



# LTCH CARE Data Set-Based Quality Measures for the LTCH Quality Reporting Program

## User's Manual Version 1.0

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# LTCH CARE DATA SET-BASED QUALITY MEASURES FOR THE LTCH QUALITY REPORTING PROGRAM

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# Chapter 1

## Quality Measure Record Selection Methodology

The purpose of this section is to present definitions used to describe the methodology employed by the Centers for Medicare and Medicaid Services (CMS) to select assessment records that are used to compute each Quality Measure (QM) from data collected by Long-Term Care Hospitals (LTCHs) and submitted to CMS using the Long-Term Care Hospital Continuity Assessment and Record Evaluation Data Set (LTCH CARE Data Set) under the LTCH Quality Reporting Program (LTCH QRP).

### Section1: Definitions

**Target period:** The span of time that defines the QM reporting period (e.g., a calendar year for the quality measure Percent of Residents or Patients with New or Worsened Pressure Ulcers [NQF<sup>1</sup> #0678]).

**Target date:** The target date for an assessment is defined as follows:

- For an admission assessment (A0250 Reason for Assessment = [01]), the target date is equal to the admission date (A0220). This is the admission target date.
- For a discharge assessment (A0250 Reason for Assessment = [10, 11]) or expiration record (A0250 Reason for Assessment = [12]), the target date is equal to the discharge date (A0270). This is the discharge target date on discharge assessment. For expired assessment the discharge date (A0270) is the date of death.

**Sort order:** The patient's records included in the target period must be sorted by the following:

- Provider Internal ID
- Resident Internal ID
- Target date (descending). This will cause records to appear in reverse chronological order so that the most recent records appear first. This will also ensure that the discharge or expiration record appears prior to the admission record.
- Item A0250 Reason for Assessment (descending). If more than one record shares a target date, this will cause the expiration record to appear first, followed by unplanned discharge record, followed by planned discharge record, followed by admission records. For example, if a patient has more than one type of discharge record (unplanned, planned, expired) that share the same target date, then the patient with one admission and all three types of discharge records would have their records sorted as follows: RFA = 12, expired; then RFA = 11, unplanned discharge; then RFA = 10, planned discharge; then RFA = 01, admission.

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<sup>1</sup> NQF: National Quality Forum

**Stay:** The period of time between a patient's admission date into a LTCH and discharge date. A stay is also defined as a set of contiguous days in a LTCH. Interrupted stay(s) of less than 3 calendar days are included as part of the patient stay.

The start of a stay is: Any admission assessment (A0250 = [01]).

The end of a stay is the discharge record for the patient with the same admission date as the admission record and the highest discharge Reason for Assessment value:

- Any discharge assessment (A0250 = [10,11]), *or*
- Any expired assessment (A0250 = [12]).

Example: If a patient had multiple records that share the same target date and RFA = 11 unplanned discharge and an RFA = 10 planned discharge, the records for the stay are the admission record and the unplanned discharge record.

**Patient Stay for QM sample:** A patient stay is defined by a pair of patient records that meet all of the following criteria:

- One of the two records is an admission assessment (A0250 = [01]). This record is the *start-of-patient stay* record.
- The other record is a discharge assessment or expiration assessment (A0250 = [10, 11, 12]). This record is the *end-of-patient stay* record.
- The target date for the *end-of-patient stay* record must be the same as or later than the target date for the *start-of-patient stay* record.
- Both the *start-* and *end-of-patient stay* records must have identical admission date (A0220).
- Both the *start-* and *end-of-patient stay* records must be for the same provider.
- Both the *start-* and *end-of-patient stay* records must have identical Resident Internal ID.
- There are no intervening records between the start- and end-of-patient stay records in the patient's sorted records when the end of patient stay record is selected as instructed above and the extraneous discharge records for the stay discarded.
- The records included in a *patient stay for QM sample* could span across quarter(s).
- For QM calculation purposes, both the admission and discharge (or expiration) assessment included in the *patient stay* are assigned to the target period of the discharge date (A0270).
- Any admission assessment that is not matched to a discharge assessment is not part of a patient stay and is excluded from the *QM sample*.
- Any discharge assessment or expiration assessment that is not matched to an admission assessment is not part of a patient stay and is excluded from the *QM sample*.

- In the case of multiple discharge assessments (where there is more than one discharge record (planned, unplanned discharge, expired) for the same patient on the same discharge date in the same facility), use the discharge record as defined as the end-of-stay record above. As noted earlier in the document, interrupted stay(s) of less than 3 calendar days are included as part of the patient stay.

