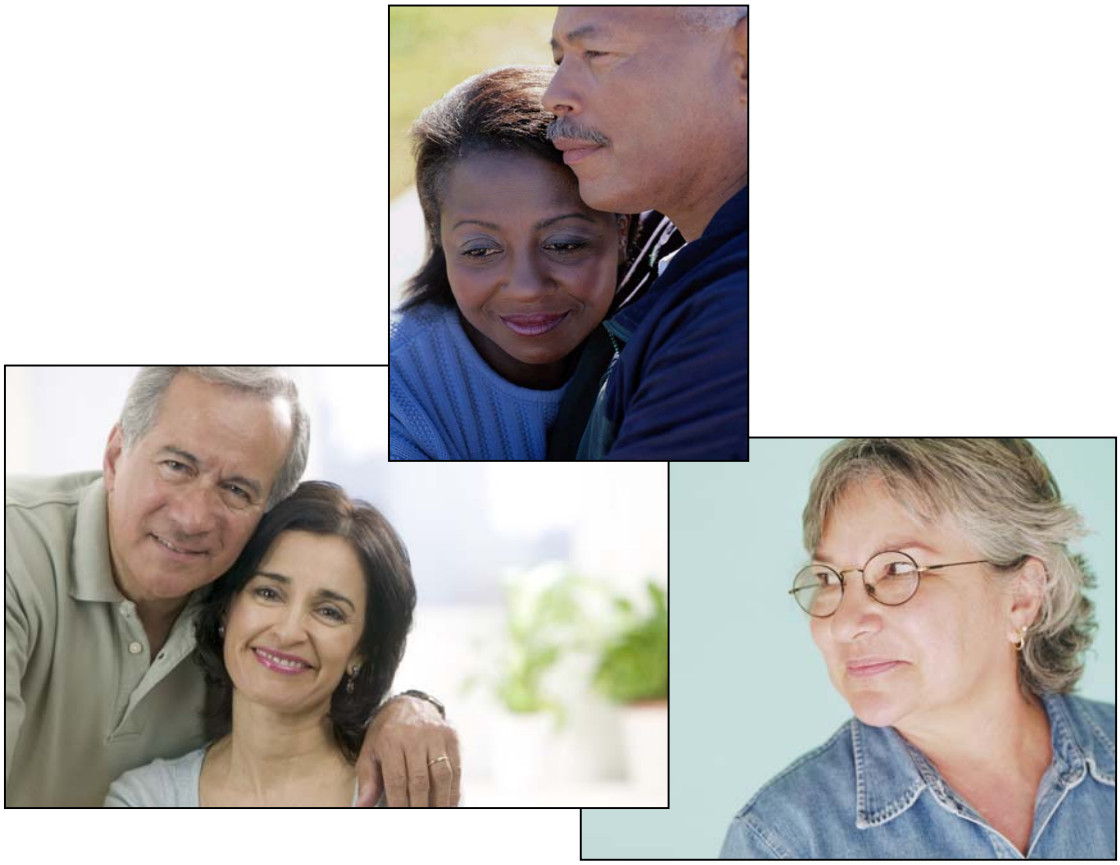
Arizona Health Care Cost Containment System

Arizona Long Term Care System (ALTCS) Performance Measure



PERFORMANCE MEASURES FOR DIABETES MANAGEMENT

Measurement Period: October 1, 2003, through September 30, 2004

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) Performance Measure:

MANAGEMENT OF DIABETES

For the Measurement Period October 1, 2003, through September 30, 2004

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INTRODUCTION

Background

Diabetes is the sixth leading cause of death among Americans, resulting in at least 70,000 deaths each year. It is a contributing factor in another 140,000 or more deaths annually. [1,2]

The federal Centers for Disease Control and Prevention (CDC) estimates that more than 18 million Americans age 20 years and older, or 6.3 percent of all people in this age group, have diabetes.[2] An estimated 244,000 Arizona adults had a diagnosis of diabetes in 2002, the most recent year for which state and national data are available.[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.[2]

The prevalance of diabetes among adults enrolled in the Arizona Long Term Care System (ALTCS) is greater than 13 percent, or twice the rate in the general population. National data show higher rates of diabetes among people with low socioeconomic status and those covered by Medicaid, compared with all people.[4]

Since 1991, the number of American adults with diabetes has risen by about 60 percent.[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*

At least 3.5 million hospitalizations each year are associated with diabetes.[8] Direct and indirect costs related to diabetes (including the costs of permanent disability and premature death) were estimated to be $132 billion in the U.S. in 2002.[9]

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.[2]

Purpose
The purpose of this study is to monitor, overall and by contracted health plan (Contractor), the percentage of ALTCS members with diabetes who receive certain clinical services to detect and prevent or reduce complications. This report summarizes current results of the ALTCS Contractor Performance Measures for diabetes care, and makes recommendations for improvement.

