NATIONAL QUALITY FORUM

National Voluntary Consensus Standards for Nursing Homes 2010

Measure Number/Title: NH-016-10: Percent of Residents Who Were Assessed and Given the Pneumococcal Vaccine (Short Stay)

Description: This measure is based on data from MDS 3.0 assessments of nursing facility residents. The measure reports the percentage of short-stay nursing facility residents who were assessed and given the Pneumococcal Vaccine (PPV) as reported on the target MDS 3.0 assessment (which may be an OBRA admission, 5-day PPS, 14-day PPS, 30-day PPS, 60-day PPS, 90-day PPS or discharge assessment) during the 12-month reporting period. The proposed measure is harmonized with the NQF's quality measure on Pneumococcal Immunizations. Short-stay residents are those residents who are discharged within the first 100 days of the stay. The measure is restricted to the population that has short-term needs and does not include the population of residents with stays longer than 100 days. A separate quality measure has been submitted for the long-stay population.

Numerator Statement: The numerator will be harmonized with NQF-endorsed measures. Residents are counted if they are short-stay residents defined as residents whose length of stay less than or equal to 100 days. Residents are counted if they meet any of the following criteria on the most recent MDS 3.0 assessment which may be a an OBRA Admission (30310.A=01), 5-day PPS (30310.B = 01, 02, 03, 04, 05, 06, 07) or discharge assessment during (A0310.F = 10, 11) during the 12 month reporting period. The following numerator components will be computed and reported separately:

1. Up-to-date vaccine status (O0300.A=1)
2. Ineligible due to medical contraindications (O0300.B=1)
3. Offered and declined vaccine (O0300.B=2)

Denominator Statement: The denominator consists of all short-stay residents in the pneumococcal vaccination sample with a MDS 3.0 assessment (which may be an OBRA admission, 5-day PPS, 14-day PPS, 30-day PPS, 60-day PPS, 90-day PPS or discharge assessment) within the 12-month period.

Level of Analysis: Facility/Agency

Data Source: Electronic clinical data

Measure developer: Research Triangle Institute International

Type of Endorsement (full or time-limited): Full

Attachments: Pneumococcal Vaccine Short Stay Table

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** NH-016-10 **NQF Project:** Nursing Homes 2010

MEASURE DESCRIPTIVE INFORMATION

De.1 Measure Title: Percent of Residents Who Were Assessed and Given the Pneumococcal Vaccine (Short Stay)

De.2 Brief description of measure*:* This measure is based on data from MDS 3.0 assessments of nursing facility residents. The measure reports the percentage of short-stay nursing facility residents who were assessed and given the Pneumococcal Vaccine (PPV) as reported on the target MDS 3.0 assessment (which may be an OBRA admission, 5-day PPS, 14-day PPS, 30-day PPS, 60-day PPS, 90-day PPS or discharge assessment) during the 12-month reporting period. The proposed measure is harmonized with the NQF's quality measure on Pneumococcal Immunizations.(1)

Short-stay residents are those residents who are discharged within the first 100 days of the stay. The measure is restricted to the population that has short-term needs and does not include the population of residents with stays longer than 100 days. A separate quality measure has been submitted for the long-stay population.

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.

The NQF standardized specifications differ from the currently reported measure in a several ways. It is important to note that, for some residents, a single vaccination is sufficient and the vaccination would be considered up to date; for others (those who are immunocompromised or older than 65 but the first vaccine was administered more than 5 years ago when the resident was younger than 65 years of age), 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 ever having received the vaccine, is of critical importance.

1. National Quality Forum. National voluntary consensus standards for influenza and pneumococcal immunizations. December 2008. Available from http://www.qualityforum.org/Publications/2008/12/National_Voluntary_Consensus_Standards_for_Influenza_and_Pneumococcal_Immunizations.aspx.

2. ACIP. Prevention of pneumococcal disease: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR. Recomm Rep. 1997;46(RR-8):1-24.
1.1-2 **Type of Measure:** Process De.3 **If included in a composite or paired with another measure, please identify composite or paired measure**
De.4 **National Priority Partners Priority Area:** Population health De.5 **IOM Quality Domain**: Patient-centered De.6 **Consumer Care Need:**

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	**NQF Staff**
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** A.3 **Measure Steward Agreement:** Government entity and in the public domain - no agreement necessary A.4 **Measure Steward Agreement attached:**	**A** **Y**☐ **N**☐
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	**B** **Y**☐ **N**☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement	**C** **Y**☐ **N**☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** No, testing will be completed within 24 months D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** **Y**☐ **N**☐
(for NQF staff use**)** **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** **Y**☐ **N**☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance.	Eval Rat

Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria. (evaluation criteria) **1a. High Impact**	ing
(for NQF staff use) Specific NPP goal:	
1a.1 Demonstrated High Impact Aspect of Healthcare: Affects large numbers, Severity of illness, Frequently performed procedure, Leading cause of morbidity/mortality, Patient/societal consequences of poor quality **1a.2** **1a.3 Summary of Evidence of High Impact:** According to CDC, pneumococcal disease kills more people in the United States each year than all other vaccine-preventable diseases combined.(1) Older people and persons with chronic health conditions are at high risk for pneumococcal disease. However, estimated pneumococcal vaccination coverage remains below 50% in recommended high risk groups.(2) Vaccinations of nursing facility residents can prevent or lower the risk of residents becoming seriously ill. Healthy People 2010 includes Objective 14-29f, for institutionalized adults, of a 90% vaccination rate in 2010.(3) Hospitalization rates for pneumonia-related stays for the elderly population have been increasing over the past 15 years, and among those 85 and older at least 1 in 20 elderly persons were hospitalized each year because of pneumonia.(4) 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 for the same year was 670,000.(5) CMS currently uses MDS 2.0 data to publicly report a pneumococcal vaccination quality measure (QM) for nursing facility residents. The first quarter 2007 statewide averages for the post-acute care population ranged from 48.8% to 91.8%, with a 73.7% national average.(6) In an analysis of quality measures using MDS data from the first quarter of 2006 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.(7) See attached Table 1: Measure Variability Across Facilities . 1. Brega A, Goodrich G, Nuccio E, Hittle D. 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. **1a.4 Citations for Evidence of High Impact:** 1. CDC. Pneumococcal polysaccharide vaccine. What you need to know. 1997. CDC, Atlanta, GA. 2. National Health Interview Survey. Pneumococcal: self-reported pneumococcal vaccination coverage trends 1989-2006. CDC. 2006. Available from http://www.cdc.gov/flu/professionals/vaccination/#coverage. 3. U.S. Department of Health and Human Services (HHS). Healthy people 2010. 2000. Available from http://www.health.gov/healthypeople. 4. Fry AAM, Shay DK, Holman RC, et al. Trends in hospitalizations for pneumonia among persons aged 65 and older in the United States, 1988-2000. JAMA. 2005; 294(21):2712-19. 5. Health Care Financing Review. Statistical Supplement 293. Baltimore, MD: Centers for Medicare and Medicaid Services. 2007. 6. 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: Colorado Foundation for Medical Care, 2007. 7. Brega A, Goodrich G, Nuccio E, Hittle D. 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.	**1a** **C** ☐ **P** ☐ **M** ☐ **N** ☐

