NQF #0039 Flu Shots for Adults Ages 50 and Over

NATIONAL QUALITY FORUM

Measure Submission and Evaluation Worksheet 5.0

This form contains the information submitted by measure developers/stewards, organized according to NQF’s measure evaluation criteria and process. The evaluation criteria, evaluation guidance documents, and a blank online submission form are available on the submitting standards web page.

<table>
<thead>
<tr>
<th>NQF #: 0039</th>
<th>NQF Project: Population Health: Prevention Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>(for Endorsement Maintenance Review)</td>
<td></td>
</tr>
<tr>
<td>Original Endorsement Date: Aug 10, 2009</td>
<td>Most Recent Endorsement Date: Aug 10, 2009</td>
</tr>
</tbody>
</table>

**BRIEF MEASURE INFORMATION**

**De.1 Measure Title:** Flu Shots for Adults Ages 50 and Over

**Co.1.1 Measure Steward:** National Committee for Quality Assurance

**De.2 Brief Description of Measure:** This measure represents the percentage of adults aged 50 and over who received an influenza vaccine within the measurement period within the respective age-stratified CAHPS surveys. This measure is only reported by age group stratification. The terms FSA and FSO, defined below, will be used to identify any differences between the two age stratifications.

FSA - A rolling average represents the percentage of members 50–64 years of age who received an influenza vaccination between September 1 of the measurement year and the date on which the CAHPS 4.0H adult survey was completed.

FSO - The percentage of Medicare members 65 years of age and older who received an influenza vaccination between September 1 of the measurement year and the date on which the Medicare CAHPS survey was completed.

**2a1.1 Numerator Statement:** The number of patients in the denominator who responded, “Yes” to the question “Have you had a flu shot since September 1, YYYY?"

*YYYY = the measurement year (2010 for the survey fielded in 2011).

**2a1.4 Denominator Statement:** FSO (65+) – The number of members who responded “Yes” or “No” to the question, “Have you had a flu shot since September 1, YYYY?”

FSA (50-64) – The number of members with a Flu Shots for Adults Ages 50-64 Eligibility Flag of “Eligible” who responded “Yes” or “No” to the question “Have you had a flu shot since September 1, YYYY?”

*YYYY = the measurement year (2010 for the survey fielded in 2011).

**2a1.8 Denominator Exclusions:** Does not meet age criteria.

**1.1 Measure Type:** Process

**2a1. 25-26 Data Source:** Paper Records

**2a1.33 Level of Analysis:** Clinician : Group/Practice, Clinician : Individual, Clinician : Team, Health Plan, Integrated Delivery System

**1.2-1.4 Is this measure paired with another measure?** No

**De.3 If included in a composite, please identify the composite measure (title and NQF number if endorsed):**

**STAFF NOTES** (issues or questions regarding any criteria)
Comments on Conditions for Consideration:

<table>
<thead>
<tr>
<th>Is the measure untested?</th>
<th>Yes ☐ No ☐</th>
<th>If untested, explain how it meets criteria for consideration for time-limited endorsement:</th>
</tr>
</thead>
</table>

1a. Specific national health goal/priority identified by DHHS or NPP addressed by the measure (check De.5):
5. Similar/related endorsed or submitted measures (check 5.1):

Other Criteria:

Staff Reviewer Name(s):

### 1. IMPACT, OPPORTUNITY, EVIDENCE - IMPORTANCE TO MEASURE AND REPORT

Importance to Measure and Report is a threshold criterion that must be met in order to recommend a measure for endorsement. All three subcriteria must be met to pass this criterion. See guidance on evidence. 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:  ☐ H ☐ M ☐ L ☐ I ☐

(The measure directly addresses a specific national health goal/priority identified by DHHS or NPP, or some other high impact aspect of healthcare.)

De.4 Subject/Topic Areas (Check all the areas that apply): Infectious Diseases, Prevention  
De.5 Cross Cutting Areas (Check all the areas that apply): Population Health

1a.1 Demonstrated High Impact Aspect of Healthcare: Affects large numbers, A leading cause of morbidity/mortality, Frequently performed procedure, High resource use, Patient/societal consequences of poor quality, Severity of illness

1a.2 If “Other,” please describe:

1a.3 Summary of Evidence of High Impact (Provide epidemiologic or resource use data):

Flu impacts the health of older adults especially acutely (Thompson 2004). One third of all Americans 50-64 years of age have one or more chronic medical conditions that puts them at increased risk for serious flu complications (CDC 2008). Influenza infection is associated with high rates of complicated illness including pneumonia, heart attacks and strokes in the 65+ population. Changes in both innate and adaptive immune function not only converge in the reduced response to vaccination and protection against influenza, but present significant challenges to new vaccine development. In older adults, the goal of vaccination is more realistically targeted to providing clinical protection against disease rather sterilizing immunity (McElhaney 2010).

1a.4 Citations for Evidence of High Impact cited in 1a.3:  

1b. Opportunity for Improvement:  ☐ H ☐ M ☐ L ☐ I ☐

(There is a demonstrated performance gap - variability or overall less than optimal performance)

1b.1 Briefly explain the benefits (improvements in quality) envisioned by use of this measure:

Among the elderly, influenza vaccines may prevent 50-60 percent of hospitalizations and 68 percent of deaths from flu-related complications (Nichol 2003).

Over the course of an average flu season, more than 15,000 lives could be saved if 90 percent vaccination coverage were achieved annually (Fiscella 2007).
1b.2 Summary of Data Demonstrating Performance Gap (Variation or overall less than optimal performance across providers): [For Maintenance – Descriptive statistics for performance results for this measure - distribution of scores for measured entities by quartile/decile, mean, median, SD, min, max, etc.]

