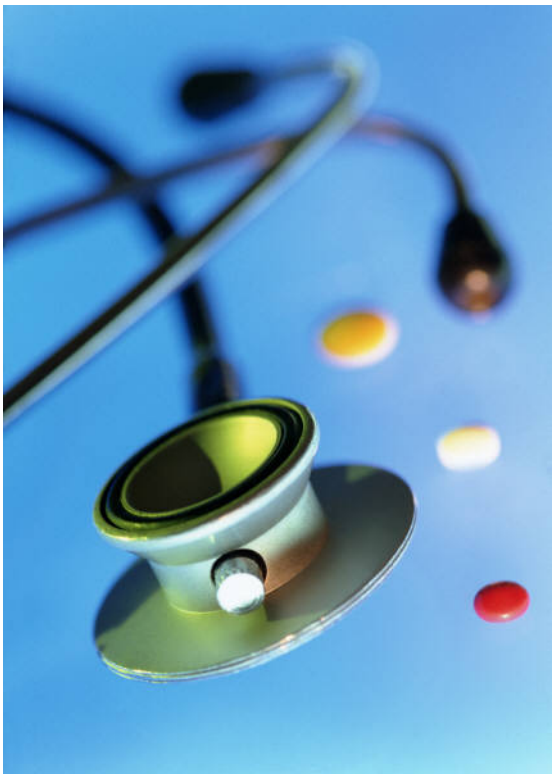
Arizona Health Care Cost Containment System

Arizona Long Term Care System (ALTCS) Performance Measure



PERFORMANCE MEASURES FOR DIABETES CARE

Measurement Period: October 1, 2007, through September 30, 2008

Prepared by the Division of Health Care Management
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AHCCCS

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

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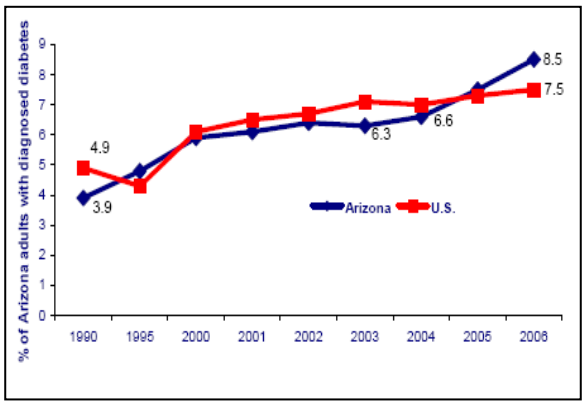
INTRODUCTION

Diabetes is a serious health problem that is growing rapidly in the United States. More than 23 million Americans age 20 years and older, or 10.7 percent of all people in this age group, have diabetes, according to an estimate by the federal Centers for Disease Control and Prevention (CDC). About 1.6 million new cases of diabetes were diagnosed among U.S. adults in 2007.[1]

In Arizona, an estimated 375,000 adults had diabetes in 2006, and another 125,000 were living with undiagnosed diabetes. Diabetes-related hospitalizations in Arizona non-federal facilities accounted for more than $3.5 billion in 2006, with an average length of stay of 5 days.[2]

Figure 1. Prevalence of Diagnosed Diabetes: Adults in Arizona and the U.S., 1994 –2006



Source: Behavior Risk Factor Surveillance System, Centers for Disease Control & Prevention

The number of people in the United States with diagnosed diabetes has nearly tripled in the last 25 years. From 1980 through 2005, the number of Americans with diabetes increased from 5.6 million to 15.8 million.[3] The prevalence of diabetes in Arizona also increased during that time.[4]

A sedentary lifestyle and a dramatic rise of obesity in the U.S. population are contributing to the increase in this costly and potentially deadly disease. Surveys conducted in recent years have found that about 60 percent of American adults are either overweight or obese.[5,6] Another study found that nearly half of obese persons have type 2 diabetes.[7]

Hispanics, Blacks, American Indians and Alaska Natives are approximately twice as likely to have diabetes than non-Hispanic Whites in the U.S. The prevalence of diabetes also is higher among older Americans – about 20 percent of all people 60 and older have diabetes – as well as among people with low socioeconomic status and those covered by Medicaid. [1,3,4]

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]

Diabetes with comorbidities (diseases that coexist and are often related to a primary condition) was the second-most prevalent diagnosis affecting AHCCCS members enrolled with the Arizona Long Term Care System (ALTCS) in the contract year ending Sept. 30, 2007. ALTCS members with type II diabetes accounted for more than $23 million in medical costs in an earlier two-year span (July 2003 to June 2005).