Comment [KP1]: 1a. The measure focus addresses:
•a specific national health goal/priority identified by NQF's National Priorities Partners; OR
•a demonstrated high impact aspect of healthcare (e.g., affects large numbers, leading cause of morbidity/mortality, high resource use (current and/or future), severity of illness, and patient/societal consequences of poor quality).

1b. Opportunity for Improvement

1b.1 Benefits (improvements in quality) envisioned by use of this measure: This measure is intended to encourage nursing facilities to focus on this important aspect of clinical care by assessing residents on the status of their pneumococcal vaccine immunization and to provide immunization as appropriate.

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:
In an analysis of quality measures using MDS 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.(1) See attached Table 1: Measure Variability Across Facilities.

1b.3 Citations for data on performance gap:
1. Brega A, Goodrich G, Nuccio E, Hittle D. 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.

1b.4 Summary of Data on disparities by population group:
Racial segregation between nursing homes has been shown to be a major factor in racial disparities in the nursing home 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.(1) A 2002 survey of a stratified sample of 39 nursing homes and 181 residential care/assisted living facilities in four states had similar findings.(2) 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.(3) Minority groups in general and African Americans in particular have also had more limited access to nursing home care than whites.(4)
Pneumococcal vaccination rates are lower for black nursing home residents than for white residents—31% of black residents compared with 24% of white residents aged 65 years or older had never received pneumococcal vaccination. Blacks also had higher odds of unknown vaccination status than whites in Medicaid-only facilities and lower odds of unknown status in government-owned facilities. The racial difference in pneumococcal vaccination exists predominantly in certain facility types.(5)

1b.5 Citations for data on Disparities:
1. Smith D, Feng Z, Fennell M, Ainn J, Mor V. Separate and unequal: racial segregation and disparities in quality across U.S. nursing homes. Health Aff (Millwood). 2007; 26(5):1448-558.

2. Howard D, Sloane P, Zimmerman S, Eckert J, Walsh J, Buie V, Taylor P, Koch G. Distribution of African Americans in residential care/assisted living and nursing homes: more evidence of racial disparity? Am J Public Health. 2002;92(8):1272-7.

3. Grabowski D. The admission of blacks to high-deficiency nursing homes. Med Care. 2004;42(5):456-64.

4. National Center for Health Statistics (NCHS). Health, United States, 1996–97, and injury chartbook. Hyattsville, MD: NCHS, 1997.

5 Marsteller J, Tiggle R, Remsburg R, Bardenheier B, Shefer A, Han B. Pneumococcal vaccination in nursing homes: does race make a difference? J Am Med Dir Assoc. 2008;9(9):641-7.

1b
C☐
P☐
M☐
N☐

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** In 2004, the seventh most common cause of death for persons aged 65 and older in the United States was pneumonia and influenza.(1) Death related to pneumonia affects the elderly at a higher rate, especially for those aged 85 and older.(2) Almost 60,000 deaths in 2004 were caused by influenza and pneumonia and more than 85% of those were for the elderly.(1) Frail elderly are especially at risk for contracting pneumonia as a complication of another infection or medical condition. In the same year, there were approximately 123,000 deaths with influenza and pneumonia mentioned on the death certificate as a secondary cause of death.(1)

1c
C☐
P☐
M☐
N☐

Rating: C=Completely; P=Partially; M=Minimally; N=Not at all; NA=Not applicable

Comment [KP2]: 1b. Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating considerable variation, or overall poor performance, in the quality of care across providers and/or population groups (disparities in care).

Comment [k3]: 1 Examples of data on opportunity for improvement include, but are not limited to: prior studies, epidemiologic data, measure data from pilot testing or implementation. If data are not available, the measure focus is systematically assessed (e.g., expert panel rating) and judged to be a quality problem.

Comment [k4]: 1c. The measure focus is:
•an outcome (e.g., morbidity, mortality, function, health-related quality of life) that is relevant to, or associated with, a national health goal/priority, the condition, population, and/or care being addressed;
OR
•if an intermediate outcome, process, structure, etc., there is **evidence** that supports the specific measure focus as follows:
oIntermediate outcome – evidence that the measured intermediate outcome (e.g., blood pressure, Hba1c) leads to improved health/avoidance of harm or cost/benefit.
oProcess – evidence that the measured clinical or administrative process leads to improved health/avoidance of harm and
if the measure focus is on one step in a multi-step care process, it measures the step that has the greatest effect on improving the specified desired outcome(s).
oStructure – evidence that the measured structure supports the consistent delivery of effective processes or access that lead to improved health/avoidance of harm or cost/benefit.
oPatient experience – evidence that an association exists between the measure of patient experience of health care and the outcomes, values and preferences of individuals/ the public.
oAccess – evidence that an association exists between access to a health service and the outcomes of, or experience with, care.
oEfficiency – demonstration of an association between the measured resource use and level of performance with respect to one or more of the other five IOM aims of quality.

Comment [k5]: 4 Clinical care processes typically include multiple steps: assess → identify problem/potential problem → choose/plan intervention (with patient input) → provide intervention → evaluate impact on health status. If the measure focus is one step in such a multi-step process, the step with the greatest effect on the desired outcome should be selected as the focus of measurement. For example, although assessment of immunization status and recommending immunization are necessary steps, they are not sufficient to achieve the desired impact on health status – patients must be vaccinated to achieve immunity. This does not preclude consideration of measures of preventive screening interventions where there is a strong link with desired outcomes (e.g., ... [1]

1c.2-3. Type of Evidence: Randomized controlled trial, Observational study

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
Immunization of nursing home residents against pneumococcal infections is an important mechanism for reducing serious illness and mortality in nursing facilities.