Flu Ages 50-64 Rolling Average Rate

Data Element; 2009; 2008; 2007;
N; 241; 250; 259;
MEAN; 51.3; 49.8; 48.6;
STDEV; 8.41; 8.37; 8.09;
STDERR; 0.54; 0.53; 0.5;
MIN; 19.3; 15.5; 16;
MAX; 73.3; 70.7; 69.7;
P10; 41.2; 39.6; 39.9;
P25; 47.2; 45.1; 43.6;
P50; 51.4; 50.3; 49.4;
P75; 56.3; 54.6; 53.6;
P90; 61.7; 59.7; 58.1;

1b.3 Citations for Data on Performance Gap: [For Maintenance – Description of the data or sample for measure results reported in 1b.2 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included]

Section 1b.2 references data from the most recent three years of measurement for HEDIS:

FSA (50-64) - The data in section 1b.2 includes percentiles, mean, min, max, standard deviation and standard error. There were 752 submissions for this measure/rate.

FSO (65+) - The data in section 1b.2 includes percentiles, mean, min, max, standard deviation and standard error. There were 815 submissions for this measure/rate.

1b.4 Summary of Data on Disparities by Population Group: [For Maintenance – Descriptive statistics for performance results for this measure by population group]

1b.5 Citations for Data on Disparities Cited in 1b.4: [For Maintenance – Description of the data or sample for measure results reported in 1b.4 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included]

1c. Evidence (Measure focus is a health outcome OR meets the criteria for quantity, quality, consistency of the body of evidence.)

Is the measure focus a health outcome? Yes ☐ No ☐ 
If not a health outcome, rate the body of evidence.
More than 200,000 people are hospitalized for flu-related complications each year, with 63% being 65 years or older (CDC, 2007; Thompson WW, Shay DK, et al., 2004). The health impact of influenza on older adults is substantial and flu shot vaccines are the most effective way to prevent severe illness complications and death due to influenza within this population (CDC, 2008). Because different influenza strains circulate every flu season, it is necessary to get a new vaccine every year. Also, immunity to influenza induced by vaccination will decrease over a period of months (NFID, 2009).

An influenza vaccination is estimated to cost just $16.70 per person vaccinated, including direct and indirect medical costs and costs associated with potential side effects, whereas a single flu epidemic can result in over $3 billion in direct hospitalization costs alone (Akazawa 2003; National Foundation for Infectious Diseases 2010). Most studies indicate that vaccination reduces or minimizes health care, societal, and individual costs and the productivity losses and absenteeism associated with influenza illness. One national study estimated the annual economic burden of seasonal influenza in the United States (using 2003 population and dollars) to be $87.1 billion, including $10.4 billion in direct medical costs. Studies of influenza vaccination in the United States among persons aged =65 years have estimated substantial reductions in hospitalizations and deaths and overall societal cost savings. A study of a larger population comparing persons aged 50–64 years with those aged =65 years estimated the cost-effectiveness of influenza vaccination to be $28,000 per quality-adjusted life year (QALY) saved (in 2000 dollars) in persons aged 50–64 years compared with $980 per QALY saved among persons aged =65 years (ACIP 2010). Excluding the indirect costs of patient time and travel, these rates decrease further to $7,200 and a gain of $17 per quality-adjusted life year for each age group.

The risks for complications, hospitalizations and deaths from influenza are higher among persons aged >65 years, young children, and persons of any age with certain underlying health conditions than among healthy older children and younger adults (ACIP, MMWR, 2005). Influenza-related deaths can result from pneumonia and from exacerbations of cardiopulmonary conditions and other chronic diseases. Deaths of older adults account for >90% of deaths attributed to pneumonia and influenza (ACIP, MMWR, 2005). Estimated rates of influenza-associated pulmonary and circulatory deaths per 100,000 persons were 0.4--0.6 among persons aged 0 to49 years, 7.5 among persons aged 50 to64 years, and rose to 98.3 among persons aged >65 years. In the United States, the number of influenza-associated deaths might be increasing in part because the number of older persons is increasing (ACIP, MMWR, 2005).

In 2004, approximately 88 million persons in the United States were included in one or more target groups for flu shots: 36 million persons aged >65 years, 1.6 million long-term--care facility residents, 6 million children aged 6--23 months, 42 million persons aged 2--64 years with one or more conditions associated with an increased risk for influenza-related complications, and 4 million pregnant women (CDC, National Immunization Program, unpublished data, 2005).
Table 1. Estimated influenza vaccination coverage among all children and adults, by selected age groups and race/ethnicity, (United States, National Flu Survey, March 2011).

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Coverage</th>
<th>Mean ± SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>4,695</td>
<td>37.7 ± 8.1</td>
</tr>
<tr>
<td>Non-Hispanic, White only</td>
<td>25,839</td>
<td>45.5 ± 3.4</td>
</tr>
<tr>
<td>Non-Hispanic, Black only</td>
<td>4,908</td>
<td>35.5† ± 11.8</td>
</tr>
<tr>
<td>Non-Hispanic, Other or multiple race</td>
<td>2,671</td>
<td>32.9 ± 9.0</td>
</tr>
</tbody>
</table>

In general, rates of influenza vaccinations vary by race and ethnicity. Among adults aged 50-64, non-Hispanic whites were 8.1% more likely than non-Hispanic blacks and 8.2% more likely than Hispanics to have been vaccinated (CDC, 2002). For adults aged 65 and older, non-Hispanic whites were 18.4% more likely than non-Hispanic blacks and 13.2% more likely than Hispanics to have received an influenza vaccination (CDC, 2002). The need exists for cultural and linguistically appropriate immunization outreach methods for older adults and practitioners. A recent study observing community-dwelling adults found that people were more likely to be immunized for pneumococcal and influenza diseases if they claimed English as their primary language (Farmer, et al., 2011).

