

National Nursing Home  
Vaccination Quality Measures

**USER'S MANUAL SUPPLEMENT**

October 11, 2006 (v1.3)

# Chapter 1

## Introduction and Overview of the Vaccination QMs

This User's Manual contains information on how each vaccination quality measure is defined and the criteria for Minimum Data Set (MDS) record selection. It is a special supplement to the National Nursing Home Quality Measures Technical User's Manual (Nov 2004). A brief introduction to the vaccination quality measures calculated for national public reporting as part of the Centers for Medicare and Medicaid Services' (CMS) Nursing Home Quality Initiative follows.

These indicators target both the Chronic and Post-Acute Care populations served by nursing facilities.

- “Chronic” Care (CC) refers to those types of patients who enter a nursing facility typically because they are no longer able to care for themselves at home. These patients (or residents) tend to remain in the nursing facility anywhere from several months to several years. The Chronic Care vaccination QMs are calculated on any residents who have a period of time during the target period when no SNF PPS assessment appeared to be in effect.
- “Post-Acute” Care (PAC) refers to those types of patients who receive SNF Post-Acute Care, typically lasting less than 30 days. This care typically follows an acute care hospitalization and involves high-intensity rehabilitation or clinically complex care. The Post-Acute Care vaccination QMs are calculated on any patients with a SNF PPS assessment in effect during any part of the target period.

There are two vaccination quality measures to be used for national reporting. These are as follows:

- Percent of eligible and willing residents vaccinated for the influenza season, October 1 through March 31.
- Percent of eligible and willing residents with an up-to-date pneumococcal vaccination.

These two vaccination QMs are separately calculated for Chronic Care and Post-Acute Care samples of residents. This yields four calculated values for the two QMs as follows:

1. A Chronic Care influenza vaccination QM,
2. A Post-Acute Care influenza vaccination QM,
3. A Chronic Care pneumococcal vaccination QM,
4. A Post-Acute Care pneumococcal vaccination QM.

For the influenza vaccination QMs, a common operational definition is used for the Chronic Care and Post-Acute Care QMs. These two influenza vaccination QMs only differ with regard to the sample of residents (Chronic Care versus Post-Acute Care). A common operational definition is also used for the Chronic Care and Post-Acute Care pneumococcal vaccination QMs. Again, these two pneumococcal vaccination QMs only differ with regard to the sample of residents (Chronic Care versus Post-Acute Care).

Chapter 2 of this User's Manual presents the operational definitions for the influenza and pneumococcal vaccination QMs. In this chapter, numerators, denominators, and exclusion criteria are described. In general, the numerator is the count of residents in the facility who received the vaccination, and the denominator is the count of residents in the facility who were eligible and willing to receive the vaccination.

Chapter 3 presents the criteria for including a resident in the Chronic Care samples for the influenza and pneumococcal vaccination QMs. Separate Chronic Care samples with separate criteria are used for the influenza and the pneumococcal vaccination QMs. Chapter 3 also defines selection of the "target" MDS record used to determine Chronic Care vaccination status. Separate target record selection criteria are used for the Chronic Care influenza and pneumococcal QMs. Finally, this chapter provides the criteria for excluding a facility from calculation and reporting of the Chronic Care influenza and pneumococcal vaccination QMs.

Chapter 4 presents the criteria for including a resident in the Post-Acute Care samples for the influenza and pneumococcal vaccination QMs. Separate Post-Acute Care samples with separate criteria are used for the influenza and the pneumococcal vaccination QMs. Chapter 4 also defines selection of the "target" MDS record used to determine Post-Acute Care vaccination status. Separate target record selection criteria are used for the Post-Acute Care influenza and pneumococcal QMs. Finally, this chapter provides the criteria for excluding a facility from calculation and reporting of the Post-Acute Care influenza and pneumococcal vaccination QMs.

## Chapter 2

### Vaccination QM Definitions

This chapter contains a matrix giving the definitions for the influenza and pneumococcal vaccination QMs. For both QMs, the first column of the matrix, labeled “Measure Description” provides the following information:

- **QM description.** The first entry in the column is a brief description of the QM.
- **QM short label.** The short label for the QM is the entry in parentheses.

The second column, labeled “Measure Specifications,” gives the information for calculating the QM based on the MDS vaccination items in Section W:

- **Numerator.** The numerator entry gives the logic used to determine whether a resident triggers the QM and is included in the numerator for the QM rate in the facility.
- **Denominator.** The denominator entry defines whether a resident has the necessary MDS target record available to be a candidate for the QM and is included in the denominator for the QM rate for the facility.
- **Exclusions.** The exclusions entry provides clinical conditions and missing data conditions that preclude a resident from consideration for the QM. An excluded resident is excluded from both the numerator and denominator of the QM rate for the facility.

