 FR 25215).
[42] Effective on October 1, 2024, the LTCH CARE Data Set Version 5.1 is used to collect and submit assessment data for the LTCH QRP. A copy of the LTCH CARE Data Set Version 5.1 is available for download on the CMS LCDS and LTCH QRP Manual website.

Table 7-5
Compliance with Spontaneous Breathing Trial (SBT) by Day 2 of the LTCH Stay
(CMS ID: L022.02)[43]

Measure Description
This measure assesses facility-level compliance with Spontaneous Breathing Trial (SBT), including Tracheostomy Collar Trial (TCT) or Continuous Positive Airway Pressure (CPAP) breathing trial, by Day 2 of the LTCH stays for patients on invasive mechanical ventilation support upon admission, and for whom weaning attempts were expected or anticipated at admission. This measure will be computed and reported separately according to each of the following components: – Component 1: Percentage of LTCH Stays in Which Patients Were Assessed for Readiness for SBT by Day 2 of the LTCH Stay – Component 2: Percentage of LTCH Stays in Which Patients Were Ready for SBT and Received SBT by Day 2 of LTCH Stay
Measure Specifications[44]
Numerator • Component 1: LTCH stays in which patients are admitted on invasive mechanical ventilation for whom the LTCH Admission assessment (A0250 = [01]) indicates: o Completed assessment for readiness for SBT by day 2 of the LTCH stay (O0150B = [1] (yes)) and were either deemed medically ready (O0150C = [1] (yes)) OR o Medically unready, with documentation of reason(s) (O0150D = [1] (Yes)). • Component 2: LTCH stays in which patients are admitted on invasive mechanical ventilation for whom the LTCH Admission assessment (A0250 = [01]) indicates SBT performed by day 2 of the LTCH stay (O0150E = [1] (yes)). ***Denominator*** • Component 1: LTCH stays in which patients were on invasive mechanical ventilation support upon admission to an LTCH, for whom weaning attempts are expected or anticipated (for LTCH stays with admission date on and after 10/01/2022: O0150A = [1] (yes, on ventilation) and O0150A2 = [1] (yes, weaning)).

(continued)

[43] This measure is finalized for reporting by LTCHs under the FY 2018 IPPS/LTCH PPS final rule (82 FR 38439 through 38443).
[44] Effective on October 1, 2024, the LTCH CARE Data Set Version 5.1 is used to collect and submit assessment data for the LTCH QRP. A copy of the LTCH CARE Data Set Version 5.1 is available for download on the CMS LCDS and LTCH QRP Manual website.

Table 7-5 (continued)
Compliance with Spontaneous Breathing Trial (SBT) by Day 2 of the LTCH Stay
(CMS ID: L022.02)

Measure Specifications[45]
• Component 2: The subset of LTCH stays in which patients in the numerator of Component 1 were assessed and deemed ready for SBT by Day 2 of the LTCH stay (O0150B = [1] (yes) and O0150C = [1] (yes)).
Exclusions
LTCH stay is excluded from both Component 1 and Component 2 if: 1. LTCH stay is missing data to calculate the measure (for stays with admission date on and after 10/01/2022: O0150A = [-] or O0150A2 = [-]), OR 2. LTCH stays in which weaning attempts are not expected or anticipated at admission for the patient (for LTCH stays with admission date from 07/01/2018 through 09/30/2022: O0150A = [0] (No, not invasive mechanical ventilation support), or O0150A = [2] (Yes, non-weaning); for LTCH stays with admission date on and after 10/01/2022: O0150A = [0] (No, not invasive mechanical ventilation support), or O0150A = [1] and O150A2 = [0] (Yes, non-weaning)).

[45] Effective on October 1, 2024, the LTCH CARE Data Set Version 5.1 is used to collect and submit assessment data for the LTCH QRP. A copy of the LTCH CARE Data Set Version 5.1 is available for download on the CMS LCDS and LTCH QRP Manual website.

