



## Measure Information

This document contains the information submitted by measure developers/stewards, but is organized according to NQF's measure evaluation criteria and process. The item numbers refer to those in the submission form but may be in a slightly different order here. In general, the item numbers also reference the related criteria (e.g., item 1b.1 relates to subcriterion 1b).

### Brief Measure Information

**NQF #: 0682**

**Corresponding Measures:**

**De.2. Measure Title:** Percent of Residents or Patients Assessed and Appropriately Given the Pneumococcal Vaccine (Short-Stay)

**Co.1.1. Measure Steward:** Centers for Medicare & Medicaid Services

**De.3. Brief Description of Measure:** The measure reports the percentage of short stay nursing home residents or IRF or LTCH patients who were assessed and appropriately given the pneumococcal vaccine during the 12-month reporting period. This measure is based on data from Minimum Data Set (MDS) 3.0 assessments of nursing home residents, the Inpatient Rehabilitation Facilities Patient Assessment Instrument (IRF-PAI) for IRF patients, and the Long Term Care Hospital (LTCH) Continuity Assessment Record and Evaluation (CARE) Data Set for long-term care hospital patients, using items that have been harmonized across the three assessment instruments. Short-stay nursing home residents are those residents who are discharged within the first 100 days of their nursing home stay.

The NQF standard specifications were harmonized to achieve a uniform approach to measurement across settings and populations, addressing who is included in or excluded from the target denominator population, who is included in the numerator population, and the time windows. In 2008, the NQF steering committee met to identify voluntary consensus measures for influenza and pneumococcal vaccination that were harmonized across healthcare settings. The steering committee recognized that "in the interest of standardization and minimizing burden for those implementing and using measures, measure harmonization is an important consideration in evaluating and recommending measures for endorsement." The committee supported the use of measure IM-017- which reports the percent of nursing home/Skilled Nursing Facility residents whose pneumococcal polysaccharide vaccine (PPV) status is up to date during the 12-month reporting period - as the basis for a harmonized measure across settings (National Quality Forum, 2008b). The NQF standardized specifications differ from the currently reported measure in several ways. Note that for some residents or patients, a single vaccination during their lifetime is sufficient and the vaccination would be considered up to date; for others (those who are immunocompromised or older than age 65, but the first vaccine was administered more than 5 years before when the resident was younger than 65), a second dose would be needed to qualify as vaccination up to date. Although the guidelines recommend a second dose in these circumstances, the NQF Committee believed that adding that requirement would make measurement too complex for the amount of benefit gained. Also, given the importance of revaccination among older adults, focusing on up-to-date status, rather than on ever having received the vaccine, is critically important. This focus on up-to-date rather than ever having received a vaccination is supported by the NQF steering committee in their discussion of the national voluntary consensus standards for this measure (National Quality Forum, 2008a).

This measure will include only residents or patients aged 5 years and older in the denominator. In their 2008 review of voluntary consensus standards for influenza and pneumococcal vaccination the NQF steering committee recommended limiting the use of measure IM -017 which reports the percent of nursing home/Skilled Nursing Facility residents whose PPV status is up to date, to residents age 5 and older. They state in their recommendation, "the specifications for high-risk groups begin at age 5, because the schedule for children ages 2-5 is different and complicated." (National Quality Forum. 2008b) The Advisory Committee on Immunization Practices (ACIP) provides age specific guidelines for pneumococcal immunization for both children and adults. These guidelines vary based on age and risk level and should be followed accordingly. Up-to-date vaccination status is defined as a resident or patient who has been vaccinated in accordance with the current CDC vaccination guidelines for pneumococcal disease for his/her age and health status. The current CDC vaccination guidelines for adults and children are available at <http://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/pneumo.html>.

National Quality Forum (2008a, June). Revised voting draft for national voluntary consensus standards for influenza and pneumococcal immunizations. Received from the Health Services Advisory Group on August 19, 2011.

National Quality Forum. (2008b, December). National voluntary consensus standards for influenza and pneumococcal immunizations. Available from [http://www.qualityforum.org/Publications/2008/12/National\\_Voluntary\\_Consensus\\_Standards\\_for\\_Influenza\\_and\\_Pneumococcal\\_Immunizations.aspx](http://www.qualityforum.org/Publications/2008/12/National_Voluntary_Consensus_Standards_for_Influenza_and_Pneumococcal_Immunizations.aspx).

**1b.1. Developer Rationale:** This measure is intended to encourage nursing homes, LTCHs, and IRFs to focus on this important aspect of clinical care by assessing residents/patients on the status of their pneumococcal vaccine immunization and to provide immunization as deemed clinically appropriate.

**S.4. Numerator Statement:** The following numerator components will be computed and reported separately: (1) up-to-date\*\* vaccine status; (2) ineligible to receive vaccine due to medical contraindications; or (3) offered and declined vaccine. Measure numerator specifications for the three provider type assessment tools are listed below:

MDS 3.0 assessment: Residents are counted if they are short-stay, defined as residents whose length of stay is less than or equal to 100 days. Residents aged 5 years and older are counted if they meet any of the following criteria on the most recent MDS 3.0 assessment, which may be an OBRA assessment (A0310A=01,02,03,04,05,06), PPS assessment (A0310B = 01, 02, 03, 04, 05, 06), or discharge assessment (A0310F = 10, 11), during the 12-month reporting period. The following numerator components will be computed and reported separately:

1. Up-to-date\*\* vaccine status (O0300A=1)
2. Ineligible due to medical contraindications (O0300B=1)
3. Offered and declined vaccine (O0300B=2)

LTCH CARE Data Set\*: Patients aged 5 years and older are counted if they meet any of the following criteria on the most recent LTCH CARE Data Set assessment during the 12-month reporting period. The following numerator components will be computed and reported separately:

1. Up-to-date\*\* vaccine status
2. Ineligible due to medical contraindications
3. Offered and declined vaccine

IRF-PAI assessment: Patients aged 5 years and older are counted if they meet any of the following criteria on the IRF-PAI assessment during the 12-month reporting period. The following numerator components will be computed and reported separately:

1. Up-to-date\*\* vaccine status
2. Ineligible due to medical contraindications
3. Offered and declined vaccine

\*Note that the items have not been added to the LTCH CARE Data Set or IRF-PAI and hence, the data elements have not yet been assigned item numbers for these two assessment tools. When CMS implements this measure for the LTCH and IRF settings, the data elements will be assigned item numbers to match the MDS.

\*\*"Up-to-date" vaccination status is defined as a resident or patient who has been vaccinated in accordance with the current CDC vaccination guidelines for pneumococcal disease for his/her age and health status. The current CDC vaccination guidelines for adults and children are available at <http://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/pneumo.html>.