In these specifications, the items referred to (e.g., W2a) are from the MDS 2.0.

The third column, labeled “Covariates/Risk Adjustment” is always empty for the vaccination QMs. Covariates and risk adjustment are not used for these QMs.

## Vaccination Quality Measures Specifications

Measure Description	Measure Specifications	Covariates/Risk Adjustment
<p><b>Percent of eligible and willing residents vaccinated for the influenza season, October 1 through March 31</b></p> <p><b>(FLU01)</b></p>	<p><b>Numerator:</b> Residents in the influenza vaccination sample who received the influenza vaccine during the <u>most recently completed</u> influenza season (October 1 through March 31) as indicated on the selected target MDS record (assessment or discharge) by <u>either</u> of the following:</p> <ol style="list-style-type: none"> <li>1. Resident received the influenza vaccine in the facility (W2a = 1).</li> <li>2. Resident received the influenza vaccine outside of the facility (W2b = 2).</li> </ol> <p><b>Denominator:</b> Residents in the influenza vaccination sample with a valid MDS target record (assessment or discharge) in the Influenza Vaccination Reporting Period (October 1 through June 30).</p> <p><b>Exclusions:</b> Residents satisfying <u>any</u> of the following conditions on the selected target assessment or target discharge:</p> <ol style="list-style-type: none"> <li>1. The resident was not in the facility during the influenza season (W2b = 1).</li> <li>2. The resident was not eligible for the influenza vaccine (W2b = 3).</li> </ol>	

## ***Vaccination Quality Measures Specifications***

<b>Measure Description</b>	<b>Measure Specifications</b>	<b>Covariates/Risk Adjustment</b>
	<p>3. The resident was offered the influenza vaccine but declined (W2b = 4).</p> <p>4. The facility was unable to obtain the vaccine (W2b = 6).</p> <p><b>Note:</b> Residents are not excluded if either or both of the influenza vaccine items (W2a and W2b) have dash (-) values indicating inability to determine.</p>	
<p><b>Percent of eligible and willing residents with an up-to-date pneumococcal vaccination</b></p> <p><b>(PNEUMOVAX01)</b></p>	<p><b>Numerator:</b> Residents in the pneumococcal vaccination sample who have an up-to-date pneumococcal vaccination (W3a = 1) within the 6-month target period as indicated on the selected MDS target record (assessment or discharge).</p> <p><b>Denominator:</b> Residents in the pneumococcal vaccination sample with a valid MDS target record (assessment or discharge) within the 6-month target period.</p> <p><b>Exclusions:</b> Residents satisfying <b><i>any</i></b> of the following conditions on the selected target assessment or target discharge:</p> <ol style="list-style-type: none"> <li>1. Resident not eligible for pneumococcal vaccination (W3b = 1).</li> </ol>	

### ***Vaccination Quality Measures Specifications***

<b>Measure Description</b>	<b>Measure Specifications</b>	<b>Covariates/Risk Adjustment</b>
	<p>2. Pneumococcal vaccination was offered but declined by the resident (W3b = 2).</p> <p><b>Note:</b> Residents are not excluded if either or both of the pneumococcal vaccine items (W3a and W3b) have dash (-) values indicating inability to determine.</p>	

## Chapter 3

### Chronic Care Vaccination QM: Resident Sample Selection, Target Record Selection, and Facility Exclusion

This chapter presents the resident sample and MDS target record definitions for the Chronic Care vaccination QMs, as well as the criteria for excluding a facility from Chronic Care vaccination QM calculation and reporting. The Chronic Care resident sample, target record, and facility exclusion criteria are different for the influenza vaccination QM and the pneumococcal vaccination QM, and separate sections are devoted to the two QMs

#### Chronic Care Influenza Sample Definition

The Chronic Care influenza sample involves residents in the facility during the *most recently completed influenza season (October 1 through March 31)*. Two types of residents are included in this sample: (1) long-stay residents with a non-PPS assessment in effect during any part of the season and (2) short-stay residents during the season with no assessment in effect. A resident is included in the Chronic Care influenza vaccination sample in *any* of the following 3 cases:

1. The resident is Chronic Care during the influenza season, as indicated by a Chronic Care assessment with reference date during the influenza season.  