Table 7-6
Ventilator Liberation Rate (CMS ID: L023.03)[46]

Measure Description
This measure reports facility-level Ventilator Liberation Rate for LTCH stays in which patients are admitted to an LTCH requiring invasive mechanical ventilation support, and for whom weaning attempts were expected or anticipated as reported on the Admission Assessment.

Measure Specifications[47]
Numerator LTCH stays in which patients were reported as fully liberated (weaned) (O0200A = [1] (fully liberated at discharge)) on the LTCH CARE Data Set Planned or Unplanned Discharge Assessments (A0250 = [10, 11]). ***Denominator*** LTCH stays in which patients were on mechanical ventilation support for whom weaning attempts were expected or anticipated at admission (for LTCH stays with admission date on and after 10/01/2022: O0150A = [1] (yes, on ventilation) and O0150A2 = [1] (yes, weaning)). ***Exclusions*** LTCH stay is excluded if: • LTCH stay is missing data to calculate the measure (for LTCH stays with admission date on and after 10/01/2022: O0150A = [-] or O0150A2 = [-]), OR • Weaning attempts are not expected or anticipated at admission for the patient (for LTCH stays with admission date on and after 10/01/2022: O0150A = [0] (No, not invasive mechanical ventilation support), or O0150A = [1] and O150A2 = [0] (No determined to be, non-weaning)).

(continued)

[46] This measure is finalized for reporting by LTCHs under the FY 2018 IPPS/LTCH PPS final rule (82 FR 38443 through 38446). The Ventilator Liberation Rate is defined as the percentage of patients who are alive and fully liberated (weaned) at discharge. A patient is considered fully liberated if he or she does not require any invasive mechanical ventilation support for at least 2 consecutive calendar days immediately prior to the date of discharge.

[47] Effective on October 1, 2024, the LTCH CARE Data Set Version 5.1 is used to collect and submit assessment data for the LTCH QRP. A copy of the LTCH CARE Data Set Version 5.1 is available for download on the CMS LCDS and LTCH QRP Manual website.

Table 7-6 (continued)
Ventilator Liberation Rate (CMS ID: L023.03)

Covariates

Data for each covariate is derived from the admission assessment included in the target LTCH stays.

1. **Age Groups**
2. **Prior Functioning: Everyday Activities, Indoor Mobility (Ambulation)**
3. **Metastatic Cancer**
4. **Severe Cancer**
5. **Left Ventricular Assistive Device with Known Ejection Fraction ≤ 30%**
6. **Progressive Neuromuscular Disease**
7. **Severe Neurological Injury, Disease, or Dysfunction**
8. **Post-Transplant (lung, heart, liver, kidney, and bone marrow)**
9. **Vasoactive Medication (i.e. continuous infusions of vasopressors or inotropes)**
10. **Dialysis**

See covariate details in ***Table RA-8***, and ***Table RA-9***, in the associated **Risk-Adjustment Appendix File**.

Table 7-7
Transfer of Health (TOH) Information to the Provider Post-Acute Care (PAC) (CMS ID L025.01)[48]

Measure Description
This measure reports the percentage of LTCH stays indicating a current reconciled medication list was transferred to the subsequent provider at the time of planned/unplanned discharge. For patients with multiple stays during the reporting period, each stay is eligible for inclusion in the measure.
Measure Specifications[49]
The measure is calculated by reviewing a patient's planned/unplanned discharge assessment for provision of a current reconciled medication list to the subsequent provider at the time of discharge. ***Numerator*** The numerator is the number of LTCH stays for which the following is true: At the time of discharge, the facility provided a current reconciled medication list to the subsequent provider (A2121 = [1]). ***Denominator*** The denominator is the total number of LTCH stays with a planned/unplanned discharge date in the measure target period, ending in discharge to a short-term general hospital, a SNF, intermediate care, home under care of an organized home health service organization or hospice, hospice in an institutional facility, a swing bed, another IRF, an LTCH, a Medicaid nursing facility, an inpatient psychiatric facility, or a critical access hospital. Discharge to one of these providers is based on response to the discharge location item, A2105, of the LCDS assessment: (A2105= [02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12]) ***Exclusions*** There are no denominator exclusions for this measure.
Covariates
None.