Direct and indirect costs related to diabetes were estimated to be $132 billion in the U.S. in 2002.

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

DIABETES COMPLICATIONS AND PREVENTIVE PRACTICES

What is Diabetes?
Diabetes mellitus is a group of chronic diseases characterized by high levels of blood glucose, which occur when the body does not properly produce or use insulin. Insulin is a hormone that is needed to convert carbohydrates into glucose, a simple sugar that is a primary source of energy. Both genetics and lifestyle, such as obesity and lack of exercise, are associated with the disease.[2,10]

There are three major types of diabetes: [2,10]

- Type 1 diabetes, which accounts for 5 to 10 percent of all diagnosed cases, usually begins in childhood and occurs when the cells that produce insulin are destroyed.
- Type 2 diabetes, which accounts for 90 to 95 percent of diagnosed cases, occurs as the body develops insulin resistance or the pancreas loses the ability to produce insulin. Type 2 is associated with both genetic and behavioral factors, including age, obesity, physical inactivity, family history and race or ethnicity. Normally seen in adults, type 2 diabetes is on the rise in children and young adults.
- Gestational diabetes, which is diagnosed in about 4 percent of women during pregnancy, and may be manifested later as type 2 diabetes.

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.[2] Diabetes is the leading cause of end stage renal (kidney) disease.

Macrovascular complications include coronary and peripheral artery disease, which may lead to heart attack or stroke. As with many diseases, other conditions (known as comorbid conditions) may be present with diabetes. For example, the increased prevalence of lipid abnormalities found with type 2 diabetes contributes to higher rates of cardiovascular disease among diabetics.[11]

Prevention of Diabetes Complications
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 benefits people with either type 1 or type 2 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. [2,12,13]

Lipid Management — Managing lipid levels has been shown to reduce macrovascular disease – or complications affecting the heart, brain and legs – in people with type 2 diabetes, especially those who have a history of cardiovascular problems.[11,12] Control of cholesterol and lipids can reduce cardiovascular complications by 20 to 50 percent.[2]

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.[2] People with type 1 and type 2 diabetes should have a comprehensive dilated eye examination by an ophthalmologist or optometrist, in order to detect and treat retinopathy and prevent vision loss.

STUDY METHODS

AHCCCS used Health Plan Employer Data and Information Set (HEDIS) 2004 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 eye exams.

Population
The population included in this measurement consisted of elderly or physically disabled (E/PD) members enrolled in ALTCS.

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

- were ages 18 through 75 years as of September 30, 2004,

- were continuously enrolled with one ALTCS Contractor, with no more than one gap in enrollment, not exceeding 31 days, as of September 30, 2004, 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.

Measurement Period

The services measured were provided from October 1, 2003, through September 30, 2004.

Data Sources

AHCCCS uses a statewide, automated managed care 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. This information was entered into the electronic tool according to detailed instructions from AHCCCS.

Data Quality and Reliability

AHCCCS conducts validation studies to evaluate the completeness, accuracy and timeliness of encounter data. Based on the most recent data validation study by AHCCCS, less than 6 percent of all encounters in PMMIS are inaccurate when compared with corresponding medical records.

In order to document 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 with their electronic data tools.

Deviation from Previous Methodology

This study differs from previous measures of diabetes preventive care services conducted by AHCCCS. In the two previous measurements, results were based on administrative data only and consisted of a combination of AHCCCS encounter data and analytic data obtained from the Centers for Medicare and Medicaid Services (CMS). The previous results were obtained and analyzed by Health Services Advisory Group (HSAG), an independent Quality Improvement Organization, through a collaborative agreement.

AHCCCS undertook this collaborative project with HSAG to collect data on diabetes care services for members who were dually enrolled in Medicaid and Medicare. HSAG was able to obtain data from CMS on services provided to some members under Medicare. However, data on services provided to dually enrolled members through Medicare managed care plans was not available from CMS. In order to collect more complete data for the diabetes Performance Measures, AHCCCS began using the current hybrid data collection process, beginning with this measurement.

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.

Eye 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 indicator, they should strive to meet the AHCCCS Goal.

Measure	MPS	Goal
Hb A_{1c} testing	51 %	55%
Lipid screening	47%	51%
Eye exams	31%	35%

These Performance standards are designed to provide milestones for Contractors to meet in achieving the AHCCCS long-range goals for these indicators, known as Benchmarks. The AHCCCS-established Benchmarks are: Hb A_{1c} testing, 85 percent; lipid screening, 81 percent; and eye exams, 64 percent.

