Arizona Health Care Cost Containment System

Arizona Long Term Care System (ALTCS) Performance Measure

PERFORMANCE MEASURES FOR DIABETES CARE

Measurement Period: October 1, 2004, through September 30, 2005

Prepared by the Division of Health Care Management
November 2006

AHCCCS

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Arizona Long Term Care System (ALTCS)

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INTRODUCTION

The federal Centers for Disease Control and Prevention (CDC) estimates that more than 20 million Americans age 20 years and older, or 9.6 percent of all people in this age group, have diabetes. About 1.5 million new cases of diabetes were diagnosed among people 20 years and older in 2005.[1]

An estimated 244,000 Arizona adults had a diagnosis of diabetes in 2002, the most recent year for which state-specific data are available.[2]

Diabetes was the sixth leading cause of death in the United States in 2002, causing or contributing to at least 224,000 deaths. [3]

In the United States, Hispanics, blacks, American Indians and Alaska natives are two to three times more likely to have diabetes than non-Hispanic whites. The prevalence of diabetes also is higher among older Americans – nearly 20 percent of all people 60 and older have diabetes – as well as among people with low socioeconomic status and those covered by Medicaid. [1,4]

The number of people in the United States with diagnosed diabetes has more than doubled in the last 15 years.[5] The prevalence of diabetes in Arizona also has increased during that time.[6] Contributing to this increase is the large number of "baby boomers" who are aging and living longer than previous generations. A sedentary lifestyle and a dramatic rise of obesity in the U.S. population also are increasing the incidence of diabetes.[7]

> Nearly 20 percent of all people 60 and older have diabetes.
>
> *Centers for Disease Control and Prevention*

About one out of every 10 health care dollars in the United States is spent on diabetes and its complications. Total U.S. expenditures related to diabetes were approximately $132 billion in 2002 – $92 billion in direct medical costs and another $40 billion in indirect costs because of missed work days or other losses in productivity.[8] At least 4 million hospitalizations and more than 26 million outpatient visits annually in the U.S. are associated with diabetes.[9,10]

Diabetes is the leading cause of end-stage kidney disease and new cases of blindness among adults. It also is responsible for more than 60 percent of nontraumatic lower-limb amputations. Other complications include heart disease, stroke, and nervous system disorders.[3]

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. This report summarizes current results of these Performance Measures.

Diabetes-related costs were estimated to be $132 billion in the U.S. in 2002.

Study conducted by the Lewin Group. Inc. for the American Diabetes Association

SIGNIFICANCE OF THE MEASURES

With diabetes, sustained high blood sugars result in microvascular complications; that is, damage to the very fine blood vessels of the eyes, peripheral nerves and kidneys. Diabetic retinopathy (damage to the retina of the eye) causes 12,000 to 24,000 new cases of blindness each year. Up to 70 percent of people with diabetes have mild to severe forms of nervous system damage, including impaired sensation or pain in the feet or hands, slowed digestion of food, carpal tunnel syndrome and other nerve problems.[3] Diabetes is the leading cause of end stage renal (kidney) disease.

Macrovascular complications of diabetes include coronary and peripheral artery disease, which may lead to heart attack or stroke, as well as amputations.

As with many diseases, other conditions (known as comorbid conditions) may be present. For example, the increased prevalence of lipid abnormalities found with type 2 diabetes contributes to higher rates of cardiovascular disease among diabetics.[11]

Despite its 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.[5,11]

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.[3,12,13]

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.[11,12] 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.

STUDY METHODS

AHCCCS used Health Plan Employer Data and Information Set (HEDIS) 2005 specifications from the National Committee for Quality Assurance (NCQA) as a guideline for measurement of diabetes care services. HEDIS methodology includes six indicators of comprehensive diabetes care. AHCCCS has identified three of these indicators for performance measurement: Hb A_{1c} testing, lipid screening, and retinal (eye) exams.

Population

The population included in this measurement consisted of elderly or physically disabled (E/PD) members enrolled with ALTCS-contracted health plans (Contractors).

Measurement Period

The measurement period for this study was the AHCCCS contract year from October 1, 2004, through September 30, 2005.

Sample Frame

The sample frame consisted of E/PD members who:

- were ages 18 through 75 years as of September 30, 2005,
- were continuously enrolled with one ALTCS Contractor during the measurement period with no more than one gap in enrollment, not exceeding 31 days,
- were enrolled with the Contractor on September 30, 2005, and
- 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 as having diabetes if he or she had one face-to-face encounter with a diagnosis of diabetes in an acute inpatient or emergency room setting during the measurement period or the previous year.

Data Sources

AHCCCS uses an automated data system known as the Prepaid Medical Management Information System (PMMIS). AHCCCS enrollment and encounter data contained in PMMIS were used to select sample members for this study and collect some data. Medical and case management records collected by Contractors were used to supplement encounter data.

Data Collection

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, and AHCCCS does not receive encounters for services paid for by another program or insurer.

AHCCCS initially collected data on diabetes services from its encounter subsystem. When encounters for specific services within the measurement period (or, in some cases the previous year) 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.