Efficacy and effectiveness of the inactivated vaccine in adults aged >65 years: A newly approved inactivated trivalent vaccine containing 60 mcg of hemagglutinin antigen per influenza vaccine virus strain (Fluzone High-Dose [sanofi pasteur]) is an alternative inactivated vaccine for persons aged ≥65 years. Persons aged ≥65 years can be administered any of the standard-dose trivalent influenza vaccine (TIV) preparations or Fluzone High-Dose. Persons aged ≥65 years can be administered either standard-dose TIV 15 (mcg per vaccine strain) or the newly licensed TIV containing 60 mcg HA antigen per vaccine strain (sanofi pasteur). TIV is licensed for use in persons with high-risk conditions. ACIP recommends that all persons aged ≥65 years receive an inactivated 2010–11 seasonal influenza vaccination but has not expressed a preference for Fluzone High-Dose or any other inactivated influenza vaccine for use in persons aged ≥65 years. Whether or not the higher postvaccination immune responses observed among Fluzone High-Dose vaccine recipients will result in greater protection against influenza illness is not known. High-dose vaccine should not be administered to persons aged <65 years (ACIP 2010).

1c.5 Quantity of Studies in the Body of Evidence (Total number of studies, not articles): Refer to ACIP; http://www.cdc.gov/vaccines/recs/acip/

1c.6 Quality of Body of Evidence (Summarize the certainty or confidence in the estimates of benefits and harms to patients across studies in the body of evidence resulting from study factors. Please address: a) study design/flaws; b) directness/indirectness of the evidence to this measure (e.g., interventions, comparisons, outcomes assessed, population included in the evidence); and c) imprecision/wide confidence intervals due to few patients or events): Good quality of evidence based on consistency of guideline and evidence review.

1c.7 Consistency of Results across Studies (Summarize the consistency of the magnitude and direction of the effect): Refer to ACIP; http://www.cdc.gov/vaccines/recs/acip/

1c.8 Net Benefit (Provide estimates of effect for benefit/outcome; identify harms addressed and estimates of effect; and net benefit - benefit over harms): Refer to ACIP; http://www.cdc.gov/vaccines/recs/acip/

1c.9 Grading of Strength/Quality of the Body of Evidence. Has the body of evidence been graded? No

1c.10 If body of evidence graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias:

1c.11 System Used for Grading the Body of Evidence: Other

1c.12 If other, identify and describe the grading scale with definitions: N/A.
1c.13 Grade Assigned to the Body of Evidence:

1c.14 Summary of Controversy/Contradictory Evidence:  No contradictory evidence or controversy.

1c.15 Citations for Evidence other than Guidelines(Guidelines addressed below):


12. (CDC. Emerging Infections Program. Unpublished data) (June 2011)


16. ACIP Prevention and Control of Influenza with Vaccines Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2010 http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5908a1.htm?s_cid=rr5908a1_e


1c.16 Quote verbatim, the specific guideline recommendation (Including guideline # and/or page #):

ACIP 2010 – Prevention and Control of Influenza with Vaccines

The 2010-11 influenza season is the first season for which influenza vaccination is recommended for all persons 6 months of age and older by The Advisory Committee on Immunization Practices (ACIP). Annual influenza vaccination is the most effective method for preventing influenza virus infection and its complications. Annual vaccination with the most up-to-date strains predicted on the basis of viral surveillance data is recommended. Influenza vaccine is recommended for all persons aged ≥6 months who do not have contraindications to vaccination. The 2010-11 influenza vaccine protects against influenza A (H3N2), influenza B, and 2009 influenza A (H1N1) viruses. This represents an expansion of the previous recommendations for annual vaccination of all adults aged 19---49 years and is supported by evidence that annual influenza vaccination is a safe and effective preventive health action with potential benefit in all age groups.

ACIP recommends that all persons aged ≥65 years receive an inactivated 2010--11 seasonal influenza vaccination but has not expressed a preference for Fluzone High-Dose or any other inactivated influenza vaccine for use in persons aged ≥65 years. Timing: Vaccination efforts should continue throughout the season, because the duration of the influenza season varies and influenza might not appear in certain communities until February or March. Providers should offer influenza vaccine routinely, and organized vaccination campaigns should continue throughout the influenza season, including after influenza activity has begun in the community. Vaccine administered in December or later, even if influenza activity has already begun, is likely to be beneficial in the majority of influenza seasons. The majority of adults have antibody protection against influenza virus infection within 2 weeks after vaccination.

Rationale: Influenza viruses can cause disease among persons in any age group, but rates of infection are highest among children (1--3). During these annual epidemics, rates of serious illness and death are highest among persons aged ≥65 years, children aged <2 years, and persons of any age who have medical conditions that place them at increased risk for complications from influenza (1,4,5). Influenza epidemics were associated with estimated annual averages of approximately 36,000 deaths during 1990--1999 and approximately 226,000 hospitalizations during 1979—2001 (Thompson 2004).

