



Quality Measures for IRF Quality Reporting Program

User's Manual

Version 1.1

Current as of March 25, 2016

Prepared for:
The Centers for Medicare & Medicaid Services
under Contract No. HHSM-500- 2013-13015I
(RTI Project No. 0214077.001.001.006.002)

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QUALITY MEASURES FOR THE IRF 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 & Medicaid Services (CMS) to select assessment records that are used to compute the Quality Measures (QMs) from data collected by Inpatient Rehabilitation Facilities (IRFs) and submitted to CMS under the IRF Quality Reporting Program (IRF QRP).

Section 1: 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 [NQF¹ #0678]).

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

- Provider Internal ID
- Resident Internal ID
- Discharge Date (descending): This will cause records to appear in reverse chronological order so that the most recent records appear first.

Stay: The period of time between a patient's date of admission into an IRF and date of discharge from the IRF. A stay, thus defined, will include a patient stay during a set of contiguous days in an IRF, and will include program interruptions lasting up to 3 calendar days.

Stay-Level Record: A stay-level record is an IRF-PAI record that includes both admission and discharge data and reflects an IRF stay.

Influenza Vaccination Season: Influenza vaccination season is October 1 through March 31 (e.g., October 1, 2014, through March 31, 2015, for the 2014-2015 influenza vaccination season).

Influenza Season: Influenza season is July 1 to June 30 (e.g., July 1, 2014, through June 30, 2015, for the 2014-2015 influenza season).

¹ NQF: National Quality Forum

Section 2: National Healthcare Safety Network and Claims-Based Measures

National Healthcare Safety Network (NHSN) Measure

- Quality Measure: National Healthcare Safety Network (NHSN) Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure
NQF ID: 0138 CMS ID: I006.01

Note: Facility-level data on this NHSN measure are available through the CASPER user-requested Facility Level Quality Measure report. Patient-level data (i.e., the Patient Level Quality Measure reports) are not available.

Claims-Based Measure

- Quality Measure: All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Inpatient Rehabilitation Facilities
NQF ID: 2502 CMS ID: I007.01

The All-Cause Unplanned Readmission Measure for 30 Days Post-Discharge from Inpatient Rehabilitation Facilities (NQF #2502) was endorsed by the NQF in December 2014. For detailed measure specifications including results of testing and model validation, please visit <http://www.qualityforum.org/ProjectTemplateDownload.aspx?SubmissionID=2502>.

Note: Facility-level data on this claims-based readmission measure are available through the CASPER user-requested Facility-Level Quality Measure report. Patient-level data (i.e., the Patient Level Quality Measure reports) are not available.

Chapter 2

Record Selection and Measures Calculation

The first section below describes the selection of stay-level records for each QM for the IRF QRP. The second section describes how each QM is calculated for the IRF 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 stay-level records for this QM are selected as follows:

1. The **target period** for this measure is a 12-month (four quarters) period. **For the CASPER reports, the measure is calculated monthly using up to 12 months (four quarters) of data.** For the CASPER reports, rates would be displayed monthly based on four rolling quarters of data. As each quarter advances, CMS would add the subsequent quarter and remove the earliest quarter. The illustration of data included in the monthly CASPER reports with data received before 4.5 months correction deadline is provided in Table 1.1.

Table 1.1
Data Included in the Monthly CASPER Reports for the Percent of Residents or Patients with Pressure Ulcers That Are New or Worsened (NQF #0678)*

Data calculation rule: The calculations should include stay-level records from discharges through the end of the month prior to the month that the calculations are run.

Example Table²

CASPER Report Calculation Month	Discharges Through the Month of	Reporting Quarter	Months of Data Included in the Reports
February 2016	January, 2016	Quarter 1, 2016	Stay-level records from discharges occurring from April 1, 2015 through January 31, 2016
March 2016	February, 2016	Quarter 1, 2016	Stay-level records from discharges occurring from April 1, 2015 through February 29, 2016

(continued)

² These are examples. Other time periods are available. The earliest quarter end date for the pressure ulcer measure data is 9/30/2015.

