Arizona Health Care Cost Containment System
Arizona Long Term Care System (ALTCS) Performance Measure

PERFORMANCE MEASURES FOR DIABETES CARE


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PERFORMANCE MEASURES FOR DIABETES CARE


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Diabetes is a serious health problem that is growing rapidly in the United States. Approximately 18 million American adults, or 8.3 percent of all people 18 years and older, have been diagnosed with diabetes, according to an estimate by the federal Centers for Disease Control and Prevention (CDC). About 1.6 million new cases of diabetes are diagnosed among U.S. adults each year.\(^1\)

The number of people diagnosed with diabetes in the U.S. has nearly tripled in the last 25 years.\(^3\) The prevalence of diabetes in Arizona also increased during that time.\(^4\) The rate of diagnosed diabetes in Arizona is about equal to the U.S. rate overall.\(^2\)

Total U.S. expenditures related to diabetes are approximately $174 billion a year — a 32 percent increase since 2002 — according to a study commissioned by the American Diabetes Association. That includes $116 billion in direct medical costs and another $58 billion in indirect costs because of missed work days or other losses in productivity.\(^8\) At least 4 million hospitalizations annually in the U.S. are associated with diabetes.\(^9\)

In Arizona, diabetes-related discharges from non-federal hospitals numbered 102,827 in 2006, accounting for more than $3.5 billion in total charges, with an average length of stay of 5.1 days.\(^{10}\)
It has been estimated that by 2034, the population with type 2 diabetes will have doubled, with annual medical spending related to diabetes growing to $336 billion.\textsuperscript{11}

The purpose of this study is to monitor performance of managed care plans contracted to provide services to ALTCS members. The measures evaluate the percent of ALTCS elderly and physically disabled (E/PD) members with diabetes who receive certain clinical services to detect and prevent or reduce complications of the disease.

Results of the measurement are used to determine whether these managed care plans (known as Contractors), are meeting Performance Standards specified in their contracts. This report summarizes these results and compares Contractors’ rates to performance standards and national means for managed care plans.

**SIG NIFICANCE OF THE MEASURES**

With diabetes, sustained high blood sugars result in “microvascular” complications, or damage to very small blood vessels throughout the body. One of these complications is retinopathy (damage to the retina of the eye), which causes 12,000 to 24,000 new cases of blindness each year. Diabetes also is the leading cause of end stage renal (kidney) disease, or ESRD, and is responsible for more than half of nontraumatic lower-limb amputations.\textsuperscript{1}

Diabetes also results in “macrovascular” complications, including coronary and peripheral artery disease. In fact, heart disease and stroke account for about 65 percent of deaths among people with diabetes.\textsuperscript{12}

In addition, up to 70 percent of people with diabetes have mild to severe forms of neuropathy (nerve damage), including impaired sensation or pain in the feet or hands, carpal tunnel syndrome and motor deficits.\textsuperscript{3}

As with many diseases, other conditions (known as comorbid conditions) may be present. The increased prevalence of hyperlipidemia (high cholesterol) found with type 2 diabetes contributes to higher rates of cardiovascular disease among diabetics.

Patients with diabetes also have worse outcomes with acute illness. For example, diabetics who are hospitalized for trauma have longer stays in the intensive care unit and more complications than people who do not have diabetes.\textsuperscript{13}

Despite its potentially deadly effects, diabetes can be controlled. Many complications of the disease can be prevented or reduced with early detection, improved care and better education of patients so they can manage their lifestyles and help control their disease.\textsuperscript{1,14}

*Glucose Control* — Control of hyperglycemia (increased blood sugar) is critical to reducing complications associated with diabetes.
Physicians utilize a glycosylated hemoglobin, or Hb A\textsubscript{1c}, test to monitor blood glucose levels. This test indicates a person’s average glucose level over a two- to three-month period by measuring the amount of glucose that has bonded with hemoglobin in the body’s red blood cells.

Studies in the United States and abroad have shown that improved glycemic control greatly benefits people with diabetes. In general, for every percentage point decrease in Hb A\textsubscript{1c} levels, the risk of developing microvascular complications is reduced by 35 to 40 percent.\textsuperscript{3,15,16} Ten-year post-trial monitoring from one of these studies, the landmark United Kingdom Prospective Diabetes Study (UKPDS), indicates that early and intensive glucose control has significant, lasting effects on eye and kidney disease, as well as on the risk of heart attack and other causes of death.\textsuperscript{17}

**Lipid Management** — Managing lipid levels has been shown to reduce macrovascular complications affecting the heart, brain and legs, especially in people who have a history of cardiovascular problems.\textsuperscript{14,15} Control of cholesterol and lipids can reduce cardiovascular complications by 20 to 50 percent.\textsuperscript{3}

A fasting lipid profile is performed to measure total cholesterol (TC), high-density lipoproteins (HDL) and triglycerides. These results are used to calculate and manage low-density lipoprotein (LDL) levels.