[48] This measure was finalized for reporting by LTCHs under the FY 2020 IPPS/LTCH PPS final rule (84 FR 42044).
[49] Effective on October 1, 2024, the LTCH CARE Data Set Version 5.1 is used to collect and submit assessment data for the LTCH QRP. A copy of the LTCH CARE Data Set Version 5.1 is available for download on the CMS LCDS and LTCH QRP Manual website.

Table 7-8
Transfer of Health Information (TOH) to the Patient Post-Acute Care (PAC) (CMS ID L026.02)[50]

Measure Description
This measure reports the percentage of LTCH stays indicating a current reconciled medication list was transferred to the patient, family, and/or caregiver at the time of discharge. For patients with multiple stays during the reporting period, each stay is eligible for inclusion in the measure.
Measure Specifications[51]
The measure is calculated by reviewing a patient's planned/unplanned discharge assessment for provision of a current reconciled medication list to the patient, family, and/or caregiver at the time of discharge. ***Numerator*** The numerator is the number of LTCH stays for which the following is true: At the time of discharge, the facility provided a current reconciled medication list to the patient, family, and/or caregiver (A2123 = [1]). ***Denominator*** The denominator is the total number of LTCH stays with a planned/unplanned discharge date in the measure target period, ending in discharge to a private home/apartment, board/care, assisted living, group home, transitional living, or other residential care arrangements. Discharge to one of these locations is based on response to the discharge location item, A2105, of the LCDS assessment: (A2105= [01, 99]) ***Exclusions*** There are no denominator exclusions for this measure.
Covariates
None.

[50] This measure was finalized for reporting by LTCHs under the FY 2020 IPPS/LTCH PPS final rule (84 FR 42044). An update to the denominator for the TOH to the Patient measure was finalized in the FY 2022 IPPS/LTCH PPS final rule (86 FR 45446 – 45447)

[51] Effective on October 1, 2024, the LTCH CARE Data Set Version 5.1 is used to collect and submit assessment data for the LTCH QRP. A copy of the LTCH CARE Data Set Version 5.1 is available for download on the CMS LCDS and LTCH QRP Manual website.

Table 7-9
Discharge Function Score (CMS ID L027.01)[52]

Measure Description
This measure estimates the percentage of LTCH stays in which patients meet or exceed an expected discharge function score.

Measure Specifications[53]
Function items and Rating scale: The function assessment items used for discharge function score calculations are: • GG0130A3. Eating • GG0130B3. Oral hygiene • GG0130C3. Toileting hygiene • GG0170A3. Roll left and right • GG0170C3. Lying to sitting on side of bed • GG0170D3. Sit to stand • GG0170E3. Chair/bed-to-chair transfer • GG0170F3. Toilet transfer • GG0170I3: Walk 10 Feet* • GG0170J3: Walk 50 Feet with two turns* • GG0170R3. Wheel 50 feet with two turns* * Count Wheel 50 Feet with two turns (GG0170R) value twice to calculate the total observed discharge function score for stays where (i) Walk 10 Feet (GG0170I) has an activity not attempted (ANA) code at both admission and discharge and (ii) either Wheel 50 Feet with two turns (GG0170R) or Wheel 150 Feet (GG0170S) has a code between 1 and 6 at either admission or discharge. The remaining stays use Walk 10 Feet (GG0170I) + Walk 50 Feet with two turns (GG0170J) to calculate the total observed discharge function score. In either case, 10 items are used to calculate the total observed discharge function score for a stay and scores range from 10 – 60.

(continued)

[52] This measure was finalized for reporting by LTCHs under the FY 2024 IPPS/LTCH PPS final rule.
[53] Effective on October 1, 2024, the LTCH CARE Data Set Version 5.1 is used to collect and submit assessment data for the LTCH QRP. A copy of the LTCH CARE Data Set Version 5.1 is available for download on the CMS LCDS and LTCH QRP Manual website.