Contractors collected data for additional services provided to their members, including some services that were paid for by Medicare, from their claims systems, case management records and medical records. This information was entered into 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. Based on the most recent study of encounters submitted by long-term care Contractors, the encounter omission rate was less than 5 percent.

In order to document the reliability of data collected outside of the AHCCCS encounter system for this study, Contractors were required to submit hard copies of the appropriate sections of medical or case management records, or documentation of a paid claim, with their electronic data tools.

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 period.

***Lipid (LDL-C) screening* —** This indicator measured the percent of members who had one or more lipid screenings during the measurement period or the preceding year.

***Retinal examinations* —** This indicator measured the percent of members who had a retinal exam by an optometrist or ophthalmologist during the measurement period or the preceding year

Performance Measure Goals

AHCCCS has established Contractor performance standards for these measures. If ALTCS Contractors have achieved the AHCCCS minimum performance standard (MPS) for any measure, they should strive to meet the AHCCCS goal.

Measure	MPS	Goal
Hb A_{1c} testing	75 %	77%
Lipid screening	76%	78%
Retinal exams	45%	47%

These performance standards are designed to provide milestones for Contractors to meet in achieving the AHCCCS long-range goals for these measures, known as benchmarks. The AHCCCS-established benchmarks are: Hb A_{1c} testing, 88 percent; lipid screening, 85 percent; and retinal exams, 64 percent.

National Benchmarks

NCQA reports national averages for Medicaid health plans for these measures. The HEDIS 2004 means (averages) reported for Medicaid plans nationally were used to establish the current AHCCCS minimum standards in 2005. HEDIS rates for the 90th percentile of plans were used to set the benchmarks.

The 2005 mean for annual Hb A_{1c} testing among Medicaid plans was 76.2 percent. The mean for lipid screening was 80.5 percent. The mean for retinal exams was 48.6 percent.

RESULTS AND ANALYSIS

Included Cases
This measurement included 1,019 ALTCS members with diabetes who were enrolled with six long-term care Contractors during the measurement period.

Hb A_{1c} Testing
The overall rate of members who received an Hb A_{1c} test during the measurement period was 74.8 percent, compared with 75.2 percent in the previous period (Table 1). The difference in rates is not statistically significant (p=.845).

Rates by Contractor ranged from 67.7 percent to 90.2 percent. However, none of the Contractors demonstrated a statistically significant change from the previous measurement period.

Three Contractors exceeded both the AHCCCS minimum performance standard and goal for this measure; one exceeded the AHCCCS benchmark (Figure 1).

Lipid (LDL-C) Screening
The overall rate of members who had an LDL-C screening, or fasting lipid profile, during the measurement period or the preceding year was 73.6 percent, compared with 70.8 percent in the previous period (Table 2). The difference in rates is not statistically significant (p=.117).

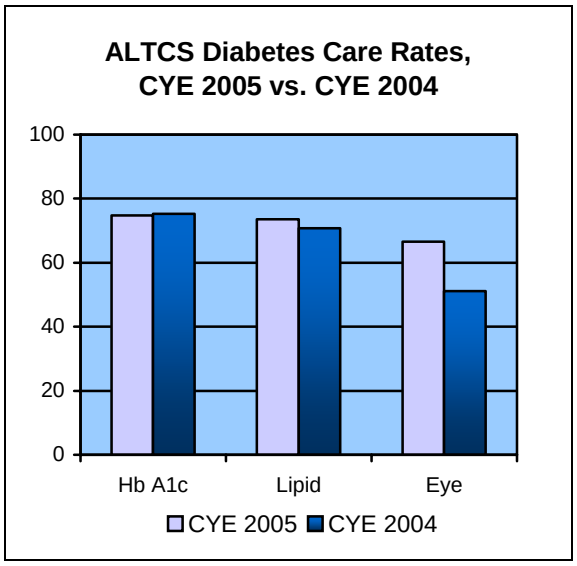
Rates by Contractor ranged from 46.2 percent to 90.2 percent. One Contractor demonstrated a relative increase of 11.8 percent (p=.033), and one Contractor showed a relative decline of 32.5 percent (p=.002).

Three Contractors exceeded both the AHCCCS minimum performance standard and goal for this measure; one exceeded the AHCCCS benchmark (Figure 2). These were the same three Contractors that achieved the highest rates for Hb A1c testing, and exceeded the AHCCCS goal for that measure.

Retinal Examinations
The overall rate of members who had a dilated eye (retinal) examination in the measurement period or the preceding year was 66.6 percent, compared with 51.1 percent in the previous measurement (Table 3). The increase is statistically significant (p<.001).

Rates by Contractor ranged from 51.7 percent to 85.6 percent. Four Contractors showed a significant improvement, with relative increases ranging from 15.4 percent to 98.8 percent. One Contractor experienced a relative decline of 22.5 percent (p=.026).

All Contractors achieved both the minimum performance standard and goal for this measure; three surpassed the benchmark (Figure 3).



DISCUSSION

Overall Results

The AHCCCS overall rates did not show improvement in two of the three measures, and the rates for these two measures fall short of the comparable HEDIS averages for Medicaid health plans nationwide. However, the rate for retinal exams increased markedly in this measurement, and is above the 90th percentile for Medicaid plans nationally.