Table 1.1 (continued)
Data Included in the Monthly CASPER Reports for the Percent of Residents or Patients with Pressure Ulcers That Are New or Worsened (NQF #0678)*

CASPER Report Calculation Month	Discharges Through the Month of	Reporting Quarter	Months of Data Included in the Reports
April 2016	March, 2016	Quarter 1, 2016	Stay-level records from discharges occurring from April 1, 2015 through March 31, 2016
May 2016	April, 2016	Quarter 2, 2016	Stay-level records from discharges occurring from July 1, 2015 through April 30, 2016
June 2016	May, 2016	Quarter 2, 2016	Stay-level records from discharges occurring from July 1, 2015 through May 31, 2016
July 2016	June, 2016	Quarter 2, 2016	Stay-level records from discharges occurring from July 1, 2015 through June 30, 2016
August 2016	July, 2016	Quarter 3, 2016	Stay-level records from discharges occurring from October 1, 2015 through July 31, 2016
September 2016	August, 2016	Quarter 3, 2016	Stay-level records from discharges occurring from October 1, 2015, through August 31, 2016
October 2016	September, 2016	Quarter 3, 2016	Stay-level records from discharges occurring from October 1, 2015, through September 30, 2016
November 2016	October, 2016	Quarter 4, 2016	Stay-level records from discharges occurring from January 1, 2016 through October 31, 2016
December 2016	November, 2016	Quarter 4, 2016	Stay-level records from discharges occurring from January 1, 2016 through November 30, 2016
January 2017	December, 2016	Quarter 4, 2016	Stay-level records from discharges occurring from January 1, 2016 through December 31, 2016

1. Select all IRF-PAI stay-level records with a discharge date (Item 40 on IRF-PAI) within the selected target period.
2. Exclude all stay-level records in which the patient is not discharged alive (Item 44C = 0 on IRF-PAI if patient is not discharged alive).
3. For each IRF-PAI stay-level record stay do the following:
 - a. Order the stay-level records according to the sort order defined on page 1.

- b. Scan the sorted stay-level records
 - c. Select all stay-level records that meet the patient stay definition on the previous page and whose discharge date is within the target period. These are **target period patient stay records**. If a patient has multiple patient stay records with a discharge date within the target period, then include each qualifying patient stay in the measure.
4. Apply the QM definition (Table 3-1) to the eligible target period patient stay-level 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 (e.g., October 1, 2014, through March 31, 2015, for the 2014-2015 influenza vaccination season). The measure is calculated using data from one influenza season and is updated monthly. **For CASPER reports**, rates would be displayed based on the influenza season and associated influenza vaccination season. The illustration of CASPER reporting timeline is provided in Table 2.1.

Table 2.1

**Data Included in the Monthly CASPER Reports for the Percent of Residents or Patients Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (Short Stay)
(NQF #0680)**

Data calculation rule: use stays with a discharge date within the influenza season AND with 1 or more days in the IRF during the associated influenza vaccination season AND with a discharge date on or before the end of the prior month.

Example Table

CASPER Report Calculation Month	Discharges Through the Month of	Influenza Season	Associated Influenza Vaccination Season	Months of data included in the reports. <i>Note: Please refer to Chapter 2, Section 1 of this Manual for instructions on QM sample selection</i>
February 2016	January, 2016	July, 2015- June 2016	October, 2015- March, 2016	Use stay-level records with a discharge date within the influenza season AND with 1 or more days in the IRF during the associated influenza vaccination season AND with a discharge date on or before January 31, 2016

(continued)

Table 2.1 (continued)
Data Included in the Monthly CASPER Reports for the Percent of Residents or Patients Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (Short Stay) (NQF #0680)