Table 7-9 (continued)
Discharge Function Score (CMS ID: L027.01)

Measure Specifications[54]

Valid codes and code definitions for the coding of the discharge function items are:

- 06 – Independent
- 05 – Setup or clean-up assistance
- 04 – Supervision or touching assistance
- 03 – Partial/moderate assistance
- 02 – Substantial/maximal assistance
- 01 – Dependent
- 07 – Patient refused
- 09 – Not applicable
- 10 – Not attempted due to environmental limitations
- 88 – Not attempted due to medical condition or safety concerns
- ^ – Skip pattern
- - – Not assessed/no information

To obtain the discharge function score, use the following procedure:

- If code is between 01 and 06, then use code as the value.
- If code is 07, 09, 10, or 88, then use statistical imputation to estimate the item value for that item and use this code as the value.
- If the item is skipped (^), dashed (-), or missing, then use statistical imputation to estimate the item value for that item and use this code as the value.

Sum the values of the discharge function items to create a discharge function score for each LTCH stay. Scores can range from 10 – 60, with a higher score indicating greater independence.

Numerator

The numerator is the number of patients in a LTCH, except those that meeting the exclusion criteria, with an observed discharge function score that is equal to or greater than the calculated expected discharge function score.[55]

(continued)

[54] Effective on October 1, 2024, the LTCH CARE Data Set Version 5.1 is used to collect and submit assessment data for the LTCH QRP. A copy of the LTCH CARE Data Set Version 5.1 is available for download on the CMS LCDS and LTCH QRP Manual website.

[55] Functional assessment items included in the discharge function score are GG0130A3, GG0130B3, GG0130C3, GG0170A3, GG0170C3, GG0170D3, GG0170E3, GG0170F3, GG0170I3, GG0170J3, and GG0170R3.

Table 7-9 (continued)
Discharge Function Score (CMS ID: L027.01)

Measure Specifications[56]

Denominator

The total number of LTCH stays with a discharge date in the measure target period, which do not meet the exclusion criteria.

Exclusions

LTCH stay is excluded if:

Patient is younger than 18 years:

Age (A0220 minus A0900) < 18 years (Age is calculated based on the truncated difference between admission date (A0220) and birth date (A0900); i.e., the difference is not rounded to nearest whole number.)

Patient had an unplanned discharge or expired:

A0250 (Reason for Assessment) = [11, 12] (Note: Discharges against medical advice are considered an unplanned discharge.)

Patient discharged against Medical Advice:

A1990 (Discharged Against Medical Advice) = [1]

Patient was discharged to short-term general hospital, long-term care hospital, inpatient psychiatric hospital or unit, hospice, or critical access hospital:

A2105 (Discharge Location) = [04, 05, 07, 09, 10, 11]

Length of stay is less than 3 days:

A0270 (Discharge Date) minus A0220 (Admission Date) < 3 days

Patient is in a coma, has complete tetraplegia locked-in syndrome, or is in a persistent vegetative state:

B0100 (Comatose) = [1] (checked)

I5101 (Complete Tetraplegia) = [1] (checked)

I5460 (Locked-In State) = [1] (checked)

I5470 (Severe Anoxic Brain Damage, Cerebral Edema, or Compression of Brain) = [1] (checked)

(continued)

[56] Effective on October 1, 2024, the LTCH CARE Data Set Version 5.1 is used to collect and submit assessment data for the LTCH QRP. A copy of the LTCH CARE Data Set Version 5.1 is available for download on the CMS LCDS and LTCH QRP Manual website.

Table 7-9 (continued)
Discharge Function Score (CMS ID: L027.01)

Covariates
Data for each covariate are derived from the admission assessment included in the target LTCH stay records.

1. **Age groups (< 55 years, 55-64 years, 65-74 years, 75-84 years, ≥ 85 years)**
2. **Admission function – continuous**[57]
3. **Admission function – squared**
4. **Bladder continence**
5. **Bowel continence**
6. **Communication impairment**
7. **Prior functioning: indoor ambulation**
8. **Prior mobility device/aids**
9. **Primary medical condition category**
10. **Interaction between admission function and primary medical condition category**
11. **Stage 2 pressure ulcer**
12. **Stage 3, 4, or unstageable pressure ulcer/injury**
13. **High BMI**
14. **Low BMI**
15. **Nutritional approaches**
16. **Ventilator status**
17. **Comorbidities**

See covariate details in ***Table RA-5*** and ***Table RA-7*** in the associated **Risk Adjustment Appendix File**.