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom***):**
The body of evidence supporting this measure has not been rated.

1c.6 Method for rating evidence:

1c.7 Summary of Controversy/Contradictory Evidence: No contradictory evidence has been identified.

1c.8 Citations for Evidence (*other than guidelines***):** 1. Gorina Y, Kelly T, Lubitz J, et al. Trends in influenza and pneumonia among older persons in the United States. 2008. CDC, National Center for Health Statistics, Atlanta, GA.

2. Thompson WW, Shay DK, Weintraub E, et al. Mortality associated with the influenza and respiratory syncytial virus in the United States. JAMA. 2003;289:179-86.

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number***):**
"Pneumococcal vaccination also should be routinely provided for residents of nursing homes and other long-term-care facilities."

1c.10 Clinical Practice Guideline Citation: ACIP. Prevention of pneumococcal disease: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR. Recomm Rep. 1997;46(RR-8):1-24.
1c.11 National Guideline Clearinghouse or other URL: CDC. Recommended adult immunization schedule—United States, 2009. CDC. November 20, 2007 (revised January 9, 2009). [NGC Update Pending] NGC:007058. Available from: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5753a6.htm.

1c.12 Rating of strength of recommendation (*also provide narrative description of the rating and by whom***):**
The body of evidence supporting this recommendation has not been rated.

1c.13 Method for rating strength of recommendation (*If different from* USPSTF system*, also describe rating and how it relates to USPSTF)***:**

1c.14 Rationale for using this guideline over others:
This is not applicable.

TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report*? | **1**

Steering Committee: Was the threshold criterion, *Importance to Measure and Report***, met?** | **1** **Y**☐ **N**☐
Rationale:

2. 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. (evaluation criteria)	Eval Rating
2a. MEASURE SPECIFICATIONS	

Comment [k6]: 3 The strength of the body of evidence for the specific measure focus should be systematically assessed and rated (e.g., USPSTF grading system http://www.ahrq.gov/clinic/uspstf07/methods/benefit.htm). If the USPSTF grading system was not used, the grading system is explained including how it relates to the USPSTF grades or why it does not. However, evidence is not limited to quantitative studies and the best type of evidence depends upon the question being studied (e.g., randomized controlled trials appropriate for studying drug efficacy are not well suited for complex system changes). When qualitative studies are used, appropriate qualitative research criteria are used to judge the strength of the evidence.

Comment [k7]: USPSTF grading system **http://www.ahrq.gov/clinic/uspstf/grades.htm**: **A -** The USPSTF recommends the service. There is high certainty that the net benefit is substantial. **B -** The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial. **C -** The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is at least moderate certainty that the net benefit is small. Offer or provide this service only if other considerations support the offering or providing the service in an individual patient. **D -** The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits. **I -** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.

S.1 Do you have a web page where current detailed measure specifications can be obtained?
S.2 If yes, provide web page URL:

2a. Precisely Specified

2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome***):**
The numerator will be harmonized with NQF-endorsed measures. Residents are counted if they are short-stay residents defined as residents whose length of stay less than or equal to 100 days. Residents are counted if they meet any of the following criteria on the most recent MDS 3.0 assessment which may be a an OBRA Admission (30310.A=01), 5-day PPS (30310.B = 01, 02, 03, 04, 05, 06, 07) or discharge assessment during (A0310.F = 10, 11) during the 12 month reporting period. The following numerator components will be computed and reported separately:
1. Up-to-date vaccine status (O0300.A=1)
2. Ineligible due to medical contraindications (O0300.B=1)
3. Offered and declined vaccine (O0300.B=2)

2a.2 Numerator Time Window (*The time period in which cases are eligible for inclusion in the numerator***):**
This time window is the selected 12-month reporting period.

2a.3 Numerator Details (*All information required to collect/calculate the numerator, including all codes, logic, and definitions***):**
Residents are counted if they are short-stay residents, defined as residents whose length of stay is less than or equal to 100 days. Short-stay residents are counted if they meet any of the following criteria on the most recent MDS 3.0 assessment (which may be an OBRA admission (A0310.A=01), 5-day PPS (A0310.B=01, 02, 03, 04, 05, 06, 07), or discharge (A0310.F=10, 11) during the 12- month reporting period: (1) have and up-to-date PPV status (item 00300A=1); or (2) were offered and declined the vaccine (item 00300B- 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 00300B=1)

2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured***):**
The denominator consists of all short-stay residents in the pneumococcal vaccination sample with a MDS 3.0 assessment (which may be an OBRA admission, 5-day PPS, 14-day PPS, 30-day PPS, 60-day PPS, 90-day PPS or discharge assessment) within the 12-month period.

2a.5 Target population gender: Female, Male
2a.6 Target population age range: The population includes short-stay residents of all ages residing in the nursing facility.

2a.7 Denominator Time Window (*The time period in which cases are eligible for inclusion in the denominator***):**
This time window is the selected 12-month reporting period.

2a.8 Denominator Details (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions***):**
Short-stay residents are defined as residents whose length of stay is less than or equal to100 days. The short-stay pneumococcal vaccination sample includes residents who have (1) a Prospective Payment System (PPS) MDS 3.0 assessment (item A0310.B= 1,2,3,4,5,6,7) with assessment reference date (item A2300) during the 12-month target period; or (2) a discharge MDS 3.0 assessment (item A0310.F= 10,11) with discharge date (item A2000) during the 12-month target period AND the preceding MDS assessment is a PPS MDS 3.0 assessment (item A0310.B= 1,2,3,4, 5,6 7) with assessment reference date (item A2300) before the target period and the discharge date (item A2000) minus the assessment reference date (item A2300) is 45 days or less.

2a-specs
C☐
P☐
M☐
N☐

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population***):** There are no resident level exclusions. Only facilities with fewer than 20 residents are excluded from public reporting due to small sample size.

2a.10 Denominator Exclusion Details (*All information required to collect exclusions to the denominator,*

Comment [KP8]: 2a. The measure is well defined and precisely specified so that it can be implemented consistently within and across organizations and allow for comparability. The required data elements are of high quality as defined by NQF's Health Information Technology Expert Panel (HITEP) .

