

## Arizona Health Care Cost Containment System (AHCCCS)

### Arizona Long Term Care System (ALTCS) Performance Measure: Prevalence of Pressure Ulcers

<b>Background:</b>	<p>Pressure ulcers — also known as pressure sores, bed sores and decubitus ulcers — are injuries to the skin and underlying tissue caused by prolonged pressure on a part of the body, and typically occur over bony prominences in bed- or chair-bound individuals. Unrelieved pressure on the skin squeezes tiny blood vessels, which supply the skin with nutrients and oxygen. When skin is starved of nutrients and oxygen for too long, the tissue dies and a pressure ulcer forms. If a person slides down in a bed or chair, blood vessels can stretch or bend and also cause pressure ulcers.</p> <p>Pressure sores may be painful, take a long time to heal, and cause other complications such as skin and bone infections. These wounds can range in severity from mild (minor skin reddening) to severe (deep craters down to muscle and bone), and are “staged” on a scale of I to IV, with IV the most severe. The most commonly affected sites, comprising approximately 80 percent of wounds, are the pelvic girdle and the heel.</p> <p>A patient with a pressure ulcer has a mortality risk that is 2 to 6 times greater than a patient with intact skin.<sup>1</sup></p> <p>The following factors increase the risk of developing pressure ulcers, and are prevalent among individuals served by the Arizona Long Term Care System (ALTCS):</p> <ul style="list-style-type: none"><li>• Being elderly</li><li>• Inability to move certain parts of the body without assistance, such as after spinal or brain injury, or with a neuromuscular disease, such as multiple sclerosis</li><li>• Being bedridden or in a wheelchair</li><li>• Having a chronic condition, such as diabetes or vascular disease, that prevents areas of the body from receiving proper blood flow</li><li>• Fragile skin and/or urinary or bowel incontinence (moisture next to the skin for long periods of time can cause skin irritation that may lead to skin breakdown)</li><li>• Mental disability from conditions such as dementia and Alzheimer's disease</li></ul> <p>According to the National Pressure Ulcer Advisory Panel, the prevalence of pressure ulcers in institutional settings can be as high as 24 percent, with an average of 1.6 to 2.5 wounds per patient. A meta-analysis of prevalence studies found rates of 2.3 to 28 percent in long-term care settings and 0 to 29 percent in home care settings.<sup>1,2</sup></p>
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	<p>Data published by the Centers for Medicare and Medicaid Services (CMS) show the average rate of pressure ulcers among high-risk nursing facility residents in Arizona to be 12 percent in 2007, compared with a national average of 13 percent. The Arizona average for residents at low risk of developing pressure sores is 3 percent, compared with 2 percent nationally.<sup>3</sup></p> <p>A recent study that involved nursing facilities, Quality Improvement Organizations and CMS demonstrated that a significant reduction in the incidence of pressure sores is possible. Through a collaborative effort, the incidence of the most serious bed sores was reduced by 69 percent in just one year.<sup>4</sup></p> <p>The U.S. Department of Health and Human Services (DHHS) has set a goal to reduce the prevalence of pressure ulcers among all nursing home residents to no more than 8 per 1,000 residents (or 0.8 percent) by the year 2010. However, the rate for 2004, the most recent year for which data are available for Healthy People 2010, is 20 per 1,000 residents (or 2 percent).</p> <p>In order to continue improving transparency and accountability in areas of quality among ALTCS contracted health plans (Contractors), the Arizona Health Care Cost Containment System (AHCCCS) began developing additional ALTCS performance measures in 2007. That same year, Gov. Janet Napolitano issued an Executive Order directing AHCCCS and the Arizona Department of Health Services (ADHS) to “set goals and to take measures to reduce Arizona’s rates of pressure ulcers in nursing homes, with a minimum goal of achieving and/or sustaining rates well below the national average.” This performance measure is part of AHCCCS’ continuing program to improve the quality of care provided to members, as well as respond to and collaborate with state and federal initiatives.</p>
<b>Purpose:</b>	<p>This measure is designed to evaluate the performance of ALTCS Contractors serving the ALTCS Elderly and Physically Disabled (E/PD) population in minimizing the prevalence of pressure ulcers, and to support good health outcomes among these members through preventive measures. It is expected that Contractors will achieve and/or sustain rates for prevalence of pressure ulcers that are below the national average.</p>
<b>Study Question:</b>	<p>What percent of sample members – overall, by Contractor, by placement and by risk status – had pressure ulcers?</p>