There is a non-PPS OBRA assessment (AA8a = 01, 02, 03, 04, 05, or 10 AND AA8b = 6 or blank) with assessment reference date (A3a) during the influenza season.
2. The resident is Chronic Care during the influenza season, as indicated by a Chronic Care assessment before the season with the next record being a discharge during the season.  

There is a discharge (AA8a = 06, 07, or 08) with discharge date (R4) during the influenza season. The preceding MDS record is a non-PPS OBRA assessment (AA8a = 01, 02, 03, 04, 05, or 10 AND AA8b = 6 or blank) with assessment reference date (A3a) before October 1 and the discharge date (R4) minus the assessment reference date (A3a) is 100 days or less.
3. The resident has a short non-PPS stay with no assessments, and days from this stay are within the influenza season.  

There is a stay ending with a discharge “prior to completing the initial assessment” (AA8a = 08). The start date of this stay is the later of the admission date (AB1) from this discharge or the 13th day prior to the discharge date (R4 date minus 13 days). Either the start date or the discharge date (R4) is within the influenza season.

Note: This case allows residents to be included in the Chronic Care influenza sample, when there are no MDS records in the target period but there is a discharge prior to completing the initial assessment in the 13 days after the end of the target period and the admission date on that discharge is in the target period.

## **Chronic Care Influenza MDS Target Record Definition**

The MDS target record (either an assessment or a discharge) provides the most recent report of vaccination given during the most recently completed influenza season (October 1 through March 31). It is possible that a vaccination during the influenza season will only be reported on a record dated after the season. If a vaccination is given late in the influenza season, the next opportunity to report that vaccination may be after the end of this season. For that reason, an *Influenza Vaccination Reporting Period (October 1 through June 30)* is used to select the target assessment or discharge.

The target record used for Chronic Care influenza QM calculation is the most recent assessment or discharge in the October 1 through June 30 reporting period, considering any of the following types of records:

1. OBRA assessment records (AA8a = 01, 02, 03, 04, 05, or 10) with assessment reference date (A3a) in the reporting period.
2. SNF PPS assessment records (AA8b = 1, 2, 3, 4, 5, 7 or 8) with assessment reference date (A3a) in the reporting period.
3. Discharge records (AA8a = 06, 07, or 08) with discharge date (R4) in the reporting period.

The most recent record is the one with the latest assessment reference date or discharge date. If two or more records have the same date, then use the QM System rules in Appendix A to determine which is the most recent.

## **Chronic Care Influenza QM Facility Exclusion<sup>1</sup>**

A facility is excluded from Chronic Care influenza QM calculation and reporting in either of the following 2 cases:

1. The facility is excluded if the Chronic Care influenza resident sample size is too small for reporting. The minimum Chronic Care influenza sample size for reporting is 30 residents.
2. The facility is excluded unless there are a minimum number of non-PPS long-term Chronic Care stays in a facility. The facility will be excluded if there are less than 30 non-PPS quarterly assessments (AA8a = 05) for the entire facility

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<sup>1</sup> Note that these same exclusions applied to all Chronic Care QMs calculated for Quarter 2 of 2006 and after.

for the year ending with the last day of the last completed influenza season (March 31).

### **Chronic Care Pneumococcal Sample Definition**

The Chronic Care pneumococcal sample involves residents in the facility during the selected 6-month target period used for the pneumococcal vaccination QM. Two types of residents are included in the Chronic Care pneumococcal sample: (1) long-stay residents with a non-PPS assessment in effect during any part of the 6-month target period and (2) short-stay residents during the target period with no assessment in effect. A resident is included in the Chronic Care pneumococcal vaccination sample in any of the following 3 cases:

1. The resident is Chronic Care during the 6-month target period, as indicated by a Chronic Care assessment with reference date during the target period.

There is a non-PPS OBRA assessment (AA8a = 01, 02, 03, 04, 05, or 10 AND AA8b = 6 or blank) with assessment reference date (A3a) during the target period.

2. The resident is Chronic Care during the 6-month target period, as indicated by a Chronic Care assessment before the target period with the next record being a discharge during the target period.

There is a discharge (AA8a = 06, 07, or 08) with discharge date (R4) during the target period. The preceding MDS record is a non-PPS OBRA assessment (AA8a = 01, 02, 03, 04, 05, or 10 AND AA8b = 6 or blank) with assessment reference date (A3a) before the target period and the discharge date (R4) minus the assessment reference date (A3a) is 100 days or less.