**S.7. Denominator Statement:** The denominator consists of all residents or patients aged 5 years and older in the pneumococcal vaccination sample (defined in Denominator Details section) with an assessment within the 12-month period. Specifications for the three provider type assessment tools are listed below:

MDS 3.0: Short-stay residents aged 5 years and older in the pneumococcal vaccination sample with an MDS 3.0 assessment (which may be an OBRA, PPS, or discharge assessment) within the 12-month period.

LTCH CARE Data Set: Patients aged 5 years and older in the pneumococcal vaccination sample with a LTCH CARE Data Set assessment

(which may be an admission or discharge assessment) within the 12-month period.

IRF-PAI: Patients aged 5 years and older in the pneumococcal vaccination sample with an IRF-PAI assessment (which includes both admission and discharge assessment data) within the 12-month period. Note: The IRF-PAI data are submitted for Medicare patients only.

**S.10. Denominator Exclusions:** Residents or patients younger than 5 years old will be excluded from the denominator. Facilities with denominator counts of less than 20 in the sample will be excluded from public reporting owing to small sample size.

**De.1. Measure Type:** Process

**S.23. Data Source:** Electronic Health Records

**S.26. Level of Analysis:** Facility, Other

**IF Endorsement Maintenance – Original Endorsement Date:** Mar 03, 2011 **Most Recent Endorsement Date:** Mar 03, 2011

**IF this measure is included in a composite, NQF Composite#/title:**

**IF this measure is paired/grouped, NQF#/title:**

**De.4. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results?** This is not applicable

## 1. Evidence, Performance Gap, Priority – Importance to Measure and Report

Extent to which the specific measure focus is evidence-based, important to making significant gains in healthcare quality, and improving health outcomes for a specific high-priority (high-impact) aspect of healthcare where there is variation in or overall less-than-optimal performance. **Measures must be judged to meet all subcriteria to pass this criterion and be evaluated against the remaining criteria.**

### 1a. Evidence to Support the Measure Focus – See attached Evidence Submission Form

[0682\\_Evidence\\_MSF5.0\\_Data.doc](#)

### 1b. Performance Gap

Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating:

- considerable variation, or overall less-than-optimal performance, in the quality of care across providers; and/or
- disparities in care across population groups.

#### 1b.1. Briefly explain the rationale for this measure (e.g., the benefits or improvements in quality envisioned by use of this measure)

This measure is intended to encourage nursing homes, LTCHs, and IRFs to focus on this important aspect of clinical care by assessing residents/patients on the status of their pneumococcal vaccine immunization and to provide immunization as deemed clinically appropriate.

**1b.2. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis.** (This is required for endorsement maintenance. Include mean, std dev, min, max, interquartile range, scores by decile. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included). This information also will be used to address the subcriterion on improvement (4b.1) under Usability and Use.

A study of the implementation of a pneumococcal vaccination standing order on an inpatient hospital serving geriatric patients found that after implementing the order, the vaccination rate increased from 0% to 15.4%, and vaccination opportunity rate increased from 8% to 59.1% (Eckrode et al., 2007). This indicates that there is a wide range of performance among facilities that are measuring vaccination rates and those that are not.

In an analysis of quality measures using MDS 2.0 data from 2006 Q1 for a random 10% facility sample (presented below), the University of Colorado found that this measure had a significant amount of variability across facilities. The quality measure varied from 15.6% at the 10th percentile to 98.1% at the 90th percentile. In addition, 8.0% of facilities had 100% vaccination (Brega et al., 2008). See attached Table 1: Measure Variability Across Facilities.

**1b.3. If no or limited performance data on the measure as specified is reported in 1b2, then provide a summary of data from the**

**literature that indicates opportunity for improvement or overall less than optimal performance on the specific focus of measurement.**

Brega A, Goodrich G, Nuccio E, et al. Transition of publicly reported nursing home quality measures to MDS 3.0—draft. Denver: Division of Health Care Policy and Research University of Colorado at Denver. 2008.

Eckrode C, Church N, English WJ. (2007). Implementation and evaluation of a nursing assessment/standing orders-based inpatient pneumococcal vaccination program. *Am J Infect Control*, 35(8), 508–515.

**1b.4. Provide disparities data from the measure as specified (current and over time) by population group, e.g., by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability.** *(This is required for endorsement maintenance. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities include.) This information also will be used to address the subcriterion on improvement (4b.1) under Usability and Use.*

A study that examined racial disparities in receipt and documentation of pneumococcal vaccinations among nursing home residents concluded that racial disparities exist in vaccination coverage among U.S. nursing home residents (Li & Mukamel, 2010). The incidence of pneumococcal infection in black adults is three to five times as high as that of white adults (Smith et al., 2007), but pneumococcal vaccination rates are lower for black nursing home residents than for white residents—31% of black residents compared with 24% of white residents age 65 years or older had never received pneumococcal vaccination. Blacks also had a higher likelihood of unknown vaccination status than whites in Medicaid-only nursing facilities and lower odds of unknown vaccination status in government-owned nursing facilities. The racial difference in pneumococcal vaccination exists predominantly in certain nursing facility types (Marsteller et al., 2008).

Within nursing homes specifically, racial segregation between facilities has been shown to be a major factor in racial disparities in this population, primarily for African Americans. In 2000, a study drawing on national MDS and Online Survey, Certification, and Reporting (OSCAR) data found that two-thirds of all black residents were living in just 10% of all facilities (Smith et al., 2007). A 2002 survey of a stratified sample of 39 nursing homes and 181 residential care/assisted living facilities in four states had similar findings (Howard et al., 2002). Facilities serving African Americans have demonstrated a lower level of quality care than those serving whites, with lower staff-to-resident ratios and higher deficiency ratings (Grabowski, 2004). Minority groups in general, and African Americans in particular, also have more limited access to nursing home care than whites (National Center for Health Statistics [NCHS], 1997; Marsteller et al., 2008).

According to the 2011 MedPAC report examining Medicare beneficiaries' use of LTCHs in 2009, LTCHs have a slight overrepresentation of minority patients, particularly African American patients, compared to the Medicare population as a whole. Across all Medicare beneficiaries in 2009, 17% were minorities (10% African American, 3% Hispanic, and 4% other). In the same year, LTCHs consisted of approximately 26% minority patients (19% African American, 4% Hispanic, and 4% other) (MedPAC, 2011, ch. 10). Minority rates in IRFs ranged depending on the payer from 15% to 20% minority. Between May and June 2010 approximately 10–13% of IRF patients were African American and 5–7 % were Hispanic, suggesting a slightly higher than average percentage of Hispanic patients in IRFs (MedPAC, 2011, ch. 9).