Long-term trend data for these measures are not available because AHCCCS has been measuring these diabetes indicators for only two years using the current methodology.

Contractor Performance

Three Contractors — Cochise Health Systems, Mercy Care Long Term Care and Pinal/Gila County Long Term Care — met the AHCCCS minimum performance standards as well as the AHCCCS goals for all three diabetes measures.

The three remaining ALTCS Contractors — Evercare Select, Pima Health System Long Term Care and Yavapai County Long Term Care — met the minimum performance standard for retinal exams only. These Contractors will be required to implement Corrective Action Plans to bring their rates for Hb A_{1c} testing and lipid screening up to the AHCCCS Minimum Performance Standards.

It should be noted that AHCCCS increased minimum standards significantly for this measurement period.

Quality Improvement Efforts

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, such as Hb A_{1c} testing, lipid screening and eye exams. Successful strategies used in other programs include:[14-19]

- Automated reminders by telephone, advising patients that they are due for tests.
- Frequent nurse follow-up by phone, especially as part of a case management or disease management program.
- Group visits with multidisciplinary provider teams; e.g., including a physician, pharmacist, diabetes educator, nutritionist, and/or mental health professional as part of the care team.
- Culturally relevant patient materials or interventions, such as food preparation classes that incorporate traditional foods, in diabetes education.
- Social support groups, which allow patients to share experiences, and give health care professionals opportunities to further encourage the lifestyle changes that are usually necessary to control diabetes.

AHCCCS Contractors have utilized a variety of strategies to improve care of their diabetic members. These include member education, monitoring and follow up through disease management programs; developing and distributing practice guidelines to primary care physicians (PCPs), and advising PCPs of diabetic members who are due for specific services.

Pinal/Gila County Long Term Care — which had the highest rates for Hb A_{1c} testing and lipid screening and the second-highest rate for eye exams — has incorporated into its contracts with home and community-based service providers requirements to ensure that members make regular visits to their physicians to have these tests performed.

The health plan profiles performance of individual assisted living facilities and attendant care providers to drive improvements. In addition, nurses with the health plan's disease management program maintain close communication with physicians to coordinate services.

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.

A related AHCCCS Performance Improvement Project (PIP) focusing on Hb A_{1c} testing showed that rates of testing among ALTCS members increased significantly from CYE 2001 through CYE 2004. These results were achieved through an intensive focus on quality improvement. For example, Cochise Health Systems, in its final report on the PIP, stated that it "has been literally bombarding members and providers with information about diabetes. (Contractor staff feel) that there is a direct correlation between our educational interventions and the steady, sustained improvement in both the Hb A_{1c} testing indicator and the poor Hb A_{1c} control indicator."

Contractors must maintain an active focus on member and provider outreach related to diabetes care, in order to continue this kind of improvement. AHCCCS will consider increasing minimum performance standards, particularly for retinal exams, to promote improvement in these measures.

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TABLE 1
AHCCCS CLINICAL QUALITY PERFORMANCE MEASURES FOR DIABETES
Annual HbA1c Tests, by ALTCS Contractor
Measurement Period: October 1, 2004, through September 30, 2005

Contractor	Included Cases	Total Receiving HbA1c Test	Percent Receiving HbA1c Test	Relative Percent Change	Significance Level
Pinal/Gila County LTC *	**112**	**101**	**90.2%**	**3.4%**	p=.498
	102	89	87.3%		
Cochise Health Systems *	**97**	**77**	**79.4%**	**-10.2%**	p=.101
	86	76	88.4%		
Mercy Care LTC *	**271**	**209**	**77.1%**	**0.3%**	p=.944
	229	176	76.9%		
Pima Health System LTC	**231**	**163**	**70.6%**	**-6.5%**	p=.245
	212	160	75.5%		
Evercare Select	**215**	**149**	**69.3%**	**13.9%**	p=.078
	184	112	60.9%		
Yavapai County LTC	**93**	**63**	**67.7%**	**-7.2%**	p=.435
	89	65	73.0%		
TOTAL	**1019**	**762**	**74.8%**	**-0.5%**	p=.845
	902	678	75.2%		

Shaded rows show results of the previous measurement period, Oct. 1, 2003, through Sept. 30, 2004.

* Indicates that the Contractor met the AHCCCS Minimum Performance Standard.

FIGURE 1
Annual Hb A1c Testing
Current Measurement Period: Oct. 1, 2004, through Sept. 30, 2005