**Eye Care** — It is estimated that regular eye exams and timely treatment, including laser therapy, could reduce the development of severe vision loss by up to 60 percent.\textsuperscript{3} New analyses from the Action to Control Cardiovascular Risk in Diabetes (ACCORD) trial released in July 2010 show that more intensive control of lipids and Hb A\textsubscript{1c} together significantly slowed the progression of diabetic retinopathy over four years.\textsuperscript{18}

People with diabetes should have comprehensive dilated eye examinations by ophthalmologists or optometrists, in order to detect and treat retinopathy and prevent vision loss. Data compiled by the CDC through the Behavioral Risk Factor Surveillance Survey indicate that 71.5 percent of all diabetic patients in the state had a dilated retinal exam in 2007.\textsuperscript{19}

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**STUDY METHODS**

The Arizona Health Care Cost Containment System (AHCCCS) used Healthcare Effectiveness Data and Information Set (HEDIS) 2010 specifications for this measurement. Developed by the National Committee for Quality Assurance (NCQA), HEDIS is a widely adopted methodology that allows for comparisons with national benchmarks, including the mean (average) for managed care plans serving Medicaid and commercial members.

AHCCCS has selected three of the HEDIS indicators of comprehensive diabetes care to measure Contractor performance: Hb A\textsubscript{1c} testing, lipid screening, and retinal exams.

**Population**

This study included elderly and physically disabled (E/PD) members enrolled with ALTCS managed care plans who had a diagnosis of type 1 or type 2 diabetes in the measurement period or the year prior to the measurement period. Members were identified as having type 1 or type 2 diabetes by either pharmacy or encounter data (records of claims paid by Contractors for covered services).
For example, a member was identified for the study if he or she had a face-to-face encounter with a medical provider and the associated claim included a diagnosis of diabetes. A member also may be identified as diabetic when dispensed insulin or other certain types of drugs used to treat diabetes.

**Measurement Period**
The measurement period for this study was the AHCCCS contract year from Oct. 1, 2008, through Sept. 30, 2009.

**Sample Frame**
The sample frame consisted of E/PD members who were:
- ages 18 through 75 years as of Sept. 30, 2009,
- continuously enrolled with one ALTCS Contractor for at least 11 member months during the measurement period, and
- enrolled with that Contractor on the last day of the measurement period.

**Data Sources**
The primary data sources were recipient, claim/encounter, and medical record data.

**Data Collection**
Recipient and encounter data are stored in the AHCCCS Prepaid Medical Management Information System (PMMIS). These data are loaded into the AHCCCS Decision Support System (ADDS), from which a sample of members was selected and initial service data were collected.

However, as many as 80 percent of ALTCS elderly and physically disabled members also are covered by Medicare, which is the primary payer for these members. Medicare providers may bill AHCCCS health plans for copayments for their members, but when they do not, AHCCCS does not have complete data on services provided to “dually enrolled” members. Thus, additional data is collected by Contractors under the HEDIS hybrid methodology for these measures.

AHCCCS provided an electronic data collection tool along with detailed instructions to the each Contractor, which collected additional service data from medical records and its claims system. The additional information was entered by Contractor staff into the electronic tool.

**Data Quality and Reliability**
AHCCCS conducts annual studies to evaluate the completeness of ALTCS encounter data compared with the corresponding medical records. The most recent study of claims paid by ALTCS Contractors shows an overall error rate of 2.4 percent for outpatient encounters.

In order to document the reliability of data collected outside of the AHCCCS encounter system, Contractors were required to submit copies of the appropriate sections of medical records or documentation from their claims systems. A sample of documentation was reviewed by AHCCCS and Contractor data were corrected as necessary.

**Study Indicators**
- **Hb A₁c testing** — This indicator measured the percent of members who had one or more Hb A₁c tests during the measurement year.
- **Lipid (LDL-C) profile** — This indicator measured the percent of members who had one or more fasting lipid profiles during the measurement year.
- **Retinal examinations** — This indicator measured an eye screening for diabetic retinal disease with a retinal or dilated eye exam by an eye-care professional (optometrist or ophthalmologist) within the measurement year. Under HEDIS methodology, a negative retinal exam (no evidence of retinopathy) in the year prior to the measurement year also may be counted.
Performance Standards
AHCCCS has established a Minimum Performance Standard (MPS) for each diabetes measure, which is specified in the CYE 2010 ALTCS E/PD contract.