**1b.5. If no or limited data on disparities from the measure as specified is reported in 1b4, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement. Include citations.**

Advisory Committee on Immunization Practices. (1997). Prevention of pneumococcal disease: recommendations of the Advisory Committee on Immunization Practices. *MMWR*, 46(RR-08), 1–24. Retrieved from <http://www.cdc.gov/mmwr/preview/mmwrhtml/00047135.htm>

Centers for Disease Control and Prevention, National Center for Health Statistics. (1997). *Health, United States, 1996–97, and injury chartbook*. Hyattsville, MD.

Grabowski D. (2004). The admission of blacks to high-deficiency nursing homes. *Med Care*, 42(5), 456–464.

Howard D, Sloane P, Zimmerman S, et al. (2002). Distribution of African Americans in residential care/assisted living and nursing homes: more evidence of racial disparity? *Am J Public Health*, 92(8), 1272–1277.

Li Y, Mukamel DB (2010). Racial disparities in receipt of influenza and pneumococcus vaccinations among US nursing-home residents. *American Journal of Public Health*, 100(S1), S256–262.

Marsteller J, Tiggle R, Remsburg R, et al. (2008). Pneumococcal vaccination in nursing homes: does race make a difference? J Am Med Dir Assoc, 9(9), 641–647.

Medicare Payment Advisory Commission (MedPAC). (2011a, March). Inpatient rehabilitation facility services. In Report to the Congress: Medicare payment policy (pp. 203–227). Washington, DC. Retrieved from [http://medpac.gov/documents/Mar11\\_EntireReport.pdf](http://medpac.gov/documents/Mar11_EntireReport.pdf)

Medicare Payment Advisory Commission (MedPAC). (2011b, March). Long-term care hospital services. In Report to the Congress: Medicare payment policy (pp. 231–256). Washington, DC: Author. Retrieved from [http://medpac.gov/documents/Mar11\\_EntireReport.pdf](http://medpac.gov/documents/Mar11_EntireReport.pdf)

Smith D, Feng Z, Fennell M, et al. (2007). Separate and unequal: racial segregation and disparities in quality across U.S. nursing homes. Health Aff (Millwood), 26(5), 1448–1558.

**1c. High Priority** (previously referred to as High Impact)

The measure addresses:

- a specific national health goal/priority identified by DHHS or the National Priorities Partnership convened by NQF; OR
- a demonstrated high-priority (high-impact) aspect of healthcare (e.g., affects large numbers of patients and/or has a substantial impact for a smaller population; leading cause of morbidity/mortality; high resource use (current and/or future); severity of illness; and severity of patient/societal consequences of poor quality).

**1c.1. Demonstrated high priority aspect of healthcare**

Affects large numbers, Severity of illness, Frequently performed procedure, A leading cause of morbidity/mortality, Patient/societal consequences of poor quality

**1c.2. If Other:**

**1c.3. Provide epidemiologic or resource use data that demonstrates the measure addresses a high priority aspect of healthcare.**

**List citations in 1c.4.**

According to the Centers for Disease Control and Prevention (CDC), pneumococcal disease kills more people in the United States each year than all other vaccine-preventable diseases combined (CDC, 2009). In 2006, all possible pneumonia diagnoses (including viral, bacterial and unspecified organisms) killed 55,477 people in the United States (NCHS, 2009) and was responsible for approximately 589,000 hospital discharges in males and 643,000 hospital discharges in females (NCHS 2006). Among the 2006 discharges, individuals age 65 or older and had the highest rate at 189 per 10,000 (NCHS, 2006). For patients in long-term care facilities, pneumonia is the leading cause of morbidity and mortality and is the leading cause of transfer to acute-care hospitals (Furman et al., 2004). Older people and those with chronic health conditions are at high risk for pneumococcal disease. Pneumonia is of even greater concern for post-surgery patients: CDC reports that pneumonia is the third-most-frequent healthcare-acquired infection (HAI) among post-surgical patients, with a prevalence of 15%; and among cases in which the cause of death was an HAI, pneumonia is the most frequent HAI (38%) (CDC, 2009). Given that many patients in post-acute care (PAC) settings are post-surgery, vaccinations of post-acute care residents can prevent or lower the risk of residents becoming seriously ill. Stroke patients are also at higher risk of pneumonia as a complication; pneumonia is one of the most common adverse events and the second most common cause of acute-hospital readmission (Hung et al., 2005).

The pneumococcal vaccine protects against the bacterial strain of pneumonia caused by *Streptococcus pneumoniae* (S. pneumoniae). Specific data related to S. pneumoniae in nursing facilities, LTCHs and IRFs is currently unknown. Generally speaking, S. pneumoniae accounted for 5,000 deaths among persons of all ages in 2009 (CDC 2010). The estimated overall annual incidence of S. pneumoniae in the United States is 15-30 cases per 100,000 population, with the rate being higher in persons aged 65 or older (about 50-83 cases per 100,000 population ) (CDC 1997). The use of the PPSV23 vaccine among adults aged 65 or older and those adults aged 19-64 years with underlying medical conditions is recommended, as they are at greater risk for serious pneumococcal infection (CDC 2010).

Hospitalization rates for pneumonia-related stays for the elderly population have been increasing over the past 15 years; among those 85 or older, at least 1 in 20 people were hospitalized each year because of pneumonia (Fry et al., 2005). In 2005, Medicare

paid an average of \$6,342 per hospital discharge for pneumonia-related short-stay hospitalizations; the average length of stay was 6.1 days. The number of Medicare-reimbursed discharges related to pneumococcal infection for the same year was 670,000 (Health Care Financing Review, 2007).

Healthy People 2010 (Objective 14-29f) and Healthy People 2020 (Objective IID-13.3) set a goal of 90% of adults vaccinated against pneumococcal disease in long-term care facilities and nursing homes by 2010 and 2020, respectively (Health People, 2010, Healthy People, 2020). However, estimated pneumococcal vaccination coverage remains below 50% among high-risk groups (NHIS, 2006). In 2006, 66 percent of persons in long-term care facilities and nursing homes certified by the Centers for Medicare and Medicaid Services (CMS) reported having up-to-date pneumococcal vaccinations (Healthy People 2020). CMS currently uses MDS 2.0 data to publicly report a pneumococcal vaccination quality measure (QM) for nursing facility residents. In an analysis of quality measures using MDS data from the 2006 Q1 for a random 10% facility sample, the University of Colorado found that this measure had a significant amount of variability across facilities. The quality measure varied from 15.6% at the 10th percentile to 98.1% at the 90th percentile. In addition, 8.0% of facilities had 100% vaccination (Brega et al., 2008). The first quarter (Q1) 2007 statewide averages for the PAC population ranged from 48.8% to 91.8%, with a 73.7% national average (Colorado Foundation for Medical Care, 2007). See attached Table 1: Measure Variability Across Facilities.