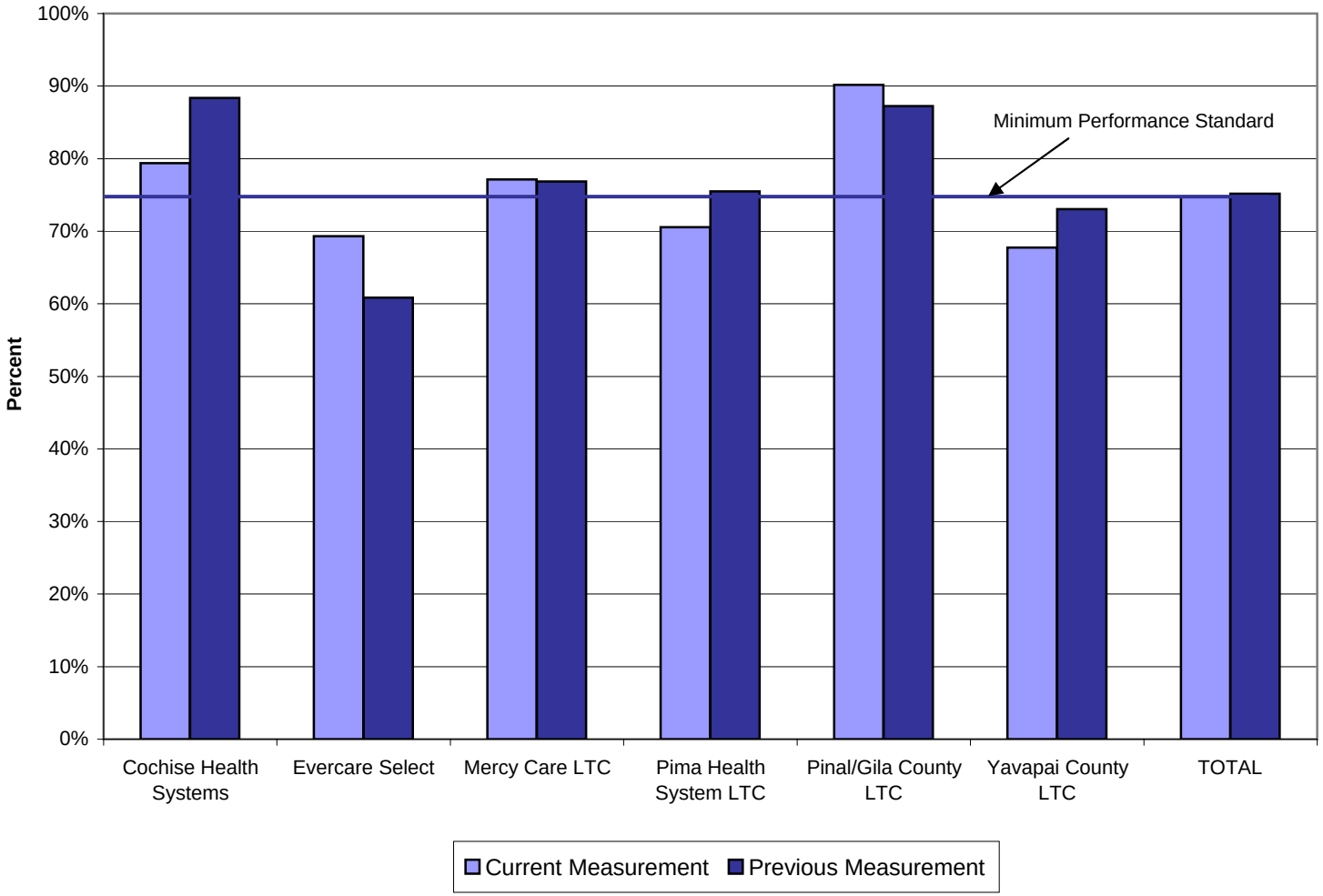


TABLE 2
AHCCCS CLINICAL QUALITY PERFORMANCE MEASURES FOR DIABETES
Biennial Lipid Screening, by ALTCS Contractor
Measurement Period: October 1, 2004, through September 30, 2005

Contractor	Included Cases	Total Receiving Fasting Lipid Profile	Percent Receiving Fasting Lipid Profile	Relative Percent Change	Significance Level
Pinal/Gila County LTC *	**112**	**101**	**90.2%**	**10.8%**	p=.064
	102	83	81.4%		
Mercy Care LTC *	**271**	**213**	**78.6%**	**11.8%**	**p=.033**
	229	161	70.3%		
Cochise Health Systems *	**97**	**76**	**78.4%**	**12.3%**	p=.185
	86	60	69.8%		
Pima Health System LTC	**231**	**174**	**75.3%**	**1.7%**	p=.759
	212	157	74.1%		
Evercare Select	**215**	**143**	**66.5%**	**4.6%**	p=.541
	184	117	63.6%		
Yavapai County LTC	**93**	**43**	**46.2%**	**-32.5%**	**p=.002**
	89	61	68.5%		
TOTAL	**1019**	**750**	**73.6%**	**3.9%**	**p=.177**
	902	639	70.8%		

Shaded rows show results of the previous measurement period, Oct. 1, 2003, through Sept. 30, 2004.

* Indicates that the Contractor met the AHCCCS Minimum Performance Standard.

Significance level in bold indicates a statistically significant change from the previous measurement.