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.

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.

SIGNIFICANCE OF THE MEASURES

With diabetes, sustained high blood sugars result in damage to very small blood vessels throughout the body. One of these "microvascular" 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.[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.[10]

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.

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

- **2 in 3 people with diabetes die of heart disease or stroke**
- **Diabetes is the #1 cause of adult blindness**
- **Diabetes is the #1 cause of kidney failure**

Diabetes: The Numbers
National Diabetes Education Program

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.[11]

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 in self-management techniques.[1,12]

Glucose Control — Control of hyperglycemia (increased blood sugar) is critical to reducing both the incidence and progression of complications associated with diabetes. Physicians utilize a glycosylated hemoglobin, or Hb A_{1c}, test to monitor patients' 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_{1c} levels, the risk of developing microvascular complications is reduced by 35 to 40 percent. [3,14] Ten-year post-trial monitoring from one of these studies, the landmark United Kingdom Prospective Diabetes Study (UKPDS), indicates that a strategy of early and intensive glucose lowering has lasting, significant effects – not only on major diabetes end points, such eye and kidney disease – but also on the risk of heart attack and other causes of mortality.[15]

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.[13,14] Control of cholesterol and lipids can reduce cardiovascular complications by 20 to 50 percent.[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.[3] People with diabetes should have comprehensive dilated eye examinations by ophthalmologists or optometrists, in order to detect and treat retinopathy and prevent vision loss.

However, data compiled by the Arizona Department of Health Services (ADHS) indicate that many diabetic patients in the state are not getting the tests they need. In its 2008 annual report of diabetes indicators, ADHS reported that only 70 percent of Arizonans with diabetes received an Hb A_{1c} test during the preceding year, 41 percent had a lipid screening performed, and 47.6 percent had a dilated retinal exam.[2]

STUDY METHODS

The Arizona Health Care Cost Containment System (AHCCCS) used Healthcare Effectiveness Data and Information Set (HEDIS) 2009 specifications for this measurement. Developed and maintained by the National Committee for Quality Assurance (NCQA), HEDIS is a widely adopted and reliable methodology that allows for comparisons with national Medicaid health plan averages.

AHCCCS has selected three of the HEDIS indicators of comprehensive diabetes care for measurement of Contractor performance: Hb A_{1c} testing, lipid screening, and retinal (eye) exams.

Population
The population included elderly and physically disabled (E/PD) members enrolled with ALTCS managed care plans who had diagnoses 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 October 1, 2007, through September 30, 2008.

Sample Frame
The sample frame consisted of E/PD members who were:

- ages 18 through 75 years as of September 30, 2008,
- continuously enrolled with one ALTCS Contractor for at least 11 member months during the measurement period, and
- enrolled with that Contractor on September 30, 2008.

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 were loaded into the AHCCCS Decision Support System (ADDS), from which a sample of members was selected and initial service data were collected.

When specific services within the measurement period were not found in encounter data, AHCCCS provided demographic data for those sample members to the appropriate Contractors. Using a standardized electronic data collection tool provided by AHCCCS, Contractors collected additional data from medical records and claims systems. Additional service information was entered on the electronic tool by Contractor staff, according to detailed instructions from AHCCCS.

Data Quality and Reliability
AHCCCS conducts validation studies to evaluate the completeness of encounter data, compared with the corresponding medical records. The two most recent annual studies of encounters submitted by ALTCS E/PD Contractors show encounter-omission rates of less than 5 percent for each year.

As many as 80 percent of ALTCS elderly and physically disabled members also are covered by Medicare. Medicare is the primary payer for these "dually enrolled" members. Medicare providers may bill AHCCCS health plans for copayments for their members. However, if they do not bill for copayments for these services, AHCCCS will not have complete encounter data. Thus, additional data is collected by Contractors from medical records. 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.

Study Indicators

- ***Hb A_{1c} testing*** — This indicator measured the percent of members who had one or more Hb A_{1c} 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. A negative retinal exam (no evidence of retinopathy) by an eye-care professional in the year prior to the measurement year also counts toward the numerator for this measure.