<table>
<thead>
<tr>
<th>Measure</th>
<th>MPS</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hb A1c testing</td>
<td>80%</td>
<td>89%</td>
</tr>
<tr>
<td>Lipid screening</td>
<td>72%</td>
<td>91%</td>
</tr>
<tr>
<td>Retinal exams</td>
<td>60%</td>
<td>68%</td>
</tr>
</tbody>
</table>

If a Contractor does not meet the minimum standard, it must implement a Corrective Action Plan and may face a financial sanction if it fails to show improvement. AHCCCS also has set goals that Contractors should strive to meet if they are already meeting minimum standards.

National Benchmarks
The most recent HEDIS national means reported by NCQA are for the measurement period of calendar year 2009.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Medicaid</th>
<th>Commercial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hb A1c testing</td>
<td>80.6%</td>
<td>89.2%</td>
</tr>
<tr>
<td>Lipid screening</td>
<td>74.2%</td>
<td>85.0%</td>
</tr>
<tr>
<td>Retinal exams</td>
<td>52.7%</td>
<td>56.5%</td>
</tr>
</tbody>
</table>

RESULTS
The measurement included 1,412 sample members enrolled with eight long-term care Contractors during the measurement period. Results were calculated overall and by Contractor. Data also were analyzed to determine if there were significant differences by members’ race or ethnicity.

Changes in Contractor and overall rates from the previous measurement period are described as increases or decreases when analysis using the Pearson chi-square test yields a statistically significant value defined as $p \leq .05$; that is, the probability of obtaining such a difference by chance only is relatively low.

Hb A1c Testing
The overall rate of Hb A1c testing during the measurement year was 86.5 percent, compared with the previous rate of 78.9 percent (Table 1). The increase is statistically significant ($p < .001$). Rates by Contractor ranged from 74.5 percent to 92.4 percent. Three Contractors showed statistically significant increases in their rates for this measure.

Six Contractors exceeded the AHCCCS MPS (Figure 1), as well as the most recent HEDIS national mean for Medicaid health plans. Three Contractors also exceeded the AHCCCS goal and the HEDIS commercial health plan mean. The AHCCCS overall rate exceeded the most recent Medicaid mean by 6.1 percentage points.

Lipid (LDL-C) Profiles
The overall rate of members who had an LDL-C test or fasting lipid profile during the measurement year was 77.9 percent (Table 2), compared with 70.9 percent in the previous measurement. The increase is statistically significant ($p < .001$). Contractor rates ranged from 65.7 percent to 90.4 percent. Three Contractors showed significant increases.

Five Contractors exceeded the MPS (Figure 2). The same five Contractors also exceeded the HEDIS national Medicaid mean and two surpassed the national commercial mean. The AHCCCS overall rate exceeded the most recent Medicaid mean by 3.7 percentage points.
Eye Examinations
The overall rate of members who had a dilated retinal exam in the measurement year or a negative exam in the previous year was 63.9 percent, compared with 59.8 percent in the previous measurement (Table 3). The increase is statistically significant (p = .027). Rates by Contractor ranged from 45.1 percent to 78.3 percent. Four Contractors showed significant increases and one showed a significant decrease in its rate.

Four Contractors exceeded the MPS (Figure 3). Seven surpassed the HEDIS national means for both Medicaid and commercial health plans. Two Contractors had rates that exceeded the AHCCCS goal. The AHCCCS overall rate exceeded the HEDIS national Medicaid mean by 11.2 percentage points; it also exceeded the commercial mean by 7.4 percentage points.

Results by Race/Ethnicity
For all measures, there were no significant differences in rates for members who identified themselves as Hispanic, Native American or Black, compared with non-Hispanic White members. Relative rates were as follows:

<table>
<thead>
<tr>
<th>Rates by Race/Ethnicity, CYE 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hb A1c</td>
</tr>
<tr>
<td>White 1</td>
</tr>
<tr>
<td>Hispanic</td>
</tr>
<tr>
<td>Black</td>
</tr>
<tr>
<td>Native American 2</td>
</tr>
<tr>
<td>Other/Unknown</td>
</tr>
</tbody>
</table>

1 Non-Hispanic Whites were used as the reference group for analyzing whether there were disparities in use of services based on race/ethnicity.
2 Results for Native Americans should be interpreted with caution, since there were only 31 members in this group.

Overall Results
AHCCCS overall rates improved significantly for all three measures and exceed the most recent HEDIS national means for Medicaid managed care plans. The AHCCCS overall rate for eye exams also exceeds the national average for commercial health plans for the fourth consecutive year.

DISCUSSION

Mercy Care Plan has shown strong performance in these measures, meeting all minimum standards for the past four years.