Although the majority of measure-specific data and quality measurement information regarding pneumococcal vaccination among the elderly has been conducted using the MDS 2.0 in a nursing home setting, and nursing homes, LTCHs, and IRFs are not entirely identical, there is overlap in these populations and risk factors. A 2009 report prepared by RTI International explored the demographic and clinical factors in all three provider populations and found similarities in age, race, and diagnosis. In regard to age, in 2006, 80% of LTCH patients were 65 or older, and 91% of both IRFs and skilled nursing facility residents were 65 or older. Comparing race, in 2006, LTCH populations were 76% white, IRFs populations were 82% white, and nursing facility populations were 89% white. When comparing the All Patient Refined–Diagnosis Related Groups (APR-DRG) illness severity index, LTCHs had significantly higher numbers of level 3 or 4 patients (74%) compared with nursing facilities (39%) and IRFs (33%) (Gage et al., 2009).

The study also found that the location of a post-acute care referral is often made based on nonclinical factors such as geographic availability and hospital affiliations. The study found “a greater likelihood of using a PAC provider setting if the hospital had subprovider (a hospital-based rehabilitation unit or skilled nursing facility is considered a subprovider) or a co-located PAC provider of that type (facilities classified as co-located if two or more independently owned providers were physically located within 250 yards of each other).” For example, if a provider had a co-located inpatient rehabilitation facility, the provider had 2.265 times the odds ( $p<.0001$ ) of referring to an inpatient rehabilitation facility, compared to if they did not have a co-located IRF. Chances of referral were also higher for co-located LTCHs and nursing homes (Gage et al., 2009). Given the impact of the geographic proximity of PAC facilities on the type of PAC patients use (MedPAC, 2011; Gage et al., 2009), it is important to note that availability of LTCH and IRF beds varies widely across the country. There are multiple states with no LTCHs, according to the 2009 Medicare Provider of Service file (MedPAC, 2011 ch. 10; Gage et al., 2009). Although IRFs are more common than LTCHs, several states have limited number of IRF beds (e.g., Maryland with 0.19 beds per 1,000 beneficiaries).

The similarities between the facilities and the potential overlap in patients, along with nonclinical factors that affect where a patient is treated, all suggest that research regarding nursing home residents and the use of the MDS assessment have applicability to the use of the LTCH CARE Data Set and the IRF-PAI.

#### **1c.4. Citations for data demonstrating high priority provided in 1a.3**

Brega A, Goodrich G, Nuccio E, et al. (2008). Transition of publicly reported nursing home quality measures to MDS 3.0. Draft. Denver: University of Colorado Anschutz Medical Campus, School of Medicine, Division of Health Care Policy and Research.

Centers for Disease Control and Prevention. (2009, March). Pneumococcal polysaccharide vaccine: What you need to know. Retrieved from <http://www.cdc.gov/vaccines/pubs/vis/downloads/vis-ppv.pdf>

Centers for Disease Control and Prevention. (2011, June). Post-procedure pneumonia (PPP) event. Retrieved from <http://www.cdc.gov/nhsn/PDFs/pscManual/10pscPPPcurrent.pdf>

Centers for Disease Control and Prevention, National Center for Health Statistics. (various years 1988–2006). National Hospital Discharge Survey. Available from [http://www.cdc.gov/nchs/nhds/nhds\\_publications.htm#nhds](http://www.cdc.gov/nchs/nhds/nhds_publications.htm#nhds)



- Centers for Disease Control and Prevention (1997). Prevention of pneumococcal disease: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1997., 46(RR-08), 1-24. Available from: <http://www.cdc.gov/mmwr/preview/mmwrhtml/00047135.htm>
- Centers for Disease Control and Prevention, National Health Interview Survey. (2006, updated 2009). Pneumococcal: Self-reported vaccination coverage trends 1989–2007. Retrieved from [http://www.cdc.gov/flu/professionals/vaccination/pdf/NHIS89\\_07ppvaxtrendtab.pdf](http://www.cdc.gov/flu/professionals/vaccination/pdf/NHIS89_07ppvaxtrendtab.pdf)
- Centers for Disease Control and Prevention (2010). Updated recommendations for prevention of invasive pneumococcal disease among adults using the 23-valent pneumococcal polysaccharide vaccine (PPSV23). MMWR 2010., 59(34), 1102-1106. Available from: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5934a3.htm>
- Colorado Foundation for Medical Care. (2007). Development, maintenance, and implementation of nursing home quality measures. Environmental scan: Review of the literature, clinical guidelines, and other sources for information pertinent to the CMS publicly reported nursing home quality measures. Final draft working team document with abstracts. Denver.
- Fry AAM, Shay DK, Holman RC, et al. (2005). Trends in hospitalizations for pneumonia among persons aged 65 and older in the United States, 1988–2000. JAMA, 294(21), 2712–2719.
- Furman CD, Rayner AV, Tobin EP. (2004). Pneumonia in older residents of long-term care facilities. Am Fam Physician, 70(8), 1495–1500.
- Gage B, Morley M, Spain P, et al. (2009, February). Examining post acute care relationships in an integrated hospital system. Waltham, MA: RTI International. Retrieved from <http://aspe.hhs.gov/health/reports/09/pacihs/report.pdf>
- Health Care Financing Review. Statistical supplement no. 293. (2007). Baltimore, MD: Centers for Medicare and Medicaid Services.
- Heron M, Hoyert DL, Murphy SL, et al. (2009, April). Deaths: Final data for 2006. National Vital Statistics Report, 57(14). Retrieved from [http://www.cdc.gov/nchs/data/nvsr/nvsr57/nvsr57\\_14.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr57/nvsr57_14.pdf)
- Hung JW, et al. (2005). Incidence and risk factors of medical complications during inpatient stroke rehabilitation. Chang Gung Medical Journal, 28(1).
- Medicare Payment Advisory Commission (MedPAC). (2011a, March). Inpatient rehabilitation facility services. In Report to the Congress: Medicare payment policy (pp. 203–227). Washington, DC. Retrieved from [http://medpac.gov/documents/Mar11\\_EntireReport.pdf](http://medpac.gov/documents/Mar11_EntireReport.pdf)
- Medicare Payment Advisory Commission (MedPAC). (2011b, March). Long-term care hospital services. In Report to the Congress: Medicare payment policy (pp. 231–256). Washington, DC. Retrieved from [http://medpac.gov/documents/Mar11\\_EntireReport.pdf](http://medpac.gov/documents/Mar11_EntireReport.pdf)
- U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (n.d.). Healthy People 2010 archive. Retrieved from <http://www.healthypeople.gov/2010/>
- U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (2011, June). Healthy People 2020: Immunization and infectious diseases. Retrieved from <http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=23>
- 1c.5. If a PRO-PM (e.g. HRQoL/functional status, symptom/burden, experience with care, health-related behaviors), provide evidence that the target population values the measured PRO and finds it meaningful. (Describe how and from whom their input was obtained.)**

## 2. Reliability and Validity—Scientific Acceptability of Measure Properties

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. **Measures must be judged to meet the subcriteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.**

**2a.1. Specifications** The measure is well defined and precisely specified so it can be implemented consistently within and across organizations and allows for comparability. eMeasures should be specified in the Health Quality Measures Format (HQMF) and the Quality Data Model (QDM).