1c.17 Clinical Practice Guideline Citation: ACIP Prevention and Control of Influenza with Vaccines Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2010
http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5908a1.htm?s_cid=rr5908a1_e

1c.18 National Guideline Clearinghouse or other URL:
http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5908a1.htm?s_cid=rr5908a1_e

1c.19 Grading of Strength of Guideline Recommendation. Has the recommendation been graded? No

1c.20 If guideline recommendation graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias:

1c.21 System Used for Grading the Strength of Guideline Recommendation: Other

1c.22 If other, identify and describe the grading scale with definitions: The strength of guideline recommendation was not graded

1c.23 Grade Assigned to the Recommendation:

1c.24 Rationale for Using this Guideline Over Others: It is NCQA policy to use guidelines which are evidence-based, applicable to physicians and other healthcare providers, and developed by a national specialty organization or government agency.
consistency of the body of evidence?
1c.25 Quantity: High  1c.26 Quality: High 1c.27 Consistency: High

Was the threshold criterion, Importance to Measure and Report, met?  
(1a & 1b must be rated moderate or high and 1c yes)  Yes [ ] No [ ]
Provide rationale based on specific subcriteria:

For a new measure if the Committee votes NO, then STOP.  
For a measure undergoing endorsement maintenance, if the Committee votes NO because of 1b. (no opportunity for improvement), it may be considered for continued endorsement and all criteria need to be evaluated.

2. RELIABILITY & VALIDITY - SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria) 
Measure testing must demonstrate adequate reliability and validity in order to be recommended for endorsement. Testing may be conducted for data elements and/or the computed measure score. Testing information and results should be entered in the appropriate field. Supplemental materials may be referenced or attached in item 2.1. See guidance on measure testing.

S.1 Measure Web Page (In the future, NQF will require measure stewards to provide a URL link to a web page where current detailed specifications can be obtained). Do you have a web page where current detailed specifications for this measure can be obtained?  No

S.2 If yes, provide web page URL:

2a. RELIABILITY. Precise Specifications and Reliability Testing:  H [ ] M [ ] L [ ] I [ ]

2a1. Precise Measure Specifications. (The measure specifications precise and unambiguous.)

2a1.1 Numerator Statement (Brief, narrative description of the measure focus or what is being measured about the target population, e.g., cases from the target population with the target process, condition, event, or outcome):
The number of patients in the denominator who responded, “Yes” to the question “Have you had a flu shot since September 1, YYYY?

*YYYY = the measurement year (2010 for the survey fielded in 2011).

2a1.2 Numerator Time Window (The time period in which the target process, condition, event, or outcome is eligible for inclusion): Currently enrolled at the time the survey is completed.

2a1.3 Numerator Details (All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, codes with descriptors, and/or specific data collection items/responses: No codes are used to collect the numerator for the survey measure.

2a1.4 Denominator Statement (Brief, narrative description of the target population being measured):
FSO (65+) – The number of members who responded “Yes” or “No” to the question, “Have you had a flu shot since September 1, YYYY?”

FSA (50-64) – The number of members with a Flu Shots for Adults Ages 50-64 Eligibility Flag of “Eligible” who responded “Yes” or “No” to the question “Have you had a flu shot since September 1, YYYY?”

*YYYY = the measurement year (2010 for the survey fielded in 2011).

2a1.5 Target Population Category (Check all the populations for which the measure is specified and tested if any):  Adult/Elderly Care

2a1.6 Denominator Time Window (The time period in which cases are eligible for inclusion):
Currently enrolled at the time the survey is completed.
NQF #0039 Flu Shots for Adults Ages 50 and Over

2a1.7 Denominator Details (All information required to identify and calculate the target population/denominator such as definitions, codes with descriptors, and/or specific data collection items/responses):

FSA (50-64) – The health plan assigns a Flu Shots for Adults Ages 50–64 Eligibility Flag for each member in the CAHPS 4.0H adult survey sample frame data file.

Flu Shots for Adults Ages 50–64 Eligibility Flag
1 = Eligible (the member was born on or between September 2, 1945, and September 1, 1960)
2 = Ineligible (the member was born before September 2, 1945, or after September 1, 1960)

The Flu Shots for Adults Ages 50–64 Eligibility Flag identifies the population eligible for the Flu Shots for Adults Ages 50–64 measure. NCQA calculates the results using responses from respondents with a flag of “1 = Eligible.” The use of an eligibility flag protects member confidentiality (using the date of birth could result in a breach of confidentiality).

FSO (65+) - Collected by CMS using the Medicare CAHPS Survey.

2a1.8 Denominator Exclusions (Brief narrative description of exclusions from the target population):

Does not meet age criteria.

2a1.9 Denominator Exclusion Details (All information required to identify and calculate exclusions from the denominator such as definitions, codes with descriptors, and/or specific data collection items/responses):

2a1.10 Stratification Details/Variables (All information required to stratify the measure results including the stratification variables, codes with descriptors, definitions, and/or specific data collection items/responses):

2a1.11 Risk Adjustment Type (Select type. Provide specifications for risk stratification in 2a1.10 and for statistical model in 2a1.13): No risk adjustment or risk stratification 2a1.12 If "Other," please describe:

2a1.13 Statistical Risk Model and Variables (Name the statistical method - e.g., logistic regression and list all the risk factor variables. Note - risk model development should be addressed in 2b4.):

2a1.14-16 Detailed Risk Model Available at Web page URL (or attachment). Include coefficients, equations, codes with descriptors, definitions, and/or specific data collection items/responses. Attach documents only if they are not available on a webpage and keep attached file to 5 MB or less. NQF strongly prefers you make documents available at a Web page URL. Please supply login/password if needed:

2a1.17-18. Type of Score: Other  FSA - Rolling Average Methodology, FSO - Rate

2a1.19 Interpretation of Score (Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score): Better quality = Higher score

2a1.20 Calculation Algorithm/Measure Logic (Describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; aggregating data; risk adjustment; etc.):

FSA (50-64) - A rolling average is calculated using the following formula.
Rate = (Year 1 Numerator + Year 2 Numerator) / (Year 1 Denominator + Year 2 Denominator)
• If the denominator is less than 100, NCQA assigns a measure result of NA
• If the denominator is 100 or more, NCQA calculates a rate
If the health plan did not report results for the current year (Year 2) NCQA assigns a measure result of NR.

