Arizona Health Care Cost Containment System (AHCCCS)
Arizona Long Term Care System (ALTCS) Performance Measure:
Influenza Immunization

**Background:**

People who are at high risk of having serious complications from influenza should be vaccinated annually. Those at high risk include people older than 50 years, people with certain chronic medical conditions (such as asthma, cardiovascular disease and diabetes) or whose immune systems are suppressed, and residents of nursing homes or other long-term care facilities.

Epidemics of influenza typically occur during the winter months, and have been associated with an average of 226,000 hospitalizations and approximately 36,000 deaths per year in the United States. Rates of serious illness and death are highest among persons age 65 years and older.¹

Vaccination is a cost-effective way of preventing the flu, and reducing the risk of hospitalization and death among the elderly and those with chronic illness. According to the Centers for Disease Control and Prevention (CDC), flu shots can be 50- to 60-percent effective in preventing hospitalization or pneumonia due to influenza among elderly nursing-home residents, and 80-percent effective in preventing death from the flu. Among elderly persons not living in nursing homes or similar chronic-care facilities, influenza vaccine is 30- to 70-percent effective in preventing hospitalization for pneumonia and influenza.¹ Thus, improving rates of influenza vaccination has significant potential to reduce death and disease, as well as costs for inpatient care among this population.

Influenza vaccination levels increased substantially during the 1990s, but further improvements in vaccination coverage levels are needed, especially among persons younger than 65 years with known risk factors for influenza complications, as well as among people who are of African-American or Hispanic descent age 65 years and older.

AHCCCS previously measured influenza vaccination rates among Arizona Long Term Care System (ALTCS) Contractors as a Performance Measure. The standard was dropped in 2002 because coverage was deemed to be at consistently high levels. However, there was a relatively high percentage of members or their authorized representatives refusing vaccination. Recent measurement of influenza vaccination by individual Contractors indicates there is still room for improvement in flu vaccination levels among ALTCS members, with reported rates in CYE 2006 of less than 80 percent among members in nursing homes and as low as 40 percent among members in home and community based settings.
Nationally, the self-reported influenza vaccination rate during the 2006-07 season was 68.8 percent among people 65 years and older, followed by 42.2 percent among people 50 to 64 years, according to the CDC. The self-reported vaccination rate among people 18 through 49 years with high-risk conditions was only 37.3 percent.

The U.S. Department of Health and Human Services has set *Healthy People 2010* objectives for influenza vaccination of 90 percent for residents of long-term care facilities and 60 percent for people 18 through 64 years with high-risk conditions.

This performance measure is part of AHCCCS’ continuing program to improve the quality of care provided to members, as well as transparency and accountability in areas of quality among ALTCS contracted health plans (Contractors), and to respond to and collaborate with state and federal initiatives.

**Purpose:**

This measure is designed to evaluate the performance of ALTCS Contractors serving the Elderly/Physically Disabled (ALTCS E/PD) population in ensuring that adult members are vaccinated against influenza, and to support good health outcomes among ALTCS members through high levels of vaccination coverage.

**Study Question:**

What is the number and percentage of ALTCS members who received an influenza vaccination during the measurement period, regardless of payer source?

**Measurement Period:**

September 1 through March 31 of the following year

**Population:**

ALTCS E/PD members, including those who are ventilator dependent

**Population Exclusions:**

- Members who enrolled in ALTCS after October 1 of the measurement period
- Members who are not placed in a nursing facility (Q placement) or a home and community based setting (H placement)
- Members who died during the measurement period
- Tribal and Fee-for-service members, because of the inability to accurately collect complete data on these members, who often obtain medical care through Indian Health Services
- Members enrolled with DES/DDD
- Members who had a gap in enrollment between October 1 and March 31 of the following year
- Members younger than 18 years of age
- Members who change Contractors within the measurement period
- E/PD members who receive Acute Care services only
**Population Stratification:**

The population will be stratified by Contractor.

