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)

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**MEASURE DESCRIPTIVE INFORMATION**

<table>
<thead>
<tr>
<th>De.1 Measure Title: Percent of Residents Assessed and Appropriately Given the Seasonal Influenza Vaccine (Long-Stay)</th>
</tr>
</thead>
<tbody>
<tr>
<td>De.2 Brief description of measure: This measure is based on data from the MDS 3.0 assessment of long-stay nursing facility residents and reports the percentage of all long-stay residents who were assessed and appropriately given the seasonal influenza vaccine during the influenza season. The measure reports on the percentage of residents who were assessed and appropriately given the seasonal influenza vaccine (MDS items O0250A and O250C) on the target MDS assessment (which may be an admission, annual, quarterly, significant change or correction assessment). Long-stay residents are those residents who have been in the nursing facility at least 100 days. The measure is restricted to the population with long-term care needs and does not include the short-stay population who are discharged within 100 days of admission. This specification of the proposed measure mirrors the harmonized measure endorsed by the National Quality Forum (Measure number 0432: Influenza Vaccination of Nursing Home/Skilled Nursing Facility Residents.) The NQF standard specifications were developed to provide a uniform approach to measurement across settings and populations. The measure harmonizes who is included in the target denominator population, who is excluded, who is included in the numerator population, and time windows for measurement and vaccinations.</td>
</tr>
<tr>
<td>De.3 If included in a composite or paired with another measure, please identify composite or paired measure</td>
</tr>
<tr>
<td>De.4 National Priority Partners Priority Area: Population health</td>
</tr>
<tr>
<td>De.5 IOM Quality Domain: Safety</td>
</tr>
<tr>
<td>De.6 Consumer Care Need:</td>
</tr>
</tbody>
</table>

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**CONDITIONS FOR CONSIDERATION BY NQF**

Rating: C=Completely; P=Partially; M=Minimally; N=Not at all; NA=Not applicable
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:

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:

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

C. The intended use of the measure includes both public reporting and quality improvement. Purpose: Public Reporting

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: Yes, fully developed and tested

D.2 Have NQF-endorsed measures been reviewed to identify if there are similar or related measures? Yes

(If NQF Staff use) Have all conditions for consideration been met? Met

Staff Notes to Reviewer (issues or questions regarding any criteria):

Staff Reviewer Name(s):
approximately 123,000 deaths with influenza and pneumonia mentioned on the death certificate as a secondary cause of death.(1)

According to the CDC, more than 200,000 people are hospitalized in the United States each year as a result of complications from influenza. (2) The average hospital stay was approximately 5.3 days at a cost of $6,900 per stay. (3) Further, the death rate from influenza and pneumonia is nearly 130 times higher among persons aged 85 and older than among persons 45-54 years of age. (1)

Among adults aged 65 years and older, approximately 72.1% were vaccinated during the 2006-2007 influenza season, which is below the Health People 2010 target of 90% for this age group. (4, 5)

CMS currently uses MDS 2.0 data to publicly report an influenza vaccination quality measure (QM) for nursing facility residents. The first quarter 2007 statewide averages for the long-stay population range from 75.9% to 96.5%, with an 87% national average. (6) According to the information currently available on Nursing Home Compare, the national average for the percent of long-stay residents given the influenza vaccine has increased to 90%. (7)

Citations for Evidence of High Impact:

Opportunity for Improvement

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 through the assessment of facility residents regarding the status of their seasonal flu vaccine immunization and to provide immunization as appropriate.

Summary of data demonstrating performance gap (variation or overall poor performance) across providers:
There is a demonstrated gap in performance in vaccination among adults aged 65 years and older. Although the influenza vaccine can be successful in preventing flu, vaccination rates remain low among nursing home residents, (1, 2) due in part to patient confusion, poor documentation of vaccination status, and availability of records from previous facilities. (3) Further, according to research, approximately 72.1% of the elderly were vaccinated during the 2006-07 influenza season, which is below the Health People 2010 target of 90% for this age group. (3, 4)

In their analysis of quality measures using MDS data from the first quarter of 2006 (presented below), the University of Colorado found that the influenza measure could be reported for 86.5% of facilities and had a fair
amount of variability across facilities in the rates of influenza immunization. The quality measure varied from 63.9% at the 10th percentile to 100% at the 90th percentile.(5)

See attached Table 1: Measure Variability Across Facilities.