If the health plan did not report results in the prior year (Year 1), but reports results for the current year and achieves a denominator of 100 or more, NCQA calculates a rate; if the denominator is less than 100, NCQA assigns a measure result of NA.

Changes in submission entity: If a health plan reports HMO and POS products separately in the prior year and reports HMO/POS combined in the current year, Year 1 numerators and denominators are created by combining data from the separate HMO and POS results. The combined Year 1 numerators and denominators are used for the rolling average calculations. Alternatively, if the health plan reports HMO/POS combined in the prior year and reports HMO and POS separately in the current year, the reporting entity is considered to be changed and prior year data are not used for rolling average calculations.

FSO (65+): Survey method for Medicare CAHPS does not specify a calculation algorithm. Specified as a numerator and denominator question.

2a1.21-23 Calculation Algorithm/Measure Logic Diagram URL or attachment:

2a1.24 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):

2a1.25 Data Source (Check all the sources for which the measure is specified and tested). If other, please describe:

- Paper Records

2a1.26 Data Source/Data Collection Instrument (Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.): FSA (50-64) - This is a survey measure; the sampling guidelines for this measure align with CAHPS survey implementation methodology. CAHPS,=collects electronically

Prior to sampling, the survey vendor confirms with the health plan that an NCQA Certified HEDIS Compliance Auditor has verified the integrity of the sample frame.

For each HEDIS/CAHPS survey administered, the survey vendor draws a random sample of members, employing the required sample size as indicated in Table S-3. In a health plan with fewer eligible members than the required sample size, the sample includes the health plan's entire eligible population.

Table S-3: Survey Sample Sizes

<table>
<thead>
<tr>
<th>Survey Type</th>
<th>Required Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult commercial</td>
<td>1,100</td>
</tr>
<tr>
<td>Adult Medicaid</td>
<td>1,350</td>
</tr>
<tr>
<td>Child commercial</td>
<td>900</td>
</tr>
<tr>
<td>Child Medicaid</td>
<td>1,650</td>
</tr>
</tbody>
</table>

To reduce respondent burden, the survey vendor deduplicates samples so that only one adult member per household is included in the adult sample and only one child member per household is included in the child sample.

FSO (65+) - Beginning in 2011, CMS will require all MA and PDP contracts with at least 600 enrollees to contract with approved survey vendors to collect and report CAHPS survey data following a specific timeline and protocols established by CMS. The CAHPS surveys will be conducted at the contract level for Medicare Advantage only (MA), Medicare Advantage Prescription Drug (MA-PD), and Stand-Alone Prescription Drug plans (PDPs). CMS will provide the sample for each contract.

2a1.27-29 Data Source/data Collection Instrument Reference Web Page URL or Attachment: URL


2a1.30-32 Data Dictionary/Code Table Web Page URL or Attachment:
2a1.33 **Level of Analysis** (Check the levels of analysis for which the measure is specified and tested): Clinician: Group/Practice, Clinician: Individual, Clinician: Team, Health Plan, Integrated Delivery System

2a1.34-35 **Care Setting** (Check all the settings for which the measure is specified and tested): Ambulatory Care: Clinician Office, Hospital/Acute Care Facility, Pharmacy, Post Acute/Long Term Care Facility: Nursing Home/Skilled Nursing Facility, Post Acute/Long Term Care Facility: Rehabilitation

2a2. **Reliability Testing.** (Reliability testing was conducted with appropriate method, scope, and adequate demonstration of reliability.)

2a2.1 **Data/Sample** (Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):
This is HEDIS 2010 data.

2a2.2 **Analytic Method** (Describe method of reliability testing & rationale):
Reliability was estimated by using the beta-binomial model. Beta-binomial is a better fit when estimating the reliability of simple pass/fail rate measures as is the case with most HEDIS® health plan measures. The beta-binomial model assumes the plan score is a binomial random variable conditional on the plan’s true value that comes from the beta distribution. The beta distribution is usually defined by two parameters, alpha and beta. Alpha and beta can be thought of as intermediate calculations to get to the needed variance estimates. The beta distribution can be symmetric, skewed or even U-shaped.

Reliability used here is the ratio of signal to noise. The signal in this case is the proportion of the variability in measured performance that can be explained by real differences in performance. A reliability of zero implies that all the variability in a measure is attributable to measurement error. A reliability of one implies that all the variability is attributable to real differences in performance. The higher the reliability score, the greater is the confidence with which one can distinguish the performance of one plan from another. A reliability score greater than or equal to 0.7 is considered very good.

2a2.3 **Testing Results** (Reliability statistics, assessment of adequacy in the context of norms for the test conducted):
FSA – 0.908015 (Reliability Statistic)
FSO - 0.965238 (Reliability Statistic)

2b. **VALIDITY.** Validity, Testing, including all Threats to Validity: H ☐ M ☐ L ☐ I ☐

2b1.1 Describe how the measure specifications (measure focus, target population, and exclusions) are consistent with the evidence cited in support of the measure focus (criterion 1c) and identify any differences from the evidence:
Consistent-no difference

2b2. **Validity Testing.** (Validity testing was conducted with appropriate method, scope, and adequate demonstration of validity.)