CASPER Report Calculation Month	Discharges Through the Month of	Influenza Season	Associated Influenza Vaccination Season	Months of data included in the reports. <i>Note: Please refer to Chapter 2, Section 1 of this Manual for instructions on QM sample selection</i>
March 2016	February, 2016	July, 2015- June 2016	October, 2015- March, 2016	Use stay-level records with a discharge date within the influenza season AND with 1 or more days in the IRF during the associated influenza vaccination season AND with a discharge date on or before February 29, 2016
April 2016	March, 2016	July, 2015- June 2016	October, 2015- March, 2016	Use stay-level records with a discharge date within the influenza season AND with 1 or more days in the IRF during the associated influenza vaccination season AND with a discharge date on or before March 31, 2016
May 2016	April, 2016	July, 2015- June 2016	October, 2015- March, 2016	Use stay-level records with a discharge date within the influenza season AND with 1 or more days in the IRF during the associated influenza vaccination season AND with a discharge date on or before April 30, 2016
June 2016	May, 2016	July, 2015- June 2016	October, 2015- March, 2016	Use stay-level records with a discharge date within the influenza season AND with 1 or more days in the IRF during the associated influenza vaccination season AND with a discharge date on or before May 31, 2016
July 2016	June, 2016	July, 2015- June 2016	October, 2015- March, 2016	Use stay-level records with a discharge date within the influenza season AND with 1 or more days in the IRF during the associated influenza vaccination season AND with a discharge date on or before June 30, 2016
August 2016	July, 2016	July, 2016- June 2017	October, 2016- March, 2017	<i>Since there are no discharges within the associated influenza vaccination season, there would be no data for this month</i>

(continued)

Table 2.1 (continued)
Data Included in the Monthly CASPER Reports for the Percent of Residents or Patients Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (Short Stay) (NQF #0680)

CASPER Report Calculation Month	Discharges Through the Month of	Influenza Season	Associated Influenza Vaccination Season	Months of data included in the reports. <i>Note: Please refer to Chapter 2, Section 1 of this Manual for instructions on QM sample selection</i>
September 2016	August, 2016	July, 2016- June 2017	October, 2016- March, 2017	<i>Since there are no discharges within the associated influenza vaccination season, there would be no data for this month</i>
October 2016	September, 2016	July, 2016- June 2017	October, 2016- March, 2017	<i>Since there are no discharges within the associated influenza vaccination season, there would be no data for this month</i>
November 2016	October, 2016	July, 2016- June 2017	October, 2016- March, 2017	Use stay-level records with a discharge date within the influenza season AND with 1 or more days in the IRF during the associated influenza vaccination season AND with a discharge date on or before October 31, 2016
December 2016	November, 2016	July, 2016- June 2017	October, 2016- March, 2017	Use stay-level records with a discharge date within the influenza season AND with 1 or more days in the IRF during the associated influenza vaccination season AND with a discharge date on or before November 30, 2016
January 2017	December, 2016	July, 2016- June 2017	October, 2016- March, 2017	Use stay-level records with a discharge date within the influenza season AND with 1 or more days in the IRF during the associated influenza vaccination season AND with a discharge date on or before December 31, 2016

1. The measure includes all patients with 1 or more days in the IRF during the influenza vaccination season and whose discharge date is within one influenza season (i.e., July 1 to June 30). Select all IRF-PAI stay-level records with an admission date (Item 12 on IRF-PAI) **or** a discharge date (Item 40 on IRF-PAI) within the target period; **or** with the admission date (item 12 on IRF-PAI) before the target period and the discharge date (Item 40 on IRF-PAI) after the target period, such that the stay includes 1 or more days in the IRF during the target period.

For example, the stay of a patient admitted to an IRF on March 31 will be selected based on the admission date, as long as the discharge date is within the target influenza season (i.e., July 1 to June 30). The stay-level record of a patient discharged

from an IRF on October 1 will be selected based on the discharge date, regardless of the admission date. The stay-level 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 IRF during the target period.

2. For each patient within each IRF, do the following:
 - a. Order the stay-level records according to the sort order defined on page 1.
 - b. Scan the sorted stay-level records.
 - c. Select any stay-level-records with a discharge date within the influenza season (i.e., July 1 to June 30).
 - d. Out of the records selected in step c, select the patient stay-level records that meet one of the following conditions so that any patient in the IRF for 1 or more days during the influenza vaccination season is included:
 - i. The discharge date is on or after October 1 of the most recently completed influenza vaccination season AND on or before March 31 of the most recently completed influenza vaccination season;

OR
 - ii. The admission date is on or after October 1 of the most recently completed influenza vaccination season AND on or before March 31 of the most recently completed influenza vaccination season;

OR
 - iii. The admission date is before October 1 of the most recently completely influenza vaccination season AND the discharge date is after March 31 and on or prior to June 30 of the most recently completed influenza vaccination season.
 - e. 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.
3. Apply the QM definitions (Tables 3-2, 3-2a, 3-2b, and 3-2c) to the qualifying influenza vaccination assessment records.