Performance Measure Goals

AHCCCS has established a Minimum Performance Standard (MPS) for each measure that ALTCS Contractors must meet. If they do not meet the MPS for any measure, they must implement a Corrective Action Plan to bring the rate up to the contractual standard and may face a financial sanction if they fail to show improvement.

AHCCCS also has established Goals that Contractors should strive to meet if they are already meeting minimum standards. These goals were established in 2006, based on national HEDIS benchmarks.

AHCCCS Performance Standards

Measure	MPS	Goal
Hb A_{1c} testing	80%	89%
Lipid screening	72%	91%
Retinal exams	60%	68%

National Benchmarks

NCQA reports national means (averages) for these measures, based on data submitted by managed care plans. The HEDIS 2008 national means for Medicaid plans, as reported by NCQA, are:

HEDIS National Means

Measure	Medicaid	Commercial
Hb A_{1c} testing	77.4%	88.1%
Lipid screening	70.9%	83.9%
Retinal exams	50.1%	55.0%

The current national means are based on the same methodology employed by AHCCCS for this measurement and are useful for comparisons with AHCCCS results.

RESULTS

The measurement included 1,389 sample members who were enrolled with eight long-term care Contractors during the measurement period. Results for each measure were analyzed by individual Contractor, by members' race/ethnicity and by rural vs. urban areas. 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 ($p \leq .05$); that is, the probability of obtaining such a difference by chance only is relatively low.

Hb A_{1c} Testing

The overall rate of Hb A_{1c} testing during the measurement year was 78.9 percent, compared with the previous rate of 80.1 percent (Table 1). The change was not statistically significant (p=.439). Rates by Contractor ranged from 63.6 percent to 88.7 percent. One Contractor showed a statistically significant increase in its rate and one showed a statistically significant decrease.

Five Contractors exceeded the AHCCCS Minimum Performance Standard (MPS) for this measure (Figure 1). Six Contractors exceeded the Medicaid mean and one surpassed the commercial mean. The AHCCCS overall rate exceeded the HEDIS national mean for Medicaid health plans.

Lipid (LDL-C) Profiles

The overall rate of members who had an LDL-C test or fasting lipid profile during the measurement year was 70.9 percent (Table 2), compared with 72.0 percent in the previous measurement. The change was not statistically significant (p=.532).

Contractor rates ranged from 52.3 percent to 85.7 percent. Two Contractors showed significant increases and two showed significant decreases.

Five Contractors exceeded the MPS, as well as the AHCCCS Goal (Figure 2). These same five Contractors also exceeded the HEDIS national Medicaid mean and one surpassed the national commercial mean. The AHCCCS overall rate equaled the national mean for Medicaid health plans.

Eye Examinations

The overall rate of members who had a dilated eye (retinal) examination in the measurement year or a negative exam in the previous year was 59.8 percent, compared with 57.1 percent in the previous measurement (Table 3). The change was not statistically significant (p=.157).

Rates by Contractor ranged from 31.8 percent to 72.4 percent. Two Contractors showed significant increases and none showed significant decreases.

Four Contractors exceeded the AHCCCS MPS and three exceeded the Goal for this measure (Figure 3). In addition, seven Contractors had rates that surpassed the most recent HEDIS national means for Medicaid plans and four Contractors' rates exceeded the national commercial mean. The AHCCCS overall rate exceeded the HEDIS national means for both Medicaid and commercial health plans.

AHCCCS overall rates for all three measures met or exceeded the national Medicaid means

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:

Rates by Race/Ethnicity, CYE 2007

	Hb A1c	Lipid	Retinal
White[1]	79.1%	72.1%	58.8%
Hispanic	78.7%	67.5%	63.6%
Black	74.7%	63.9%	72.3%
Native American[2]	82.1%	75.0%	60.7%
Other/Unknown	79.9%	76.6%	49.5%

1 Non-Hispanic Whites were used as the reference group for analyzing whether disparities in use of services exist based on race/ethnicity.