## Chapter 2

# Record Selection and Measure Calculation

The first section below describes the selection of records for each QM for the LTCH QRP. The second section describes how each QM is calculated for LTCH QRP.

### Section 1: Selection for Each QM Sample

#### ***Percent of Residents or Patients with Pressure Ulcers that Are New or Worsened (Short-Stay) (NQF #0678)***

The eligible records for this QM are selected as follows:

1. The **target period** for this measure is a 12-month (four quarters) period. **The measure is calculated quarterly, using a rolling 12 months (four quarters) of data. For public display,** rates would be displayed based on four rolling quarters of data and would initially be reported using discharges from January 1, 2015, through December 31, 2015, for calculation. As each quarter advances, CMS would add the subsequent quarter and remove the earliest quarter. For example, initially we would use data from discharges occurring from January 1, 2015, through December 31, 2015. The next quarter, we would display performance data using discharges that occurred between the dates of April 1, 2015, through March 31, 2016, etc.
2. LTCHs have up to 45 days after the target period ends to submit data for the given quarter. Therefore, the measure should not be calculated until 45 or more days after the target period has ended. Please Note: Starting October 1 to December 31, 2015, LTCHs will have up to 4.5 months/135 days after the target period ends to submit data for the given quarter (subject to adoption of CMS proposal through FY 2016 IPPS/LTCH PPS Final Rule). Therefore, to include any data corrected by a LTCH, LTCH QM calculations should be run 4.5 months after the end of the 12-month period. Refer to Table 1-1 for measure calculation timelines.

**Table 1-1**  
**LTCH measure calculation timeline**

Data submission deadlines	Time given to LTCHs to submit data	Illustration <sup>2</sup>
For quarters starting October 1, 2012, and ending on June 30, 2014	4.5 months/135 days	For target period April-June 2014, measure should be calculated after November 15, 2014
For quarters starting July 1, 2014, and ending on September 30, 2015	1.5 months/45 days	For target period July-September 2015, measure should be calculated after November 14, 2015
For quarters starting October 1, 2015 onward	4.5 months/135 days	For target period October-December 2015, measure should be calculated after May 15, 2016

<sup>2</sup> These are varied illustrations.

3. Select all LTCH CARE Data Set records (stays) with discharge target date within the data target period.
4. For each patient within each LTCH, do the following:
  - a. Sort the records/stays according to the sort order defined on page 1.
  - b. Scan the sorted records/stays.
  - c. Select all records/stays that meet the patient stay for QM definition on the previous page, that end with a discharge or expired assessment (A0250 = [10, 11,12]) and whose discharge target date is within the target period. These are **target patient stay records**. If a patient has multiple patient stay records with a discharge target date within the data target period, then include each qualifying patient stay in the measure.
5. Apply the QM definition to the eligible target patient stay records.

***Percent of Residents or Patients Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (Short-Stay) (NQF #0680)***

The sample for this QM is selected as follows:

1. The target period for this measure is the influenza vaccination season: October 1 through March 31 (i.e., October 1, 2014, through March 31, 2015, for the 2014-2015 influenza vaccination season).
2. The measure includes all patients with 1 or more days of stay in the LTCH during the target period. Select all LTCH CARE Data Set records with an admission date (A0220) **or** a planned or unplanned (A0250 = 10, 11) discharge date (A0270) within the target period; **or** with the admission date (A0220) before the target period and the planned or unplanned (A0250 = 10, 11) discharge date (A0270) after the target period, such that the stay includes 1 or more days in the LTCH during the target period or there is no discharge record (A0250 = 10, 11, 12).

For example, the record of a patient admitted to an LTCH on March 31 will be selected based on the admission date, regardless of the discharge date. The record of a patient discharged with a planned or unplanned discharge from an LTCH on October 1 will be selected based on the discharge date, regardless of the admission date. The record of a patient admitted on September 30 and discharged on April 1 will be selected because the stay includes 1 or more days in the LTCH during the target period. The record of a patient discharged on October 1 will be selected, regardless of admission date, because the stay includes 1 or more days in the LTCH during the target period. The measure is calculated once per year.

3. For each patient within each LTCH, do the following:
  - a. Sort the stay-level records according to the sort order defined earlier.