**Sample Frame:**

The sample frame will consist of members who:
- Were continuously enrolled with one ALTCS E/PD Contractor from October 1 through March 31 of the following year with no gaps in enrollment, and were enrolled on the last day of the measurement period
- Were placed in a nursing facility (Q placement) or a home and community based setting (H placement)
- Were at least 18 years old

**Sample Selection:**

The sample frame will be identified through enrollment records using the stated criteria. A statistical software program will be used to select a representative, random sample, using a 95-percent confidence level and a confidence interval of +/-5 percent. An over sampling rate of 10 percent will be utilized.

**Data Sources:**

AHCCCS administrative data will be used to select the sample frame.

AHCCCS will collect service data (influenza vaccinations) for sample members from its encounter system. Contractors will collect additional service data using claims, immunization records, and/or medical records supplied by providers to determine whether vaccinations were administered and reasons why services were not provided (i.e., medical contraindications and other exclusions). The following CPT codes will be used to identify an influenza vaccination from administrative data (claims/encounters):

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>90656</td>
<td>Influenza virus vaccine, split virus, preservative free, when administered to individuals 3 years and older, for intramuscular use</td>
</tr>
<tr>
<td>90658</td>
<td>Influenza virus vaccine, split virus, when administered to individuals 3 years and older, for intramuscular use</td>
</tr>
<tr>
<td>90661</td>
<td>Influenza virus vaccine, derived from cell cultures, subunit, preservative and antibiotic free, for intramuscular use</td>
</tr>
<tr>
<td>90662</td>
<td>Influenza virus vaccine, split virus, preservative free, enhanced immunogenicity via increased antigen content, for intramuscular use</td>
</tr>
<tr>
<td>90663</td>
<td>Influenza virus vaccine, pandemic formulation</td>
</tr>
</tbody>
</table>

*Note: The above vaccine codes may be used in conjunction with CPT codes 90471 and 90472 for immunization administration; however, the code for the vaccine must be included on the claim or encounter.*
Other sources of data may include: CDC patient consent forms signed by members at the time of vaccination showing the specific vaccination and date administered; other immunization records that indicate the type and dates of vaccination and the provider administering the dose; and information provided by SNFs or Assisted Living Facilities (ALFs) on members who received vaccination during the flu season, including copies of immunization sheets or medication administration records that specify the type of vaccination and date administered.

In the future, data collected through the Arizona State Immunization Information System (ASIIS), which does not currently require reporting of immunizations administered to adults, may be used for this measure.

**Data Collection:**

Data will be collected through a hybrid methodology. AHCCCS will initially obtain denominator data and some numerator data (influenza vaccinations) for sample members and provide the sample file in a predetermined electronic format to Contractors, with detailed instructions for collecting additional data.

Contractors will collect additional service and exclusion data from claims, medical records, immunization records and/or other information submitted by providers and enter it on the electronic data file, which will then be returned to AHCCCS. AHCCCS will require Contractors to submit copies of documentation to verify the additional data they collect.

Contractors will be required to return their collected data to AHCCCS in the predetermined electronic format containing the required information.

**Confidentiality Plan:**

AHCCCS and its Contractors maintain compliance with the Health Insurance Portability and Accountability Act (HIPAA) requirements. The Data Analysis and Research (DA&R) Unit maintains the following security and confidentiality protocols:

- To prevent unauthorized access, the sample member file is maintained on a secure, password-protected computer, by the DA&R project lead.
- Only AHCCCS employees who analyze data for this project will have access to study data.
- Requested data are used only for the purpose of performing health care operations, oversight of the health care system, or research.
- Only the minimum amount of necessary information to complete the project is sent to and returned from Contractors.
- Sample files given to Contractors are tracked to ensure that all records are returned.
- Member names are never identified or used in reporting.
- Upon completion, all study information is removed from the computer and placed on a compact disk, which is stored in a secure location.
Quality Assurance Measures:

Data files received back from Contractors will be reviewed to ensure that:

- All members included in the sample sent to Contractors were listed in the returned data files
- Services met numerator criteria for this Performance Measure
- All requested information was provided

Data Validation:

The sample frame will be validated to ensure that members meet criteria for inclusion in the study and that data collected from administrative sources (e.g., AHCCCS encounters) meet numerator criteria. These data will be validated through review of a random sample of members selected for the denominator as well as those not selected, and a random sample of numerator data collected during the initial phase of data collection.