Comment [k9]: 11 Risk factors that influence outcomes should not be specified as exclusions.
12 Patient preference is not a clinical exception to eligibility and can be influenced by provider interventions.

including all codes, logic, and definitions)**:**

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):**
Based on the descriptions of the long-stay and short-stay populations above, there are inherent differences in nursing facility's being responsible for assessing and/or providing vaccines for these distinct populations. For the short-stay population, nursing 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 to rates for long-term care populations. Separating them recognizes these differences in vaccination rates.

This is not applicable.

2a.12-13 Risk Adjustment Type: No risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Ratio
2a.20 Interpretation of Score:
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps***):**
For each facility, the number of short-stay residents meeting the numerator criteria and the number of meeting the demominator criteria are counted. The following numerator components will be computed and reported separately:
1. Up-to-date vaccine status (O0300.A=1)
2. Ineligible due to medical contraindications (O0300.B=1)
3. Offered and declined (O0300.B=2)

2a.22 Describe the method for discriminating performance *(e.g., significance testing)***:**
Because the computed scores are not estimates, but include all residents who meet the measure criteria, in terms of discriminating performance, the computed scores can be used to make valid comparisons.

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
This is not applicable.

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Electronic clinical data

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
The data source or collection instrument is Nursing Home Minimum Data Set 3.0

2a.26-28 Data source/data collection instrument reference web page URL or attachment: URL
http://www.cms.hhs.gov/NursingHomeQualityInits/25_NHQIMDS30.asp#TopOfPage

2a.29-31 Data dictionary/code table web page URL or attachment: URL
http://www.cms.hhs.gov/NursingHomeQualityInits/25_NHQIMDS30.asp#TopOfPage

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)*
Facility/Agency

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*
Nursing home (NH) /Skilled Nursing Facility (SNF)

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)

TESTING/ANALYSIS	
2b. Reliability testing **2b.1 Data/sample** *(description of data/sample and size)*: Two major tests of the reliability of the pneumococcal measure have been conducted. First, the MDS 2.0 measure items and the existing quality measure were tested in the Data Assessment and Verification (DAVE 2) project conducted by Abt Associates.(1) This project used a nationwide sample of randomly selected nursing homes using MDS assessments for the period April 1 to December 31, 2006.(1) During this project, 173 two-stage reviews were performed. Second, the University of Colorado used national facility-level quality measure data: data from 2003 Quarter 3 (Q3) through 2006 Q3 came from the Quality Improvement and Evaluation System (QIES) MDS Express Reports on the CMS intranet; OSCAR data related to facility characteristics (e.g., state, resident census, number of beds, staffing) and certification survey results were downloaded from QIES Workbench.(2) A 10% random sample of all Medicare-certified nursing facilities was also downloaded from MDS assessment records. Analyses were based on complete MDS data from January 2005 through March 2006, nearly complete data for April 2006, and partial data for May and June 2006. **2b.2 Analytic Method** *(type of reliability & rationale, method for testing)*: The national test of MDS 3.0 items examined the agreement between assessors (reliability); the validity of new cognitive, depression, and behavior items; the response rates for interview items; user satisfaction and feedback on changes; and time to complete the assessment. The network of Quality Improvement Organizations was employed identify gold-standard (research) nurses and recruit community nursing homes to participate in the national evaluation, including a representative sample of for-profit and not-for-profit facilities and hospital-based and freestanding facilities. The gold-standard nurses were trained in the MDS 3.0 instrument, and they, in turn, trained a facility nurse from each participating nursing home in their home states. Residents participating in the test were selected to capture a representative sample of short- and long-stay residents. The DAVE 2 Project used a two-stage cluster sample design to examine MDS reporting. A trained nurse reviewer selected a current resident with a recent assessment performed by the nursing home within the last 14 days. In Stage 1 of this review, the nurse reviewer conducted a blind reassessment of the resident using standard MDS assessment and coding procedures (examination of the medical record; observation of the resident; interview of staff, resident, and family; and use of coding criteria). In Stage 2 of this assessment, the DAVE 2 nurse reviewer's assessment was compared with the corresponding nursing facility assessment, and each discrepancy was reconciled, with the nursing facility assessor and the nurse reviewer agreeing on the appropriate response. In addition to data entering the facility MDS code, the DAVE 2 code, and the reconciled code into the MDS-QC data entry software, the DAVE 2 nurse reviewer entered a "reason code" to attribute the cause of the discrepancy, per MDS item reviewed, to an established list of reasons. **2b.3 Testing Results** *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*: According to the University of Colorado findings, the pneumococcal Immunization measure for short-stay residents received ratings of "guarded" for the dimensions of validity and reliability. Moderate Two-Stage discrepancy rates were obtained for the vaccination QI/QMs. The rate was 13.4% for Pneumococcal. The Retrospective Medical Record Reviews rate was lower and the difference reached standard significance for the Pneumococcal measure. More detailed analysis of QI/QM discrepancies indicates that facilities under-code QI/QMs much more often than they overcode. Two-Stage RUG-III group discrepancies on skilled nursing facility (SNF) PPS assessments were found to be quite high, with a rate of 22.1%. This RUG-III group rate is a bit higher than the 15% rate found in the original DAVE project. A somewhat higher rate may be expected for DAVE 2 because reviews during this project were conducted onsite using independent resident assessment and reconciliation with facility staff, whereas the original DAVE reviews were conducted offsite with access only to a partial medical record mailed by the facility.	**2b** **C** ☐ **P** ☐ **M** ☐ **N** ☐

Comment [KP10]: 2b. Reliability testing demonstrates the measure results are repeatable, producing the same results a high proportion of the time when assessed in the same population in the same time period.

Comment [k11]: 8 Examples of reliability testing include, but are not limited to: inter-rater/abstractor or intra-rater/abstractor studies; internal consistency for multi-item scales; test-retest for survey items. Reliability testing may address the data items or final measure score.

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

2. Brega A, Goodrich G, Nuccio E, Hittle D. 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.

2c. Validity testing

2c.1 Data/sample *(description of data/sample and size)***:** The MDS 2.0 and MDS 3.0 vaccination items were tested by the DAVE 2 Project, which used a nationwide sample of randomly selected nursing facilities using MDS assessments for the period April 1 to December 31, 2006. The sample size (number of reviews) was 164 for the pneumococcal vaccination QI/QM.