2 Results for Native Americans should be interpreted with caution, since there were only 17 members in this category.

Results by County Type

There were significant differences in rates between members residing in rural and urban counties for two of the measures. Members living in urban counties were more likely to have an Hb A_{1c} test during the year, at 83.6 percent, than those in rural counties, at 73.0 percent ($p \leq .001$). Members in urban counties also were more likely to have a lipid screening during the year, at 76.0 percent, compared with those living in rural counties, at 63.8 percent ($p \leq .001$)

DISCUSSION

Overall Results

AHCCCS overall rates remained stable for all three measures. AHCCCS overall rates for two measures — Hb A1c testing and eye exams — exceeded the most recent HEDIS national means for Medicaid managed care plans, and the rate for lipid screening equaled the national average. The AHCCCS overall rate for eye exams also exceeded the most recent HEDIS commercial mean.

It should be noted that AHCCCS increased the MPS for Hb A1c testing for this measurement period, in order to encourage continued improvement in Contractor performance.

Contractor Performance

Three Contractors — Evercare Select, Mercy Care Long Term Care Plan and Yavapai County Long Term Care — met the AHCCCS Minimum Performance Standards for all measures. Mercy Care has shown strong performance in these measures, meeting all minimum standards for the past three years.

All Contractors except Mercy Care have corrective action plans (CAPs) in place for at least one of the diabetes measures. Most of these CAPs were implemented in early 2009, and would not have affected the current measurement period. However, it is expected that Contractors will show improvement in the next measurement period, based on these CAPs.

It appears that incomplete data collection affected results for Pima Health System, and the Contractor must address this issue as part of its corrective actions.

AHCCCS will work with the lowest-performing Contractors to assist and encourage them to improve rates.

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.[7] Contractors should continue to reinforce with providers the current clinical standards of care for members with diabetes.

In order to assist ALTCS Contractors with improving their rates for these measures, AHCCCS has provided health plans with educational materials and opportunities, as well as information on successful strategies for increasing the use of preventive-care services.

Successful strategies used in other programs include:

- automated reminders by telephone to advise patients that they are due for tests;

- frequent nurse follow-up by phone, especially as part of a case management or disease management program; and
- culturally relevant patient education materials, such as guides on preparing healthy meals, particularly those that incorporate traditional foods for specific ethnic and racial populations.[16-21]

Because depression and other mental health issues often coexist with diabetes, Contractors also should ensure that members receive behavioral health services as needed to support their abilities to manage their self-care.

Conclusion

Diabetes can be devastating and costly. However, clinical services that help monitor and control glucose and lipid levels, or detect retinal damage early, can help reduce the burden of disease.

Contractors must maintain an active focus on member and provider outreach related to diabetes care, in order to continue progress toward long-term goals for use of recommended screenings.

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TABLE 1

AHCCCS Clinical Quality Performance Measures for Diabetes

Hb A1c TESTS - ALTCS E/PD MEMBERS WITH DIABETES

Current Measurement Period: October 1, 2007, through September 30, 2008

Contractor	Included Cases	Total Receiving HbA1c Test	Percent Receiving HbA1c Test	Relative Percent Change	Significance Level
Bridgeway Health Solution *	132	106	80.3%	4.4%	p=.543
	91	70	76.9%		
Cochise Health Systems	98	76	77.6%	5.8%	p=.486
	105	77	73.3%		
Evercare Select *	250	213	85.2%	-2.3%	p=.517
	250	218	87.2%		
Mercy Care LTC *	336	298	88.7%	1.5%	p=.594
	332	290	87.3%		
Pima Health System LTC	237	151	63.7%	-22.8%	**p<.001**
	229	189	82.5%		
Pinal/Gila County LTC *	144	116	80.6%	47.3%	**p<.001**
	117	64	54.7%		
Scan Long Term Care	107	68	63.6%	12.4%	p=.528
	23	13	56.5%		
Yavapai County LTC *	85	68	80.0%	2.7%	p=.737
	86	67	77.9%		
TOTAL	1389	1096	78.9%	-1.5%	p=.439
	1233	988	80.1%		

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.