**De.5. Subject/Topic Area** (check all the areas that apply):

**De.6. Non-Condition Specific** (check all the areas that apply):

Primary Prevention

**S.1. Measure-specific Web Page** (Provide a URL link to a web page specific for this measure that contains current detailed specifications including code lists, risk model details, and supplemental materials. Do not enter a URL linking to a home page or to general information.)

See Release Notes.

**S.2a. If this is an eMeasure**, HQMF specifications must be attached. Attach the zipped output from the eMeasure authoring tool (MAT) - if the MAT was not used, contact staff. (Use the specification fields in this online form for the plain-language description of the specifications)

This is not an eMeasure Attachment:

**S.2b. Data Dictionary, Code Table, or Value Sets** (and risk model codes and coefficients when applicable) must be attached. (Excel or csv file in the suggested format preferred - if not, contact staff)

No data dictionary Attachment:

**S.3. For endorsement maintenance**, please briefly describe any changes to the measure specifications since last endorsement date and explain the reasons.

**S.4. Numerator Statement** (Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome)

IF an OUTCOME MEASURE, state the outcome being measured. Calculation of the risk-adjusted outcome should be described in the calculation algorithm.

The following numerator components will be computed and reported separately: (1) up-to-date\*\* vaccine status; (2) ineligible to receive vaccine due to medical contraindications; or (3) offered and declined vaccine. Measure numerator specifications for the three provider type assessment tools are listed below:

MDS 3.0 assessment: Residents are counted if they are short-stay, defined as residents whose length of stay is less than or equal to 100 days. Residents aged 5 years and older are counted if they meet any of the following criteria on the most recent MDS 3.0 assessment, which may be an OBRA assessment (A0310A=01,02,03,04,05,06), PPS assessment (A0310B = 01, 02, 03, 04, 05, 06), or discharge assessment (A0310F = 10, 11), during the 12-month reporting period. The following numerator components will be computed and reported separately:

1. Up-to-date\*\* vaccine status (O0300A=1)
2. Ineligible due to medical contraindications (O0300B=1)
3. Offered and declined vaccine (O0300B=2)

LTCH CARE Data Set\*: Patients aged 5 years and older are counted if they meet any of the following criteria on the most recent LTCH CARE Data Set assessment during the 12-month reporting period. The following numerator components will be computed and reported separately:

1. Up-to-date\*\* vaccine status
2. Ineligible due to medical contraindications
3. Offered and declined vaccine



#0682 Percent of Residents or Patients Assessed and Appropriately Given the Pneumococcal Vaccine (Short-Stay), Last Updated: Aug 24, 2016

IRF-PAI assessment: Patients aged 5 years and older are counted if they meet any of the following criteria on the IRF-PAI assessment during the 12-month reporting period. The following numerator components will be computed and reported separately:

1. Up-to-date\*\* vaccine status
2. Ineligible due to medical contraindications
3. Offered and declined vaccine

\*Note that the items have not been added to the LTCH CARE Data Set or IRF-PAI and hence, the data elements have not yet been assigned item numbers for these two assessment tools. When CMS implements this measure for the LTCH and IRF settings, the data elements will be assigned item numbers to match the MDS.

\*\*"Up-to-date" vaccination status is defined as a resident or patient who has been vaccinated in accordance with the current CDC vaccination guidelines for pneumococcal disease for his/her age and health status. The current CDC vaccination guidelines for adults and children are available at <http://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/pneumo.html>.

**S.5. Time Period for Data** *(What is the time period in which data will be aggregated for the measure, e.g., 12 mo, 3 years, look back to August for flu vaccination? Note if there are different time periods for the numerator and denominator.)*

This time window is the selected 12-month reporting period.

**S.6. Numerator Details** *(All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)*  
IF an OUTCOME MEASURE, describe how the observed outcome is identified/counted. Calculation of the risk-adjusted outcome should be described in the calculation algorithm.

Specifications for the three provider type assessment tools are listed below:

MDS 3.0: Residents are counted if they are short-stay, defined as residents whose length of stay is less than or equal to 100 days. Short-stay residents aged 5 years and older are counted if they meet any of the following criteria on the most recent MDS 3.0 assessment, an OBRA assessment(A0310A= 01,02,03,04,05,06), PPS assessment (A0310B= 01,02,03,04,05,06), or discharge assessment(A0310F =10,11) during the 12-month reporting period: (1) have an up-to-date\*\* pneumococcal vaccine status (item O0300A= 1); or (2) were offered and declined the vaccine (item O0300B= 2); or (3) were ineligible due to medical contraindication(s) (i.e., anaphylactic hypersensitivity to components of the vaccine; bone marrow transplant within the past 12 months; or receiving a course of chemotherapy within the past two weeks) (item O0300B=1).

LTCH CARE Data Set\*: Patients aged 5 years and older are counted if they meet any of the following criteria on the LTCH CARE Data Set assessment during the 12-month reporting period: (1) have an up-to-date pneumococcal vaccine status\*\*; or (2) were offered and declined the vaccine; or (3) were ineligible due to medical contraindication(s) (i.e., anaphylactic hypersensitivity to components of the vaccine; bone marrow transplant within the past 12 months; or receiving a course of chemotherapy within the past two weeks).

IRF-PAI\*: Patients aged 5 years and older are counted if they meet any of the following criteria on the most recent IRF-PAI assessment during the 12-month reporting period: (1) have an up-to-date pneumococcal vaccine status\*\* or (2) were offered and declined the vaccine; or (3) were ineligible due to medical contraindication(s) (i.e., anaphylactic hypersensitivity to components of the vaccine; bone marrow transplant within the past 12 months; or receiving a course of chemotherapy within the past two weeks). Note: The IRF-PAI data are submitted for Medicare patients only.

\*Note that the components of the LTCH CARE Data Set and IRF-PAI have not yet been assigned item numbers but will be assigned item numbers to match the MDS 3.0.

\*\*"Up-to-date" vaccination status is defined as a resident or patient who has been vaccinated in accordance with the current CDC vaccination guidelines for pneumococcal disease for his/her age and health status. The current CDC vaccination guidelines for adults and children are available at <http://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/pneumo.html>.

**S.7. Denominator Statement** *(Brief, narrative description of the target population being measured)*

The denominator consists of all residents or patients aged 5 years and older in the pneumococcal vaccination sample (defined in Denominator Details section) with an assessment within the 12-month period. Specifications for the three provider type assessment tools are listed below:

MDS 3.0: Short-stay residents aged 5 years and older in the pneumococcal vaccination sample with an MDS 3.0 assessment (which may be an OBRA, PPS, or discharge assessment) within the 12-month period.