Most Contractors had corrective action plans (CAPs) in place for at least one of the diabetes measures prior to this measurement. Since most of these CAPs were implemented by early 2009, it appears corrective actions and regulatory pressure from AHCCCS have resulted in the improvements demonstrated in the current measurement.

AHCCCS has worked with the lowest-performing Contractors over the past few years to reinforce performance expectations. Of particular note are the substantial gains in all measures made by Pima Health System, Pinal/Gila Long Term Care and SCAN Long Term Care.
Conversely, Cochise Health Systems had lower rates for all three measures than in the previous measurement. In addition, Evercare Select’s rate for eye exams dropped significantly after it had improved it to 72.4 percent in the previous measurement under a CAP. All Contractors that did not meet AHCCCS minimum standards will have to continue and revise existing CAPs or develop new ones.

**Quality Improvement Efforts**

AHCCCS Contractors have utilized a variety of strategies to improve care of diabetic members. These include intensive member education, monitoring of members’ test status and follow up by case managers and nurses; distributing to primary care physicians (PCPs) practice guidelines and other tools, such as a diabetic flow sheet to help track tests that must be performed periodically, and advising PCPs of diabetic members who are due or overdue for specific services.

The interventions that involve PCPs may be especially effective, since research shows that, among people with diabetes, physicians are the primary source of information about their disease and best positioned to influence compliance with self-management and receipt of recommended services. Contractors should continue to reinforce with providers the current clinical standards of care for members with diabetes.

Contractors also must ensure that, once improvement is achieved, they continue to focus on sustaining performance.

**REFERENCES**


For questions or comments about this report, please contact:
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Quality Improvement Manager
Clinical Quality Management
DHCM, AHCCCS
Rochelle.Tigner@azahcccs.gov
**TABLE 1**
AHCCCS Clinical Quality Performance Measures for Diabetes
Hb A1c TESTS - ALTCS E/PD MEMBERS WITH DIABETES

Minimum Performance Standard: 80%

<table>
<thead>
<tr>
<th>Contractor</th>
<th>Included Cases</th>
<th>Total Receiving Hb A1c Test</th>
<th>Percent Receiving Hb A1c Test</th>
<th>Relative Percent Change</th>
<th>Significance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridgeway Health Solutions *</td>
<td>162</td>
<td>135</td>
<td>83.3%</td>
<td>3.8%</td>
<td>p=.501</td>
</tr>
<tr>
<td></td>
<td>132</td>
<td>106</td>
<td>80.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cochise Health Systems</td>
<td>102</td>
<td>76</td>
<td>74.5%</td>
<td>-3.9%</td>
<td>p=.615</td>
</tr>
<tr>
<td></td>
<td>98</td>
<td>76</td>
<td>77.6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evercare Select *</td>
<td>212</td>
<td>179</td>
<td>84.4%</td>
<td>-0.9%</td>
<td>p=.819</td>
</tr>
<tr>
<td></td>
<td>250</td>
<td>213</td>
<td>85.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercy Care Plan *</td>
<td>301</td>
<td>271</td>
<td>90.0%</td>
<td>1.5%</td>
<td>p=.584</td>
</tr>
<tr>
<td></td>
<td>336</td>
<td>298</td>
<td>88.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pima Health System *</td>
<td>238</td>
<td>220</td>
<td>92.4%</td>
<td>45.1%</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>237</td>
<td>151</td>
<td>63.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinal/Gila Long Term Care *</td>
<td>157</td>
<td>143</td>
<td>91.1%</td>
<td>13.1%</td>
<td>p=.008</td>
</tr>
<tr>
<td></td>
<td>144</td>
<td>116</td>
<td>80.6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCAN Long Term Care *</td>
<td>153</td>
<td>131</td>
<td>85.6%</td>
<td>34.7%</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>107</td>
<td>68</td>
<td>63.6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yavapai County Long Term Care</td>
<td>87</td>
<td>66</td>
<td>75.9%</td>
<td>-5.2%</td>
<td>p=.513</td>
</tr>
<tr>
<td></td>
<td>85</td>
<td>68</td>
<td>80.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>1,412</td>
<td>1,221</td>
<td>86.5%</td>
<td>9.6%</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>1,389</td>
<td>1,096</td>
<td>78.9%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
- * Denotes the Contractor met or exceeded the AHCCCS Minimum Performance Standard (MPS).
- Significance levels in bold face indicate a statistically significant change from the previous measurement (p < .05).
- Results of the previous measurement period (Oct. 1, 2007, through Sept. 30, 2008), are shown in shaded rows.
Figure 1
Hb A1c TESTS - ALTCS E/PD MEMBERS WITH DIABETES
### TABLE 2
AHCCCS Clinical Quality Performance Measures for Diabetes