National Benchmarks

NCQA has reported national averages for Medicaid HEDIS measures for diabetes care. The 2003 mean (average) for annual Hb A_{1c} testing among Medicaid plans was 74.8 percent. The mean for LDL-C screening was 75.9 percent. The mean for eye exams was 45.0 percent.

RESULTS AND ANALYSIS

Included Cases

This measurement included 1,154 ALTCS E/PD members with diabetes.

Hb A_{1c} Testing

The overall rate of members who received an Hb A_{1c} test during the measurement period was 76.7 percent (Table 1).

Rates by Contractor ranged from 60.9 percent to 88.4 percent. All seven Contractors exceeded the current AHCCCS goal for this measure and two exceeded the AHCCCS long-range benchmark (Figure 1). Five Contractors achieved rates above the national Medicaid HEDIS average for 2003.

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 69.2 percent (Table 2).

Rates by Contractor ranged from 63.5 percent to 81.4 percent. All Contractors exceeded the current AHCCCS goal for this measure and one achieved the AHCCCS long-range benchmark (Figure 2). This same Contractor also exceeded the national Medicaid HEDIS average for 2003.

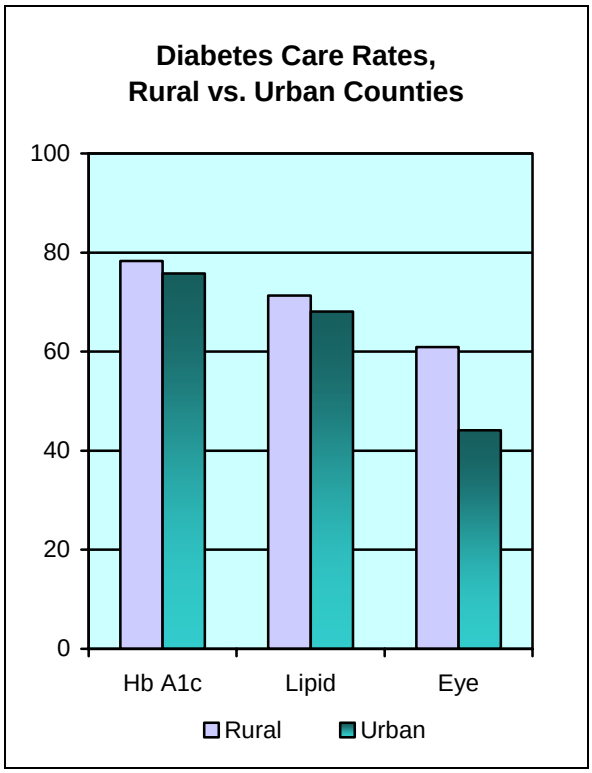
Eye Examinations

The overall rate of members who had a dilated eye examination in the measurement period or the preceding year was 50.1 percent (Table 3).

Rates by Contractor ranged from 31.1 percent to 73.5 percent. All Contractors achieved the Minimum Performance Standard for this measure, six exceeded the current goal, and two surpassed the long-range benchmark (Figure 3). Six Contractors achieved rates above the national Medicaid HEDIS average for 2003.

Results by Geographic Area

The overall rate of eye exams was significantly higher in rural counties, compared with urban counties ($p<.001$). There was no significant difference in rates of Hb A_{1c} testing and lipid screening between rural and urban areas ($p= .345$ and .266, respectively).

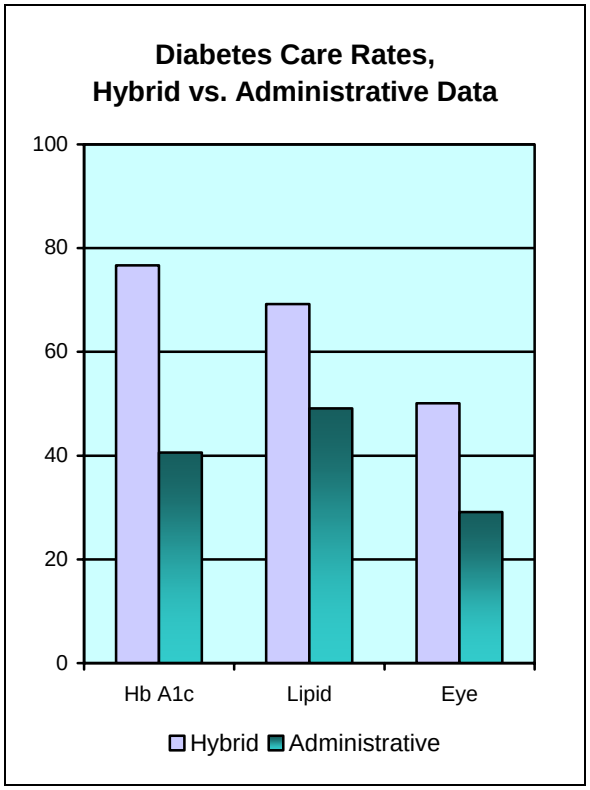


DISCUSSION

Overall Results

As previously noted, AHCCCS has collected administrative data for this measure through a collaboration with HSAG over the past two years. In addition to the hybrid data collection conducted by AHCCCS and its Contractors for this study, HSAG also collected and analyzed diabetes care data for the current measurement period, according to methodology used for previous studies. As expected, rates generated by administrative data only, including some data for Medicare services obtained from CMS, were substantially lower than the rates generated by a combination of AHCCCS encounter and medical record or case management data.