1b.3 Citations for data on performance gap:


1b.4 Summary of Data on disparities by population group:
Racial segregation between nursing home has been shown to be a major factor in racial disparities in the nursing facility 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 facilities 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 facility care than whites.(4) Among adults age 18 and over, there are higher rates of seasonal influenza vaccinations in rural areas (53.7%) compared to urban areas (47.1%) but there is no published information specific to the elderly or to nursing facility residents.(5)

A search of PubMed did not reveal any recently published research studies specifically related to racial and ethnic disparities for influenza immunization in nursing facilities. However, differences in influenza vaccination between whites and non-white Medicare beneficiaries and Medicare beneficiaries in general have been documented.(6)

Bardenheier and colleagues conducted a study in 2004 to identify nursing home resident-specific characteristics associated with vaccination coverage and at baseline. Results of their bivariate analysis showed that residents with cognitive, psychiatric, or neurologic problems were more likely to be vaccinated than those without these conditions. Results of the multilevel analysis also showed that the presence of cognitive deficits was one of the strongest resident characteristics associated with receipt of immunizations, controlling facility variation.(7)

1b.5 Citations for data on Disparities:


1c.6 Method for rating evidence:

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


1c.9 Quote the Specific guideline recommendation (including guideline number and/or page number): CDC. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP), 2009. MMWR. 2009 July 31; 58(RR-08).


1c.12 Rating of strength of recommendation (also provide narrative description of the rating and by whom):

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 the relevant guideline listed with the National Guideline Clearinghouse that addresses immunization against influenza.

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

Steering Committee: Was the threshold criterion, Importance to Measure and Report, met?

Rationale:

| 1 | Y | N |

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)

2a. MEASURE SPECIFICATIONS

Rating: C=Completely; P=Partially; M=Minimally; N=Not at all; NA=Not applicable
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. The numerator is the number of long-stay residents in the facility with an MDS OBRA admission, annual, quarterly, significant change, correction, or discharge assessment who meet any of the following criteria for the most recently completed influenza season (the numerator components will be computed and reported separately): (1) those who received the influenza vaccine during the most recent influenza season, either in the facility or outside the facility, (2) the number who were offered and declined the influenza vaccine, or (3) the number who were ineligible due to contraindication(s) (i.e., anaphylactic hypersensitivity to eggs or other components of the vaccine, history of Guillain-Barré Syndrome within 6 weeks after a previous influenza vaccination, or bone marrow transplant within the past 6 months).

#### 2a.2 Numerator Time Window (The time period in which cases are eligible for inclusion in the numerator):

Annual influenza season as defined by the Centers for Disease Control and Prevention (CDC).

#### 2a.3 Numerator Details (All information required to collect/calculate the numerator, including all codes, logic, and definitions):

Residents are counted if they are long-stay residents, defined as residents whose length of stay is greater than 100 days. Residents who return to the nursing home following a hospital discharge will not have their stay reset to zero. Residents are included in the numerator if they meet any of the following criteria for the most recently completed influenza season: (1) received the influenza vaccine during the most recent influenza season, either in the facility (item O0250.A=1) or outside the facility (item O0250.C=2) (computed and reported separately); or (2) were offered and declined the influenza vaccine (item O0250.C=4) (computed and reported separately); or (3) were ineligible due to contraindication(s) (item O0250.C=3) (computed and reported separately). Included in the numerator are residents who meet the criteria on the most recent OBRA MDS 3.0 assessment (A0310.A=01,02,03,04,05,06) or discharge assessment (A0310.F=10,11) during the influenza reporting period as defined by the Centers for Disease Control and Prevention.

#### 2a.4 Denominator Statement (Brief, text description of the denominator - target population being measured):

The denominator consists of all residents in the long-stay sample with an MDS 3.0 assessment (which may be an OBRA admission, annual, quarterly, significant change, significant correction or discharge assessment) during the vaccination reporting period defined as October 1 through June 30. This measure is based on the NQF’s National Voluntary Standards for Influenza and Pneumococcal Immunizations. The NQF standard includes resident refusal and ineligibility in both the denominator and the numerator. This is a change from the currently used nursing home quality measure.

#### 2a.5 Target population gender: Female, Male

#### 2a.6 Target population age range: The target population includes long-stay residents of all ages admitted to the nursing facility.