2c.2 Analytic Method *(type of validity & rationale, method for testing)***:**
The national test of MDS 3.0 items examined the agreement between assessors (reliability); the validity of new cognitive, depression, and behavior items; the response rates for interview items; user satisfaction and feedback on changes; and time to complete the assessment. The network of Quality Improvement Organizations was employed identify gold-standard (research) nurses and recruit community nursing facilities to participate in the national evaluation, including a representative sample of for-profit and not-for-profit facilities and hospital-based and freestanding facilities. The gold-standard nurses were trained in the MDS 3.0 instrument, and they, in turn, trained a facility nurse from each participating nursing home in their home states. Residents participating in the test were selected to capture a representative sample of short- and long-stay residents.

The DAVE 2 Project used a two-stage cluster sample design to examine MDS reporting. A trained nurse reviewer selected a current resident with a recent assessment performed by the nursing home within the last 14 days. In Stage 1 of this review, the nurse reviewer conducted a blind reassessment of the resident using standard MDS assessment and coding procedures (examination of the medical record; observation of the resident; interview of staff, resident, and family; and use of coding criteria). In Stage 2 of this assessment, the DAVE 2 nurse reviewer's assessment was compared with the corresponding nursing facility assessment, and each discrepancy was reconciled, with the nursing facility assessor and the nurse reviewer agreeing on the appropriate response. In addition to data entering the facility MDS code, the DAVE 2 code, and the reconciled code into the MDS-QC data entry software, the DAVE 2 nurse reviewer entered a "reason code" to attribute the cause of the discrepancy, per MDS item reviewed, to an established list of reasons.

2c.3 Testing Results *(statistical results, assessment of adequacy in the context of norms for the test conducted)***:**
According to the University of Colorado findings, the pneumococcal Immunization measure for short-stay residents received ratings of "guarded" for the dimensions of validity and reliability. Moderate Two-Stage discrepancy rates were obtained for the vaccination QI/QMs. The rate was 13.4% for Pneumococcal. The Retrospective Medical Record Reviews rate was lower and the difference reached standard significance for the Pneumococcal measure. More detailed analysis of QI/QM discrepancies indicates that facilities under-code QI/QMs much more often than they overcode.

Two-Stage RUG-III group discrepancies on skilled nursing facility (SNF) PPS assessments were found to be quite high, with a rate of 22.1%. This RUG-III group rate is a bit higher than the 15% rate found in the original DAVE project. A somewhat higher rate may be expected for DAVE 2 because reviews during this project were conducted onsite using independent resident assessment and reconciliation with facility staff, whereas the original DAVE reviews were conducted offsite with access only to a partial medical record mailed by the facility.

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

2. Brega A, Goodrich G, Nuccio E, Hittle D. 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.

2c
C ☐
P ☐
M ☐
N ☐

Comment [KP12]: 2c. Validity testing demonstrates that the measure reflects the quality of care provided, adequately distinguishing good and poor quality. If face validity is the only validity addressed, it is systematically assessed.

Comment [k13]: 9 Examples of validity testing include, but are not limited to: determining if measure scores adequately distinguish between providers known to have good or poor quality assessed by another valid method; correlation of measure scores with another valid indicator of quality for the specific topic; ability of measure scores to predict scores on some other related valid measure; content validity for multi-item scales/tests. Face validity is a subjective assessment by experts of whether the measure reflects the quality of care (e.g., whether the proportion of patients with BP < 140/90 is a marker of quality). If face validity is the only validity addressed, it is systematically assessed (e.g., ratings by relevant stakeholders) and the measure is judged to represent quality care for the specific topic and that the measure focus is the most important aspect of quality for the specific topic.

2d. Exclusions Justified

2d.1 Summary of Evidence supporting exclusion(s):
All short-stay residents for whom complete data exist are included.

2d.2 Citations for Evidence:
This is not applicable.

2d.3 Data/sample *(description of data/sample and size)***:** This is not applicable.

2d.4 Analytic Method *(type analysis & rationale)***:**
This is not applicable.

2d.5 Testing Results *(e.g., frequency, variability, sensitivity analyses)***:**
This is not applicable.

2d C☐ P☐ M☐ N☐ NA☐

2e. Risk Adjustment for Outcomes/ Resource Use Measures

2e.1 Data/sample *(description of data/sample and size)***:** This is not applicable.

2e.2 Analytic Method *(type of risk adjustment, analysis, & rationale)***:**
This is not applicable.

2e.3 Testing Results *(risk model performance metrics)***:**
This is not applicable.

2e.4 If outcome or resource use measure is not risk adjusted, provide rationale: The proposed measure is a process measure and it is not risk adjusted.

2e C☐ P☐ M☐ N☐ NA☐

2f. Identification of Meaningful Differences in Performance

2f.1 Data/sample from Testing or Current Use *(description of data/sample and size)***:** The testing did not include the updated specs, which increase the number of residents who might be counted in the numerator and denominator. We indicated that the measures were tested because this change does not affect the underlying items and their reliability, nor the reportability or usability of the quality measure. In addition, it is unlikely that variability across facilities would be accounted for based on whether individuals who refused to be vaccinated or had medical contraindications to vaccination are included in the numerator and denominator.

The data sample is from MDS 2.0 data from 2006 Q1.

2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance *(type of analysis & rationale)***:**
Because the computed scores are not estimates, but include all residents who meet the measure criteria, in terms of discriminating performance, the computed scores can be used to make valid comparisons.

2f.3 Provide Measure Scores from Testing or Current Use *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)***:**
In its analysis of quality measures using MDS data from 2006 Q1, the University of Colorado found that this measure could be reported for 76% of facilities and had a reasonable amount of variability across facilities in the rates of pneumococcal immunization. The quality measure varied from 15.6% at the 10th percentile to 98.1% at the 90th percentile.

See attached Table 1: Measure Variability Across Facilities.

1. Brega A, Goodrich G, Nuccio E, Hittle D. 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.

2f C☐ P☐ M☐ N☐

2g. Comparability of Multiple Data Sources/Methods

2g

Comment [KP14]: 2d. Clinically necessary measure exclusions are identified and must be:
•supported by evidence of sufficient frequency of occurrence so that results are distorted without the exclusion;
AND
•a clinically appropriate exception (e.g., contraindication) to eligibility for the measure focus;
AND
•precisely defined and specified:
–if there is substantial variability in exclusions across providers, the measure is specified so that exclusions are computable and the effect on the measure is transparent (i.e., impact clearly delineated, such as number of cases excluded, exclusion rates by type of exclusion);
if patient preference (e.g., informed decision-making) is a basis for exclusion, there must be evidence that it strongly impacts performance on the measure and the measure must be specified so that the information about patient preference and the effect on the measure is transparent (e.g., numerator category computed separately, denominator exclusion category computed separately).