2b2.1 **Data/Sample** (Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):
Refer to Section 1b.2 for 3-year trending data that speaks to the validity of the measure.

2b2.2 **Analytic Method** (Describe method of validity testing and rationale; if face validity, describe systematic assessment):
NCQA tested the measure for face validity using a panel of stakeholders with specific expertise in measurement and child health care. This panel included representatives from key stakeholder groups, including pediatricians, family physicians, health plans, state Medicaid agencies, CMS and researchers. Experts reviewed the results of the field test and assessed whether the results were consistent with expectations, whether the measure represented quality care, and whether we were measuring the most important aspect of care in this area.

2b2.3 **Testing Results** (Statistical results, assessment of adequacy in the context of norms for the test conducted; if face validity, describe results of systematic assessment):
Cognitive testing provides useful information about respondents’ comprehension of the questions, their ability to answer the questions, and the adequacy of the response choices. It also helps identify words that can be used to describe health care
providers accurately and consistently across a range of consumers (e.g., commercially insured, Medicaid, fee-for-service, managed care, lower socioeconomic status (SES), middle SES, low literacy, higher literacy) and explores whether key words and concepts work equally well in both English and Spanish.

Field tests and psychometric analyses provide information about the items’ reliability and validity. Many existing questionnaires about health care have been tested primarily or exclusively using a psychometric approach, but the CAHPS team views the combination of cognitive and psychometric approaches as essential to producing the best possible survey instrument.

During development of the measure, the Geriatrics MAP concluded that self-reported information is the most appropriate method to obtain pneumococcal vaccination status because this vaccine is rendered infrequently, or may be rendered several years prior to enrollment in the health plan, or may be rendered outside the health plan. Given the factors above, documentation of the vaccine is often missing from administrative databases and medical charts.

Self-reported immunization status has long been recognized as a valid method to gather and assess vaccination status of populations. The NHIS and BRFSS contain items on pneumonia and influenza vaccination status. The accuracy of self-reported information is difficult to ascertain because evidence of the immunization may be missing from a patient’s medical record.

### POTENTIAL THREATS TO VALIDITY

All potential threats to validity were appropriately tested with adequate results.

2b3. Measure Exclusions. (Exclusions were supported by the clinical evidence in 1c or appropriately tested with results demonstrating the need to specify them.)

2b3.1 Data/Sample for analysis of exclusions (Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):

2b3.2 Analytic Method (Describe type of analysis and rationale for examining exclusions, including exclusion related to patient preference):

2b3.3 Results (Provide statistical results for analysis of exclusions, e.g., frequency, variability, sensitivity analyses):

2b4. Risk Adjustment Strategy. (For outcome measures, adjustment for differences in case mix (severity) across measured entities was appropriately tested with adequate results.)

2b4.1 Data/Sample (Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):

2b4.2 Analytic Method (Describe methods and rationale for development and testing of risk model or risk stratification including selection of factors/variables):

2b4.3 Testing Results (Statistical risk model: Provide quantitative assessment of relative contribution of model risk factors; risk model performance metrics including cross-validation discrimination and calibration statistics, calibration curve and risk decile plot, and assessment of adequacy in the context of norms for risk models. Risk stratification: Provide quantitative assessment of relationship of risk factors to the outcome and differences in outcomes among the strata):

2b4.4 If outcome or resource use measure is not risk adjusted, provide rationale and analyses to justify lack of adjustment: The measure assesses flu vaccination in a general population of 50+ year olds; risk adjustment is not indicated.

2b5. Identification of Meaningful Differences in Performance. (The performance measure scores were appropriately analyzed and discriminated meaningful differences in quality.)

2b5.1 Data/Sample (Describe the data or sample including number of measured entities; number of patients; dates of data; if a
sample, characteristics of the entities included):

2b5.2 Analytic Method (Describe methods and rationale to identify statistically significant and practically/meaningfully differences in performance):
Comparison of means and percentiles; analysis of variance against established benchmarks.

2b5.3 Results (Provide measure performance results/scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance):
Refer to 1b.2

2b6. Comparability of Multiple Data Sources/Methods. (If specified for more than one data source, the various approaches result in comparable scores.)

2b6.1 Data/Sample (Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):
There are no data comparability issues since CAHPS 4.0H, Adult Version and the Medicare CAHPS survey are standardized.

2b6.2 Analytic Method (Describe methods and rationale for testing comparability of scores produced by the different data sources specified in the measure):

2b6.3 Testing Results (Provide statistical results, e.g., correlation statistics, comparison of rankings; assessment of adequacy in the context of norms for the test conducted):

2c. Disparities in Care: H□ M□ L□ I□ NA□ (If applicable, the measure specifications allow identification of disparities.)

2c.1 If measure is stratified for disparities, provide stratified results (Scores by stratified categories/cohorts): The measure is not stratified to detect disparities.

2c.2 If disparities have been reported/identified (e.g., in 1b), but measure is not specified to detect disparities, please explain:
NCQA has participated with IOM and others in attempting to include information on disparities in measure data collection. However, at the present time, this data, at all levels (claims data, paper chart review, and electronic records), is not coded in a standard manner, and is incompletely captured. There are no consistent standards for what entity (physician, group, plan, employer) should capture and report this data. While “requiring” reporting of the data could push the field forward, it has been our position that doing so would create substantial burden with inability to use the data because of its inconsistency. At the present time, we agree with the IOM report that disparities are best considered by the use of zip code analysis which has limited applicability in most reporting situations. At the health plan level, for HEDIS health plan data collection, NCQA does have extensive data related to our use of stratification by insurance status (Medicare, Medicaid and private-commercial) and would strongly recommend this process where the data base supporting the measurement includes this information. However, we believe that the measure specifications should NOT require this since the measure is still useful where the data needed to determine disparities cannot be ascertained from the data available.