#### 2a.7 Denominator Time Window (The time period in which cases are eligible for inclusion in the denominator):

Annual influenza season as defined by the Centers for Disease Control and Prevention (CDC).

#### 2a.8 Denominator Details (All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions):

Residents are counted if they are long-stay residents defined as residents whose length of stay is greater than 100 days. Residents who return to the nursing home following a hospital discharge will not have their day count reset to zero. The long-stay influenza vaccination sample includes residents meeting any of the following three conditions during the influenza season: (1) the resident has an MDS 3.0 OBRA assessment (A0310.A=01,02,03,04,05,06) with assessment reference date (item A2300) during the influenza season; or (2) the resident has a discharge assessment (A0310.F=10,11) with discharge date (item A2000) during the influenza season. The preceding MDS assessment is a OBRA assessment (A0310.A=01,02,03,04,05,06) with assessment reference date (item A2300) during the influenza season.
reference date (item A2300) before October 1 and the discharge date (item A2000) minus the assessment reference date (item A2300) is 100 days or less; or (3) the resident has a discharge assessment “prior to completing the initial assessment” (item A0310.A=99). The start of this stay is the later of the admission date (item A1600) from the discharge tracking form or the 13th day prior to the discharge date (item A2000 date minus 13 days). Either the start date or the discharge date (item A2300) is within the influenza season.

2a.9 Denominator Exclusions (Brief text description of exclusions from the target population): Residents are excluded from the denominator if they were not in the facility (item O0250.C =1) during the annual influenza season (as defined by the Centers for Disease Control and Prevention). 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, 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):

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 eligible facility, the number of residents meeting the numerator criteria and the number of (non-excluded) residents meeting the denominator criteria are counted. The facility-observed score for the measure is a prevalence score calculated as the number of residents in the facility meeting the criteria for inclusion in the numerator divided by all non-excluded residents in the denominator.

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.): Nursing Home Minimum Data Set 3.0


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

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

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.
2b. Reliability testing

2b.1 Data/sample (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 the 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 underlying items used to construct this measure did not change. However, the numerator specifications for the proposed measure have changed by adding residents who refused the vaccine or who have contraindications to both the numerator and the denominator. Three major tests of the reliability of the current influenza immunization 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. This project used a nationwide sample of randomly selected nursing facilities using MDS assessments for the period April 1 to December 31, 2006. DAVE 2 performed 173 two-stage reviews. The sample size (number of reviews) was 94 for the influenza vaccination QI/QM. Chronic care and post-acute care cases were combined.

Second, the University of Colorado used national facility-level quality measure data from 2003 Quarter 3 (Q3) through 2006 Q3 came from the Quality Improvement and Evaluation System (QIES) MDS Express Reports on the Centers for Medicare & Medicaid Services (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. A 10% random sample of all Medicare-certified nursing facilities was also downloaded from MDS assessment records and used to address specific questions regarding the influenza and pneumonia vaccination quality measures. The file contained data for all post-acute care and chronic care residents for a sample of 1,603 facilities. Analyses were based on complete MDS data from January 2005 through March 2006, as well as nearly complete data for April 2006 and partial data for May and June 2006.

Third, testing of the reliability of MDS 3.0 data items underlying the influenza immunization quality measure and a comparison with the MDS 2.0 quality measures were conducted by RAND as part of the MDS 3.0 development process. A representative sample of for-profit and not-for-profit facilities and hospital-based and freestanding facilities was recruited for the study, which included 71 community nursing facilities in 8 states, 19 Veterans Affairs (VA) nursing homes, and 1,180 nursing facility residents for the influenza quality measure.


2b.2 Analytic Method (type of reliability & rationale, method for testing): Three sets of analytic methods were used. First, in the DAVE 2 Project, trained nurse reviewers selected a current resident with a recent assessment performed by the nursing home (NH) within the last 14 days. In the first stage 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 the second stage of this assessment (Stage 2), the DAVE 2 nurse reviewer’s assessment was compared with the corresponding nursing facility

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.
assessment and each discrepancy was reconciled, with the nursing home 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.

Second, to evaluate reliability, the University of Colorado used the QM-level and item-level discrepancy rates reported by the DAVE 2 project. They also examined measure stability, which is related to reliability. To accomplish this they examined the percentage of facilities that had a change in ranking from one quarter to the next of at least three deciles. (2) This indicator of stability was computed for each of the 12 pairs of adjacent quarters for which data were available (2003 Q3 through 2006 Q3).