Results of the previous measurement period (Oct. 1, 2006, through Sept. 30, 2007), are shown in shaded rows

Figure 1
Hb A1c TESTS - ALTCS E/PD MEMBERS WITH DIABETES
Current Measurement Period: October 1, 2007, through September 30, 2008

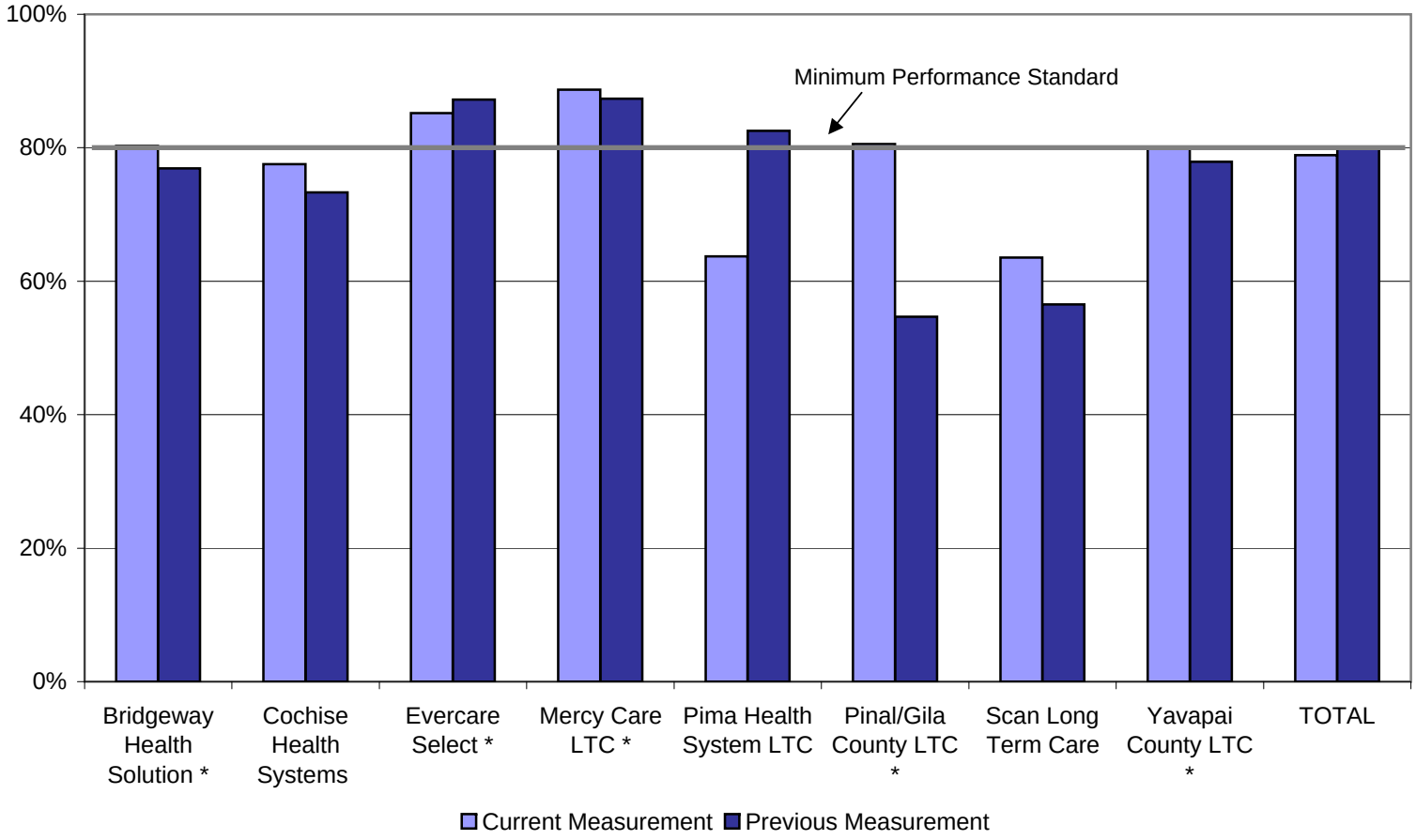


TABLE 2

AHCCCS Clinical Quality Performance Measures for Diabetes

ANNUAL LIPID PROFILES - ALTCS E/PD MEMBERS WITH DIABETES

Current Measurement Period: October 1, 2007, through September 30, 2008

Contractor	Included Cases	Total Receiving Fasting Lipid	Percent Receiving Fasting Lipid	Relative Percent Change	Significance Level
Bridgeway Health Solution *	132	97	73.5%	4.5%	p=.605
	91	64	70.3%		
Cochise Health Systems	98	67	68.4%	1.1%	p=.909
	105	71	67.6%		
Evercare Select *	250	180	72.0%	-10.9%	**p=.021**
	250	202	80.8%		
Mercy Care LTC *	336	288	85.7%	3.5%	p=.306
	332	275	82.8%		
Pima Health System LTC	237	124	52.3%	-21.7%	**p=.001**
	229	153	66.8%		
Pinal/Gila County LTC *	144	107	74.3%	33.8%	**p=.001**
	117	65	55.6%		
Scan Long Term Care	107	60	56.1%	17.2%	p=.471
	23	11	47.8%		
Yavapai County LTC *	85	62	72.9%	33.5%	**p=.013**
	86	47	54.7%		
TOTAL	1389	985	70.9%	-1.5%	p=.532
	1233	888	72.0%		

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.

Results of the previous measurement period (Oct. 1, 2006, through Sept. 30, 2007), are shown in shaded rows

Figure 2
LIPID PROFILES - ALTCS E/PD MEMBERS WITH DIABETES
Current Measurement Period: October 1, 2007, through September 30, 2008