2.1-2.3 Supplemental Testing Methodology Information:

Steering Committee: Overall, was the criterion, Scientific Acceptability of Measure Properties, met? (Reliability and Validity must be rated moderate or high) Yes□ No□
Provide rationale based on specific subcriteria:
If the Committee votes No, STOP

3. USABILITY
See Guidance for Definitions of Rating Scale: H=High; M=Moderate; L=Low; I=Insufficient; NA=Not Applicable
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)**

### C.1 Intended Purpose/Use

**Check all the purposes and/or uses for which the measure is intended:**
- Payment Program, Public Health/Disease Surveillance, Public Reporting, Quality Improvement with Benchmarking (external benchmarking to multiple organizations), Regulatory and Accreditation Programs

### 3.1 Current Use

**Check all that apply; for any that are checked, provide the specific program information in the following questions:**
- Public Reporting, Payment Program, Public Health/Disease Surveillance, Regulatory and Accreditation Programs, Quality Improvement with Benchmarking (external benchmarking to multiple organizations)

#### 3a. Usefulness for Public Reporting

**Check all that apply; for any that are checked, provide the specific program information in the following questions:**
- Public Reporting, Payment Program, Public Health/Disease Surveillance, Regulatory and Accreditation Programs, Quality Improvement with Benchmarking (external benchmarking to multiple organizations)

**H** | **M** | **L** | **I**
---|---|---|---

**The measure is meaningful, understandable and useful for public reporting.**

- **3a.1. Use in Public Reporting - disclosure of performance results to the public at large**
  - If used in a public reporting program, provide name of program(s), locations, Web page URL(s). If not publicly reported in a national or community program, state the reason AND plans to achieve public reporting, potential reporting programs or commitments, and timeline, e.g., within 3 years of endorsement: **[For Maintenance – If not publicly reported, describe progress made toward achieving disclosure of performance results to the public at large and expected date for public reporting; provide rationale why continued endorsement should be considered.]**

  The Medicare CAHPS surveys produce comparable data on the patient’s experience of care that allow objective and meaningful comparisons between MA and PDP contracts on domains that are important to consumers. The survey data are publicly reported by contract. The results from the Medicare CAHPS surveys are published in the Medicare & You handbook and on the Medicare Options Compare Web site (www.medicare.gov). Public reporting of the survey results is designed to create incentives for contracts to improve their quality of care and also serves to enhance public accountability in health care by increasing the transparency of the quality of care provided by Medicare contracts. The measures derived from the surveys are used by beneficiaries to help choose a MA or PDP contract, help contracts identify areas for quality improvement, and allow the public and research community to assess Medicare program performance. Medicare administrators and policymakers also rely on the measures to manage the program; devise, implement, and monitor quality improvement efforts; and make policy decisions.

  NCQA uses the CAHPS survey to assess member experience with care as part of the Satisfaction With Experience of Care domain of HEDIS® (the Health Plan Employer Data and Information Set), a set of health plan performance measures used for both public reporting and accreditation.

- **3a.2. Provide a rationale for why the measure performance results are meaningful, understandable, and useful for public reporting.** If usefulness was demonstrated (e.g., focus group, cognitive testing), describe the data, method, and results:
  - Longstanding reporting by NCQA on its website, the annual State of HealthCare Quality Report and Quality Compass database.

- **3.2 Use for other Accountability Functions (payment, certification, accreditation).** If used in a public accountability program, provide name of program(s), locations, Web page URL(s): Not Applicable. NCQA reports on performance of health plans and providers nationally. Our results are not part of an internal NCQA QI program.

#### 3b. Usefulness for Quality Improvement

**Check all that apply; for any that are checked, provide the specific program information in the following questions:**
- Public Reporting, Payment Program, Public Health/Disease Surveillance, Regulatory and Accreditation Programs, Quality Improvement with Benchmarking (external benchmarking to multiple organizations)

**H** | **M** | **L** | **I**
---|---|---|---

**The measure is meaningful, understandable and useful for quality improvement.**

- **3b.1. Use in QI.** If used in quality improvement program, provide name of program(s), locations, Web page URL(s): **[For Maintenance – If not used for QI, indicate the reasons and describe progress toward using performance results for improvement].**

  This measure is a measure in the Healthcare Effectiveness Data and Information Set (HEDIS) and is used in NCQA’s Health Plan Accreditation program, and in a broad range of state, regional and Federal QI and accountability programs.

  - Since 1999, the National Center for Quality Assurance (NCQA) has required CAHPS Health Plan survey results from health plans seeking accreditation and/or submitting data as part of the Health Plan-Employer Data and Information Set (HEDIS®). Similarly, results of the ECHO® Survey are required for managed behavioral healthcare organizations seeking accreditation.