Comment [k15]: 10 Examples of evidence that an exclusion distorts measure results include, but are not limited to: frequency of occurrence, sensitivity analyses with and without the exclusion, and variability of exclusions across providers.

Comment [KP16]: 2e. For outcome measures and other measures (e.g., resource use) when indicated:
•an evidence-based risk-adjustment strategy (e.g., risk models, risk stratification) is specified and is based on patient clinical factors that influence the measured outcome (but not disparities in care) and are present at start of care; Error! Bookmark not defined. OR ... [2]

Comment [k17]: 13 Risk models should not obscure disparities in care for populations by including factors that are associated with differences/inequalities in care such as race, socioeconomic status, gender (e.g., poorer treatment outcomes of African American men with prostate cancer, inequalities in treatment for CVD risk factors between men and women). It is preferable to stratify measures by ra ... [3]

Comment [KP18]: 2f. Data analysis demonstrates that methods for scoring and analysis of the specified measure allow for identification of statistically significant and practically/clinically meaningful differences in performance.

Comment [k19]: 14 With large enough sample sizes, small differences that are statistically significant may or may not be practically or clinically meaningful. The substantive question may be, for example, whether a statistically significant difference of one percentage point in the percentage of patients who received smoking cessation counseling (e.g., 74% v. 75%) is clinically ... [4]

Comment [KP20]: 2g. If multiple data sources/methods are allowed, there is demonstration they produce comparable results.

2g.1 Data/sample *(description of data/sample and size)*: This is not applicable.

2g.2 Analytic Method *(type of analysis & rationale)*:
This is not applicable.

2g.3 Testing Results *(e.g., correlation statistics, comparison of rankings)*:
This is not applicable.

C☐ P☐ M☐ N☐ NA☐

2h. Disparities in Care

2h.1 If measure is stratified, provide stratified results *(scores by stratified categories/cohorts)*: This is not applicable.

2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:
This is not applicable.

2h C☐ P☐ M☐ N☐ NA☐

Comment [KP21]: 2h. If disparities in care have been identified, measure specifications, scoring, and analysis allow for identification of disparities through stratification of results (e.g., by race, ethnicity, socioeconomic status, gender);OR rationale/data justifies why stratification is not necessary or not feasible.

TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*

2

Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, **met?**
Rationale:

2 C☐ P☐ M☐ N☐

3. USABILITY

Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)

Eval Rating

3a. Meaningful, Understandable, and Useful Information

3a.1 Current Use: In use

3a.2 Use in a public reporting initiative (disclosure of performance results to the public at large) (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*):
For current use of the pneumococcal immunization quality measure, please see Nursing Home Compare at http://www.medicare.gov/NHCompare/Include/DataSection/Questions/SearchCriteriaNEW.asp?version=default&browser=IE%7C6%7CWinXP&language=English&defaultstatus=0&pagelist=Home&CookiesEnabledStatus=True

3a.3 If used in other programs/initiatives (*If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):**
This is not applicable.

Testing of Interpretability (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*)
3a.4 Data/sample *(description of data/sample and size)*: A recent study examined whether consumers could accurately interpret the quality information given for all the measures reported by Nursing Home Compare.(1) Data were collected from 4,754 family members of nursing facility residents.

3a C☐ P☐ M☐ N☐

Comment [KP22]: 3a. Demonstration that information produced by the measure is meaningful, understandable, and useful to the intended audience(s) for both public reporting (e.g., focus group, cognitive testing) and informing quality improvement (e.g., quality improvement initiatives). An important outcome that may not have an identified improvement strategy still can be useful for informing quality improvement by identifying the need for and stimulating new approaches to improvement.

1. Castle N. The Nursing Home Compare report card: consumers' use and understanding. J Aging Soc Policy. 2009;21(2):187-208.

3a.5 Methods *(e.g., focus group, survey, QI project)*:
A comprehension index was used to examine whether the information contained in Nursing Home Compare for each quality measure was understood by family members.

3a.6 Results *(qualitative and/or quantitative results and conclusions)*:
The study found that 31% of the consumers used the Internet to help them choose a nursing facility, 12% recalled using Nursing Home Compare. In general, the consumers' comprehension index scores were high indicating good understanding, although the study did not evaluate this measure.

3b/3c. Relation to other NQF-endorsed measures

3b.1 NQF # and Title of similar or related measures:
This measure replaces NQF #0433 Pneumococcal Vaccination of Nursing Home/ Skilled Nursing Facility Residents.

(for NQF staff use) **Notes on similar/related** endorsed **or submitted measures:**

3b. Harmonization
If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population):
3b.2 Are the measure specifications harmonized? If not, why?
Yes. The measure specifications are harmonized. They correspond to the specifications in the 2008 NQF National Voluntary Consensus Standards for Influenza and Pneumococcal Immunizations Report. The specifications are updated to reflect the changes in MDS 3.0.

3b C☐ P☐ M☐ N☐ NA☐

3c. Distinctive or Additive Value
3c.1 Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:
The current measure is being retired due to the change in the data source. The proposed measure will replace it and is harmonized to the NQF Voluntary Consensus Standards for Influenza and Pneumococcal Immunizations.

5.1 If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:

3c C☐ P☐ M☐ N☐ NA☐

TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability*?

3

Steering Committee: Overall, to what extent was the criterion, *Usability*, **met?**
Rationale:

3 C☐ P☐ M☐ N☐

4. FEASIBILITY

Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)

Eval Rating

4a. Data Generated as a Byproduct of Care Processes

4a.1-2 How are the data elements that are needed to compute measure scores generated?

4a C☐ P☐

Comment [KP23]: **3b.** The measure specifications are harmonized with other measures, and are applicable to multiple levels and settings.

Comment [k24]: 16 Measure harmonization refers to the standardization of specifications for similar measures on the same topic (e.g., *influenza immunization* of patients in hospitals or nursing homes), or related measures for the same target population (e.g., eye exam and HbA1c for *patients with diabetes*), or definitions applicable to many measures (e.g., age designation for children) so that they are uniform or compatible, unless differences are dictated by the evidence. The dimensions of harmonization can include numerator, denominator, exclusions, and data source and collection instructions. The extent of harmonization depends on the relationship of the measures, the evidence for the specific measure focus, and differences in data sources.