Section 2: Measures 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 observed score (steps 1.1 through 1.3)

1.1 Calculate the denominator count (See Table 3-1):

Calculate the total number of patient stay-level records with an IRF-PAI assessment in the measure target period, which do not meet the exclusion criteria.

1.2 Calculate the numerator count (See Table 3-1):

Calculate the total number of stay-level records whose IRF-PAI assessment indicates one or more new or worsened pressure ulcers (Stage 2 to 4) at discharge since admission.

1.3 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 1.2 by the result of step 1.1.

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 (Table 3-1) for each patient:

Assign covariate values (COV), 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 data on IRF-PAI.

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), and 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), and 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 B 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 stay- level records for the IRF setting, calculate the mean facility-level expected QM score 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 1.3),

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

*National average observed QM score.

** The national observed QM mean for the target period Q3 2015(October 1, 2014 through September 30, 2015), is available in Appendix B.*

The calculation of the adjusted score uses the following equation:

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

Where:

Adj is the facility-level adjusted QM score, and

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

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.

Note: If the observed value is 0 or 100, set the risk-adjusted value equal to that value.

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

Using the definitions in Tables 3-2, 3-2a, 3-2b, and 3-2c, the following steps are used to calculate the measure:

1. Identify excluded stay-level records

Stay-level records for which the 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 based on this age calculation are included in the measure. Patients who are 179 days old or less based on this age calculation are excluded from the measure.

2. Calculate the denominator count:

Select any stay-level records with a discharge date within the influenza season (i.e., July 1 to June 30). From these selected records, calculate the total number of records in which the patient had 1 or more days in the IRF during the influenza vaccination season, that do not meet the exclusion criteria above.

3. Calculate the facility's overall numerator:

Calculate total number of stay-level records in the denominator meeting any of the following criteria on the selected IRF-PAI:

1. Patient received the influenza vaccine during the most recent influenza vaccination 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 medical contraindication(s) (O0250C = [3]).
3. Calculate the facility's three numerator counts:
 - 3.1 Numerator 1: Calculate the total number of stay-level records in the denominator during which patient received the influenza vaccine during the most recent influenza vaccination season, either in the facility (O0250A = [1]) or outside the facility (O0250C = [2]).
 - 3.2 Numerator 2: Calculate the total number of stay-level records in the denominator during which patient was offered and declined the influenza vaccine (O0250C = [4]).
 - 3.3 Numerator 3: Calculate the total number of stay-level records in the denominator during which patient was ineligible due to medical contraindication(s) (O0250C = [3]).
 4. Calculate the facility's overall observed score:

Divide facility's overall numerator count (step 3) by its denominator count (step 2) (refer to Table 3-2 for measure specifications).
 5. Calculate the facility's observed scores for each numerator count:
 - 5.1 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).
 - 5.2 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 to Table 3-2b for measure specifications).
 - 5.3 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 to Table 3-2c for measure specifications).

Section 3. Comparison Group

A national comparison group will be used. State-level comparison groups are not recommended because of the small number of IRFs in several states.

Chapter 3

IRF-PAI Quality Measures Logical Specifications

Table 3-1
Percent of Residents or Patients with Pressure Ulcers that Are New or Worsened (Short Stay) (NQF #0678)¹