<b>Measurement Period:</b>	October 1 through September 30 of the following year
<b>Population:</b>	The population will consist of ALTCS E/PD members, including those who are ventilator dependent
<b>Population Exclusions</b>	<p>The following members will be excluded from the population for sample selection:</p> <ul style="list-style-type: none"> <li>• Members who receive Acute Care services only</li> <li>• Members less than 18 years of age</li> <li>• Members not enrolled on the last day of the study period</li> <li>• Members with a gap in coverage greater than one month</li> <li>• Tribal and Fee-for-service members, due to the inability to collect complete data on these populations</li> <li>• Members enrolled with the Department of Economic Security’s Division of Developmental Disabilities (DES/DDD)</li> <li>• Members who are not placed in a nursing facility or a home and community based setting.</li> <li>• Members who change Contractors within the measurement period.</li> </ul>
<b>Population Stratification</b>	The population will be stratified by Contractor and by risk for developing pressure ulcers.
<b>Sample Frame:</b>	The sample frame will consist of ALTCS E/PD members ages 18 years and older who were continuously enrolled with one ALTCS Contractor during the measurement period, with no more than a one-month gap in enrollment, and who were residing in a nursing facility (Q placement) or a home and community based setting (H placement).
<b>Sample Selection:</b>	A statistical software package will be used to select a random representative sample by Contractor from the sample frame. The sample size will be determined using a 95-percent confidence level and a 5-percent confidence interval, plus an oversample of 10 percent.
<b>Data Sources:</b>	<ul style="list-style-type: none"> <li>• AHCCCS recipient data will be used to select the sample frame.</li> <li>• AHCCCS expects to initially collect pressure ulcer data on residents in nursing facilities using Minimum Data Set (MDS) data from the Centers for Medicare and Medicaid Services (CMS). Based on available data from CMS, these sample members may be classified as high-risk or low-risk. <i>Note: MDS data are stratified by high-risk and low-risk patients. See Operational Definitions in this document.</i></li> <li>• These data will be combined with AHCCCS encounter data to identify whether sample members had pressure ulcers during the measurement period. ICD-9-CM diagnosis codes 707.XX will be used to identify pressure ulcers.</li> </ul>

	<p><i>Note: If MDS data are not available from CMS, AHCCCS will collect data initially from encounters.</i></p> <ul style="list-style-type: none"> <li>• Additional data may be collected from case management and/or provider medical records to identify whether sample members are classified as high-risk or low-risk for developing pressure ulcers. <i>See Operational Definitions in this document.</i></li> <li>• AHCCCS also may collect additional data in the future for home and community based members (HCBS) from the Outcome and Assessment Information Set (OASIS), which is collected by Medicare-approved home health agencies, through CMS.</li> </ul>
<p><b>Data Collection Process:</b></p>	<ul style="list-style-type: none"> <li>• AHCCCS will identify recipients who meet the sample frame criteria from the Recipient Universe of the Prepaid Medical Management Information System (PMMIS) and collect demographic data for the denominator.</li> <li>• After selecting a random, representative sample, AHCCCS expects to collect data from MDS. Any additional numerator data, based on a diagnosis of pressure ulcer, will be collected from the AHCCCS Encounter Universe of PMMIS.</li> <li>• In order to further identify whether sample members had pressure ulcers and are classified as high-risk or low-risk for developing pressure ulcers, AHCCCS may request that Contractors collect additional data from case management and/or provider medical records. If so, AHCCCS will provide Contractors with an electronic file of sample members in a predetermined format, with detailed instructions for collecting additional data.</li> <li>• If directed by AHCCCS, Contractors will collect the additional data and enter it on the electronic data file, which will then be returned to AHCCCS. Contractors will be required to submit documentation from medical records and/or their case management systems to verify the additional data they collect.</li> </ul>
<p><b>Data Quality and Validation:</b></p>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Data files received back from Contractors will be reviewed to ensure that: <ul style="list-style-type: none"> <li>◦ All members included in the sample are listed in the returned data file</li> <li>◦ All requested information has been provided</li> </ul> </li> <li>• 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 or a copy/screen print of case management notes), including the date(s) of entry.</li> <li>• AHCCCS overall encounter data are validated against medical records on an annual basis.</li> <li>• AHCCCS also may conduct a randomized, double-blind study to evaluate the accuracy and completeness of Contractor-supplied data.</li> </ul>