FIGURE 2
Biennial Lipid Test
Current Measurement Period: Oct. 1, 2004, through Sept. 30, 2005

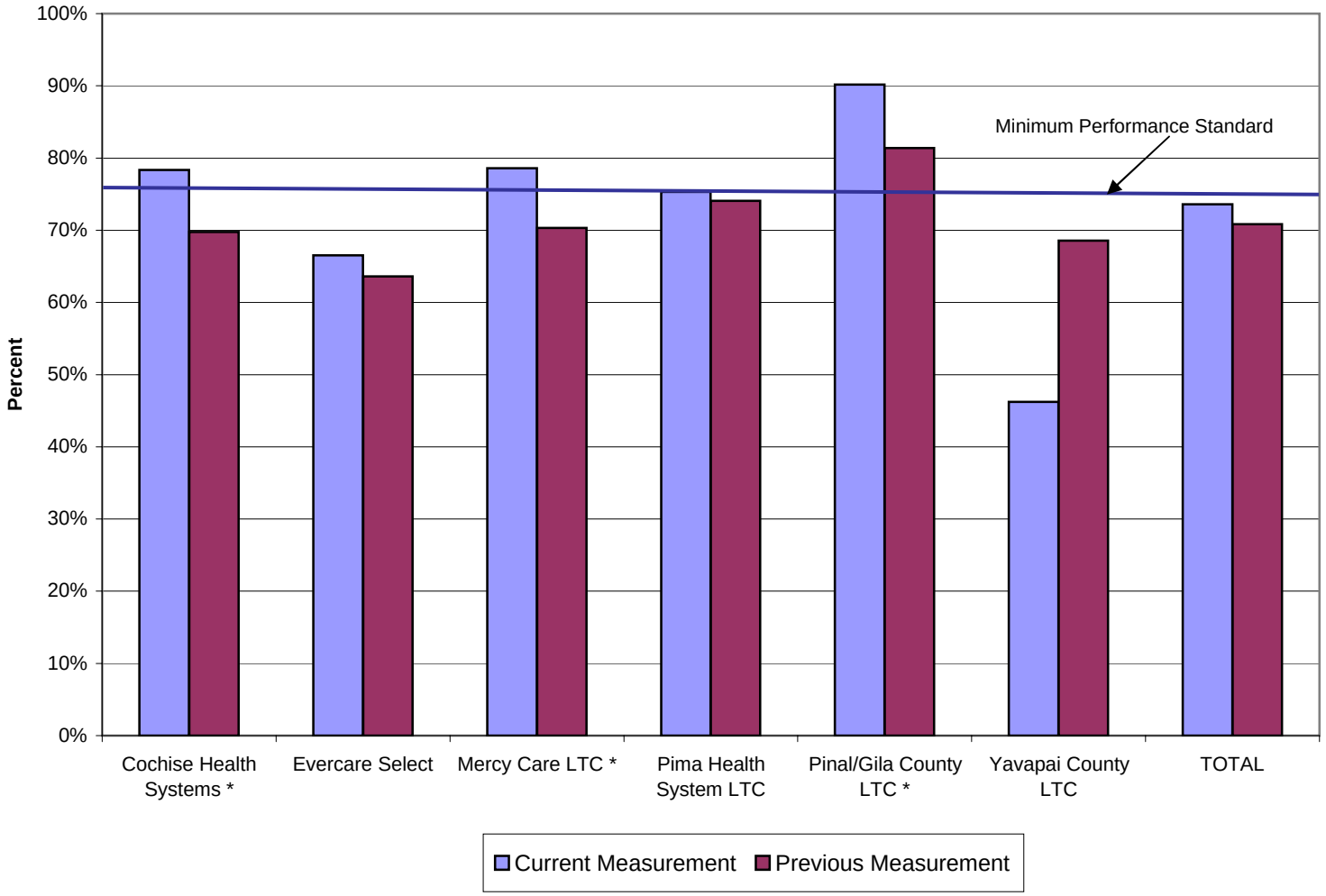


TABLE 3
AHCCCS CLINICAL QUALITY PERFORMANCE MEASURES FOR DIABETES
Biennial Retinal Exams, by ALTCS Contractor
Measurement Period: October 1, 2004, through September 30, 2005