Measure Description	Measure Specifications ²	Covariates
<p>This measure reports the percentage of stay-level records with Stage 2, Stage 3 or Stage 4 pressure ulcers that are new or worsened since admission.</p> <p>The measure is calculated by reviewing a patient's IRF-PAI pressure ulcer discharge assessment data 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>Numerator</p> <p>Patient stay-level records for whom the IRF-PAI assessment indicates one or more new or worsened Stage 2, Stage 3 or Stage 4 pressure ulcers:</p> <ol style="list-style-type: none"> 1. M0300B4 (new or worsened Stage 2 pressure ulcers) > 0, <i>or</i> 2. M0300C4 (new or worsened Stage 3 pressure ulcers) > 0, <i>or</i> 3. M0300D4 (new or worsened Stage 4 pressure ulcers) > 0. <p>Denominator</p> <p>Calculate the total number of patient stay-level records with an IRF-PAI assessment in the measure target period, which do not meet the exclusion criteria.</p> <p>Exclusions</p> <ol style="list-style-type: none"> 1. Patient stay-level record is excluded if M0300B4 = [-] and M0300C4 = [-] and M0300D4 = [-] on the discharge assessment. 2. Patient stay-level record that ends with patient expiration (Item 44C = [0]) is excluded from the measure. 	<p>Data for each covariate is derived from the IRF-PAI admission assessment data included in the target patient stay records.</p> <ol style="list-style-type: none"> 1. Indicator of minimal assistance or more assistance for the functional mobility item Transfers: Bed, Chair, Wheelchair (FIM® item 39I): <ul style="list-style-type: none"> Covariate = [1] (yes) if 39I = [0,1,2,3,4] ([0] = Activity did not occur, [1] = Total assistance, [2] = Maximal assistance, [3] = Moderate assistance, [4] = Minimal assistance) Covariate = [0] (no) if 39I = [5, 6, 7, -] ([5] = Supervision, [6] = Modified independence (Device), [7] = Complete independence (Timely, Safely), [-] = No response available) 2. Indicator of any bowel incontinence in the past 7 days (Item 32): <ul style="list-style-type: none"> Covariate = [1] (yes) if item 32 [1, 2, 3, 4, 5] ([1] = Five or more accidents in the past 7 days, [2] = Four accidents in the past 7 days, [3] = Three accidents in the past 7 days, [4] = Two accidents in the past 7 days, [5] = One accident in the past 7 days) Covariate = [0] (no) if item 32 = [6, 7, -] ([6] = No accidents; uses device such as an ostomy, [7] = No accidents, [-]=No response available) 3. Have peripheral vascular disease or peripheral arterial disease or diabetes: <ul style="list-style-type: none"> Covariate = [1] (yes) if one or more of the following are true: <ol style="list-style-type: none"> a. I0900A = [1] b. I0900B = [1] c. I2900A = [1] Covariate = [0] (no) if I0900A = [0,-] AND I0900B = [0,-] AND I2900 = [0,-] ([0]=No, [-] = No response available) 4. Indicator of low body mass index (BMI) , based on height (Item 25A) and weight (Item 26A): <ul style="list-style-type: none"> Covariate = [1] (yes) if BMI ≥ [12.0] AND ≤ [19.0] Covariate = [0] (no) if BMI > [19.0] Covariate = [0] (no) if 25A = [-] OR 26A = [-] OR BMI < [12.0] ([-] = No response available) <p>Where: BMI = (weight * 703 / height²) = ([26A] * 703) / (25A²) and the resulting value is rounded to one decimal. <i>To round off to the value to one decimal, if the digit in the second place is greater than 5, we add 1 to the digit 1, otherwise leave digit 1 unchanged. Drop all the digits following digit 1.</i></p>

¹ This measure is NQF-endorsed for use in the IRF setting (<http://www.qualityforum.org/QPS/0678>) (in addition to Long Term Care Hospital and Skilled Nursing Facility/Nursing Home (SNF/NH) settings) and finalized for reporting by IRFs under the IRF QRP (*Federal Register* 78 (6 August 2013): 47903-47919. Web. <http://www.gpo.gov/fdsys/pkg/FR-2013-08-06/pdf/2013-18770.pdf> and *Federal Register* 79 (6 August 2014): 45908-45918. Web. <http://www.gpo.gov/fdsys/pkg/FR-2014-08-06/pdf/2014-18447.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 IRF patient is a “resident” or that a stay in an IRF is a “short stay.”

² IRF-PAI Version 1.3 became effective on October 1, 2014. A copy of IRF-PAI V 1.3 is included in Section 8 of the IRF-PAI Training Manual V 1.3.