The following graph shows the difference in rates generated from hybrid data, compared with administrative data only.



Contractor Performance

All Contractors are meeting the current AHCCCS Minimum Performance Standards for diabetes care and most have exceeded current goals. Compared with the most recent HEDIS data for Medicaid health plans, most ALTCS Contractors exceeded national averages for Hb A_{1c} testing and eye exams. It also should be noted that some AHCCCS Contractors are achieving rates of diabetes preventive care services that are comparable with HEDIS commercial health plan averages.

The current standards for ALTCS Contractors were implemented in 2004. For the contract year ending September 30, 2006, AHCCCS increased the Minimum Performance Standard for each measure, based on the HEDIS national averages for Medicaid Health Plans. AHCCCS goals for Contractor performance also were raised accordingly.

Quality Improvement Efforts

In order to assist ALTCS Contractors with quality improvement, AHCCCS has been providing health plans with educational opportunities, outreach resources, and information on successful strategies for increasing the use of preventive-care practices. Successful member-focused strategies include:[14-18]

- Automated reminders by telephone, advising patients that they are due for tests.
- Nurse follow-up by phone, especially as part of a case management or disease management program.
- Social support groups and group visits with providers.
- Use of diabetes educators, dietitians, pharmacists and/or mental health professionals as part of the care team.
- Culturally relevant patient materials or interventions, such as food preparation classes that incorporate traditional foods, in diabetes education.

Several AHCCCS Contractors have utilized these kinds of strategies, often as part of disease management programs for members with diabetes. In addition to member education and follow up, Contractors have developed and distributed practice guidelines and provided practitioner education on current standards of care for diabetes.

At least one Contractor has focused diabetes education efforts on caregivers of members in home and community-based settings, such as assisted living facilities (ALFs). Attendant care givers and ALF staff are expected to ensure that members have regular appointments with their primary care physicians (PCPs) to have routine tests performed. The Health Plan's case managers also maintain close communication with PCPs.

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. With a substantial portion of their members diagnosed with diabetes, AHCCCS Contractors are focusing significant efforts on managing care of these members.

AHCCCS will continue working with ALTCS Contractors, especially those with the lowest rates, to assist them in reaching goals for these Performance Measures in the future.

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TABLE 1

Arizona Health Care Cost Containment System (AHCCCS)

ALTCS PERFORMANCE MEASURES FOR DIABETES MANAGEMENT:

ANNUAL Hb A1c BLOOD TESTS

Measurement Period: October 1, 2003, through September 30, 2004

Contractor	Included Cases	Total Receiving HbA1c Test	Percent Receiving HbA1c Test
Cochise Health Systems	86	76	88.4%
Pinal/Gila County LTC	102	89	87.3%
Maricopa LTC	252	207	82.1%
Mercy Care LTC	229	176	76.9%
Pima Health System LTC	212	160	75.5%
Yavapai County LTC	89	65	73.0%
Evercare Select	184	112	60.9%
TOTAL	**1154**	**885**	**76.7%**

Figure 1
ARIZONA HEALTH CARE COST CONTAINMENT SYSTEM (AHCCCS)
ALTCS PERFORMANCE MEASURES FOR DIABETES MANAGEMENT
ANNUAL HB A1C TESTING
Measurement Period: October 1, 2003, through September 30, 2004