Comment [KP25]: **3c.** Review of existing endorsed measures and measure sets demonstrates that the measure provides a distinctive or additive value to existing NQF-endorsed measures (e.g., provides a more complete picture of quality for a particular condition or aspect of healthcare, is a more valid or efficient way to measure).

Comment [KP26]: **4a.** For clinical measures, required data elements are routinely generated concurrent with and as a byproduct of care processes during care delivery. (e.g., BP recorded in the electronic record, not abstracted from the record later by other personnel; patient self-assessment tools, e.g., depression scale; lab values, meds, etc.)

Data generated as byproduct of care processes during care delivery (Data are generated and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition)	M ☐ N ☐
4b. Electronic Sources 4b.1 **Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) No 4b.2 **If not, specify the near-term path to achieve electronic capture by most providers.**	4b C☐ P☐ M ☐ N ☐
4c. Exclusions 4c.1 **Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No 4c.2 **If yes, provide justification.**	4c C☐ P☐ M ☐ N ☐ NA ☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences 4d.1 **Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.** 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 their 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.(1) Residents with short stays are less likely to be vaccinated than residents with longer stays, which can be problematic for those facilities serving primary a short-stay population. Abt Associates' DAVE 2 Project found that 13% of the time the current pneumococcal immunization measure was assessed differently by different assessors.(2) Part of that may be because definitions for the currently reported measure are misunderstood, or the assessors leave the items blank when they 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 undercode QI/QMs much more often than they overcode. 1. Brega A, Hittle D, Goodrich G, Kramer A, Conway K, Levy C. Empirical review of publicly reported nursing home quality measures. Denver: Division of Health Care Policy and Research University of Colorado at Denver; Abt Associates, Inc, 2007. 2. Abt Associates, Inc.; Stepwise Systems, Inc.; Qualidigm. Data Assessment and Verification (DAVE 2) project—MDS two-stage discrepancy findings, April–December 2006. Cambridge, MA: Abt Associates, Inc, 2007. 3. Saliba D, Buchanan J. 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, Apr 2008. Available from http://www.cms.hhs.gov/NursingHomeQualityInits/Downloads/MDS30FinalReport.pdf.	4d C☐ P☐ M ☐ N ☐
4e. Data Collection Strategy/Implementation 4e.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/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** The data collection method is already in operational use and there are no issues with these areas.	4e C☐ P☐ M ☐ N

Comment [KP27]: 4b. The required data elements are available in electronic sources. If the required data are not in existing electronic sources, a credible, near-term path to electronic collection by most providers is specified and clinical data elements are specified for transition to the electronic health record.

Comment [KP28]: 4c. Exclusions should not require additional data sources beyond what is required for scoring the measure (e.g., numerator and denominator) unless justified as supporting measure validity.

Comment [KP29]: 4d. Susceptibility to inaccuracies, errors, or unintended consequences and the ability to audit the data items to detect such problems are identified.

Comment [KP30]: 4e. Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, etc.) can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use).

4e.2 Costs to implement the measure (*costs of data collection, fees associated with proprietary measures*)**:** Data are collected as part of an existing process with no additional cost. **4e.3 Evidence for costs:** This is not applicable. **4e.4 Business case documentation:** The proposed measure relies on data from the MDS 3.0. As there is no change in the data collection method for the MDS 3.0 as compared with its predecessor, the MDS 2.0, we do not anticipate any additional burden to nursing facilities. MDS 2.0, and soon to be MDS 3.0, data are collected as part of an existing, federally mandated process used for payment and quality monitoring purposes.	☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility*?	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility***, met?** **Rationale:**	**4** **C**☐ **P**☐ **M**☐ **N**☐
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited**☐
Steering Committee: Do you recommend for endorsement? **Comments:**	**Y**☐ **N**☐ **A**☐
CONTACT INFORMATION	
Co.1 Measure Steward (Intellectual Property Owner) **Co.1 Organization** Centers for Medicare & Medicaid Services, 7500 Security Boulevard, Mail Stop S3-02-01, Baltimore, Maryland, 21244-1850 **Co.2 Point of Contact** Judith, Tobin, PT, MBA, Judith.Tobin@cms.hhs.gov, 410-786-6892-	
Measure Developer If different from Measure Steward **Co.3 Organization** RTI International, 1440 Main Street, Suite 310, Waltham, Massachusetts, 02451-1623 **Co.4 Point of Contact** Roberta, Constantine, RN, MBA, PhD, rconstantine@rti.org, 781-434-1711-	
Co.5 Submitter If different from Measure Steward POC Roberta, Constantine, RN, MBA, PhD, rconstantine@rti.org, 781-434-1711-, RTI International	
Co.6 Additional organizations that sponsored/participated in measure development	
ADDITIONAL INFORMATION	
Workgroup/Expert Panel involved in measure development **Ad.1 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 met during 2 days in January 2009 to review an environmental scan of the current quality measures and to make recommendations regarding their transition from MDS 2.0 to MDS 3.0.
Ad.2 If adapted, provide name of original measure: This measure was adapted from the measure of the same name derived from MDS 2.0 data. **Ad.3-5 If adapted, provide original specifications URL or attachment** http://www.cms.hhs.gov/NursingHomeQualityInits/downloads/NHQIQMUsersManual.pdf
Measure Developer/Steward Updates and Ongoing Maintenance **Ad.6 Year the measure was first released:** 2002 **Ad.7 Month and Year of most recent revision:** 02, 2010 **Ad.8 What is your frequency for review/update of this measure?** Every 3 years. **Ad.9 When is the next scheduled review/update for this measure?** 02, 2013
Ad.10 Copyright statement/disclaimers:
Ad.11 -13 Additional Information web page URL or attachment: Attachment Pneumoccal Vaccine Short Stay tables_FINAL.doc
Date of Submission (*MM/DD/YY*)**:** 07/09/2010

Page 4: [1] Comment [k5] **Karen Pace** **10/5/2009 8:59:00 AM**

4 Clinical care processes typically include multiple steps: assess → identify problem/potential problem → choose/plan intervention (with patient input) → provide intervention → evaluate impact on health status. If the measure focus is one step in such a multi-step process, the step with the greatest effect on the desired outcome should be selected as the focus of measurement. For example, although assessment of immunization status and recommending immunization are necessary steps, they are not sufficient to achieve the desired impact on health status – patients must be vaccinated to achieve immunity. This does not preclude consideration of measures of preventive screening interventions where there is a strong link with desired outcomes (e.g., mammography) or measures for multiple care processes that affect a single outcome.