Table 3-2
Percent of Residents or Patients Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (Short Stay)
(NQF #0680)¹

Measure Description	Measure Specifications ²	Covariates
<p>This measure reports the percentage of stay-level records in which the patients were assessed and appropriately given the influenza vaccine during the most recent influenza vaccination season.</p>	<p>Numerator</p> <p>Total number of patient stay-level records in the denominator meeting any of the following criteria on the selected influenza vaccination assessment:</p> <ol style="list-style-type: none"> 1. Patient received the influenza vaccine during the most recent influenza vaccination season either in the facility (O0250A = 1) or outside the facility (O0250C = 2) (computed and reported separately); or 2. Patient was offered and declined the influenza vaccine (O0250C = 4) (computed and reported separately); or 3. Patient was ineligible due to medical contraindication(s) (O0250C = 3) (computed and reported separately). <p>Denominator</p> <p>Select any stay-level records with a discharge date within the influenza season (i.e., July 1 to June 30). From these selected records, calculate the total number of records in which the patient had 1 or more days in the IRF during the influenza vaccination season, except those with exclusions. Note: IRF-PAI records are only submitted to CMS for Medicare patients.</p> <p>Exclusions</p> <p>Stay-level records for which the 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.</p>	<p>Not applicable.</p>

¹ This measure is NQF-endorsed for use in the IRF setting (<http://www.qualityforum.org/QPS/0680>) (in addition to Long Term Care Hospital and Skilled Nursing Facility/Nursing Home (SNF/NH) settings) and finalized for reporting by IRFs under the IRF QRP (*Federal Register* 78 (6 August 2013): 47903-47919. Web. <http://www.gpo.gov/fdsys/pkg/FR-2013-08-06/pdf/2013-18770.pdf> and *Federal Register* 79 (6 August 2014): 45908-45918. Web. <http://www.gpo.gov/fdsys/pkg/FR-2014-08-06/pdf/2014-18447.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 home setting. CMS’s use of these words does not imply that the IRF patient is a “resident” or that a stay in an IRF is a “short stay.”

² A copy of IRF-PAI V 1.3, including items for patient influenza vaccination measure, is included in Section 8 of the IRF-PAI Training Manual V 1.3.

Table 3-2a
Percent of Residents or Patients Who Received the Seasonal Influenza Vaccine (Short Stay)
(NQF #0680)¹

Measure Description	Measure Specifications ²	Covariates
<p>This measure reports the percentage of stay-level records in which the patients received the influenza vaccination during the most recent influenza vaccination season.</p> <p>The measure score is computed and reported for the three numerator components separately.</p>	<p>Numerator</p> <p>Total number of patient stay-level records in the denominator meeting the following criteria on the selected influenza vaccination assessment:</p> <ol style="list-style-type: none"> 1. Patient received the influenza vaccine during the most recent influenza vaccination season, either in the facility (O0250A = 1) or outside the facility (O0250C = 2) (computed and reported separately). <p>Denominator</p> <p>Select any stay-level records with a discharge date within the influenza season (i.e., July 1 to June 30). From these selected records, calculate the total number of records in which the patient had 1 or more days in the IRF during the influenza vaccination season, except those with exclusions. Note: IRF-PAI records are only submitted to CMS for Medicare patients.</p> <p>Exclusions</p> <p>Stay-level records for which the 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.</p>	<p>Not applicable.</p>

¹ This measure is NQF-endorsed for use in the IRF setting (<http://www.qualityforum.org/QPS/0680>) (in addition to Long Term Care Hospital and Skilled Nursing Facility/Nursing Home (SNF/NH) settings) and finalized for reporting by IRFs under the IRF QRP (*Federal Register* 78 (6 August 2013): 47903-47919. Web. <http://www.gpo.gov/fdsys/pkg/FR-2013-08-06/pdf/2013-18770.pdf> and *Federal Register* 79 (6 August 2014): 45908-45918. Web. <http://www.gpo.gov/fdsys/pkg/FR-2014-08-06/pdf/2014-18447.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 home setting. CMS’s use of these words does not imply that the IRF patient is a “resident” or that a stay in an IRF is a “short stay.”

² A copy of IRF-PAI V 1.3, including items for patient influenza vaccination measure, is included in Section 8 of the IRF-PAI Training Manual V 1.3.