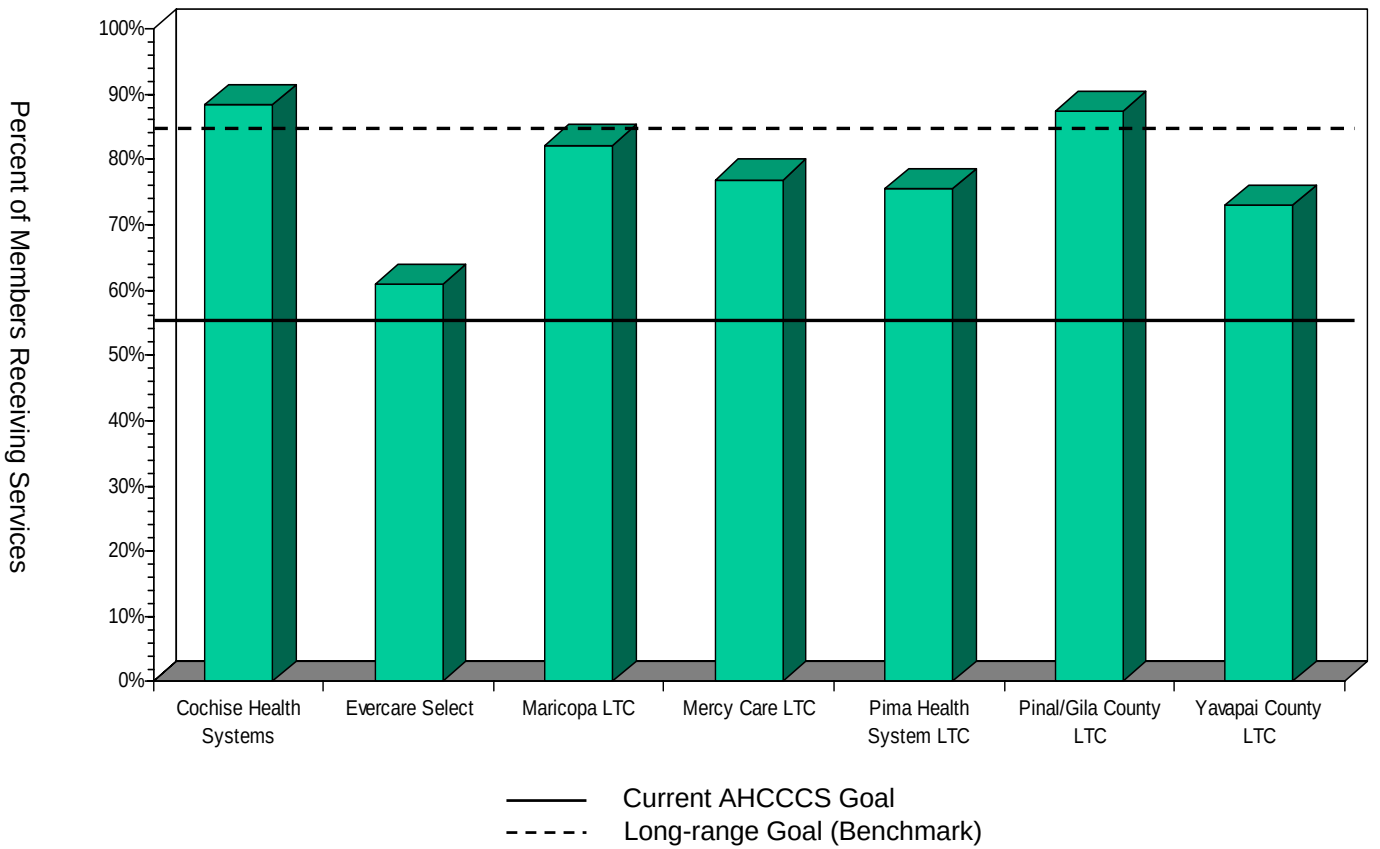


TABLE 2
Arizona Health Care Cost Containment System (AHCCCS)
ALTCS PERFORMANCE MEASURES FOR DIABETES MANAGEMENT:
BIENNIAL LIPID SCREENING
Measurement Period: October 1, 2003, through September 30, 2004

Contractor	Included Cases	Total Receiving Lipid Screening	Percent Receiving Lipid Screening
Pinal/Gila County LTC	102	83	81.4%
Pima Health System LTC	212	157	74.1%
Mercy Care LTC	229	161	70.3%
Cochise Health Systems	86	60	69.8%
Yavapai County LTC	89	61	68.5%
Evercare Select	184	117	63.6%
Maricopa LTC	252	160	63.5%
TOTAL	**1154**	**799**	**69.2%**

Figure 2
ARIZONA HEALTH CARE COST CONTAINMENT SYSTEM (AHCCCS)
ALTCS PERFORMANCE MEASURES FOR DIABETES MANAGEMENT
BIENNIAL LIPID SCREENING
Measurement Period: October 1, 2003, through September 30, 2004