- b. Scan the sorted records.
  - c. Select the patient stay-level records that meet all of the following conditions:
    - i. Patient was in the LTCH 1 or more days during the target period based on admission date *or* discharge date (i.e., either the admission date, the discharge date, or both the admission and discharge date fall within the target period of October 1 to March 31), *or* both the admission and discharge date (i.e., the admission date is before October 1 and the discharge date is after March 31), *or* the patient is admitted prior to October 1 and the patient has not yet been discharged as of the date of the calculation of the influenza vaccination measure.
    - ii. The planned or unplanned (A0250 = 10, 11) discharge target date (A0270) is on or after October 1 of the most recently completed influenza season AND on or before March 31 of the most recently completed influenza season;
 

OR

The admission date (A0220) is on or after October 1 of the most recently completed influenza season AND on or before March 31 of the most recently completed influenza season;

OR

The admission date (A0220) is before October 1 of the most recently completed influenza season AND the discharge date (A0270) is after March 31 of the most recently completed influenza season or there is no discharge record for the patient.
    - iii. If qualifying patient stay records are found, select the latest record from the patient stay that is either an admission or discharge assessment (A0250 = 01, 10, 11). This is called an *influenza vaccination assessment*.
    - iv. If the patient has multiple patient stay records during the target period, then include each influenza vaccination assessment from all qualifying patient stays in the measure.
  - d. If no qualifying record is found for a patient, then the patient is excluded from the measure.
4. Apply the QM definition to the qualifying influenza vaccination assessment records.

## Section 2: Measure [QM] Calculation

### ***Percent of Residents or Patients with Pressure Ulcers that Are New or Worsened (Short-Stay) (NQF #0678)***

Using the definitions in Table 3-1, the following steps are used to calculate the measure:

1. Calculate the facility-level observed score (steps 1.1 through 1.4).

1.1. Identify Excluded Records (excluded stays).

- 1.1.1. Patient stay is excluded if data on new or worsened Stage 2, 3, and 4 pressure ulcers are missing on the planned or unplanned discharge assessment; i.e., M0800A = [-] and M0800B = [-] and M0800C = [-].
- 1.1.2. Patient stay is excluded if the patient died during the LTCH stay; i.e., A0250 = [12].
- 1.1.3. Patient stay is excluded if there is no admission assessment available to derive data for risk adjustment (covariates).

1.2. Calculate the denominator count:

Calculate the total number of stays with both an admission and discharge LTCH CARE Data Set assessment in the measure target period, which do not meet the exclusion criteria.

1.3. Calculate the numerator count:

Calculate the total number of stays for which the discharge assessment indicates one or more new or worsened pressure ulcers compared to the admission assessment.

1.4. Calculate the facility's observed score:

Divide the facility's numerator count by its denominator count to obtain the facility's observed score; that is, divide the result of step 1.3 by the result of step 1.2.

2. Calculate the expected score for each patient (steps 2.1 and 2.2).

2.1. Determine presence or absence of the pressure ulcer covariates for each patient:

Assign covariate values, either '0' for covariate condition not present or '1' for covariate condition present, for each patient for each of the four covariates as reported on the admission assessment.

2.2. Calculate the expected score for each patient with the following formula:

$$[1] \text{ Patient-level expected QM score} = 1 / [1 + e^{-X}]$$

Where  $e$  is the base of natural logarithms and  $X$  is a linear combination of the constant and the logistic regression coefficients times the covariate scores (from Formula [2], below).

$$[2] \text{ QM triggered (yes} = 1, \text{ no} = 0) = B_0 + B_1 * COV_1 + B_2 * COV_2 + B_3 * COV_3 + B_4 * COV_4$$

Where  $B_0$  is the logistic regression constant,  $B_1$  is the logistic regression coefficient for the first covariate of functional limitation (where applicable),  $COV_1$  is the patient-level score for the first covariate of functional limitation;  $B_2$  is the logistic regression coefficient for the second covariate of bowel incontinence, and  $COV_2$  is the patient level score for the second covariate of bowel incontinence (where applicable);  $B_3$  is the logistic regression coefficient for the third covariate of diabetes or peripheral vascular disease/peripheral artery disease (PVD/PAD) (where applicable),  $COV_3$  is the patient-level score for the third covariate of diabetes or PVD/PAD;  $B_4$  is the logistic regression coefficient for the fourth covariate of low body mass index (BMI), and  $COV_4$  is the patient-level score for the fourth covariate of low BMI (where applicable). See Appendix A for the regression constant and regression coefficients. The regression constant and regression coefficients are numbers obtained through statistical logistic regression analysis.

3. Calculate the facility expected score (step 3.1).

3.1. Once an expected QM score has been calculated for all patient stays, calculate the mean facility-level expected QM score by using all patient-level expected scores.

4. Calculate the facility-level adjusted score (step 4.1).

4.1. Calculate the facility-level adjusted score based on the:

Facility-level observed QM score (step 1.4),

Facility-level average expected QM score (step 3.1), and

National\* average observed QM score.