Table 3-2b
Percent of Residents or Patients Who Were Offered and Declined the Seasonal Influenza Vaccine (Short Stay) (NQF #0680)¹

Measure Description	Measure Specifications ²	Covariates
<p>This measure reports the percentage of stay-level records in which the patients were offered and declined the influenza vaccination during the most recent influenza vaccination season.</p> <p>The measure score is computed and reported for the three numerator components separately.</p>	<p>Numerator</p> <p>Total number of patient stay-level records in the denominator meeting the following criteria on the selected influenza vaccination assessment:</p> <ol style="list-style-type: none"> 1. Patient was offered and declined the influenza vaccine (O0250C = 4) (computed and reported separately) <p>Denominator</p> <p>Select any stay-level records with a discharge date within the influenza season (i.e., July 1 to June 30). From these selected records, calculate the total number of records in which the patient had 1 or more days in the IRF during the influenza vaccination season, except those with exclusions. Note: IRF-PAI records are only submitted to CMS for Medicare patients.</p> <p>Exclusions</p> <p>Stay-level records for which the 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.</p>	<p>Not applicable.</p>

¹ This measure is NQF-endorsed for use in the IRF setting (<http://www.qualityforum.org/QPS/0680>) (in addition to Long Term Care Hospital and Skilled Nursing Facility/Nursing Home (SNF/NH) settings) and finalized for reporting by IRFs under the IRF QRP (*Federal Register* 78 (6 August 2013): 47903-47919. Web. <http://www.gpo.gov/fdsys/pkg/FR-2013-08-06/pdf/2013-18770.pdf> and *Federal Register* 79 (6 August 2014): 45908-45918. Web. <http://www.gpo.gov/fdsys/pkg/FR-2014-08-06/pdf/2014-18447.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 home setting. CMS’s use of these words does not imply that the IRF patient is a “resident” or that a stay in an IRF is a “short stay.”

² A copy of IRF-PAI V 1.3, including items for patient influenza vaccination measure, is included in Section 8 of the IRF-PAI Training Manual V 1.3.

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

Measure Description	Measure Specifications ²	Covariates
<p>This measure reports the percentage of stay-level records in which the patients did not receive, due to medical contraindication, the influenza vaccination during the most recent influenza vaccination season.</p> <p>The measure score is computed and reported for the three numerator components separately.</p>	<p>Numerator</p> <p>Total number of patient stay-level records in the denominator meeting the following criteria on the selected influenza vaccination assessment:</p> <ol style="list-style-type: none"> 1. Patient was ineligible due to medical contraindication(s) (O0250C = 3) (computed and reported separately). <p>Denominator</p> <p>Select any stay-level records with a discharge date within the influenza season (i.e., July 1 to June 30). From these selected records, calculate the total number of records in which the patient had 1 or more days in the IRF during the influenza vaccination season, except those with exclusions. Note: IRF-PAI records are only submitted to CMS for Medicare patients.</p> <p>Exclusions</p> <p>Stay-level records for which the 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.</p>	<p>Not applicable.</p>

¹ This measure is NQF-endorsed for use in the IRF setting (<http://www.qualityforum.org/QPS/0680>) (in addition to Long Term Care Hospital and Skilled Nursing Facility/Nursing Home (SNF/NH) settings) and finalized for reporting by IRFs under the IRF QRP (*Federal Register* 78 (6 August 2013): 47903-47919. Web. <http://www.gpo.gov/fdsys/pkg/FR-2013-08-06/pdf/2013-18770.pdf> and *Federal Register* 79 (6 August 2014): 45908-45918. Web. <http://www.gpo.gov/fdsys/pkg/FR-2014-08-06/pdf/2014-18447.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 home setting. CMS’s use of these words does not imply that the IRF patient is a “resident” or that a stay in an IRF is a “short stay.”

² A copy of IRF-PAI V 1.3, including items for patient influenza vaccination measure, is included in Section 8 of the IRF-PAI Training Manual V 1.3.