<b>Denominators:</b>	<ol style="list-style-type: none"> <li>1. The number of nursing facility (NF) members selected for the sample who are considered high risk for pressure ulcers, according to the CMS definition used for MDS</li> <li>2. The number of NF members selected for the sample who are considered low risk for pressure ulcers, according to the CMS definition used for MDS</li> <li>3. The number of HCBS members selected for the sample who are considered high risk for pressure ulcers, according to the CMS definition used for MDS</li> <li>4. The number of HCBS members selected for the sample who are considered low risk for pressure ulcers, according to the CMS definition used for MDS</li> </ol>
<b>Numerators:</b>	<ol style="list-style-type: none"> <li>1. The number of high-risk NF members who had one or more pressure ulcers during the measurement period</li> <li>2. The number of low-risk NF members who had one or more pressure ulcers during the measurement period</li> <li>3. The number of high-risk HCBS members who had one or more pressure ulcers during the measurement period</li> <li>4. The number of low-risk HCBS members who had one or more pressure ulcers during the measurement period</li> </ol>
<b>Confidentiality Plan:</b>	<p>AHCCCS continues to work in collaboration with Contractors to maintain compliance with the Health Insurance Portability and Accountability Act (HIPAA) requirements. The Data Analysis and Research (DAR) Unit maintains the following security and confidentiality protocols:</p> <ul style="list-style-type: none"> <li>• To prevent unauthorized access, the sample member file is maintained on a secure, password-protected computer, by the DAR project lead.</li> <li>• Only DAR employees who analyze data have access to study data.</li> <li>• All employees and Contractors are required to sign a confidentiality agreement.</li> <li>• Requested data are used only for the purpose of performing health care operations, oversight of the health care system, or research.</li> <li>• Only the minimum amount of necessary information to complete the project is sent to and returned from Contractors.</li> <li>• Sample files given to Contractors are tracked to ensure that all records are returned.</li> <li>• Member names are never identified or used in reporting.</li> <li>• Upon completion, all study information is removed from the computer and placed on a compact disk, and stored in a secure location.</li> </ul>

<p><b>Limitations:</b></p>	<p>MDS data includes only nursing facility residents. Data for members in home and community based settings will be collected from AHCCCS encounters, and may be augmented with additional data collected by Contractors from medical records and/or case management systems. Encounter data may not be as complete as MDS assessment, medical record or case management system data, particularly if members receive services covered by third party liability outside the AHCCCS system, and this may falsely influence results.</p> <p>If MDS data are unavailable to AHCCCS for use in conducting this Performance Measure study, AHCCCS will collect data from encounters and may require Contractors to collect additional data from case management and/or provider medical records. Aggregate data may not be as complete without the MDS data. In addition, AHCCCS may not be able to apply risk stratifications to members without the use of MDS data.</p> <p>Other unidentified factors besides Contractor interventions also may influence results.</p>
<p><b>Comparative Analysis:</b></p>	<ul style="list-style-type: none"> <li>• The results of this study will be compared to the results of any other comparable studies, if available.</li> <li>• Comparative analysis also will include: <ul style="list-style-type: none"> <li>◦ Urban and rural counties compared to each other</li> <li>◦ Individual Contractor to the statewide average</li> <li>◦ All other stratifications as deemed appropriate (i.e. age, gender, race/ethnicity, GSA)</li> </ul> </li> <li>• Differences between baseline study results and remeasurement results will be analyzed for statistical significance and relative change.</li> </ul>
<p><b>Analysis Plan:</b></p>	<ul style="list-style-type: none"> <li>• Variability of distribution will be calculated, utilizing the Kolmogorov-Smirnov test, to determine appropriate methods of statistical analysis. Data variability also will determine categorization of variables and ensure data is reported appropriately (mean, median, etc.).</li> <li>• A statistical software package will be utilized to calculate results.</li> <li>• To assist Contractors in better focusing their interventions, additional analyses will be performed to determine if a particular subgroup of the population is more likely to have pressure ulcers. This will be accomplished by examining prevalence by county type (urban or rural) and by placement type (nursing facility or home and community based setting).</li> <li>• Results also will be analyzed by demographic variables including, age, gender, and race/ethnicity.</li> </ul>