Third, the national test of MDS 3.0 items examined agreement between assessors (reliability). (3) Quality Improvement Organizations were employed to identify gold-standard (research) nurses and recruit community nursing facilities to participate in the national evaluation. The gold-standard nurses were trained in the MDS 3.0 instrument and, in turn, trained a facility nurse from each participating nursing facility in their home states. Residents participating in the test were selected to capture a representative sample of short- and long-stay residents. Quality measures using the MDS 2.0 and the MDS 3.0 items were calculated and then compared, with correlations and Kappas calculated.


2b.3 Testing Results (reliability statistics, assessment of adequacy in the context of norms for the test conducted):
The DAVE 2 Project found a moderate two-stage discrepancy rate of 13.1% for the current influenza measure and the associated MDS 2.0 item. (1) The Retrospective Medical Record Review rate was lower.

According to the University of Colorado findings, the influenza immunization measure for long-stay residents received ratings of “guarded” for the dimensions of both validity and reliability. (2) In their empirical review of the quality measures, Brega and colleagues found that length of stay has an impact on the rates for the vaccination measures. They did not report on the stability of the influenza immunization measure because the measure had not been in use long enough at the time of their analysis.

The national pilot test of the MDS 3.0 items conducted by Saliba and Buchanan showed good reliability. The kappa statistic for gold-standard nurse to gold-standard nurse agreement was .989 for influenza vaccine given and the kappa for gold-standard nurse to facility nurse agreement was .941. (3)


2c. Validity testing

2c.1 Data/sample (description of data/sample and size): The data came from two sources: national facility...
level quality measure data from 2003 Q3 through 2006 Q3 came from the 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. 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, as well as nearly complete data for April 2006 and partial data for May and June 2006.

2c.2 Analytic Method (type of validity & rationale, method for testing):
The analysis evaluated measure validity in a number of ways; to examine the expected positive influence of public reporting on quality of care, an assessment of the degree to which quality measure triggering rates have improved over time; to evaluate convergent validity, an assessment of the correlation of the quality measure with all other measures; to determine whether the quality measure triggering rate was influenced by factors that are unrelated to facility quality, an evaluation of seasonal variations in triggering rates across the 13 quarters of data. The analysis also computed descriptive statistics and conducted a one-way analysis of variance (ANOVA) for the measure to examine the amount of variance in triggering rates explained by the state in which a facility was located.

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 influenza measure for long-stay residents received a rating of guarded for validity testing. Results show the influenza vaccination measures are very well correlated with the pneumonia vaccination measure and with the short-stay influenza measure (r ranges from 0.58 to 0.81), providing evidence of convergent validity; the measure showed variability across states, as indicated by a percent of variance explained by the state ANOVA of 10% or more.

See attached Table 2: Correlation of Vaccination Measures and Table 3: Measure Variability across States.

2d. Exclusions Justified

2d.1 Summary of Evidence supporting exclusion(s):
Only facilities with less than 30 residents are excluded from public reporting due to small sample size.

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.

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.

2f. Identification of Meaningful Differences in Performance

Comment [k13]: 9 Examples of validity testing include: 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 hypertension patients on 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.

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;
- clinically appropriate exception (e.g., contraindication) to eligibility for the measure focus;
- 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 without the exclusion); and
- examples of evidence that exclusions distort 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;
- 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 without the exclusion; and
- examples of evidence that exclusions distort 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 [KP17]: 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, inequities 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.

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.
2f.1 Data/sample from Testing or Current Use (description of data/sample and size): The data came from two sources: national facility-level quality measure data from 2003 Q3 through 2006 Q3 came from the QIES MDS Express Reports on the CMS intranet; online Survey, Certification, and Reporting (OSCAR) data related to facility characteristics (e.g., state, resident census, number of beds, staffing) and certification survey results were downloaded from QIES Workbench. 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, as well as nearly complete data for April 2006 and partial data for May and June 2006.

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 their analysis of quality measures using MDS data from the first quarter of 2006, the University of Colorado found that this measure could be reported for 89.5% of facilities and had a fair amount of variability across facilities in the rates of influenza immunization. The quality measure varied from 63.9% at the 10th percentile to 100% at the 90th percentile. For 1,452 facilities, the mean triggering rate was 86.5% with a standard deviation of 17.8%.