ANNUAL LIPID PROFILES - ALTCS E/PD MEMBERS WITH DIABETES

Minimum Performance Standard: 72%

<table>
<thead>
<tr>
<th>Contractor</th>
<th>Included Cases</th>
<th>Total Receiving Fasting Lipid</th>
<th>Percent Receiving Fasting Lipid</th>
<th>Relative Percent Change</th>
<th>Significance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridgeway Health Solutions *</td>
<td>162</td>
<td>120</td>
<td>74.1%</td>
<td>0.8%</td>
<td>p=.909</td>
</tr>
<tr>
<td></td>
<td>132</td>
<td>97</td>
<td>73.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cochise Health Systems</td>
<td>102</td>
<td>67</td>
<td>65.7%</td>
<td>-3.9%</td>
<td>p=.687</td>
</tr>
<tr>
<td></td>
<td>98</td>
<td>67</td>
<td>68.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evercare Select *</td>
<td>212</td>
<td>163</td>
<td>76.9%</td>
<td>6.8%</td>
<td>p=.231</td>
</tr>
<tr>
<td></td>
<td>250</td>
<td>180</td>
<td>72.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercy Care Plan *</td>
<td>301</td>
<td>265</td>
<td>88.0%</td>
<td>2.7%</td>
<td>p=.386</td>
</tr>
<tr>
<td></td>
<td>336</td>
<td>288</td>
<td>85.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pima Health System</td>
<td>238</td>
<td>166</td>
<td>69.7%</td>
<td>33.3%</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>237</td>
<td>124</td>
<td>52.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinal/Gila Long Term Care *</td>
<td>157</td>
<td>142</td>
<td>90.4%</td>
<td>21.7%</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>144</td>
<td>107</td>
<td>74.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCAN Long Term Care *</td>
<td>153</td>
<td>115</td>
<td>75.2%</td>
<td>34.0%</td>
<td>p=.001</td>
</tr>
<tr>
<td></td>
<td>107</td>
<td>60</td>
<td>56.1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yavapai County Long Term Care</td>
<td>87</td>
<td>62</td>
<td>71.3%</td>
<td>-2.3%</td>
<td>p=.806</td>
</tr>
<tr>
<td></td>
<td>85</td>
<td>62</td>
<td>72.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,412</td>
<td>1,100</td>
<td>77.9%</td>
<td>9.9%</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>1,389</td>
<td>985</td>
<td>70.9%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
* Denotes the Contractor met or exceeded the AHCCCS Minimum Performance Standard (MPS).
Significance levels in bold face indicate a statistically significant change from the previous measurement (p < .05).
Results of the previous measurement period (Oct. 1, 2007, through Sept. 30, 2008), are shown in shaded rows.
Figure 2
LIPID PROFILES - ALTCS E/PD MEMBERS WITH DIABETES
### TABLE 3
AHCCCS Clinical Quality Performance Measures for Diabetes
RETINAL EXAMS - ALTCS E/PD MEMBERS WITH DIABETES

Minimum Performance Standard: 60%

<table>
<thead>
<tr>
<th>Contractor</th>
<th>Included Cases</th>
<th>Total Receiving Retinal Exam</th>
<th>Percent Receiving Retinal Exam</th>
<th>Relative Percent Change</th>
<th>Significance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridgeway Health Solutions</td>
<td>162</td>
<td>97</td>
<td>59.9%</td>
<td>18.0%</td>
<td>p=.117</td>
</tr>
<tr>
<td></td>
<td>132</td>
<td>67</td>
<td>50.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cochise Health Systems</td>
<td>102</td>
<td>59</td>
<td>57.8%</td>
<td>-17.8%</td>
<td>p=.064</td>
</tr>
<tr>
<td></td>
<td>98</td>
<td>69</td>
<td>70.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evercare Select</td>
<td>212</td>
<td>122</td>
<td>57.5%</td>
<td>-20.5%</td>
<td>p=.001</td>
</tr>
<tr>
<td></td>
<td>250</td>
<td>181</td>
<td>72.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercy Care Plan *</td>
<td>301</td>
<td>227</td>
<td>75.4%</td>
<td>10.7%</td>
<td>p=.026</td>
</tr>
<tr>
<td></td>
<td>336</td>
<td>229</td>
<td>68.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pima Health System *</td>
<td>238</td>
<td>146</td>
<td>61.3%</td>
<td>20.2%</td>
<td>p=.001</td>
</tr>
<tr>
<td></td>
<td>237</td>
<td>121</td>
<td>51.1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinal/Gila Long Term Care *</td>
<td>157</td>
<td>123</td>
<td>78.3%</td>
<td>46.5%</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>144</td>
<td>77</td>
<td>53.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCAN Long Term Care</td>
<td>153</td>
<td>69</td>
<td>45.1%</td>
<td>41.9%</td>
<td>p=.031</td>
</tr>
<tr>
<td></td>
<td>107</td>
<td>34</td>
<td>31.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yavapai County Long Term Care *</td>
<td>87</td>
<td>59</td>
<td>67.8%</td>
<td>8.8%</td>
<td>p=.452</td>
</tr>
<tr>
<td></td>
<td>85</td>
<td>53</td>
<td>62.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,412</td>
<td>902</td>
<td>63.9%</td>
<td>6.8%</td>
<td>p=.027</td>
</tr>
<tr>
<td></td>
<td>1389</td>
<td>831</td>
<td>59.8%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:

* Denotes the Contractor met or exceeded the AHCCCS Minimum Performance Standard (MPS).
Significance levels in bold face indicate a statistically significant change from the previous measurement (p ≤ .05).
Results of the previous measurement period (Oct. 1, 2006, through Sept. 30, 2007), are shown in shaded rows.
Figure 3
RETINAL EXAMS - ALTCS E/PD MEMBERS WITH DIABETES

Minimum Performance Standard

Current Measurement vs. Previous Measurement

- Bridgeway Health Solutions
- Cochise Health Systems
- Evercare Select
- Pima Health System *
- Pinal/Gila Long Term Care *
- Mercy Care Plan *
- SCAN Long Term Care
- Yavapai County Long Term Care *
- TOTAL
AHCCCS Rates Compared with National Medical Means:

Hb A1c Testing

AHCCCS Overall Rate
HEDIS Medicaid Mean
APPENDIX

Arizona Health Care Cost Containment System (AHCCCS)
Arizona Long Term Care System (ALTCS)

DIABETES PERFORMANCE MEASURES METHODOLOGY

Purpose
The purpose of this study is to monitor performance of health plans contracted with the Arizona Long Term Care System (ALTCS) for diabetes-related measures. These measures evaluate the percent of ALTCS members with diabetes who receive certain clinical services to detect and prevent or reduce complications.

Measurement Period
October 1, 2008, through September 30, 2009

Study Questions
1. What is the number and percent, overall, and by Contractor, of members enrolled with ALTCS Contractors who met the sample frame criteria and who had one or more HbA1c blood tests during the measurement period?
2. What is the number and percent, overall, and by Contractor, of members enrolled with ALTCS Contractors who met the sample frame criteria and who had one or more fasting lipid profiles (cholesterol, high density lipoprotein or HDL and low density lipoprotein or LDL) during the measurement period?
3. What is the number and percent, overall, and by Contractor, of members enrolled with ALTCS Contractors who meet the sample frame criteria and had a retinal exam during the measurement period or a negative exam during the preceding year?

Population
This study includes AHCCCS members diagnosed with diabetes, as defined by HEDIS® 2010. Members may be identified as diabetic during the measurement year or the twelve months prior to the measurement period.

Population Exclusions
The following members are excluded from this study:
- Members less than 18 years of age.
- Members greater than 75 years of age.
- Members not enrolled the last day of the measurement period
- Members with a gap in coverage resulting in less than 11 member-months of enrollment with the same health plan during the measurement period
- Members with steroid-induced diabetes or gestational diabetes
- Members with a diagnosis of polycystic ovaries who did not have two face-to-face encounters with a diagnosis of diabetes in any setting during the measurement year or prior year
• Tribal and Fee for Service members, due to the inability to accurately collect complete data on these populations. These members may obtain medical care outside of the AHCCCS system; therefore, data would not be available from AHCCCS administrative data.

Population Stratification
The population will be stratified by:
• Contractor*

* E/PD and VD populations for each Contractor are combined before stratifying

Sample Frame
The sample frame consists of members 18 through 75 years of age as of September 30, 2009, who were continuously enrolled with one ALTCS E/PD Contractor for at least 11 members-months during the measurement period, and diagnosed with type 1 or type 2 diabetes.
• Prior Period Coverage (PPC) is considered a break in enrollment.
• A change of county service area with the same Contractor is not considered a break in enrollment.
• Members must have been enrolled on the last day of the measurement period.

Sample Selection
The sample frame will be identified through enrollment, claims and encounter 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. Each Contractor’s lowest rate of the three indicators as reported for the previous measurement will be used to calculate the estimated proportion of incidence for the current sample. An over sampling rate of 10 percent also will be utilized to determine the sample.