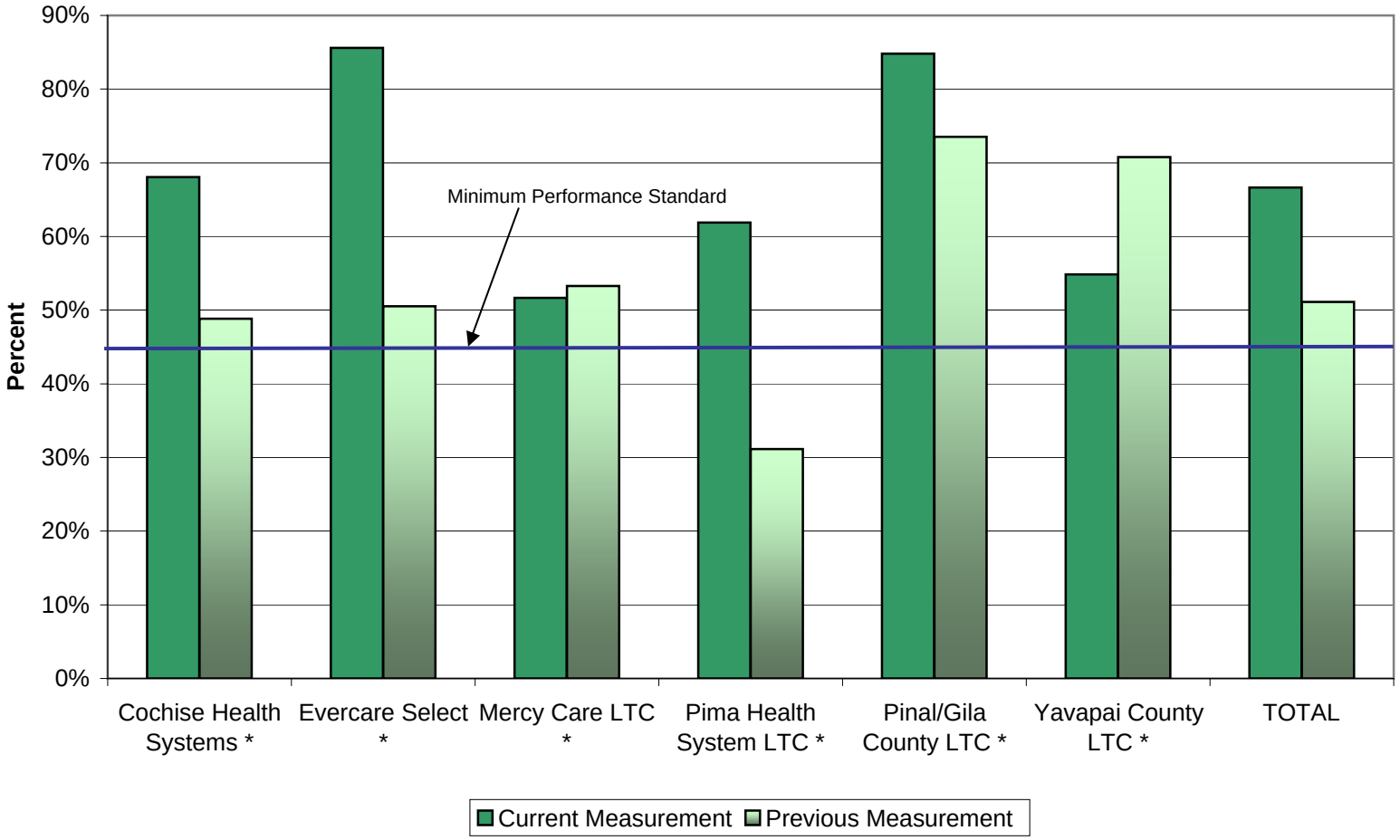
Contractor	Included Cases	Total Receiving Retinal Exam	Percent Receiving Retinal Exam	Relative Percent Change	Significance Level
Evercare Select *	**215**	**184**	**85.6%**	**69.3%**	**p<.001**
	184	93	50.5%		
Pinal/Gila County LTC *	**112**	**95**	**84.8%**	**15.4%**	**p=.041**
	102	75	73.5%		
Cochise Health Systems *	**97**	**66**	**68.0%**	**39.3%**	**p=.008**
	86	42	48.8%		
Pima Health System LTC *	**231**	**143**	**61.9%**	**98.8%**	**p<.001**
	212	66	31.1%		
Yavapai County LTC *	**93**	**51**	**54.8%**	**-22.5%**	**p=.026**
	89	63	70.8%		
Mercy Care LTC *	**271**	**140**	**51.7%**	**-3.0%**	p=.719
	229	122	53.3%		
TOTAL	**1019**	**679**	**66.6%**	**30.4%**	**p<.001**
	902	461	51.1%		

Shaded rows show results of the previous measurement period, Oct. 1, 2003, through Sept. 30, 2004.

* Indicates that the Contractor met the AHCCCS Minimum Performance Standard.

Significance level in bold indicates a statistically significant change from the previous measurement.

FIGURE 3
Biennial Retinal Exam
Current Measurement Period: Oct. 1, 2004, through Sept. 30, 2005



METHODOLOGY

Arizona Health Care Cost Containment System (AHCCCS)
Arizona Long Term Care system (ALTCS)
DIABETES PERFORMANCE MEASURES
Measurement Period: October 1, 2004, through September 30, 2005

Background

Diabetes is the sixth leading cause of death among Americans, contributing to more than 200,000 deaths each year. The United States Department of Health and Human Services (DHHS) estimates that 18 million Americans age 20 years and older have diabetes, accounting for 8.7 percent of all people in this age group.[1,2]

According to DHHS estimates, approximately 244,000 Arizona adults had a diagnosis of diabetes in 2002.[3]

Diabetes is becoming more common in the United States. Since 1991, the number of adult Americans with diabetes has increased by about 60 percent.[2] The prevalence of diabetes also has increased in Arizona during that time. In 1990, the state ranked among those with a prevalence of diabetes of less than 4 percent of adults. In 2002, Arizona ranked among those states with a prevalence of between 6 and 8 percent.[4]

Direct and indirect costs associated with diabetes in the United States, including lost productivity, were estimated to be $132 billion in 2002.[2,5] Diabetes is the leading cause of end-stage kidney disease and new cases of blindness among U.S. adults ages 20 to 74 years. It is responsible for more than 60 percent of nontraumatic lower-limb amputations. Other complications include heart disease, stroke, high blood pressure, nervous system disease and dental disease.[1] About 3.5 million hospitalizations each year are associated with diabetes.[6]

In the U.S., Hispanics, blacks, American Indians and Alaska natives are two to three times more likely to have diabetes than non-Hispanic whites. The prevalence of diabetes also is higher among older Americans: nearly 20 percent of all people 65 and older have diabetes.[2]

Purpose

The purpose of the AHCCCS performance measures for diabetes care is to monitor and improve the percentage of ALTCS members with diabetes who receive diagnostic and preventive services, in order to facilitate the medical care and self management necessary to minimize complications. This report summarizes the performance of ALTCS Contractors for these measures.