See attached Table 1: Measure Variability Across Facilities.

2g. Comparability of Multiple Data Sources/Methods

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.

2h. Disparities in Care

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

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

While MDS 3.0 collects data on the resident’s race and other characteristics, there are no current plans to stratify the measure. As noted in the NQF’s Report on Voluntary Consensus Standards for Influenza and Pneumococcal Immunizations, a comprehensive measure can be stratified to allow examination of a particular patient group of interest (e.g., diagnosis of chronic obstructive pulmonary disease) without creating multiple versions of the same measure.(1) However, the ultimate goal is to vaccinate all recommended populations, including the elderly and nursing facility residents, which is what the measure is intended to capture.


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? 2 C

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

**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):**

**Nursing Home Compare**

**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):**

CMS expects that the proposed quality measure will be used by nursing facilities as a tool to increase facilities’ seasonal influenza vaccination rates.

**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.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 in choosing a nursing facility and 12% recalled using Nursing Home Compare. Although the influenza measure was not specifically included in the analysis, the study showed that, overall, data for the measures posted on Nursing Home Compare are understood by consumers. Because the proposed long-stay influenza vaccination quality measure is based upon the current measure, with only slight changes, we anticipate the proposed measure will also be understood by consumers.

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

**3b.1 NQF # and Title of similar or related measures:**
This measure replaces NQF #0432: Influenza Vaccination of Nursing Home/Skilled Nursing Facility Residents.

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

**3b. Harmonization**

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.

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

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:

TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for Usability?
Steering Committee: Overall, to what extent was the criterion, Usability, met?
Rationale:

4. FEASIBILITY

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

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?
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), Coding/abstraction performed by someone other than person obtaining original information (E.g., DRG, ICD-9 codes on claims, chart abstraction for quality measure or registry)

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.
Not applicable.

4c. Exclusions

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.)

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.
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.

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.  
Abt Associates’ DAVE 2 Project found that 13% of the time the current Influenza Immunization measure was triggered differently by different assessors. Part of this may be because definitions for the currently reported measure are misunderstood, or the assessors leave the items blank when they should be completed. The changes made to the MDS 3.0 regarding the vaccine items were relatively minor; however, these minor changes reportedly improved the clarity of the items. Further, in a reliability test of the revised MDS 3.0 items, Saliba and Buchanan reported a kappa statistic for gold-standard nurse to gold-standard nurse agreement was .989 for influenza vaccine given and the kappa for gold-standard nurse to facility nurse agreement was .941.

The proposed long-stay influenza immunization measure has been harmonized; it mirrors the measure specifications as identified by the NQF #0432.


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.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?
Steering Committee: Overall, to what extent was the criterion, Feasibility, met?

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**RECOMMENDATION**

(for NQF staff use) Check if measure is untested and only eligible for time-limited endorsement.

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Steering Committee: Do you recommend for endorsement?

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**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
Cheryl, Wiseman, MS, MPH, Cheryl.wiseman2@cms.hhs.gov, 410-786-1175-

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
Karen, Reilly, ScD, kreilly@rti.org, 781-434-1700-1791

Co.5 Submitter if different from Measure Steward POC
Karen, Reilly, ScD, kreilly@rti.org, 781-434-1700-1791, 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.
This technical expert panel met over 2 days in January 2009 to review the environmental scan of the current quality measures and make recommendations regarding their transition from MDS 2.0 to MDS 3.0. See attached Table 4: Nursing Home Quality Measures Technical Expert Panel (January 2009) showing a list of workgroup or panel member names and organizations.

Ad.2 If adapted, provide name of original measure:
Ad.3-5 If adapted, provide original specifications URL or attachment

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 Seasonal influenza Vaccine Long Stay tables_FINAL.doc |
| Date of Submission (MM/DD/YY): | 04/27/2011 |
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:
  o Intermediate outcome - evidence that the measured intermediate outcome (e.g., blood pressure, Hba1c) leads to improved health/avoidance of harm or cost/benefit.
  o Process - 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).
  o Structure - 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.
  o Patient 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.
  o Access - evidence that an association exists between access to a health service and the outcomes of, or experience with, care.
  o Efficiency - 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.

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).