[57] Admission function is the sum of admission values for function items included in the discharge score. NAs coded on admission items are treated the same way as NAs coded on discharge items, with NAs replaced with imputed values. Walking items and wheeling item are used in the same manner as in the discharge score.

Table 7-10
COVID-19 Vaccine: Percent of Patients/Residents Who Are Up To Date (CMD ID: L028.02)[58]

Measure Description
This measure reports the percentage of LTCH stays in which patients are "up to date" with their COVID-19 vaccinations per the CDC's latest guidance.[59]

Measure Specifications[60]

Numerator

The total number of LTCH stays in the denominator in which patients are up to date with the COVID-19 vaccine (O0350= [1]) during the target period.

Denominator

Any LTCH stays with a planned or unplanned Discharge assessment (A0250 = [10, 11]) during the target period.

Exclusions

There are no denominator exclusions for this measure.

Covariates
None.

[58] This quality measure was finalized for reporting in the FY 2024 LTCH PPS final rule (88 FR 59250)

[59] The definition of "up to date" may change based on the CDC's latest guidance, and can be found on the CDC webpage "Stay Up to Date with COVID-19 Vaccines Including Boosters," https://www.cdc.gov/covid/vaccines/stay-up-to-date.html (last accessed 3/5/2025).

[60] Effective on October 1, 2024, the LCDS 5.1 is used to collect and submit assessment data for the LTCH QRP. A copy of the LCDS Version 5.1 is available for download on the CMS LCDS and LTCH QRP Manual website.

Appendix A:
Measure Specification History

Appendix A provides tables detailing the effective dates corresponding to each CMS ID update for all LTCH QRP quality measures, and the effective dates corresponding to each manual/addendum version (**Section A.1**).

Section A.1: CMS ID Update and Manual Version History Tables

This section contains tables detailing the effective dates corresponding to each CMS ID update for all LTCH QRP quality measures (***Table A-1***), and the effective dates corresponding to each manual/addendum version (***Table A-2***).

Table A-1
Effective Dates by CMS ID Update for all LTCH QRP Quality Measures

Measure ID Updates					
Quality Measure	**.01**	**.02**	**.03**	**.04**	**.05**
National Healthcare Safety Network (NHSN) Measures					
National Healthcare Safety Network (NHSN) Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure (CMS ID: L006.01)	Inception – Present	--	--	--	--
National Healthcare Safety Network (NHSN) Central Line-Associated Bloodstream Infection (CLABSI) Outcome Measure (CMS ID: L007.01)	Inception – Present	--	--	--	--
National Healthcare Safety Network (NHSN) Facility-Wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure (CMS ID: L014.01)	Inception – Present	--	--	--	--
Influenza Vaccination Coverage Among Healthcare (CMS ID: L015.01)	Inception – Present	--	--	--	--
COVID-19 Vaccination Coverage Among Healthcare Personnel (HCP) (CMS ID: L024.02)	Inception – 09/30/2023	10/01/2023 – Present	--	--	--

(Continued)

Table A-1 (cont.)
Effective Dates by CMS ID Update for all LTCH QRP Quality Measures

Measure ID Updates					
Quality Measure	**.01**	**.02**	**.03**	**.04**	**.05**
Medicare Claims-Based Measures					
Potentially Preventable 30-Days Post-Discharge Readmission Measure for Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP) (CMS ID: L017.01)	Inception – Present	--	--	--	--
Discharge to Community–Post-Acute Care (PAC) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP) (CMS ID: L018.02)	Inception – 09/30/2020	10/01/2020 – Present	--	--	--
Medicare Spending Per Beneficiary – Post-Acute Care (PAC) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP) (CMS ID: L019.01)	Inception – Present	--	--	--	--