*\* The national observed QM mean for the target period Q4 2014 (target period January-December 2014) is available in Appendix A.*

The calculation of the adjusted score uses the following equation:

$$[3] \text{ Adj} = 1 / [1 + e^y]$$

Where:

*Adj* is the facility-level adjusted QM score, and

$$y = (\text{Ln}(\text{Obs}/(1 - \text{Obs})) - \text{Ln}(\text{Exp}/(1 - \text{Exp})) + \text{Ln}(\text{Nat}/(1 - \text{Nat}))),$$

Obs is the facility-level observed QM rate,

Exp is the facility-level expected QM rate,

Nat is the national observed QM rate,

Ln indicates a natural logarithm, and

*e* is the base of natural logarithms.

### ***Percent of Residents or Patients Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (Short-Stay) (NQF #0680)***

The following steps are used to calculate the measure:

1. Identify Excluded Records (excluded stays).

1.1. Patient's age on selected influenza vaccination assessment is 179 days or less. Calculate the age in days using the discharge date or the last date of the influenza vaccination season (March 31 of relevant year), whichever comes first in time. Patients who are 180 days old or more by this calculation are included in the measure. Patients who are 179 days old or less by this calculation are excluded from the measure.

1.2. Patient stay that ends with patient expiration (A0250 = [12]) is excluded from the measure.

2. Calculate the denominator count:

Calculate the total number of stays with a discharge LTCH CARE Data Set assessment that had 1 or more days in the LTCH during the influenza vaccination season, that do not meet the exclusion criteria.

3. Calculate the facility's overall numerator:

Calculate total number of discharges that had 1 or more days in the LTCH during the influenza vaccination season meeting any of the following criteria on the selected influenza vaccination assessment:

1. Patient received the influenza vaccine during the most recent influenza season, either in the facility (O0250A = [1]) or outside the facility (O0250C = [2]); or
  2. Patient was offered and declined the influenza vaccine (O0250C = [4]); or
  3. Patient was ineligible due to contraindication(s) (O0250C = [3]).
4. Calculate the facility's three numerator counts:
    - 4.1. Numerator 1: Calculate the total number of discharges for which patient received the influenza vaccine during the most recent influenza season, either in the facility (O0250A = [1]) or outside the facility (O0250C = [2]).
    - 4.2. Numerator 2: Calculate the total number of discharges for which patient was offered and declined the influenza vaccine (O0250C = [4]).
    - 4.3. Numerator 3: Calculate the total number of discharges for which patient was ineligible due to contraindication(s) (O0250C = [3]).
  5. Calculate the facility's overall observed score:
    - 5.1. Divide facility's overall numerator count (step 3) by its denominator count (step 2) (refer to Table 3-2 for measure specifications).
  6. Calculate the facility's observed scores for each numerator count:
    - 6.1. Divide facility's numerator 1 count (step 4.1) by its denominator count (step 2) to obtain the facility's observed score associated with numerator 1 (refer table 3-2a for measure specifications).
    - 6.2. Divide facility's numerator 2 count (step 4.2) by its denominator count (step 2) to obtain the facility's observed score associated with numerator 2 (refer table 3-2b for measure specifications).
    - 6.3. Divide facility's numerator 3 count (step 4.3) by its denominator count (step 2) to obtain the facility's observed score associated with numerator 3 (refer table 3-2c for measure specifications).

# Chapter 3

## LTCH CARE Data Set Quality Measures Logical Specifications

**Table 3-1**  
**Percent of Residents or Patients with Pressure Ulcers that Are New or Worsened (NQF #0678)<sup>1</sup>**