LTCH CARE Data Set: Patients aged 5 years and older in the pneumococcal vaccination sample with a LTCH CARE Data Set assessment (which may be an admission or discharge assessment) within the 12-month period.

IRF-PAI: Patients aged 5 years and older in the pneumococcal vaccination sample with an IRF-PAI assessment (which includes both admission and discharge assessment data) within the 12-month period. Note: The IRF-PAI data are submitted for Medicare patients only.

**S.8. Target Population Category** *(Check all the populations for which the measure is specified and tested if any):*  
Elderly

**S.9. Denominator Details** *(All information required to identify and calculate the target population/denominator such as definitions, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)*

All residents or patients aged 5 years and older who have an assessment during the 12-month period. Specifications for the three provider type assessment tools are listed below:

MDS 3.0 Short-stay residents are defined as residents whose length of stay is less than or equal to 100 days. The short-stay pneumococcal vaccination sample includes residents aged 5 years and older with a target assessment who have (1) a PPS MDS 3.0 assessment (item A0310B= 01,02,03,04,05,06) with assessment reference date (item A2300) during the 12-month \*target period; or (2) an OBRA assessment (A0310A=01,02,03,04,05,06) or (3) a discharge MDS 3.0 assessment (item A0310F = 10,11) with discharge date (item A2000) during the 12-month target period.

\*According to the MDS 3.0 manual, the target period refers to the span of time that defines the quality measure's reporting period (e.g. a calendar quarter). In any target period, there will likely be multiple assessments.

LTCH CARE Data Set: The pneumococcal vaccination sample includes patients aged 5 years and older who have a LTCH CARE Data Set assessment record with discharge date (A0270) during the 12-month target period.

IRF-PAI: The pneumococcal vaccination sample includes patients aged 5 years and older who have a discharge assessment with discharge date (item 40) during the 12-month target period.

**S.10. Denominator Exclusions** *(Brief narrative description of exclusions from the target population)*

Residents or patients younger than 5 years old will be excluded from the denominator. Facilities with denominator counts of less than 20 in the sample will be excluded from public reporting owing to small sample size.

**S.11. Denominator Exclusion Details** *(All information required to identify and calculate exclusions from the denominator such as definitions, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)*

Residents or patients younger than 5 years old will be excluded from the denominator.

**S.12. Stratification Details/Variables** *(All information required to stratify the measure results including the stratification variables, definitions, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format with at S.2b)*

Specifications for the three provider type assessment tools are listed below:

MDS 3.0: Based on the descriptions of the long-stay and short-stay populations noted above, there are inherent differences in

facilities' responsibility for assessing and/or providing vaccines for these distinct populations. For the short-stay population, facilities have less time to assess and/or provide the vaccine than for the long-stay population. As a result, nursing facilities' vaccination rates for post-acute care populations should not be compared with rates for long-term care populations. Separating them recognizes these differences in vaccination rates.

LTCH CARE Data Set: Patients in LTCHs have an average length of stay of 26.2 days. All patients with assessments in the 12-month evaluation period will be included.

IRF-PAI: Patients in IRFs have an average length of stay of 13.1 days. All patients with assessments in the 12-month evaluation period will be included.

**S.13. Risk Adjustment Type** (Select type. Provide specifications for risk stratification in S.12 and for statistical model in S.14-15)

No risk adjustment or risk stratification

If other:

**S.14. Identify the statistical risk model method and variables** (Name the statistical method - e.g., logistic regression and list all the risk factor variables. Note - risk model development and testing should be addressed with measure testing under Scientific Acceptability)

This is not applicable.

**S.15. Detailed risk model specifications** (must be in attached data dictionary/code list Excel or csv file. Also indicate if available at measure-specific URL identified in S.1.)

Note: Risk model details (including coefficients, equations, codes with descriptors, definitions), should be provided on a separate worksheet in the suggested format in the Excel or csv file with data dictionary/code lists at S.2b.

Provided in response box S.15a

**S.15a. Detailed risk model specifications** (if not provided in excel or csv file at S.2b)

Available at measure-specific web page URL identified in S.1

**S.16. Type of score:**

Rate/proportion

If other:

**S.17. Interpretation of Score** (Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score)

Better quality = Higher score

**S.18. Calculation Algorithm/Measure Logic** (Describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; aggregating data; risk adjustment; etc.)

For each facility, the number of residents or patients meeting the numerator criteria and the number meeting the denominator criteria are counted.

The following numerator components will be computed and reported separately: (1) up-to-date\*\* vaccination status; (2) ineligible due to medical contraindications; and (3) offered and declined.

Specifications for the three provider type assessment tools are listed below:

MDS 3.0: the number of short-stay residents meeting the numerator criteria and the number of residents meeting the denominator criteria are counted. The following numerator components will be computed and reported separately:

1. Up-to-date\*\* vaccine status (O0300A=1)
2. Ineligible due to medical contraindications (O0300B=1)
3. Offered and declined (O0300B=2)

LTCH CARE Data Set\*: The number of patients meeting the numerator criteria and the number of patients meeting the denominator

criteria are counted. The following numerator components will be computed and reported separately:

1. Up-to-date\*\* vaccine status
2. Ineligible due to medical contraindications
3. Offered and declined

IRF-PAI\*: The number of patients meeting the numerator criteria and the number of patients meeting the denominator criteria are counted. The following numerator components will be computed and reported separately:

1. Up-to-date\*\* vaccine status
2. Ineligible due to medical contraindications
3. Offered and declined

\*\*Note that the components of the LTCH CARE Data Set and IRF-PAI have not yet been assigned item numbers but will be assigned item numbers to match the MDS.

\*\*"Up-to-date" vaccination status is defined as a resident or patient who has been vaccinated in accordance with the current CDC vaccination guidelines for pneumococcal disease for his/her age and health status. The current CDC vaccination guidelines for adults and children are available at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5934a3.htm>.

**S.19. Calculation Algorithm/Measure Logic Diagram URL or Attachment** (You also may provide a diagram of the Calculation Algorithm/Measure Logic described above at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)  
URL

**S.20. Sampling** (If measure is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.)

IF a PRO-PM, identify whether (and how) proxy responses are allowed.

This not applicable

**S.21. Survey/Patient-reported data** (If measure is based on a survey, provide instructions for conducting the survey and guidance on minimum response rate.)

IF a PRO-PM, specify calculation of response rates to be reported with performance measure results.

**S.22. Missing data** (specify how missing data are handled, e.g., imputation, delete case.)

Required for Composites and PRO-PMs.

**S.23. Data Source** (Check ONLY the sources for which the measure is SPECIFIED AND TESTED).

If other, please describe in S.24.