Measurement. Periods

October 1, 2004, through September 30, 2005

Study Questions

1. What is the prevalence of diabetes among the Arizona Long Term Care System (ALTCS) members who are no less than 18 years of age and no greater than 75 years of age as of September 30, 2005?

2. What is the number and percent, overall, and by Contractor, of members enrolled with (ALTCS) Contractors who meet the sample frame criteria and who had an annual HbA1c blood test completed between October 1, 2004 and September 30, 2005?
3. What is the number and percent, overall, and by Contractor, of members enrolled with ALTCS Contractors who meet the sample frame criteria and who had a biennial Fasting Lipid Profile (Cholesterol, HDL and LDL) completed between October 1, 2004 and September 30, 2005?
4. 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 biennial Retinal exam completed between October 1, 2004 and September 30, 2005?

Population

This study will include AHCCCS members diagnosed with diabetes, as defined by HEDIS® 2005. Members may be identified as diabetic during the measurement year or twelve months prior (October 1, 2003, through September 30, 2005).

Population Exclusions

The following members will be excluded from this study:

- Members less than 18 years of age.
- Members greater than 75 years of age.
- Members with Prior Period Coverage
- Members not enrolled the last day of the study period
- Members with a gap in coverage greater than 31 days
- 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 will be combined before stratifying

Sample Frame

The sample frame will consist of members 18 through 75 years of age as of September 30, 2005, 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 2005 specifications, by one of the following methods:

Pharmacy Data
- National Drug Code (NDC) list
  available at: http://www.ncqa.org/Programs/HEDIS/hedis2005NDCFinallists.htm

OR

Diagnosis Codes
- 250 – Diabetes mellitus
- 357.2 – Polyneuropathy in diabetes
- 362.0 – Diabetic retinopathy
- 366.41 – Central serous retinopathy
- 648.0 – Diabetes

AND

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. See Appendix A for codes to identify encounters.

Indicators
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. 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	LOINC
83036	4548-4, 4549-2, 17855-8, 17856-6

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 or year prior to measurement period, identified through either administrative data or medical record review. 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	LOINC
80061, 83715, 83716, 83721	2089-1, 12773-8, 13457-7, 18261-8, 18262-6, 22748-8, 24331-1

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 test was performed and the result.

Retinal Exam

This indicator measures an eye screening for diabetic retinal disease. It includes those diabetics who had a retinal or dilated eye exam by an eye care professional (optometrist or ophthalmologist) within the measurement period.

- Documented through either administrative data (using claim/encounter with one of the CPT or ICD-9 codes used for identification of eye exams) or medical record review.

Codes to Identify Eye Exams:

CPT Codes	**ICD-9-CM Codes**
67101, 67105, 67107-67108, 67110, 67112, 67141, 67145, 67208, 67210, 67218, 67227, 67228, 92002, 92004, 92012, 92014, 92018, 92019, 92225, 92226, 92230, 92235, 92240, 92250, 92260, 92287, 99203-99205, 99213 - 99215, 99242-99245	14.1-14.5, 14.9, 95.02-95.04, 95.11, 95.12, 95.16

- A negative retinal exam (an examination by an eye-care professional with no evidence of retinopathy) is allowed to be counted toward the numerator performed in the year prior to October 1, 2004 through September 30, 2005, if the member meets both of the following criteria:
  - The member was not prescribed or dispensed insulin during the measurement year.
  - The member's most recent HbA1c level (performed during the measurement period) is <8.0%.

Denominator

1. The total number of sample members enrolled with ALTCS Contractors during the measurement period.

Numerators

1. The number of members that met the sample frame criteria
2. The number of ALTCS EP/D members who had one or more Hb A1c tests during the measurement period
3. The number of ALTCS EP/D members who had a fasting lipid profile during the measurement period or the preceding year
4. The number of ALTCS EP/D members who had a retinal exam during the measurement period or 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.
- All employees and Contractors are required to sign a confidentiality agreement.
- 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

- Encounters, claims and pharmacy data (Form C) will be used to identify the population.
- AHCCCS has worked in collaboration with laboratories to establish a direct data links between Contractors and laboratories in their networks. These laboratories have the capability to electronically download member lab results directly into a Contractor's data information system. Contractors may collect data directly from their data information systems.
- When administrative or laboratory data is not available, data will be collected from members' medical or case management records.