(Continued)

Table A-1 (cont.)
Effective Dates by CMS ID Update for all LTCH QRP Quality Measures

Measure ID Updates						
Quality Measure	**.01**	**.02**	**.03**	**.04**	**.05**	**.06**
Assessment-Based Measures						
Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury (CMS ID: L021.01)	Inception – Present	--	--	--	--	--
Application of Percent of Residents Experiencing One or More Falls with Major Injury (Long Stay) (CMS ID: L012.01)	Inception – Present	--	--	--	--	--
Functional Outcome Measure: Change in Mobility Among Long-Term Care Hospital Patients Requiring Ventilator Support (CMS ID: L011.06)	Inception – 06/30/2018	07/01/2018 – 09/30/2019	10/01/2019 – 09/30/2020	10/01/2020 – 09/30/2022	10/01/2022 – 09/30/2024	10/01/2025 – Present
Compliance with Spontaneous Breathing Trial (SBT) by Day 2 of the LTCH Stay (CMS ID: L022.02)	Inception – 09/30/2022	10/01/2022 – Present	--	--	--	--
Ventilator Liberation Rate (CMS ID: L023.03)	Inception – 09/30/2022	10/01/2022 – Present	--	--	--	--
Drug Regimen Review Conducted with Follow-Up for Identified Issues –Post Acute Care (PAC) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP) (CMS ID: L020.01)	Inception – Present	--	--	--	--	--
Transfer of Health (TOH) Information to the Provider Post-Acute Care (PAC) (CMS ID: L025.01)	Inception – Present	--	--	--	--	--
Transfer of Health (TOH) Information to the Patient Post-Acute Care (PAC) (CMS ID: L026.02)	Inception – 09/30/2021	10/01/2022 – Present	--	--	--	--

Measure ID Updates						
Quality Measure	**.01**	**.02**	**.03**	**.04**	**.05**	**.06**
Assessment-Based Measures						
Discharge Function Score (CMS ID: L027.01)	Inception – Present	--	--	--	--	--
COVID-19 Vaccine: Percent of Patients/Residents Who Are Up To Date (CMS ID: L028.02)	Inception – Present	--	--	--	--	--

Table A-2
Effective Dates of LTCH Quality Measures User's Manual Versions

Manual Version	Effective Dates
Manual V1.0	09/04/2015 – 06/26/2017
Manual V2.0	06/27/2017 – 06/30/2018
Manual V3.0	07/01/2018 – 09/30/2019
Addendum V3.1	10/01/2019 – 09/30/2020
Addendum V3.1.1/V3.1.2	10/01/2020 – 09/30/2022
Manual V4.0	10/01/2022 – 09/30/2023
Manual V5.0	10/01/2023 – 09/30/2024
Manual V6.0	10/01/2024 – 09/30/2025
Manual V7.0	10/01/2025 – Present

Appendix B:
Risk-Adjustment and Imputation Appendix Files

Appendix B provides the following information:

- Overview of the Risk-Adjustment Appendix File for the Long-Term Care Hospital Quality Reporting Program Measure Calculations and Reporting User's Manual (Risk- Adjustment Appendix File) (**Section B.1**).
- Procedure on how to use the Long-Term Care Hospital Quality Reporting Program Measure Calculations and Reporting User's Manual and the associated Risk-Adjustment Appendix File information to apply intercept and coefficient values for measure calculations (**Section B.2**).
- Overview of the Imputation Appendix File (Discharge Function Score and Change in Mobility) for the Long-Term Care Hospital Quality Reporting Program Measure Calculations and Reporting User's Manual (Imputation Appendix File (Discharge Function Score and Change in Mobility)) (**Section B.3**).
- Procedure on how to use the Long-Term Care Hospital Quality Reporting Program Measure Calculations and Reporting User's Manual and the associated Imputation Appendix File (Discharge Function Score and Change in Mobility) information to apply model threshold and coefficient values for calculating statistically imputed values for GG items with missing codes, for use in Discharge Function Score measure calculations (**Section B.4**).