3. The resident has a short non-PPS stay with no assessments, and the discharge for that stay occurs during the 6-month target period.

There is a stay ending with a discharge “prior to completing the initial assessment” (AA8a = 08) and the discharge date (R4) is within the target period.

### **Chronic Care Pneumococcal MDS Target Record Definition**

The MDS target record (either an assessment or a discharge) provides the most recent report of pneumococcal vaccination status during the selected 6-month target period.

The target record used for Chronic Care pneumococcal QM calculation is the most recent assessment or discharge, considering any of the following types of records:

1. OBRA assessment records (AA8a = 01, 02, 03, 04, 05, or 10) with assessment reference date (A3a) in the target period.
2. SNF PPS assessment records (AA8b = 1, 2, 3, 4, 5, 7 or 8) with assessment reference date (A3a) in the target period.

3. Discharge records (AA8a = 06, 07, or 08) with discharge date (R4) in the target period.

The most recent record is the one with the latest assessment reference date or discharge date. If two or more records have the same date, then use the QM System rules in Appendix A to determine which is the most recent.

### **Chronic Care Pneumococcal QM Facility Exclusion<sup>2</sup>**

A facility is excluded from Chronic Care pneumococcal QM reporting in either of the following 2 cases:

1. The facility is excluded if the Chronic Care pneumococcal resident sample size is too small for reporting. The minimum Chronic Care pneumococcal sample size for reporting is 30 residents.
2. The facility is excluded unless there are a minimum number of non-PPS long-term Chronic Care stays in a facility. The facility will be excluded if there are less than 30 non-PPS quarterly assessments (AA8a = 05) for the entire facility for the year ending with the last day of the selected 6-month target period.

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<sup>2</sup> Note that these same exclusions applied to all Chronic Care QMs calculated for Quarter 2 of 2006 and after.

## Chapter 4

### Post-Acute Care Vaccination QM: Resident Sample Selection, Target Record Selection, and Facility Exclusion

This chapter presents the resident sample and MDS target record definitions for the Post-Acute Care vaccination QMs, as well as the criteria for excluding a facility from Post-Acute Care vaccination QM calculation and reporting. The Post-Acute care resident sample, target record, and facility exclusion criteria are different for the influenza vaccination QM and the pneumococcal vaccination QM, and separate sections are devoted to the two QMs

#### Post-Acute Care Influenza Sample Definition

The Post-Acute Care influenza sample involves residents in the facility during the *most recently completed influenza season (October 1 through March 31)*. Post-Acute residents with a PPS assessment in effect during any part of the season are included. A resident is included in *either* of the following 2 cases:

1. The resident is Post-Acute Care during the influenza season, as indicated by a Post-Acute PPS assessment with reference date during the influenza season.

There is a PPS assessment whether or not it is also an OBRA assessment (AA8b = 1, 2, 3, 4, 5, 7 or 8 and AA8a = any value) with assessment reference date (A3a) during the influenza season.

2. The resident is Post-Acute Care during the influenza season, as indicated by a Post-Acute Care PPS assessment before the season with the next record being a discharge during the season.

There is a discharge (AA8a = 06, 07, or 08) with discharge date (R4) during the influenza season. The preceding MDS record is a PPS assessment whether or not it is also an OBRA assessment (AA8b = 1, 2, 3, 4, 5, 7 or 8 and AA8a = any value) with assessment reference date (A3a) before October 1 and the discharge date (R4) minus the assessment reference date (A3a) is 45 days or less.

#### Post-Acute Care Influenza MDS Target Record Definition

The MDS target record (either an assessment or a discharge) provides the most recent report of vaccination given during the most recently completed influenza season (October 1 through March 31). It is possible that a vaccination during the influenza season will only be reported on a record dated after the season. If a vaccination is given late in the influenza season, the next opportunity to report that vaccination may be after the end of this season. For that reason, an *Influenza Vaccination Reporting Period (October 1 through June 30)* is used to select the target assessment or discharge.

The target record used for Post-Acute Care influenza QM calculation is the most recent assessment or discharge in the October 1 through June 30 reporting period, considering **any** of the following types of records:

1. OBRA assessment records (AA8a = 01, 02, 03, 04, 05, or 10) with assessment reference date (A3a) in the reporting period.
2. SNF PPS assessment records (AA8b = 1, 2, 3, 4, 5, 7 or 8) with assessment reference date (A3a) in the reporting period.
3. Discharge records (AA8a = 06, 07, or 08) with discharge date (R4) in the reporting period.