Measure Description	Measure Specifications <sup>2</sup>	Covariates
<p>This measure reports the percentage of patients with Stage 2-4 pressure ulcers that are new or worsened pressure ulcers since the admission assessment (A0250 = 01).</p> <p>The measure is calculated by review of a patient's discharge assessment for reports of Stage 2-4 pressure ulcers that were not present or were at a lesser stage at the time of the admission assessment.</p>	<p><b>Denominator</b> Patients with a pair of target patient stay records: an admission assessment (A0250 = [01]) and a planned or unplanned discharge assessment (A0250 = [10, 11]) that define a patient stay during the target period except those with exclusions.</p> <p><b>Numerator</b> Patients for whom the planned or unplanned discharge assessment indicates one or more new or worsened Stage 2-4 pressure ulcers:</p> <ol style="list-style-type: none"> <li>1. Stage 2 (M0800A) &gt; 0, or</li> <li>2. Stage 3 (M0800B) &gt; 0, or</li> <li>3. Stage 4 (M0800C) &gt; 0.</li> </ol> <p><b>Exclusions</b></p> <ol style="list-style-type: none"> <li>1. Patient stay is excluded if M0800A = [-] and M0800B = [-] and M0800C = [-] on the discharge assessment.</li> <li>2. Patient stay that ends with patient expiration (A0250 = [12]) is excluded from the measure.</li> <li>3. Patient stay is excluded if there is no admission assessment available to derive data for risk adjustment (covariates).</li> </ol> <p><b>Additional Exclusion for Future Public Reporting Purposes</b> LTCHs with denominator counts of less than 20 in the sample will be excluded from public reporting owing to small sample size.</p>	<p>Data for each covariate is derived from the admission assessment included in the target patient stay records.</p> <ol style="list-style-type: none"> <li>1. Indicator of supervision/touching assistance or more for the functional mobility item, Lying to sitting on side of bed: <ul style="list-style-type: none"> <li>For record with a target date prior to 4/1/2016: Covariate = [1] (yes) if GG0160C = [01,02,03,04,07,09,88] ([01] = Dependent, [02] = Substantial/maximal assistance, [03] = Partial/moderate assistance, [04] = Supervision or touching assistance, [07] = Patient refused, [09] = Not applicable, [88] = (activity) not attempted due to medical condition or safety concerns)</li> <li>Covariate = [0] (no) if GG0160C= [05, 06, -, ^] ([05] = Set-up or clean-up assistance, [06] = Independent, [-] = No response available, [^] = Valid skip)</li> <li>For record with a target date on or after 4/1/2016: Covariate = [1] (yes) if GG0170C = [01,02,03,04,07,09,88] ([01] = Dependent, [02] = Substantial/maximal assistance, [03] = Partial/moderate assistance, [04] = Supervision or touching assistance, [07] = Patient refused, [09] = Not applicable, [88] = (activity) not attempted due to medical condition or safety concerns)</li> <li>Covariate = [0] (no) if GG0170C= [05, 06, -, ^] ([05] = Setup or clean-up assistance, [06] = Independent, [-] = No response available, [^] = Valid skip)</li> </ul> </li> <li>2. Indicator of bowel incontinence at least occasionally: <ul style="list-style-type: none"> <li>Covariate = [1] (yes) if H0400 = [1, 2, 3] ([1] = Occasionally incontinent, [2] = Frequently incontinent, [3] = Always incontinent)</li> <li>Covariate = [0] (no) if H0400 = [0, 9, - ,] ([0] = Always continent, [9] = Not rated, [-] = No response available)</li> </ul> </li> <li>3. Have diabetes mellitus, peripheral vascular disease or peripheral arterial disease: <ul style="list-style-type: none"> <li>Covariate = [1] (yes) if one or both of the following are true: <ol style="list-style-type: none"> <li>a. I0900 = [1] (checked)</li> <li>b. I2900 = [1] (checked)</li> </ol> </li> <li>Covariate = [0] (no) if I0900 = [0,-] and I2900 = [0,-] ([0] = No, [-] = No response available)</li> </ul> </li> <li>4. Indicator of low body mass index (BMI), based on height (K0200A) and weight (K0200B): <ul style="list-style-type: none"> <li>Covariate = [1] (yes) if BMI ≥ [12.0] and ≤ [19.0]</li> <li>Covariate = [0] (no) if BMI &gt; [19.0]</li> <li>Covariate = [0] (no) if K0200A = [-] OR K0200B = [-] OR BMI &lt; [12.0] , ('-' = No response available)</li> </ul> <p>Where: BMI = (weight * 703 / height<sup>2</sup>) = ((K0200B) * 703) / (K0200A<sup>2</sup>) and the resulting value is rounded to one decimal.</p> </li> </ol>

<sup>1</sup> This measure is NQF-endorsed for use in the LTCH setting (<http://www.qualityforum.org/QPS/0678>) (in addition to inpatient rehabilitation facility and skilled nursing facility/nursing home settings) and is finalized for reporting by LTCHs under the LTCH QRP *Federal Register* 76 (18 August 2011): 51476-51846. Web. <http://www.gpo.gov/fdsys/pkg/FR-2011-08-18/pdf/2011-19719.pdf>, *Federal Register* 77 (31 August 2012): 53619-53621. Web. <http://www.gpo.gov/fdsys/pkg/FR-2012-08-31/pdf/2012-19079.pdf>, and *Federal Register* 78 (19 August 2013): 50853-50887. Web. <http://www.gpo.gov/fdsys/pkg/FR-2013-08-19/pdf/2013-18956.pdf>.