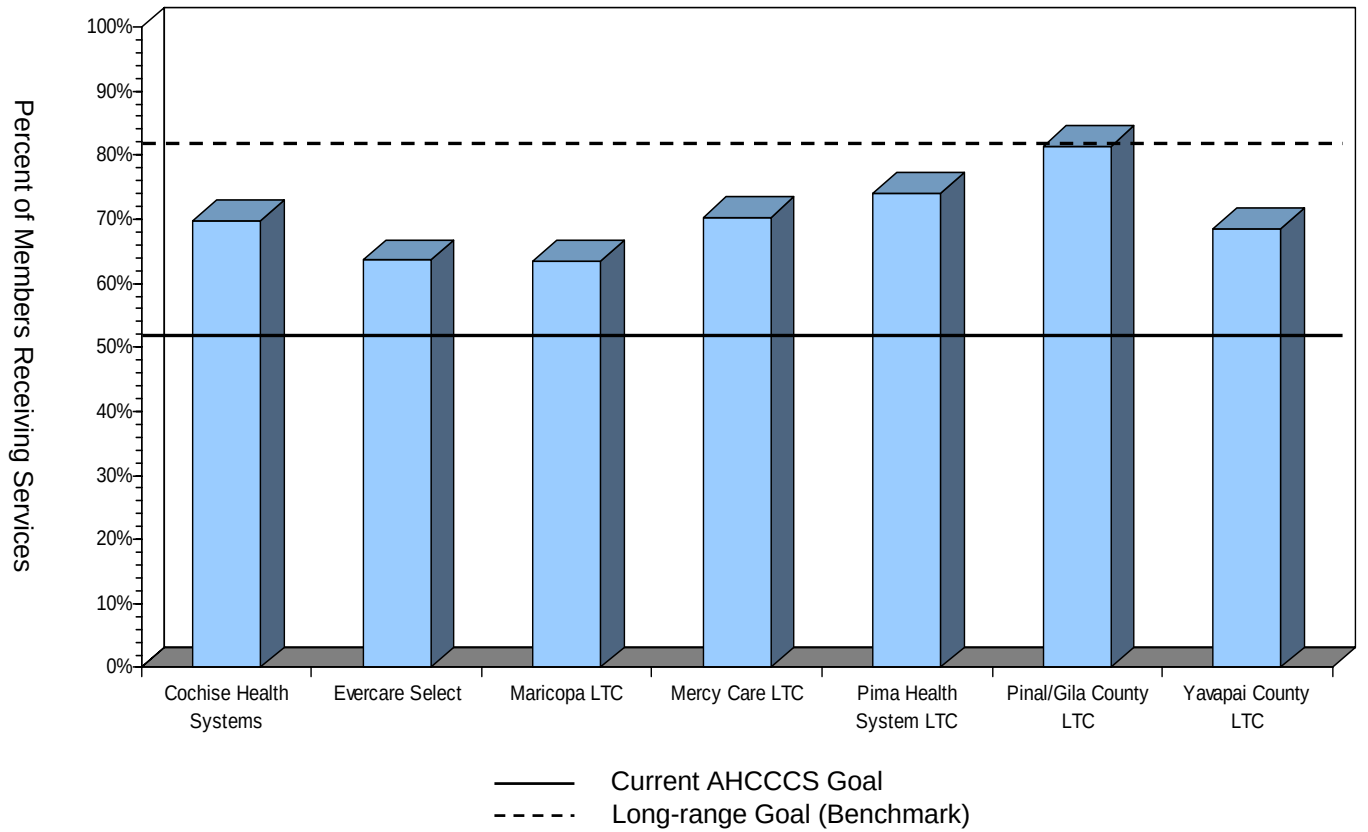


TABLE 3

Arizona Health Care Cost Containment System (AHCCCS)