Section B.1: Risk-Adjustment Appendix File Overview

The intercept and coefficient values for each of the covariates used in assessment-based quality measures requiring risk-adjustment are available in the Risk-Adjustment Appendix File, which can be accessed on the LTCH Quality Reporting Measures Information website. This Risk-Adjustment Appendix File, which is used alongside this appendix, contains current and historical intercept and coefficient values, the risk-adjustment schedule including applicable discharge dates for each update to the intercept and coefficient values, and covariate definitions.

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 the Long-Term Care Hospital Quality Reporting Program Measure Calculations and Reporting User's Manual V7.0.
- *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 Long-Term Care Hospital Quality Reporting Program Measure Calculations and Reporting User's Manual, located on the title page.
- *QM User's Manual Specification Posting Date:* Month and year of the Long-Term Care Hospital Quality Reporting Program Measure Calculations and Reporting User's Manual posting on the LTCH Quality Reporting Measures Information website.
- *Measure Calculation Application Dates:* Discharge 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 this document.

Quality Measure Specific Covariate Definition Tabs: Lists each covariate and its coding definition.

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

Section B.2: Risk-Adjustment Procedure

Below is the procedure on how to use the Long-Term Care Hospital Quality Reporting Program Measure Calculations and Reporting User's Manual and the associated Risk-Adjustment Appendix File information to apply intercept and coefficients values to calculate the risk-adjusted score. Steps to calculate the risk-adjusted quality measure may vary by each measure. The following procedure contains the general steps:

1. Utilize the stay selection guidance as listed in **Chapter 4** Stay Selection for Assessment-Based Quality Measures (LCDS) in this manual.
2. Follow the guidance for the version or versions of the LTCH CARE Data Set applicable to the assessment dates (based on discharge date) required for your calculation found in **Chapter 5, Section 5.3**: Measure Calculations During the Transition from LTCH CARE Data Set V5.0 to LTCH CARE Data Set V5.1.
3. Use the specific calculation steps provided in **Chapter 6** Measure Calculations for Assessment-Based Quality Measures (LTCH CARE Data Set) for the measure(s).
    a. Refer to the covariate definition table for the applicable quality measure in the **Risk-Adjustment Appendix File** on details to calculate the covariates for each quality measure.
4. Refer to the **Risk-Adjustment Appendix File**, Overview tab, for information on how to apply intercept and coefficient values to measure calculations. Under the Schedule tab, refer to the QM User's Manual Specification Version relevant to the timeframe for which you want to calculate the measure.

5. Use the column "Measure Calculation Application Dates" to select the applicable discharge dates then identify the Risk-Adjustment Update ID associated with those discharge dates.
6. Select the coefficients tab corresponding to the applicable quality measure, and then use the applicable Risk-Adjustment Values Update ID column. Apply the intercept and coefficient values for each covariate.
    a. For quality measures using the national average observed score in the measure calculation, select the National Average tab and use the national average observed score that corresponds to the Risk-Adjustment Values Update ID column used.

Example (Steps 4–6): Functional Outcome Measure: Change in Mobility Among Long-Term Care Hospital (LTCH) Patients Requiring Ventilator Support

LTCH stay had a discharge date of 06/15/2026.

- In the Schedule tab of the **Risk-Adjustment Appendix File**, refer to the Change in Mobility measure.
- The discharge date of 06/15/2026 is within the discharge date range for Risk-Adjustment Update ID 8 (10/01/2025 – 09/30/2026). Therefore, the user should use the information provided in the Risk-Adjustment ID 8 column.
- Select the Change in Mobility tab and apply the intercept and coefficient values in the Risk-Adjustment ID 8 column for each covariate.
- Select the National Average tab and use the Risk-Adjustment Update ID 8 column for the Change in Mobility national average observed score.