<sup>2</sup> Beginning on October 1, 2012, LTCHs began to use the LTCH CARE Data Set to collect and submit pressure ulcer data for the LTCH QRP.

**Table 3-2**  
**Percent of Residents or Patients Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (NQF #0680)<sup>1</sup>**

Measure Description	Measure Specifications <sup>2</sup>	Covariates
<p>This measure reports the percentage of patients who are assessed and appropriately given the influenza vaccine during the most recent influenza season.</p> <p>The measure score is computed and reported for the three numerator components separately. Patient influenza vaccination measure is calculated only once per year.</p>	<p><b>Denominator</b></p> <p>All patients with a selected influenza vaccination planned or unplanned discharge assessment, except those with exclusions.</p> <p><b>Numerator</b></p> <p>Patients meeting any of the following criteria on the selected influenza vaccination assessment:</p> <ol style="list-style-type: none"> <li>1. Patient received the influenza vaccine during the most recent influenza season, either in the facility (O0250A = [1]) or outside the facility (O0250C = [2]); or</li> <li>2. Patient was offered and declined the influenza vaccine (O0250C = [4]); or</li> <li>3. Patient was ineligible due to contraindication(s) (O0250C = [3]).</li> </ol> <p><b>Exclusions</b></p> <ol style="list-style-type: none"> <li>1. Patient's age on selected influenza vaccination assessment is 179 days or less. Calculate the age in days using the discharge date or the last date of the influenza vaccination season (March 31 of relevant year), whichever comes first in time. Patients who are 180 days old or more by this calculation are included in the measure. Patients who are 179 days old or less by this calculation are excluded from the measure.</li> <li>2. Patient stay that ends with patient expiration (A0250 = [12]) is excluded from the measure.</li> </ol> <p><b>Additional Exclusion for Future Public Reporting Purposes</b></p> <p>LTCHs with denominator counts of less than 20 in the sample will be excluded from public reporting owing to small sample size.</p> <p><b>Notes</b></p> <p>This measure is only calculated once a year with a target period of October 1 of the prior year to March 31 of the current year and reports for the October 1 through March 31 influenza vaccination season.</p>	<p>Not applicable.</p>

<sup>1</sup> This measure is NQF-endorsed for use in the Long-Term Care Hospital (LTCH) setting (<http://www.qualityforum.org/QPS/0680>) (in addition to inpatient rehabilitation facility and skilled nursing facility/nursing home settings) and is finalized for reporting by LTCHs under the LTCH QRP (*Federal Register* 77 (31 August 2012): 53624-53627. Web. <http://www.gpo.gov/fdsys/pkg/FR-2012-08-31/pdf/2012-19079.pdf>). The use of the words “resident” and “short-stay” in the title of this measure refer to the use of this measure in the SNF/NH setting. CMS’s use of these words does not imply that the LTCH patient is a “resident” or that a stay in an LTCH is a “short stay.”

<sup>2</sup> Beginning on July 1, 2014, LTCHs began to use the LTCH CARE Data Set to collect and submit patient influenza vaccination data for the LTCH QRP.

**Table 3-2a**  
**Percent of Patients Who Received the Seasonal Influenza Vaccine (NQF #0680)<sup>1</sup>**

Measure Description	Measure Specifications <sup>2</sup>	Covariates
<p>This measure reports the percentage of patients who received the influenza vaccination during the most recent influenza season.</p> <p>The measure score is computed and reported for the three numerator components separately. Patient influenza vaccination measure is calculated only once per year.</p>	<p><b>Denominator</b></p> <p>All patients with a selected influenza vaccination planned or unplanned discharge assessment, except those with exclusions.</p> <p><b>Numerator</b></p> <p>Patients meeting the following criterion on the selected influenza vaccination assessment:</p> <ol style="list-style-type: none"> <li>1. Patient received the influenza vaccine during the most recent influenza season, either in the facility (O0250A = [1]) or outside the facility (O0250C = [2]).</li> </ol> <p><b>Exclusions</b></p> <ol style="list-style-type: none"> <li>1. Patient's age on selected influenza vaccination assessment is 179 days or less. Calculate the age in days using the discharge date or the last date of the influenza vaccination season (March 31 of relevant year), whichever comes first in time. Patients who are 180 days old or more by this calculation are included in the measure. Patients who are 179 days old or less by this calculation are excluded from the measure.</li> <li>2. Patient stay that ends with patient expiration (A0250 = [12]) is excluded from the measure.</li> </ol> <p><b>Additional Exclusion for Future Public Reporting Program</b></p> <p>LTCHs with denominator counts of less than 20 in the sample will be excluded from public reporting owing to small sample size.</p> <p><b>Notes</b></p> <p>This measure is only calculated once a year with a target period of October 1 of the prior year to March 31 of the current year and reports for the October 1 through March 31 influenza vaccination season.</p>	<p>Not applicable.</p>