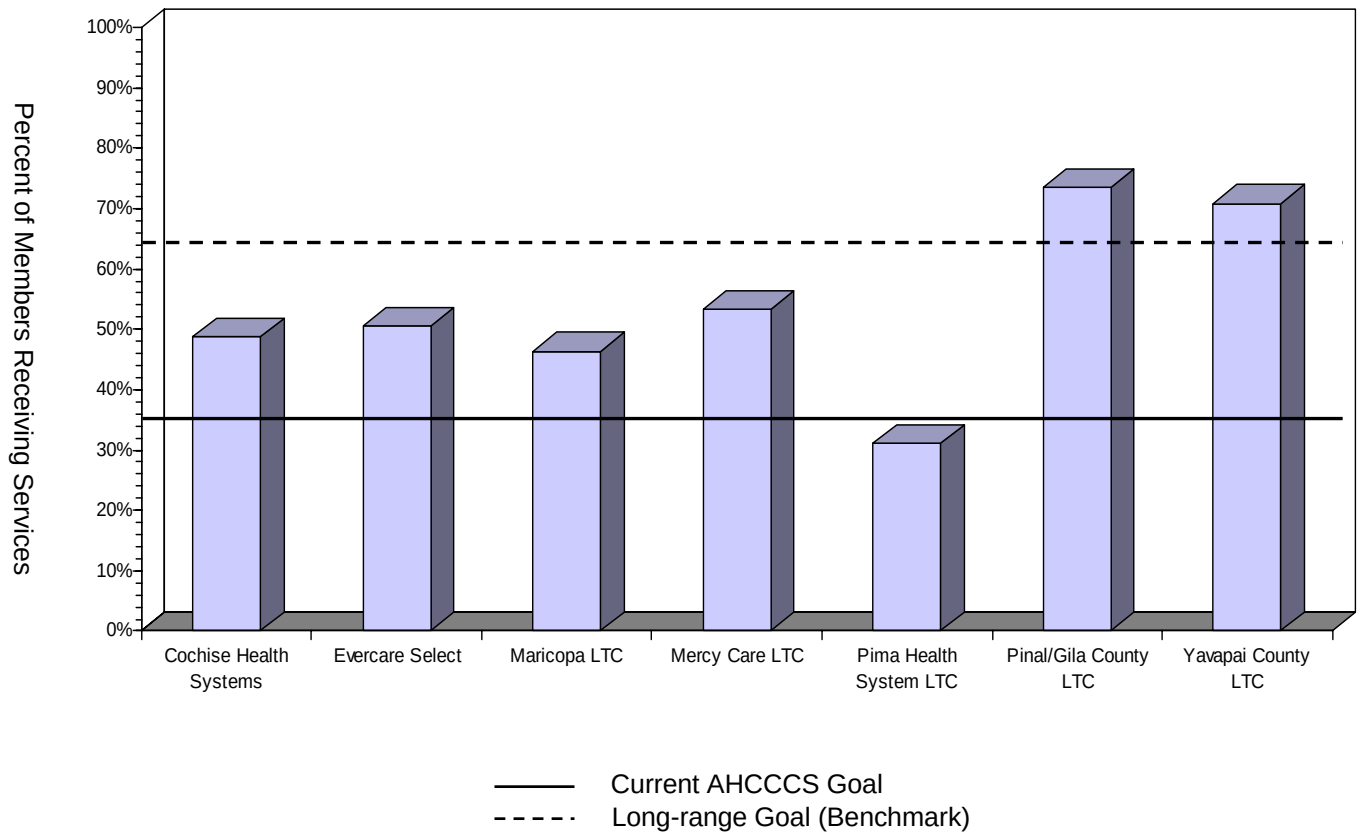
ALTCS PERFORMANCE MEASURES FOR DIABETES MANAGEMENT:

BIENNIAL RETINAL EXAMS

Measurement Period: October 1, 2003, through September 30, 2004

Contractor	Included Cases	Total Receiving Retinal Exam	Percent Receiving Retinal Exam
Pinal/Gila County LTC	102	75	73.5%
Yavapai County LTC	89	63	70.8%
Mercy Care LTC	229	122	53.3%
Evercare Select	184	93	50.5%
Cochise Health Systems	86	42	48.8%
Maricopa LTC	252	117	46.4%
Pima Health System LTC	212	66	31.1%
TOTAL	**1154**	**578**	**50.1%**

Figure 3
ARIZONA HEALTH CARE COST CONTAINMENT SYSTEM (AHCCCS)
ALTCS PERFORMANCE MEASURES FOR DIABETES MANAGEMENT
BIENNIAL RETINAL EXAM
Measurement Period: October 1, 2003, through September 30, 2004



APPENDIX

Methodology and Technical Specifications:
Diabetes Management Performance Measures
For the Measurement Period Ending September 30, 2004

Population
The population included all elderly and physically disabled (E/PD) members in the Arizona Long Term Care System (ALTCS) who are enrolled with the following Contractors: Cochise LTC (110003 and 550003), Evercare Select (110049 and 550047), Maricopa County LTC (110023 and 550021), Mercy Care LTC (110306 and 550306), Pima Health System LTC (110015 and 550013), Pinal/Gila LTC (110065 and 550063), and Yavapai LTC (110025 and 550025).

Inclusion Criteria
Members ages 18 through 75 years as of September 30, 2004, were included based on the following enrollment criteria:
- Enrolled as of September 30, 2004
- Members in the population
- Continuously enrolled with one ALTCS Contractor with no more than one gap in enrollment, not exceeding 31 days

Members were identified as having a diagnosis of type 1 or type 2 diabetes by either of the following methods: *

- Pharmacy - National Drug Codes (NDC)

  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 period or the year prior with a diagnosis of diabetes

** Refer to Technical Specifications for more information*

Exclusion Criteria
Members were excluded from the study based on the following criteria:
- Younger than 18 years of age
- Older than 75 years of age
- Members not in the population
- Tribal members
- Members with prior period coverage
- Members not enrolled on the last day of the study period
- Members with a gap in enrollment greater than 31 days
- Members in the fee-for-service program

- Members with the following diagnoses:

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

Sample Frame
The sample frame consisted of a representative random sample by Contractor.