Section B.3: Imputation Appendix File (Discharge Function Score and Change in Mobility) Overview

The model thresholds and coefficient values for each of the covariates used in the imputation models for the Discharge Function Score measure are available in the **Imputation Appendix File (Discharge Function Score and Change in Mobility)**, which can be accessed on the LTCH Quality Reporting Measures Information website. This **Imputation Appendix File (Discharge Function Score and Change in Mobility)**, which is used alongside this appendix, contains model thresholds and coefficient values, the imputation schedule including applicable discharge dates for each update to the model threshold and coefficient values, and covariate definitions.

Excel Worksheets in the Imputation Appendix File (Discharge Function Score and Change in Mobility):

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

Schedule*:* The imputation schedule for the Discharge Function Score measure.

- *Quality Measure Name*: Full measure name as referenced throughout the Long-Term Care Hospital Quality Reporting Program Measure Calculations and Reporting User's Manual V7.0.
- *Measure Reference Name:* Abbreviated name for the Discharge Function Score measure.
- *Imputation Update ID:* Number assigned to the initial and subsequent updates of the coefficient and model threshold values for the Discharge Function Score measure.
- *QM User's Manual Specification Version:* Number assigned to the initial and subsequent versions of the Long-Term Care Hospital Quality Reporting Program Measure Calculations and Reporting User's Manual, located on the title page.
- *QM User's Manual Specification Posting Date:* Month and year of the Long-Term Care Hospital Quality Reporting Program Measure Calculations and Reporting User's Manual posting on the LTCH Quality Reporting Measures Information website.
- *Measure Calculation Application Dates:* Discharge dates associated with the model threshold and coefficient values for each Imputation Update ID.

Covariate Definitions Tab: Lists the model thresholds and each covariate and its coding definition, and indicates thresholds and covariates used in each of the imputation models.

Coefficients – Admission Tab: Lists each model threshold value and each covariate and its associated coefficient value associated with each Imputation Update ID, for each GG admission item imputation model.

Coefficients – Discharge Tab: Lists each model threshold value and each covariate and its associated coefficient value associated with each Imputation Update ID, for each GG discharge item imputation model.

Section B.4: Imputation Procedure (Discharge Function Score and Change in Mobility among Long-Term Care Hospital Patients Requiring Ventilator Support Short)

Below is the procedure for how to use the Long-Term Care Hospital Quality Reporting Program Measure Calculations and Reporting User's Manual and the associated Imputation Appendix File (Discharge Function Score and Change in Mobility) information to apply coefficient and model threshold values to calculate the statistically imputed item value. The following procedure contains the general steps:

1. Use the specific calculation steps of Step 2.4 provided in **Section 6.9**: Discharge Function Score of **Chapter 6** Measure Calculations for Assessment-Based Quality Measures (LTCH CARE Data Set).

    a. Refer to the covariate definition table in the **Imputation Appendix File (Discharge Function Score and Change in Mobility)** for details to calculate the covariates.

2. Refer to the **Imputation Appendix File (Discharge Function Score and Change in Mobility)**, Overview tab, for information on how to apply coefficient and model threshold values to imputation calculations. Under the Schedule tab, refer to the QM User's Manual Specification Version relevant to the timeframe for which you want to calculate the measure.

3. Use the column "Measure Calculation Application Dates" to select the applicable discharge dates then identify the Imputation Update ID associated with those discharge dates.

4. Select the coefficients tab corresponding to the GG item model (Admission/Discharge) and Update ID, and then use the applicable Imputation Values GG item model column. Apply the coefficient values for each covariate and the model threshold values.

Example (Steps 2–4):

LCDS assessment had a discharge date of 06/15/2026 and a "Not Attempted" value coded for GG0130A1 (Eating at Admission).

- In the Schedule tab of the **Imputation Appendix File (Discharge Function Score and Change in Mobility)**, refer to the Discharge Function Score measure.
- The discharge date of 06/15/2026 is within the discharge date range for Imputation Update ID 2 (10/01/2025-09/30/2026). Therefore, the user should use the information provided in the Imputation Update ID 2 tabs.
- Select the Coefficients – Admissions – ID 2 tab and apply the coefficient values for each covariate and the model threshold values in the Imputation Update ID 2, GG0130A1 column.