The most recent record is the one with the latest assessment reference date or discharge date. If two or more records have the same date, then use the QM System rules in Appendix A to determine which is the most recent.

### **Post-Acute Care Influenza QM Facility Exclusion<sup>3</sup>**

A facility is excluded from Post-Acute Care influenza QM reporting in the following case:

1. The facility is excluded if the Post-Acute Care influenza resident sample size is too small for reporting. The minimum Post-Acute Care influenza sample size for reporting is 20 residents.
2. The facility is excluded if there are no 5-day PPS assessments (AA8b = 1) for the entire facility for the year ending with the last day of the influenza season (March 31).

### **Post-Acute Care Pneumococcal Sample Definition**

The Post-Acute Care pneumococcal sample involves residents in the facility during the selected 6-month target period used for the pneumococcal vaccination QM. Post-Acute residents with a PPS assessment in effect during any part of the target period are included. A resident is included in **either** of the following 2 cases:

1. The resident is Post-Acute Care during the 6-month target period, as indicated by a Post-Acute PPS assessment with reference date during the target period.  

There is a PPS assessment whether or not it is also an OBRA assessment (AA8b = 1, 2, 3, 4, 5, 7 or 8 and AA8a = any value) with assessment reference date (A3a) during the target period.
2. The resident is Post-Acute Care during the 6-month target period, as indicated by a Post-Acute Care PPS assessment before the target period with the next record being a discharge during the target period.

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<sup>3</sup> Note that these same exclusions applied to all Post-Acute Care QMs calculated for Quarter 2 of 2006 and after.

There is a discharge (AA8a = 06, 07, or 08) with discharge date (R4) during the target period. The preceding MDS record is a PPS assessment whether or not it is also an OBRA assessment (AA8b = 1, 2, 3, 4, 5, 7 or 8 and AA8a = any value) with assessment reference date (A3a) before the target period and the discharge date (R4) minus the assessment reference date (A3a) is 45 days or less.

## **Post-Acute Care Pneumococcal MDS Target Record Definition**

The MDS target record (either an assessment or a discharge) provides the most recent report of pneumococcal vaccination status during the selected 6-month target period.

The target record used for Post-Acute Care pneumococcal QM calculation is the most recent assessment or discharge, considering any of the following types of records:

1. OBRA assessment records (AA8a = 01, 02, 03, 04, 05, or 10) with assessment reference date (A3a) in the target period.
2. SNF PPS assessment records (AA8b = 1, 2, 3, 4, 5, 7 or 8) with assessment reference date (A3a) in the target period.
3. Discharge records (AA8a = 06, 07, or 08) with discharge date (R4) in the target period.

The most recent record is the one with the latest assessment reference date or discharge date. If two or more records have the same date, then use the QM System rules in Appendix A to determine which is the most recent.

## **Post-Acute Care Pneumococcal QM Facility Exclusion<sup>4</sup>**

A facility is excluded from Post-Acute Care pneumococcal QM calculation and reporting in either of the following 2 cases:

1. The facility is excluded if the Post-Acute Care pneumococcal resident sample size is too small for reporting. The minimum Post-Acute Care pneumococcal sample size for reporting is 20 residents.
2. The facility is excluded if there are no 5-day PPS assessments (AA8b = 1) for the entire facility for the year ending with the last day of the 6-month target period.

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<sup>4</sup> Note that these same exclusions applied to all Post-Acute Care QMs calculated for Quarter 2 of 2006 and after.

## Appendix A

### QM System Order of Records with a Date

**QM System Assumed Order of Records within a Date.** An assessment is assumed to be dated on the assessment reference date (A3a). A reentry is assumed to be dated on the reentry date (A4a). A discharge is assumed to be dated on the discharge date (R4). When multiple records for a resident occur on the same date for the same facility, then the records are assumed to be in the following order (earliest to latest) by type of record based on the primary reason for assessment item (AA8a):

- AA8a = 09 (reentry)
- AA8a = 05 (quarterly review assessment)
- AA8a = 10 (significant correct of prior quarterly assessment)
- AA8a = 00 (Medicare PPS assessment)
- AA8a = 02 (annual assessment)
- AA8a = 03 (significant change in status assessment)
- AA8a = 04 (significant correction of prior full assessment)
- AA8a = 01 (admission assessment)
- AA8a = 07 (discharge return anticipated)
- AA8a = 08 (admission/discharge prior to admission assessment)
- AA8a = 06 (discharge return not anticipated)