<sup>1</sup> This measure is NQF-endorsed for use in the Long-Term Care Hospital (LTCH) setting (<http://www.qualityforum.org/OPS/0680>) (in addition to inpatient rehabilitation facility and skilled nursing facility/nursing home settings) and is finalized for reporting by LTCHs under the LTCH Quality Reporting Program (*Federal Register* 77 (31 August 2012): 53624-53627. Web. <http://www.gpo.gov/fdsys/pkg/FR-2012-08-31/pdf/2012-19079.pdf>). The use of the words “resident” and “short-stay” in the title of this measure refer to the use of this measure in the SNF/NH setting. CMS’s use of these words does not imply that the LTCH patient is a “resident” or that a stay in an LTCH is a “short stay.”

<sup>2</sup> Beginning on July 1, 2014, LTCHs began to use the LTCH CARE Data Set to collect and submit patient influenza vaccination data for the LTCH Quality Reporting Program.

**Table 3-2b**  
**Percent of Patients Who Were Offered and Declined**  
**the Seasonal Influenza Vaccine (Short-Stay) (NQF #0680)<sup>1</sup>**

Measure Description	Measure Specifications <sup>2</sup>	Covariates
<p>This measure reports the percentage of patients who are offered and declined the influenza vaccination during the most recent influenza season.</p> <p>The measure score is computed and reported for the three numerator components separately. Patient influenza vaccination measure is calculated only once per year.</p>	<p><b>Denominator</b></p> <p>All patients with a selected influenza vaccination planned or unplanned discharge assessment, except those with exclusions.</p> <p><b>Numerator</b></p> <p>Patients meeting the following criterion on the selected influenza vaccination assessment:</p> <ol style="list-style-type: none"> <li>1. Patient was offered and declined the influenza vaccine (O0250C = [4]).</li> </ol> <p><b>Exclusions</b></p> <ol style="list-style-type: none"> <li>1. Patient's age on selected influenza vaccination assessment is 179 days or less. Calculate the age in days using the discharge date or the last date of the influenza vaccination season (March 31 of relevant year), whichever comes first in time. Patients who are 180 days old or more by this calculation are included in the measure. Patients who are 179 days old or less by this calculation are excluded from the measure.</li> <li>2. Patient stay that ends with patient expiration (A0250 = [12]) is excluded from the measure.</li> </ol> <p><b>Additional Exclusion for Future Public Reporting Program</b></p> <p>LTCHs with denominator counts of less than 20 in the sample will be excluded from public reporting owing to small sample size.</p> <p><b>Notes</b></p> <p>This measure is only calculated once a year with a target period of October 1 of the prior year to March 31 of the current year and reports for the October 1 through March 31 influenza vaccination season.</p>	<p>Not applicable.</p>

<sup>1</sup>This measure is NQF-endorsed for use in the LTCH setting (<http://www.qualityforum.org/QPS/0680>) (in addition to inpatient rehabilitation facility and skilled nursing facility/nursing home settings) and is finalized for reporting by LTCHs under the LTCH Quality Reporting Program (*Federal Register* 77 (31 August 2012): 53624-53627. Web. <http://www.gpo.gov/fdsys/pkg/FR-2012-08-31/pdf/2012-19079.pdf>). The use of the words "resident" and "short-stay" in the title of this measure refer to the use of this measure in the SNF/NH setting. CMS's use of these words does not imply that the LTCH patient is a "resident" or that a stay in an LTCH is a "short stay."

<sup>2</sup>Beginning on July 1, 2014, LTCHs began to use the LTCH CARE Data Set to collect and submit patient influenza vaccination data for the LTCH Quality Reporting Program.