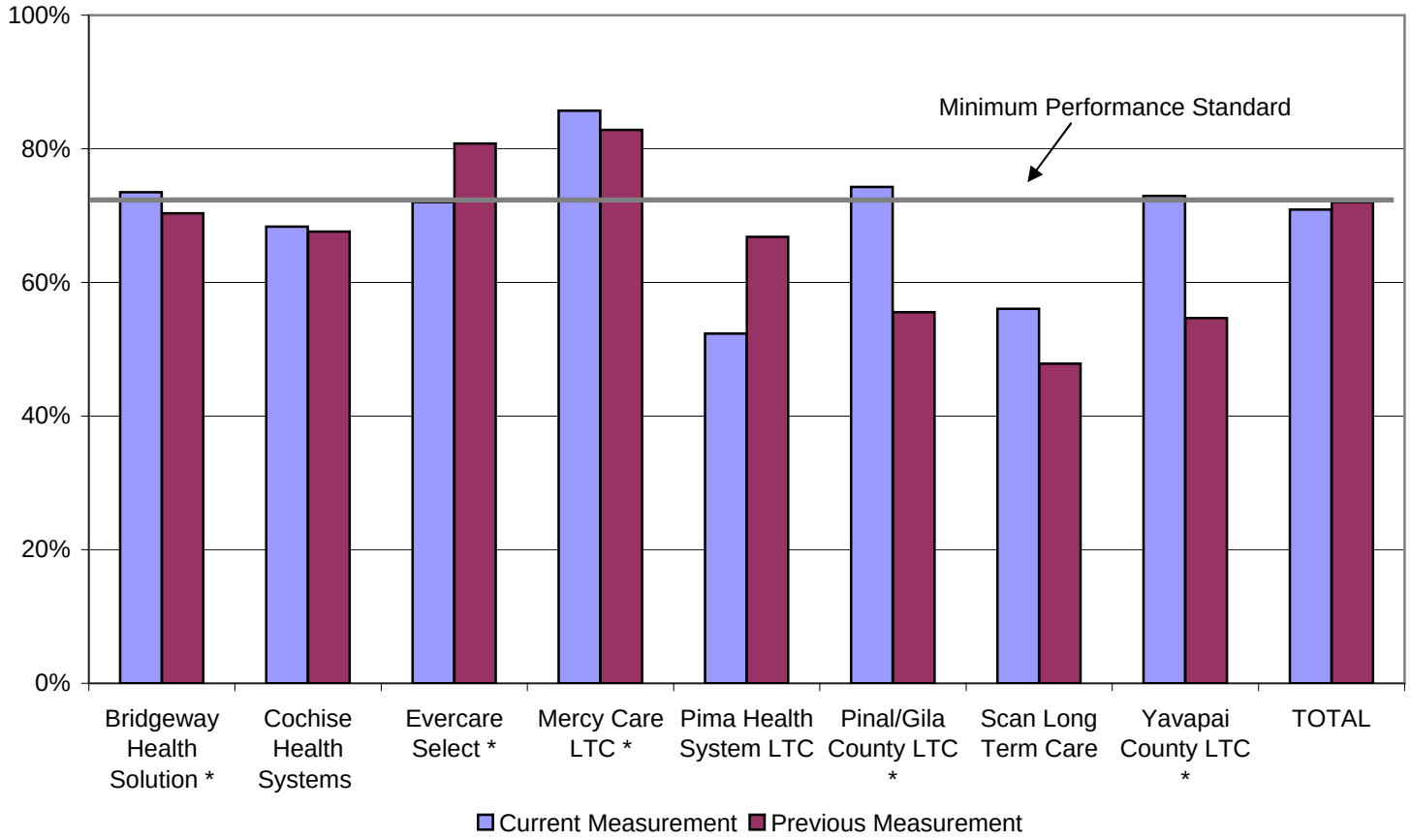


TABLE 3

AHCCCS Clinical Quality Performance Measures for Diabetes

RETINAL EXAMS - ALTCS E/PD MEMBERS WITH DIABETES

Current Measurement Period: October 1, 2007, through September 30, 2008

Contractor	Included Cases	Total Receiving Retinal Exam	Percent Receiving Retinal Exam	Relative Percent Change	Significance Level
Bridgeway Health Solution	132	67	50.8%	18.4%	p=.246
	91	39	42.9%		
Cochise Health Systems *	98	69	70.4%	-7.6%	p=.352
	105	80	76.2%		