Page 10: [2] Comment [KP16] **Karen Pace** **10/5/2009 8:59:00 AM**

2e. For outcome measures and other measures (e.g., resource use) when indicated:

- an evidence-based risk-adjustment strategy (e.g., risk models, risk stratification) is specified and is based on patient clinical factors that influence the measured outcome (but not disparities in care) and are present at start of care;**Error! Bookmark not defined.** OR

rationale/data support no risk adjustment.

Page 10: [3] Comment [k17] **Karen Pace** **10/5/2009 8:59:00 AM**

13 Risk models should not obscure disparities in care for populations by including factors that are associated with differences/inequalities in care such as race, socioeconomic status, gender (e.g., poorer treatment outcomes of African American men with prostate cancer, inequalities in treatment for CVD risk factors between men and women). It is preferable to stratify measures by race and socioeconomic status rather than adjusting out differences.

Page 10: [4] Comment [k19] **Karen Pace** **10/5/2009 8:59:00 AM**

14 With large enough sample sizes, small differences that are statistically significant may or may not be practically or clinically meaningful. The substantive question may be, for example, whether a statistically significant difference of one percentage point in the percentage of patients who received smoking cessation counseling (e.g., 74% v. 75%) is clinically meaningful; or whether a statistically significant difference of $25 in cost for an episode of care (e.g., $5,000 v. $5,025) is practically meaningful. Measures with overall poor performance may not demonstrate much variability across providers.

Project Name: NQF Nursing Home Project

Measure Title: Percent of Residents Who Were Assessed and Given the Pneumococcal Vaccine (Short Stay)

Planned Date of Measure Submission: March 19, 2010

Steward Name:

Point of Contact
Judith C. Tobin, PT, MBA
Centers for Medicare & Medicaid Services
7500 Security Boulevard
Mail Stop S3-02-01
Baltimore, MD 21244-1850
410-786-6892
Judith.Tobin@cms.hhs.gov

Developer/Submitter Name:

RTI International
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Table 1. Measure Variability Across Facilities

Quality Measure (QM)	N of Facilities[1]	Mean	Std Dev	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Facilities with QM = 0%
Pneumococcal Immunization	1,233	65.3%	30.7%	15.6%	41.1%	75.9%	92.0%	98.1%	8.0%

Table 2. Nursing Home Quality Measures Technical Expert Panel (January 2009)

Name	Title	Affiliation
Barbara Anglin, RN	Program Services Consultant	American Association of Nurse Assessment Coordinators (AANAC)
Bonnie Burak-Danielson, MSM, EXP, LPTA	Rehab Manager of Reimbursement	Spaulding Rehab Network
Sarah Burger, MPH, RN	Senior Advisor and Coordinator	Coalition of Geriatric Nursing Organizations The John A. Hartford Institute for Geriatric Nursing

Diane Carter, MSN, RN, CS	President	AANAC
Kate Dennison, RN, RAC-MT	Minimum Data Set (MDS) Coordinator	The Cedars
Mary Ellard, RN, MPA/H, RAC-CT	Clinical Assessment Specialist	Five Star Quality Care, Inc.
Sandy Fitzler, RN	Senior Director of Clinical Services	American Health Care Association
David F. Hittle, PhD	Assistant Professor	Division of Health Care Policy and Research University of Colorado Denver, School of Medicine
Steve Levenson, MD, CMD	Multi-Facility Medical Director, Baltimore, MD	
Carol Maher, RN-BC, RAC-CT	Director of Clinical Reimbursement	Ensign Facilities Services
Barbara Manard, PhD	Vice President, Long Term Care/Health Strategies	American Association of Homes and Services for the Aging
Debra Saliba, MD, MPH	Anna and Harry Borun Chair in Geriatrics and Gerontology at UCLA Research Physician VA GLAHS GRECC Director of UCLA/JHA Borun Center for Gerontological Research Senior Natural Scientist RAND Health	University of California, Los Angeles (UCLA), Veterans Affairs (VA), RAND Corporation
Eric Tangalos, MD	Professor of Medicine	Mayo Clinic
Jacqueline Vance, RNC, CDONA/LTC	Director of Clinical Affairs	(American Medical Directors Association) AMDA
Mary Van de Kamp, MS/CCC-SLP	Vice President, Clinical Rehabilitation	People*first* Rehabilitation
Charlene Harrington, PhD, RN, FAAN*	Professor Emeritus	University of California, San Francisco Fellow in the American Academy of Nursing

Measure #/Title/Steward

NH-016-10: Percent of Residents Who Were Assessed and Given the Pneumococcal Vaccine (Short Stay)
Centers for Medicare & Medicaid Services

Description: This measure is based on data from MDS 3.0 assessments of nursing facility residents. The measure reports the percentage of short-stay nursing facility residents who were assessed and given the Pneumococcal Vaccine (PPV) as reported on the target MDS 3.0 assessment (which may be an OBRA admission, 5-day PPS, 14-day PPS, 30-day PPS, 60-day PPS, 90-day PPS or discharge assessment) during the 12-month reporting period. The proposed measure is harmonized with the NQF's quality measure on Pneumococcal Immunizations.Short-stay residents are those residents who are discharged within the first 100 days of the stay. The measure is restricted to the population that has short-term needs and does not include the population of residents with stays longer than 100 days. A separate quality measure has been submitted for the long-stay population.

Initial In-Person Vote:

Recommended for endorsement with conditions – 19
Not present - 1

Steering Committee Questions/Conditions for Measure Developer:	Response from Measure Developer
• Missing data or blank fields should be counted as not administered vaccination; this data should not be excluded.	• The developer agreed with the Steering Committee's recommendation; residents who have missing pneumococcal vaccine data are included in the denominator.
• The numerator components should be computed and reported separately: Up-to-date vaccine status/all short-stay residents with MDS 3.0 assessment within the 12 month period, Offered and declined vaccine/all short-stay residents with MDS 3.0 assessment within the 12 month period, Ineligible due to medical contraindications/all short-stay residents with MDS 3.0 assessment within the 12 month period	• The following numerator components will be computed and reported separately: 1. Up-to-date vaccine status (O0300.A=1) 2. Ineligible due to medical contraindications (O0300.B=1) 3. Offered and declined vaccine (O0300.B=2) The developer also noted the public reporting recommendation and agreed to communicate it to the business owner component at CMS.
• The definition of short-stay residents needs to be clarified	• Short-stay residents are defined by a length of stay less than or equal to 100 days.