**Table 3-2c**  
**Percent of Residents or Patients Who Did Not Receive, Due to Medical Contraindication,**  
**the Seasonal Influenza Vaccine (NQF #0680)<sup>1</sup>**

Measure Description	Measure Specifications <sup>2</sup>	Covariates
<p>This measure reports the percentage of patients who did not receive, due to medical contraindication, the influenza vaccination during the most recent influenza season.</p> <p>The measure score is computed and reported for the three numerator components separately. Patient influenza vaccination measure is calculated only once per year.</p>	<p><b>Denominator</b></p> <p>All patients with a selected influenza vaccination planned or unplanned discharge assessment, except those with exclusions.</p> <p><b>Numerator</b></p> <p>Patients meeting the following criteria on the selected influenza vaccination assessment:</p> <ol style="list-style-type: none"> <li>1. Patient was ineligible due to contraindication(s) (O0250C = [3]) (e.g., anaphylactic hypersensitivity to eggs or other components of the vaccine, history of Guillain-Barre Syndrome within 6 weeks after a previous influenza vaccination, bone marrow transplant within the past 6 months).</li> </ol> <p><b>Exclusions</b></p> <ol style="list-style-type: none"> <li>1. Patient's age on selected influenza vaccination assessment is 179 days or less. Calculate the age in days using the discharge date or the last date of the influenza vaccination season (March 31 of relevant year), whichever comes first in time. Patients who are 180 days old or more by this calculation are included in the measure. Patients who are 179 days old or less by this calculation are excluded from the measure.</li> <li>2. Patient stay that ends with patient expiration (A0250 = [12]) is excluded from the measure.</li> </ol> <p><b>Additional Exclusion for Future Public Reporting Program</b></p> <p>LTCHs with denominator counts of less than 20 in the sample will be excluded from public reporting owing to small sample size.</p> <p><b>Notes</b></p> <p>This measure is only calculated once a year with a target period of October 1 of the prior year to March 31 of the current year and reports for the October 1 through March 31 influenza vaccination season.</p>	<p>Not applicable.</p>

<sup>1</sup> This measure is NQF-endorsed for use in the Long-Term Care Hospital (LTCH) setting (<http://www.qualityforum.org/QPS/0680>) (in addition to inpatient rehabilitation facility and skilled nursing facility/nursing home settings) and is finalized for reporting by LTCHs under the LTCH Quality Reporting Program (*Federal Register* 77 (31 August 2012): 53624-53627. Web. <http://www.gpo.gov/fdsys/pkg/FR-2012-08-31/pdf/2012-19079.pdf>). The use of the words “resident” and “short-stay” in the title of this measure refer to the use of this measure in the SNF/NH setting. CMS’s use of these words does not imply that the LTCH patient is a “resident” or that a stay in an LTCH is a “short stay.”

<sup>2</sup> Beginning on July 1, 2014, LTCHs began to use the LTCH CARE Data Set to collect and submit patient influenza vaccination data for the LTCH Quality Reporting Program.

# Appendix A: Model Parameters

## *Percent of Residents or Patients with Pressure Ulcers that Are New or Worsened (Short-Stay) (NQF #0678)*

The purpose of this appendix is to present the logistic regression coefficients used in the risk adjustment calculations that were applied to the risk-adjusted QM.

This appendix presents the model parameters that were estimated for the risk adjusted QM, the Percent of Patients with Pressure Ulcers That Are New or Worsened (NQF #0678) for the LTCH Quality Reporting Program for the following time periods:

- The **Target Period** is January 1, 2014, through December 31, 2014.

### LOGISTIC REGRESSION COEFFICIENTS

The logistic regression coefficients presented in Table A.1 are based on calculations for the target period: January 1, 2014, through December 31, 2014.

**Table A1**  
**LTCH Logistic Regression Coefficients for the Percent of Residents or Patients with Pressure Ulcers that Are New or Worsened (NQF #0678)**

Constant (Intercept)	Patient-Level Covariates
-5.4067	1. Covariate 1 (Functional Limitation): 1.2427 2. Covariate 2 (Bowel Incontinence): 0.4794 3. Covariate 3 (Diabetes or PVD/PAD): 0.1595 4. Covariate 4 (Low BMI): 0.4919

### NATIONAL OBSERVED MEAN

1. Calculate national mean QM score (steps 1.1 through 1.3)

1.1. Calculate the denominator count:

Count the total number of stays with both an admission and discharge LTCH CARE Data Set assessment in the measure target period that do not meet the exclusion criteria and sum for the nation.

1.2. Calculate the numerator count:

Calculate the total number of stays for which the discharge assessment indicates one or more new or worsened pressure ulcers compared to the admission assessment and sum for the nation.

1.3. Calculate national mean observed QM score:

Divide the numerator count by its denominator count to obtain the nation's observed score; that is, divide the result of step 1.2 by the result of step 1.1.

The national observed QM means are updated for each target period. The national observed mean for the target period January 1, 2014, through December 31, 2014, is **0.020792**.

## **COMPARISON GROUP**

CMS will make the final determination regarding the appropriate comparison group to use for this measure. State-level comparison groups are not recommended because many states have small numbers of LTCHs and some states have no LTCHs. Regional or national comparison groups could be considered.