Appendix A: Public Reporting Documentation

Section 1: Quality Measures for Public Reporting- 2016

Inpatient Rehabilitation Facility-Patient Assessment Instrument (IRF-PAI) Data Set Measure

- Quality Measure: Percent of Residents or Patients with Pressure Ulcers that Are New or Worsened (Short Stay)
NQF ID: 0678 CMS ID: I001.01

National Healthcare Safety Network (NHSN) Measure

- Quality Measure: National Healthcare Safety Network (NHSN) Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure
NQF ID: 0138 CMS ID: I006.01

Claims-Based Measure

- Quality Measure: All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Inpatient Rehabilitation Facilities
NQF ID: 2502 CMS ID: I007.01

Section 2: Record Selection Criteria

Select only the quality measure data submitted prior to the submission/correction deadline. This means that if a modified or inactivated record was submitted after the deadline and before the calculation run, the modified or inactivated record submitted after the deadline will be ignored and the version of the claims or assessment submitted prior to the deadline will be used. Please note that the calculations for the CASPER reports include all current records in the database at time of calculation. Please refer to Chapter 2, Section 1 of this Manual for instructions on record selection for Percent of Residents or Patients with Pressure Ulcers that Are New or Worsened (Short Stay) measure (NQF ID:0678).

Section 3: Calculation Frequency

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

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, and is updated quarterly.** 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 April 1, 2015 and March 31, 2016, etc.

IRFs submit IRF-PAI data to CMS per the IRF Prospective Payment System requirements. IRFs have up to 4.5 months after the discharge date to submit corrected data to CMS for QM calculations. Each year, corrections to the IRF-PAI data are due at the following four time points: February 15, May 15, August 15, and November 15. Measure data could be calculated sooner than 4.5 months after the end of the target period since IRFs submit data to CMS per the IRF prospective payment system (PPS) requirements, however, corrected data submitted after the calculation would not be included. **Therefore, to include all data corrected by an IRF prior to the deadline, the public reporting calculations will be run after the submission deadline of the quarter.** Refer to table A.1 for measure calculation timeline.

**Table A.1
IRF Measure Calculation Timeline for Public Reporting**

Data Collection Timeframe	Time Given to Submit Corrected IRF-PAI Data	Example
For quarters starting October 1, 2015 onwards.	4.5 months approximately/135 days	For target period October-December 2015, measure should be calculated after May 15, 2016.

National Healthcare Safety Network (NHSN) Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure (NQF ID: 0138)

The measure is calculated quarterly, using 12 months of data, and is updated quarterly.

All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Inpatient Rehabilitation Facilities (NQF ID: 2502)

This measure is calculated and updated annually using 2 consecutive calendar years of Medicare Fee-for-Service claims data.

Section 4: Additional Exclusion Criteria for Public Reporting

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

IRFs with denominator counts of less than 20 in the sample will be excluded from public reporting owing to small sample size.

All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Inpatient Rehabilitation Facilities (NQF ID: 2502)

CMS has proposed to exclude IRFs with fewer than 25 eligible stays during the measurement period from public reporting.

Appendix B: 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 following time period:

- The **Target Period** is October 1, 2014, through September 30, 2015.

Logistic Regression Coefficients

The logistic regression coefficients presented in Table B.1 are based on calculations for the target period: October 1, 2014 through September 30, 2015.

Table B.1
IRF Logistic Regression Coefficients for Percent of Patients or Residents with Pressure Ulcers That Are New or Worsened Using Incomplete Data (NQF #0678)

Constant (Intercept)	Patient-Level Covariates
-7.0372	1. Covariate 1 (Functional Limitation): 1.9173 2. Covariate 2 (Bowel Incontinence): 0.5726 3. Covariate 3 (Diabetes or PVD/PAD): 0.4571 4. Covariate 4 (Low BMI): 0.6210

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 patients with an IRF-PAI assessment in the measure target period retained after exclusions, and sum for the nation.

- 1.2 Calculate the numerator count:

Count the total number of patients whose IRF-PAI assessment indicates one or more new or worsened pressure ulcers (Stage 2 to 4) at discharge since admission, 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 IRF national observed mean for the target period October 1, 2014 through September 30, 2015*, is 0.008355.

*For the most updated national observed mean, please refer to the national observed mean included in Facility Level Quality Measure report.