Electronic Health Records

**S.24. Data Source or Collection Instrument** (Identify the specific data source/data collection instrument e.g. name of database, clinical registry, collection instrument, etc.)

IF a PRO-PM, identify the specific PROM(s); and standard methods, modes, and languages of administration.

The data source or collection instruments are Nursing Home MDS 3.0, the IRF-PAI , and the LTCH CARE Data Set.

**S.25. Data Source or Collection Instrument** (available at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)

URL

**S.26. Level of Analysis** (Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED)

Facility, Other

**S.27. Care Setting** (Check ONLY the settings for which the measure is SPECIFIED AND TESTED)

Inpatient/Hospital, Post-Acute Care

If other:
<b>S.28. COMPOSITE Performance Measure</b> - Additional Specifications <i>(Use this section as needed for aggregation and weighting rules, or calculation of individual performance measures if not individually endorsed.)</i>
<b>2a. Reliability – See attached Measure Testing Submission Form</b> <b>2b. Validity – See attached Measure Testing Submission Form</b> <a href="#">0682_MeasureTesting_MS5.0_Data.zip</a>

<b>3. Feasibility</b>
Extent to which the specifications including measure logic, require data that are readily available or could be captured without undue burden and can be implemented for performance measurement.
<b>3a. Byproduct of Care Processes</b> For clinical measures, the required data elements are routinely generated and used during care delivery (e.g., blood pressure, lab test, diagnosis, medication order).  <b>3a.1. Data Elements Generated as Byproduct of Care Processes.</b> <a href="#">generated by and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition</a> If other:
<b>3b. Electronic Sources</b> The required data elements are available in electronic health records or other electronic sources. If the required data are not in electronic health records or existing electronic sources, a credible, near-term path to electronic collection is specified.  <b>3b.1. To what extent are the specified data elements available electronically in defined fields?</b> <i>(i.e., data elements that are needed to compute the performance measure score are in defined, computer-readable fields)</i> <a href="#">ALL data elements are in defined fields in a combination of electronic sources</a>  <b>3b.2. If ALL the data elements needed to compute the performance measure score are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources.</b>  <b>3b.3. If this is an eMeasure, provide a summary of the feasibility assessment in an attached file or make available at a measure-specific URL.</b> <b>Attachment:</b>
<b>3c. Data Collection Strategy</b> Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, costs associated with fees/licensing of proprietary measures) can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use). For eMeasures, a feasibility assessment addresses the data elements and measure logic and demonstrates the eMeasure can be implemented or feasibility concerns can be adequately addressed.  <b>3c.1. Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.</b> <b>IF a PRO-PM, consider implications for both individuals providing PROM data (patients, service recipients, respondents) and those whose performance is being measured.</b> <a href="#">For nursing homes, the data collection method is already in operational use and there are no issues with these areas. For IRFs, the data will be collected by adding an additional item to the IRF-PAI, an assessment instrument already in place. Additional time and resources will be needed for implementing the LTCH CARE Data Set; however, given its similarity to the MDS 3.0, we do not anticipate any major challenges with implementation.</a>  <a href="#">Data are collected as part of an existing process of care with no additional cost for nursing homes, inpatient rehabilitation facilities</a>

and long-term care hospitals.

**3c.2. Describe any fees, licensing, or other requirements to use any aspect of the measure as specified (e.g., value/code set, risk model, programming code, algorithm).**

## 4. Usability and Use

Extent to which potential audiences (e.g., consumers, purchasers, providers, policy makers) are using or could use performance results for both accountability and performance improvement to achieve the goal of high-quality, efficient healthcare for individuals or populations.

### 4a. Accountability and Transparency

Performance results are used in at least one accountability application within three years after initial endorsement and are publicly reported within six years after initial endorsement (or the data on performance results are available). If not in use at the time of initial endorsement, then a credible plan for implementation within the specified timeframes is provided.

#### 4.1. Current and Planned Use

*NQF-endorsed measures are expected to be used in at least one accountability application within 3 years and publicly reported within 6 years of initial endorsement in addition to performance improvement.*

Planned	Current Use (for current use provide URL)
Public Reporting	
Quality Improvement (Internal to the specific organization)	

#### 4a.1. For each CURRENT use, checked above, provide:

- Name of program and sponsor
- Purpose
- Geographic area and number and percentage of accountable entities and patients included

**4a.2. If not currently publicly reported OR used in at least one other accountability application (e.g., payment program, certification, licensing) what are the reasons?** (e.g., Do policies or actions of the developer/steward or accountable entities restrict access to performance results or impede implementation?)

**4a.3. If not currently publicly reported OR used in at least one other accountability application, provide a credible plan for implementation within the expected timeframes -- any accountability application within 3 years and publicly reported within 6 years of initial endorsement.** (Credible plan includes the specific program, purpose, intended audience, and timeline for implementing the measure within the specified timeframes. A plan for accountability applications addresses mechanisms for data aggregation and reporting.)

### 4b. Improvement

Progress toward achieving the goal of high-quality, efficient healthcare for individuals or populations is demonstrated. If not in use for performance improvement at the time of initial endorsement, then a credible rationale describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

#### 4b.1. Progress on Improvement. (Not required for initial endorsement unless available.)

Performance results on this measure (current and over time) should be provided in 1b.2 and 1b.4. Discuss:

- Progress (trends in performance results, number and percentage of people receiving high-quality healthcare)



- **Geographic area and number and percentage of accountable entities and patients included**

**4b.2. If no improvement was demonstrated, what are the reasons? If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.**

**4c. Unintended Consequences**

The benefits of the performance measure in facilitating progress toward achieving high-quality, efficient healthcare for individuals or populations outweigh evidence of unintended negative consequences to individuals or populations (if such evidence exists).

**4c.1. Were any unintended negative consequences to individuals or populations identified during testing; OR has evidence of unintended negative consequences to individuals or populations been reported since implementation? If so, identify the negative unintended consequences and describe how benefits outweigh them or actions taken to mitigate them.**

The analysis previously reported indicates that the data elements for the current measure have some inaccuracies that result in inconsistencies on identifying a particular case, or in the inclusion or exclusion of a given case. However, it is uncertain whether these data accuracy problems are more prevalent in the current post-acute care measure than the chronic care measure, and thus whether the reliability is stronger for the chronic care measure than for the acute-care measure. In its empirical review of the quality measures, the University of Colorado found that length of stay has an impact on the rates for the vaccination measures (Brega et al., 2007). Residents with short stays are less likely to be vaccinated than residents with longer stays, which can be problematic for those facilities serving primarily a short-stay population.

The average length of stay for patients in LTCHs in 2009 was 26.4 days (MedPAC, 2011, ch 10). In IRFs, the average length of stay in 2009 was 13.1 days (MedPAC, 2011, ch 9 and ch 10). Because the average length of stay in each of these facilities is well under the 100-day maximum for short-stay nursing home residents, it is reasonable to utilize a short-stay measure to evaluate their performance.