Identification of Members with Diabetes
Members with diabetes will be identified, according to HEDIS 2010 specifications, by pharmacy data (National Drug Code or NDC list) or by specific diagnosis codes. To be included in the measurement, members must have had two face-to-face encounters with different dates of service in an ambulatory or non-acute inpatient setting, or one face-to-face encounter in an acute inpatient or emergency room setting during the measurement year, or the year prior to the measurement year, with a diagnosis of diabetes as specified in HEDIS 2010, Volume II.

Indicators
AHCCCS will work with ALTCS E/PD Contractors to collect data for this measurement through a hybrid methodology, as allowed under HEDIS.

HbA1c testing
This indicator measures whether selected members received one or more HbA1c tests during the measurement period, identified through either administrative data or medical record review, according to HEDIS 2010 specifications. A member is considered to have had an HbA1c test if:
- a claim or encounter, using codes listed in the following table, or an automated laboratory record with a service date during the measurement period was found for the member

<table>
<thead>
<tr>
<th>CPT Code</th>
<th>CPT Category II</th>
</tr>
</thead>
<tbody>
<tr>
<td>83036, 83037</td>
<td>3044F, 3045F, 3046F, 3047F</td>
</tr>
</tbody>
</table>

or

- At a minimum, documentation in the medical record must include a note indicating the date on which the HbA1c test was performed and the result. The organization may count notation of the following in the medical record review
  - A1c
  - Hemoglobin A1c
  - HgbA1c
  - HbA1c
  - Glycohemoglobin A1c

**Fasting Lipid Profile**
This indicator measures whether selected members received one or more LDL-C tests during the measurement period, identified through either administrative data or medical record review, according to HEDIS 2010 specifications. A member is considered to have had an LDL-C test if:
- a claim or encounter, using codes listed in the following table, or an automated laboratory record with a service date during the measurement period that was found for the member,

<table>
<thead>
<tr>
<th>CPT Code</th>
<th>CPT Category II</th>
</tr>
</thead>
<tbody>
<tr>
<td>80061, 83700, 83701, 83704, 83721</td>
<td>3048F, 3049F, 3050F</td>
</tr>
</tbody>
</table>

or

- there was documentation in the member’s medical record (at a minimum, a note or lab result record) indicating the date a fasting lipid profile was performed and the result.

**Retinal Exam**
This indicator measures an eye screening for diabetic retinal disease, documented through either administrative data or medical record review. It includes a retinal or dilated eye exam by an eye care professional (optometrist or ophthalmologist) within the measurement period or a negative retinal exam (no evidence of retinopathy) by an eye-care professional in the year prior to the measurement year. At a minimum, documentation in the medical record must include:
- a note or letter from an ophthalmologist, optometrist or other health-care professional summarizing the date on which the procedure was performed and the results of a retinal evaluation performed by an eye-care professional

or
• a chart or photograph of retinal abnormalities. If fundus photography was used in the exam, there must be documentation in the medical record indicating the date on which the procedure was performed and evidence that an eye-care professional reviewed the results. Alternatively, results may be read by a qualified reading center that operates under the direction of a medical director who is a retinal specialist

or

• a note, which may be prepared by a primary care provider, indicating the date on which the procedure was performed, and that an ophthalmoscop e exam was completed by an eye-care professional, with results of the exam.

<table>
<thead>
<tr>
<th>CPT Code</th>
<th>CPT Category II</th>
<th>HCPCS</th>
<th>ICD-9-CM Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>67028, 67030, 67031, 67036 67038-67040, 67041-67043, 67101, 67105, 67107, 67108, 67110, 67112, 67113, 67121, 67141, 67145, 67208, 67210, 67218, 67220, 67221, 67227, 67228, 92002, 92004, 92012, 92014, 92018, 92019, 92225, 92226, 92230, 92235, 92240, 92250, 92260, 99203-99205, 99213-99215, 99242-99245</td>
<td>2022F, 2024F, 2026F, 3072F</td>
<td>S0625, S3000, S0620, S0621</td>
<td>14.1-14.5, 14.9, 95.02-95.04, 95.11, 95.12, 95.16</td>
</tr>
</tbody>
</table>

**Denominator**

1. The number of members who met the sample frame criteria

**Numerator**

1. The number of ALTCS EP/D members who had one or more Hb A1c tests during the measurement period
2. The number of ALTCS EP/D members who had one or more fasting lipid profiles during the measurement period
3. The number of ALTCS EP/D members who had a retinal exam during the measurement period or a negative retinal exam in the preceding year

**Confidentiality Plan**

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 (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, and stored in a secure location.