  - URAC, which accredits preferred provider organizations (PPOs), recommends the CAHPS Health Plan Survey and has integrated
### 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: H M L I

##### 4a.1-2 How are the data elements needed to compute measure scores generated? *(Check all that apply).*  
Data used in the measure are:  
- Other Survey

#### 4b. Electronic Sources: H M L I

##### 4b.1 Are the data elements needed for the measure as specified available electronically *(Elements that are needed to compute measure scores are in defined, computer-readable fields):*  
ALL data elements are in a combination of electronic sources

##### 4b.2 If ALL data elements are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources:

#### 4c. Susceptibility to Inaccuracies, Errors, or Unintended Consequences: H M L I

##### 4c.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measurement identified during testing and/or operational use and strategies to prevent, minimize, or detect. If audited, provide results:  
This measure has detailed, precise specifications that clearly define the numerator, denominator, data sources, allowable values, methods of measurement and method of reporting. All measures that are used in NCQA programs are audited.

#### 4d. Data Collection Strategy/Implementation: H M L I

##### 4d.1 Please check if either of the following apply *(regarding proprietary measures):*  
- Proprietary measure

Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues *(e.g., fees for use of proprietary measures):*  
This is a survey measure and found to be logistically feasible as administered through CAHPS and Medicare CAHPS. This measure does not pose a threat to confidentiality. The eligibility criteria are based solely on age. The usual methods employed to protect confidentiality of data are expected to be appropriate for this measure. Information about individual members cannot be identified by public reporting.

Provide rationale based on specific subcriteria:

#### OVERALL SUITABILITY FOR ENDORSEMENT

Does the measure meet all the NQF criteria for endorsement?  
- Yes ☐  
- No ☐  

Rationale:  

*If the Committee votes No, STOP.*

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See Guidance for Definitions of Rating Scale: H=High; M=Moderate; L=Low; I=Insufficient; NA=Not Applicable
If the Committee votes Yes, the final recommendation is contingent on comparison to related and competing measures.

5. COMPARISON TO RELATED AND COMPETING MEASURES

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

5.1 If there are related measures (either same measure focus or target population) or competing measures (both the same measure focus and same target population), list the NQF # and title of all related and/or competing measures:

0041 : Influenza Immunization

5a. Harmonization

5a.1 If this measure has EITHER the same measure focus OR the same target population as NQF-endorsed measure(s): Are the measure specifications completely harmonized? Yes

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

5b. Competing Measure(s)

5b.1 If this measure has both the same measure focus and the same target population as NQF-endorsed measure(s): Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible):

CONTACT INFORMATION


Co.2 Point of Contact: Bob, Rehm, Assistant Vice President, Performance Measurement, Rehm@ncqa.org, 202-955-1728-

Co.3 Measure Developer if different from Measure Steward: National Committee for Quality Assurance, 1100 13th Street NW, Suite 1000, Washington, District Of Columbia, 2005

Co.4 Point of Contact: Bob, Rehm, Assistant Vice President, Performance Measurement, Rehm@ncqa.org, 202-955-1728-

Co.5 Submitter: Dawn, Alayon, MPH, CPH, Senior Health Care Analyst, alayon@ncqa.org, 202-955-3533-, National Committee for Quality Assurance

Co.6 Additional organizations that sponsored/participated in measure development:

Co.7 Public Contact: Bob, Rehm, Rehm@ncqa.org, 202-955-1728-, National Committee for Quality Assurance

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.

Geriatric Measurement Advisory Panel

The NCQA Geriatric Measurement Advisory Group advised NCQA during measure development. They evaluated the way staff specified measures, assessed the content validity of measures, and reviewed field test results. As you can see from the list, the
MAP consisted of a balanced group of experts, including representatives from health plans, government agencies, universities and health care delivery organizations. Note that, in addition to the MAP, we also vetted these measures with a host of other stakeholders, as is our process. Thus, our measures are the result of consensus from a broad and diverse group of stakeholders, in addition to the MAP.

**GMAP Members**
- Wade Aubry, BCBS Association
- Arlene Bierman, University of Toronto and St. Michael's Hospital
- Joyce Dubow, AARPPeter Hollmann, BCBS of Rhode Island
- Jerry Johnson, University of Pennsylvania
- David Martin, Ovations
- Steven Phillips, Sierra Health Services, Inc.
- Scott Sarran, BCBS of Illinois
- Eric G Tangalos, Mayo Clinic
- Joan Weiss, Health Resources and Services Administration
- Neil Wenger, UCLA Division of General Internal Medicine and RAND

**CMS/AHRQ Liaisons**
- Marsha Davenport
- Jeffrey Kelman
- Elizabeth Goldstein
- Morgot Blige Holloway
- Rosemary Lee
- Alice Lee Martin
- Chris Haffer
- Sonya Bowen
- Mary B. Barton

Describe the group’s role in measure development.
The NCQA Geriatric Measurement Advisory Group advised NCQA during measure development. They evaluated the way staff specified measures, assessed the content validity of measures, and reviewed field test results. As you can see from the list, the MAP consisted of a balanced group of experts, including representatives from medical research and education, health plans, the federal Medicare program, and older adult associations. Note that, in addition to the MAP, we also vetted these measures with a host of other stakeholders, as is our process. Thus, our measures are the result of consensus from a broad and diverse group of stakeholders, in addition to the MAP.

<table>
<thead>
<tr>
<th>Ad.2</th>
<th>If adapted, provide title of original measure, NQF # if endorsed, and measure steward. Briefly describe the reasons for adapting the original measure and any work with the original measure steward:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure Developer/Steward Updates and Ongoing Maintenance</td>
<td></td>
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</tbody>
</table>

Ad.3 Year the measure was first released:
Ad.4 Month and Year of most recent revision: 07, 2011
Ad.5 What is your frequency for review/update of this measure?
Ad.6 When is the next scheduled review/update for this measure? 07, 2013

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| Ad.9 | Additional Information/Comments: |

**Date of Submission (MM/DD/YY):** 07/12/2011