Data Collection Process

- When the final population file is received from the AHCCCS Information Services Division, the sample population will be selected by the DA&R Unit.
- Applicable services from administrative data will paired with members selected for the study.
- Members found not to have complete data will be sent to Contractors in an electronic data file.

- Contractors will collect the required 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, pertinent medical/case management record(s), 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.
- AHCCCS will require Contractors to submit documentation of medical records, case management notes, and/or laboratory data to verify services that were provided.

Data Validation

- To verify that an annual HbA1c test, Biennial Fasting Lipid Profile tests and an annual Retinal examination were performed, Contractors must submit any one of the following for each member identified as receiving indicator services: laboratory records, pertinent medical or case management record(s), or information extracted from direct transmission of laboratory data.
- This documentation must contain the confirmation of examination being performed and date of service. Thus, the documentation also will validate that all tests for each indicator were performed during the measurement period. If no documentation of an indicator examination is available, but the Contractor has evidence of a claim paid for the tests (individual CPT and/or ICD-9 codes), the Contractor should submit verification of the administrative data.
- A double-blind validation may be performed by AHCCCS, matching the medical/case management record or laboratory data 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 in HEDIS® 2005, including:
    - Remove Glucophage/metformin from table of prescriptions that identify diabetics using pharmacy data. Diabetic members on these medications are identified through diagnosis coding only.
    - Remove glychohemoglobin from the HbA1c screening and control indicators.
    - Delete CPT codes 99288 from table that identifies acute inpatient/ emergency department visits.
    - Add UB-92 revenue code 19X to the outpatient/non-acute codes.
    - Add new table identifying HbA1c testing

- Add CPT codes 99203 and 99213 to table that identifies eye exams.
- Add LOINC (Logical Observation Identifiers Names and Codes) to tables that identify HbA1c, LDL-C, Microalbuminuria and Macroalbuminuria tests.
- Add ICD-9CM code 251.8 to table that identifies steroid-induced diabetes.

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 and by ALTCS Contractor.
- 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 the results of other state Medicaid programs as reported by the National Committee for Quality Assurance (NCQA), Minimal Performance Standard and AHCCCS Goal.
- Individual Contractors will be compared to each other and to the statewide average.
- All other stratifications as deemed appropriate (i.e. age, gender, ethnicity) will be compared with each other.

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. The parameters used are:
Degree of Freedom =1
Statistical Significance Level $p <= .05$

TECHNICAL SPECIFICATIONS

Diagnosis
May be identified by pharmacy data, claims or encounters

Pharmacy Data:
List of National Drug Codes (NDC) available at:
http://www.ncqa.org/Programs/HEDIS/hedis2005NDCFinallists.htm

OR

Claims/Encounter Data:
Two face-to-face encounters with different dates of service in an ambulatory setting or non-acute inpatient setting, or one face-to-face encounter in an acute inpatient emergency room setting during the measurement year or year prior with a diagnosis of diabetes. A diagnosis of diabetes will be determined by utilizing the following codes:

Description	ICD-9-CM Codes	CPT Codes	DRG
Diabetes diagnosis	250, 357.2, 362.0, 366.41, 648.0		294,295
Outpatient/non-acute inpatient	19x, 456, 49X-53X, 55X-59X, 65X, 66X, 76X, 77X, 82X-85X, 88X, 92X, 94X, 96X, 972-979, 982-986, 988, 989	92002-92014, 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99271-99275, 99301-99303, 99311-99313, 99321-99323, 99331-99333, 99341-99355, 99384-99387, 99394-99397, 99401-99404, 99411, 99412, 99420-99429, 99499	
Acute inpatient/ED	10X-16X, 20X-22X, 450, 451, 452, 459, 72X, 80X, 981, 987	99221-99223, 99231-99233, 99238-99239, 99251-99255, 99261-99263, 99281-99285, 99291-99292, 99356-99357	

Criteria for HbA1c

- One (or more) HbA1c test(s) conducted during the measurement year, denoted by codes listed in the following table:

Codes to Identify HbA1c Tests

CPT Code	LOINC
83036	4548-4, 4549-2, 17855-8, 17856-6

Criteria for Eye Exam

- A retinal exam performed during the measurement year or the preceding year

Codes to Identify Eye Exams:

CPT Codes	ICD-9-CM Codes
67101, 67105, 67107-67108, 67110, 67112, 67141, 67145, 67208, 67210, 67218, 67227, 67228, 92002, 92004, 92012, 92014, 92018, 92019, 92225, 92226, 92230, 92235, 92240, 92250, 92260, 92287,99203 - 99205, 99213 - 99215, 99242-99245	14.1-14.5, 14.9, 95.02-95.04, 95.11, 95.12, 95.16

Criteria for Lipid (**LDL-C) Screening**

- An LDL-C test done during the measurement year or year prior to the measurement year denoted by the following codes:

Codes to Identify LDL-C Screening

CPT Codes	LOINC
80061, 83715, 83716, 83721	2089-1, 12773-8, 13457-7, 18261-8, 18262-6, 22748-8, 24331-1

Exclusions

Description	ICD-9-CM Codes
Steroid Induced Diabetes	251.8, 962.0
Polycystic Ovaries	256.4
Gestational Diabetes	648.8