<b>Operational Definitions:</b>	<p><i>High risk.</i> Members will be classified as high risk according to MDS criteria, including residents with any one of the following at the time of data collection: impaired in bed mobility or transfer, comatose or suffering from malnutrition, according to the MDS assessment and/or Contractor-collected data.</p> <p><i>Low risk.</i> Members will be classified as low risk in the absence of any of the above criteria for high risk. Members in home and community based settings will be considered low risk unless Contractors supply data to document that they meet high-risk criteria.</p>
<b>References:</b>	<p><sup>1</sup> American Medical Directors Association. Pressure ulcers: Percentage of patients who develop pressure ulcers while in the facility. National Quality Measures Clearinghouse. Available at: <a href="http://www.qualitymeasures.ahrq.gov/summary">http://www.qualitymeasures.ahrq.gov/summary</a>. Accessed April 26, 2007.</p> <p><sup>2</sup> National Pressure Ulcer Advisory Panel. Pressure ulcers in America: Prevalence, incidence, and implications for the Future. Monograph. April 1, 2001.</p> <p><sup>3</sup> Centers for Medicare and Medicaid Services. Nursing Home Compare website. Available at: <a href="http://www.medicare.gov/NHCompare/include/DataSection/ResultsSummary">http://www.medicare.gov/NHCompare/include/DataSection/ResultsSummary</a>. Accessed June 9, 2008.</p> <p><sup>4</sup> Bed sores can be stopped with proper care in nursing homes Medicare project shows [press release]. Baltimore: Centers for Medicare and Medicaid Services; Oct. 22, 2007. Available at: <a href="http://www.cms.hhs.gov/apps/media/press/release">http://www.cms.hhs.gov/apps/media/press/release</a>. Accessed Oct. 22, 2007.</p>

## INSTRUCTION FOR CONSTRUCTING FILES

Contractors may submit information in one of three ways: using an Excel spreadsheet provided by AHCCCS, or a d-BASE IV file or a Text file. The data layout and instructions described must be followed for submission to ensure accuracy of data translation and acceptance of data elements by AHCCCS.

- All variable fields must be left justified.
- All variable fields are to be used exactly as indicated in the above tables.
- If information does NOT exist for any variable field, leave blank spaces in the columns.
- Do not add any “new” variables that are not listed in the above table.
- Do not change variable names.
- Do not change the order of the variable fields.
- Do not change any information provided by AHCCCS. If there is a question regarding the information provided, please notify AHCCCS immediately.
- All dates should be formatted as mm/dd/yyyy. Thus, January 2, 2008 would be reported as 01/02/2008.
- If submitting information in an Excel spreadsheet, use the file provided by AHCCCS. Do not change the formatting. The format has been designed for accurate importing of the data into AHCCCS software. Any changes to the format could result in lost information and a request for the Contractor to resubmit the data.
- If submitting the information in a d-BASE IV format, use the field layout provided above. If no information exists for a variable field or your data does not fill the required field length, use blank spaces in that column.
- Data files must be formatted as fixed-width text files (\*.txt).
- Submit the data files using a 3.5” IBM compatible diskette or CD-ROM. If file size is an issue, please compress the files into a .zip file. If this does not solve the file size problem, please call Jessica Hauser at (602) 417- 4503.

**ANY DEVIATION FROM INSTRUCTIONS FOR SUBMISSION OF DATA WILL NOT BE ACCEPTED AND THE FILE WILL BE RETURNED TO THE CONTRACTOR TO CORRECT.**

Put an external label on the disk or CD indicating:  
Health Plan or Program Contractor Name  
Contact Name & Phone Number  
Number of records in file(s) being provided

Send the disk or CD to:  
AHCCCS  
C/O Jessica Hauser - DAR  
701 East Jefferson, Mail Drop 6600  
Phoenix, AZ 85034

The disk or CD must arrive at AHCCCS by close of business **DATE**.

Technical questions related to the data request should be directed to Jessica Hauser at (602) 417-4503 or [jessica.hauser@azahcccs.gov](mailto:jessica.hauser@azahcccs.gov). All other questions related to the project should be directed to Rochelle Tigner at (602) 417-4683 or [rochelle.tigner@azahcccs.gov](mailto:rochelle.tigner@azahcccs.gov).