Abt Associates' DAVE 2 Project found that 13% of the time the current pneumococcal immunization items (based on MDS 2.0) were assessed differently by different assessors (Abt Associates, 2007). Part of that may be because definitions for the currently reported measure are misunderstood, or the assessors leave items blank that should have been completed. The changes made to the MDS 3.0 regarding the vaccine measures were minor, however; these changes improved the clarity of the items. MDS 3.0 contains most of the necessary items to parallel the MDS 2.0 measure that is currently reported. More detailed analysis of QI/QM discrepancies indicates that facilities under-code QI/QMs much more often than they over-code them (Saliba and Buchanan, 2008).

Also, because the items for the pneumococcal vaccine quality measure in the LTCH CARE Data Set and IRF-PAI are new, it is possible that there will be challenges with implementation, interpretation, reliability, or validity. However, given the similarities between the populations across all three settings in which the tools are used, we do not anticipate that many of these issues will arise.

Abt Associates, Inc.; Stepwise Systems, Inc.; Qualidigm. (2007). Data Assessment and Verification (DAVE 2) project. MDS two-stage discrepancy findings, April-December 2006. Cambridge, MA: Abt Associates, Inc.

Brega A, Hittle D, Goodrich G, et al. (2007). Empirical review of publicly reported nursing home quality measures. Denver, CO, and Cambridge, MA:

University of Colorado Anschutz Medical Campus, School of Medicine, Division of Health Care Policy and Research; Abt Associates, Inc.

Medicare Payment Advisory Commission (MedPAC). (2011a, March). Inpatient rehabilitation facility services. In Report to the Congress: Medicare payment policy (pp. 203–227). Washington, DC. Retrieved from [http://medpac.gov/documents/Mar11\\_EntireReport.pdf](http://medpac.gov/documents/Mar11_EntireReport.pdf)

Medicare Payment Advisory Commission (MedPAC). (2011b, March). Long-term care hospital services. In Report to the Congress: Medicare payment policy (pp. 231–256). Washington, DC. Retrieved from [http://medpac.gov/documents/Mar11\\_EntireReport.pdf](http://medpac.gov/documents/Mar11_EntireReport.pdf)

Saliba D, Buchanan J. (2008, April). Development and validation of a revised nursing home assessment tool: MDS 3.0. Contract No. 500-00-0027/Task Order #2. Santa Monica, CA: Rand Corporation. Available from [https://www.cms.gov/NursingHomeQualityInits/25\\_NHQIMDS30.asp](https://www.cms.gov/NursingHomeQualityInits/25_NHQIMDS30.asp)

## 5. Comparison to Related or Competing Measures

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure.

### 5. Relation to Other NQF-endorsed Measures

Are there related measures (conceptually, either same measure focus or target population) or competing measures (conceptually both the same measure focus and same target population)? If yes, list the NQF # and title of all related and/or competing measures.

#### 5.1a. List of related or competing measures (selected from NQF-endorsed measures)

#### 5.1b. If related or competing measures are not NQF endorsed please indicate measure title and steward.

### 5a. Harmonization

The measure specifications are harmonized with related measures;

**OR**

The differences in specifications are justified

#### 5a.1. If this measure conceptually addresses EITHER the same measure focus OR the same target population as NQF-endorsed measure(s):

Are the measure specifications completely harmonized?

Yes

#### 5a.2. If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.

### 5b. Competing Measures

The measure is superior to competing measures (e.g., is a more valid or efficient way to measure);

**OR**

Multiple measures are justified.

#### 5b.1. If this measure conceptually addresses both the same measure focus and the same target population as NQF-endorsed measure(s):

Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible.)

The current measure for Nursing Homes is expanded to additional post-acute care settings (LTCHs and IRFs) and associated addition in the data source (MDS 3.0 will remain the data source of nursing homes, IRF-PAI will be data source for IRFs, and the LTCH CARE Data Set will be data source for LTCHs). The proposed measure is harmonized to the NQF Voluntary Consensus Standards for Influenza and Pneumococcal Immunizations.

No current measure exists for LTCHs and IRFs, so this measure adds distinctive value.

## Appendix

**A.1 Supplemental materials may be provided in an appendix.** All supplemental materials (such as data collection instrument or methodology reports) should be organized in one file with a table of contents or bookmarks. If material pertains to a specific

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submission form number, that should be indicated. Requested information should be provided in the submission form and required attachments. There is no guarantee that supplemental materials will be reviewed.

**Attachment:**

### Contact Information

**Co.1 Measure Steward (Intellectual Property Owner):** Centers for Medicare & Medicaid Services  
**Co.2 Point of Contact:** Helen, Dollar-Maples, [Helen.Dollar-Maples@cms.hhs.gov](mailto:Helen.Dollar-Maples@cms.hhs.gov), 410-786-7214-  
**Co.3 Measure Developer if different from Measure Steward:** Centers for Medicare & Medicaid Services  
**Co.4 Point of Contact:** Cheryl, Wiseman, [Cheryl.Wiseman2@CMS.hhs.gov](mailto:Cheryl.Wiseman2@CMS.hhs.gov), 410-768-6738-

### Additional Information

**Ad.1 Workgroup/Expert Panel involved in measure development**

**Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.**

See attached Table 2: Nursing Home Quality Measures Technical Expert Panel (January 2009), showing a list of workgroup or panel member names and organizations. This technical expert panel (TEP) on nursing homes met during 2 days in January 2009 to review an environmental scan of the current quality measures and to make recommendations regarding the transition from MDS 2.0 to MDS 3.0.

See attached Table 3: Inpatient Rehabilitation Facilities and Long-Term Care Hospitals Quality Measures Technical Expert Panel (July 2011) for list of workgroup or panel member names and organizations. A TEP on LTCHs met on July 7, 2011 to review proposed LTCH quality measures and provide feedback on the specifications, as well as to provide input on the feasibility of the measures, any unintended consequences, and suggestions for improving the measures. A TEP on IRF met on July 6, 2011 to review proposed IRF quality measures and provide feedback on the specifications, as well as to provide input on the feasibility of the measures, any unintended consequences, and suggestions for improving the measures.

**Measure Developer/Steward Updates and Ongoing Maintenance**

**Ad.2 Year the measure was first released:** 2010

**Ad.3 Month and Year of most recent revision:** 12, 2009

**Ad.4 What is your frequency for review/update of this measure?** Every 3 years

**Ad.5 When is the next scheduled review/update for this measure?**

**Ad.6 Copyright statement:**

**Ad.7 Disclaimers:**

**Ad.8 Additional Information/Comments:** Please see attachment CMS Memo to NQF 682.doc