Evercare Select *	250	181	72.4%	23.1%	**p=.001**
	250	147	58.8%		
Mercy Care LTC *	336	229	68.2%	1.0%	p=.850
	332	224	67.5%		
Pima Health System LTC	237	121	51.1%	1.7%	p=.857
	229	115	50.2%		
Pinal/Gila County LTC	144	77	53.5%	42.2%	**p=.011**
	117	44	37.6%		
Scan Long Term Care	107	34	31.8%	21.8%	p=.592
	23	6	26.1%		
Yavapai County LTC *	85	53	62.4%	9.4%	p=.474
	86	49	57.0%		
TOTAL	1389	831	59.8%	4.8%	p=.157
	1233	704	57.1%		

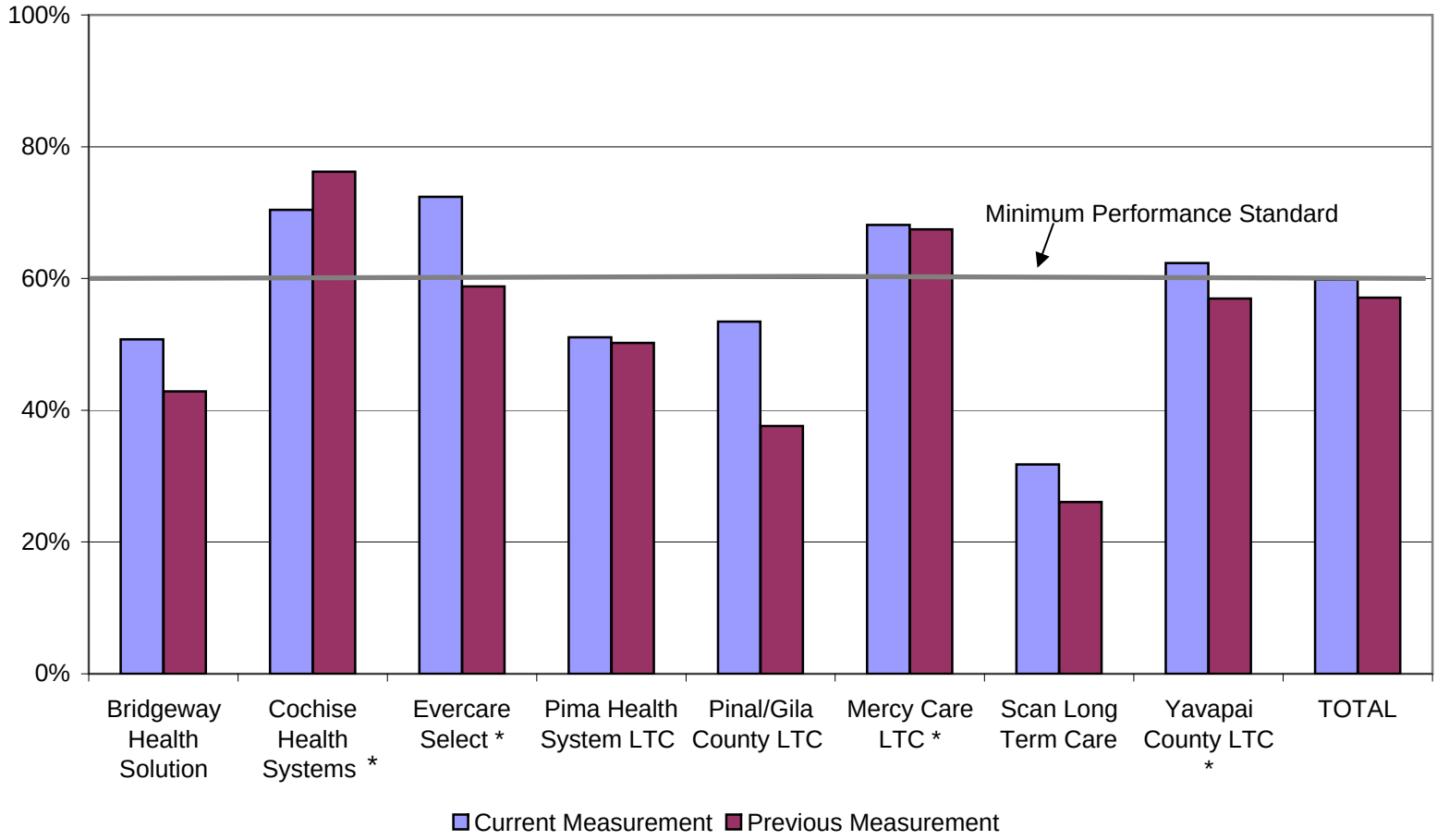
Notes:

* 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.

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
Current Measurement Period: October 1, 2007, through September 30, 2008



Appendix:

METHODOLOGY

Arizona Health Care Cost Containment System (AHCCCS)
Arizona Long Term Care System (ALTCS)
DIABETES PERFORMANCE MEASURES
Measurement Period: October 1, 2007, through September 30, 2008

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, 2007, through September 30, 2008

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 at 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® 2009. 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 study period
- Members with a gap in coverage greater than one month
- Members with steroid induced diabetes and gestational diabetes
- Members with a diagnosis of polycystic ovaries who do not have two face-to-face encounters with the diagnosis of diabetes in any setting during the measurement year or prior year

- Tribal and Fee for Service members will be excluded due to the inability to accurately collect complete data on these populations. Often these members seek 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:
- Program type (ALTCS*)
- 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, 2008, who were continuously enrolled during the measurement period, with no more than one gap in enrollment of up to 31 days, and diagnosed with type 1 or type 2 diabetes.
- Prior Period Coverage (PPC) will be considered a break in enrollment.
- A change of county service area with the same Contractor, without a gap in enrollment, will not be considered a break in enrollment.

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. Based on prior studies, an over sampling rate of 10 percent will be utilized.

Identification of Members with Diabetes
Members with diabetes will be identified, according to HEDIS 2009 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 above.

Indicators

<u>HbA1c testing</u>
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 2009 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

Codes to Identify HbA1c Tests

CPT Code	CPT Category II
83036, 83037	3044F, 3045F, 3046F, 3047F

or

- there was documentation in the member's medical record (at a minimum, a note or lab result record) indicating the date an HbA1c test was performed. The following notations count toward this indicator:
    - glycated hemoglobin
    - glycosylated hemoglobin
    - A1c
    - HbA1c
    - Hemoglobin A1c
    - HgbA1c

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 2009 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,

Codes to Identify LDL-C Screening

CPT Code	CPT Category II
80061, 83700, 83701, 83704, 83721	3048F, 3049F, 3050F

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 ophthalmoscopic exam was completed by an eye-care professional, with results of the exam.

CPT Code	CPT Category II	HCPCS	ICD-9-CM Procedure
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	2022F, 2024F, 2026F, 3072F	S0625, S3000, S0620, S0621	14.1-14.5, 14.9, 95.02-95.04, 95.11, 95.12, 95.16

Denominator

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

Numerators

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 double-blind validation may be performed by AHCCCS, matching the Contractor-supplied documentation with data on the Contractor's electronic file.

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® 2009 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 denominator will be divided by the numerator 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 studies will be compared to the current results.
- The results of this study will be compared to national HEDIS means and percentiles for Medicaid health plans as reported by the National Committee for Quality Assurance (NCQA), and 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, limitations and recommendations
- 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 sent 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