Service data provided by Contractors must be accompanied by documentation of the source data (i.e., a copy of the pertinent section of the medical record, CDC consent form, medication administration sheet, immunization record or a copy/screen print of a claim), including the date(s) of service (medical record data must identify the month, date and year the service was provided).

AHCCCS overall encounter data are validated against medical records on an annual basis. Subject to availability of funds, AHCCCS also may conduct a randomized, double-blind study to evaluate the accuracy and completeness of Contractor-supplied data.

Indicator Description:

The indicator will measure whether one dose of trivalent (inactivated) influenza vaccine (TIV) was administered during the measurement period.

Denominator:

The number of members selected for the sample, minus those who meet the exclusionary criteria.

Denominator Exclusions:

The following denominator exclusions will apply:

- Members who have a severe allergy to chicken eggs, as documented in medical records
- Members who have had a severe reaction to an influenza vaccination in the past, as documented in medical records
- Members who developed Guillain-Barré syndrome within six weeks of getting an influenza vaccine previously, as documented in medical records
- Members who are in a hospice during the measurement period

Numerator:

The number of sample members who received an influenza vaccination

Numerator Exclusions:

Doses of live attenuated influenza vaccine (LAIV), administered by nasal spray, will not be counted.
Goal/Performance Standard: AHCCCS has adopted a goal of 90 percent for annual influenza vaccination among the ALTCS E/PD population. Results of this measurement will be used to establish Minimum Performance Standards for Contractors.

Analysis Plan:
- The numerator will be divided by the denominator to determine the indicator rate.
- Results will be analyzed as a statewide aggregate and by individual Contractor.
- Results will be analyzed by members’ placement; i.e., nursing facility vs. home and community based services (HCBS) settings.
- Results will be analyzed by urban and rural county groups.
- Results also may be analyzed by age groupings; i.e., 18 to 49 years, 50 to 64 years and 65 years or older, as well as any other stratifications deemed appropriate.

Comparative Analysis:
- Results will be compared with prior years to identify changes and trends.
- Results by placement will be compared with each other.
- Rural and urban area results will be compared to identify any significant disparities in geographic area types.
- Individual Contractor results will be compared with each other, the statewide aggregate, and the AHCCCS goal.
- Results may be compared by other stratifications as deemed appropriate (i.e. age, race/ethnicity, gender).
- Results will be compared to the results of any other comparable studies, if available.
- In the future, differences between overall baseline study results and overall remeasurement results will be analyzed for statistical significance and relative change.

Limitations: A large portion of the ALTCS E/PD population also is covered by Medicare and often seeks services outside the AHCCCS system. Because Medicare is the primary payer for these beneficiaries, AHCCCS does not have the ability to collect complete information on these services. In addition, members may receive vaccinations in a variety of settings, including seasonal community vaccination clinics. AHCCCS will require review of medical charts by Contractors to supplement administrative data, and the proportion of data abstracted from medical charts will vary by Contractor. Because Contractors may not collect complete data for members, the actual rate of members vaccinated may be higher than reported. Other unidentified factors besides Contractor interventions may falsely influence results.
Operational Definitions:  

*Live attenuated influenza vaccine (LAIV).* Also referred to as nasal-spray flu vaccine or FluMist®, this vaccine will not count toward the numerator, since it is only approved for use in healthy people ages 2 to 49 years, except pregnant women (healthy” indicates persons who do not have underlying medical conditions that predispose them to influenza complications).

*Influenza vaccination:* Vaccinations may be obtained through AHCCCS EP/D Contractors or from another community source. If the vaccination was provided by another source or payer, and documented by one of the data sources identified as valid for this measurement, the member will be counted as meeting the indicator criteria, unless the claim/encounter or medical record indicates live attenuated influenza vaccine (LAIV), nasal-spray flu vaccine or FluMist. Documentation must specify the date of service, including the month, date and year the vaccine was administered.

References:

1. Centers for Disease Control and Prevention. Prevention and control of influenza. MMWR Recommendations and Reports. 2007: 56(RR06);1-54. Atlanta, 2007. Available at: [http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5606a1.htm?s_cid=rr5606a1_e](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5606a1.htm?s_cid=rr5606a1_e)