**Data Sources**
- Recipient demographic information, as well as encounters and pharmacy data (Form C), will be used by AHCCCS to identify the population.
- Encounters will be used by AHCCCS to identify services. Contractors will use administrative (claims) or laboratory data to collect additional service information. When these data are not available, data will be collected from members’ medical records.

**Data Collection Process**
- The population file will be obtained from the AHCCCS Decision Support system (ADDS). The sample population will be selected by the Data Analysis & Research (DA&R) unit of the Division of Health Care Management from this file.
- Applicable services from administrative (encounter) data will paired with members selected for the study.
- After initial data collection by AHCCCS, electronic data files will be sent to Contractors. These files will contain only the Contractors’ sample members.
- Contractors will collect additional service data and enter it on the electronic file.
- The electronic data file will then be returned to AHCCCS.
- AHCCCS will require Contractors to submit laboratory records, medical records, electronic data directly transmitted by laboratories, or claims data to verify services that were provided.

**Quality Assurance Process**
- Contractors will be instructed in use of the data collection methods, sample file layout and timelines for data collection.
- Contractors will receive written instructions for data collection, in addition to AHCCCS resource and contact information for assistance.
- AHCCCS will verify that all records have been returned. The distribution to Contractors and return of sample files will be monitored by the DA&R Unit.

**Data Validation**
- To verify that an HbA1c test, fasting lipid profile or retinal examination was performed, Contractors must submit any one of the following for each member identified as receiving indicator services: laboratory records, medical records, electronic data directly transmitted by laboratories, or claims data
- This documentation must contain confirmation of an examination being performed and the date of service.
- A random sample of Contractor-submitted documentation will be reviewed by AHCCCS, matching the Contractor-supplied documentation with data on the Contractor’s electronic file. Any members for whom documentation does not meet HEDIS criteria will be excluded from the numerator.
Limitations

- A large portion of the ALTCS population also is covered by Medicare and seeks services outside the AHCCCS provider system. Because Medicare is the primary payer for Medicare beneficiaries, AHCCCS does not have the ability to collect information on services provided to members outside the AHCCCS system. Thus, some members with diabetes may not be identified for inclusion in this study.

Deviations from Previous Methodology

Codes to identify diabetic members were updated to the HEDIS® 2010 standard, including:
- Added drugs to Table CDC-A, Prescriptions to Identify Members with Diabetes
- Added CPT Category II codes 3044F and 3045F to Table CDC-D
- Added CPT codes 67030, 67031, 67036, 67121, 67220 and 67221 to Table CDC-G
- Deleted CPT codes 99499 from Table CDC-C
- Added CPT codes 67041-67043 and 67113 to Table CDC-G
- Clarified use of CPT Category II code 3072F in Table CDC-G
- Deleted CPT codes 83715 and 83716 from Table CDC-H

Analysis Plan

- The numerator will be divided by the denominator to determine the percentage of compliance with each indicator. The rates will be analyzed and reported overall, by ALTCS Contractor and by race/ethnicity.
- Variability of distribution will be calculated by range and standard deviation. Any Contractor with results more than two standard deviations from the mean will be identified, and the reason ascertained if possible. To avoid skewed and misleading conclusions, any such Contractor may be excluded from selected charts and graphs. Clear documentation in the report will caveat any Contractor exclusions and the reasons for exclusion.

Comparative Analysis

- Prior measurements will be compared to the current results.
- The results of this measurement will be compared to national HEDIS means and percentiles for Medicaid and commercial health plans, as reported by the National Committee for Quality Assurance (NCQA)
- Results by Contractor will be compared to the AHCCCS Minimum Performance Standard and Goal.
- Individual Contractors will be compared to each other and to the statewide average.

Report Format

- The report will include the methodology used, narrative summary of analysis findings, and limitations
- Findings will be displayed in appropriate charts, tables and/or graphs, with results reported by individual Contractor, program type, and statewide aggregate.
- The comprehensive findings will be presented in a manner that will allow for easy interpretation of the data by evaluators at the federal, state, and Contractor levels.
- Results will be reported on the AHCCCS website and will be provided to an External Quality Review Organization (EQRO) for annual reporting to the Centers for Medicare and Medicaid Services (CMS).
**Definitions**

Statistically Significant: A finding is described as statistically significant, when it can be demonstrated that the probability of obtaining such a difference by chance only is relatively low. It is customary to describe one's finding as statistically significant, when the obtained result is among those that (theoretically) would occur no more than 5 out of 100 times, p<= .05, or occur no more than 1 out of 100 times, p<=. 01, when the only factors operating are the chance variations that occur whenever random samples are drawn. It is important to note that a finding may be statistically significant but may not be clinically or financially significant.

The statistically significant value is calculated using the Pearson chi-square test. Statistical Significance Level: p <= .05