Sample Selection
Sample selection was calculated for each Contractor to provide a 95-percent confidence level and 5-percent confidence interval.

Sample Frame Stratification
The sample frame was stratified by ALTCS Contractor and by rural vs. urban area.

Data Sources
AHCCCS enrollment and encounter data were used to select sample members for this study and collect some data. Medical records, case management notes and laboratory data collected by Contractors were used to supplement encounter data.

Data Collection
AHCCCS initially collected data on diabetes services from its encounter subsystem. When encounters for specific services within the measurement period (or in the previous year for lipid screening and eye exams) 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. This information was entered into the electronic tool according to detailed instructions from AHCCCS.

Data Quality and Reliability
AHCCCS conducts validation studies to evaluate the completeness, accuracy and timeliness of encounter data. Based on the most recent data validation study by AHCCCS, less than 6 percent of all encounters in PMMIS are inaccurate when compared with corresponding medical records.

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

Denominators
The total number of members who were identified as diabetics

Numerators

1. The number of members in the denominator who had an annual Hb A1c blood test
2. The number of members in the denominator who had a biennial fasting lipid profile
3. The number of members in the denominator who had a biennial retinal exam

Analysis

- The numerator was divided into the denominator for each corresponding indicator to determine the indicator rate.
- Data was analyzed as a statewide aggregate for all members in the denominator and by individual Contractor.
- Standard deviations and patterns of abnormal distribution of data were utilized to identify any outliers.
- All other stratifications as deemed appropriate (e.g., age or gender) were analyzed.
- Individual Contractor rates were compared to AHCCCS Minimum Performance Standards and Goals, and to NCQA national averages.

Deviations from HEDIS

This study is based on HEDIS specifications for the indicators measured. The HEDIS measure of Comprehensive Diabetes Care includes additional indicators, which were not part of the AHCCCS study:

- Hb A1c poorly controlled (greater than 9.5 percent)
- LDL-C controlled (LDL less than 130 mg/dL)
- Kidney disease (nephropathy) monitored

This study used a combination of AHCCCS encounter and medical record data. AHCCCS also allowed Contractors to collect data from case management systems, as a proxy for medical record review. This is a deviation from HEDIS hybrid methodology, which only specifies medical record review in addition to administrative data.

Deviation from Previous Methodology

This study differs from previous measures of diabetes preventive care services conducted by AHCCCS. In the two previous measurements, results were based on administrative data only and consisted of a combination of AHCCCS encounter data and analytical data obtained from the Centers for Medicare and Medicaid Services (CMS). The previous results were obtained and analyzed by Health Services Advisory Group (HSAG), an independent Quality Improvement Organization, through a collaborative agreement. However, data on services provided to dually enrolled members through Medicare managed care plans was not available from CMS. In order to collect more complete data for the Diabetes Performance Measures, AHCCCS began using the current hybrid data collection process, beginning with this measurement.

HEDIS specifications allow health plans to count toward the numerator a *negative* retinal examination (no evidence of retinopathy) performed by an optometrist or ophthalmologist in the year priod to the measurement year if the member meets both the following criteria:

- the member was not prescribed or dispensed insulin during the measurement year, and

- the member's most recent Hb A1c level (performed during the measurement year) was less than 8.0 percent.

AHCCCS did not exercise this option. It counted toward the numerator only documented instances in which a member had a retinal exam within the measurement period or the preceeding year.

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 a 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.

- Statistically significant values were calculated using the Pearson chi-square test. The parameter used was Degree of Freedom: 1
- Statistically significant levels were set at $p <= .05$.

Relative Change:

The Relative Percent Change from the previous measurement period was calculated using the following formula:

$$\frac{\text{Current Rate (\%)} - \text{Previous Rate (\%)}}{\text{Previous Rate (\%)}}$$

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/hedis2003NDClists.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	UB-92 Revenue Codes	CPT Codes
Diabetes diagnosis	250, 357.2, 362.0, 366.41, 648.0		
Outpatient/non-acute inpatient		49X-53X, 55X-59X, 65X, 66X, 76X, 82X-85X, 88X, 92X, 94X, 96X, 972-979, 982-986, 988	92002-92014, 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99271-99275, 99288, 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, 45X, 72X, 80X, 981, 987	99221-99223, 99231-99233, 99238-99239, 99251-99255, 99261-99263, 99281-99288, 99291-99292, 99356-99357

Criteria for Hb A1c
- One (or more) Hb A1c test(s) conducted during the measurement year, denoted by CPT code 83036

Criteria for Eye Exam

- A retinal exam performed during the measurement year or year prior to the measurement 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, 92287,99204, 99205, 99214, 99215, 99242-99245	14.1-14.5, 14.9, 95.02-95.04, 95.11, 95.12, 95.16

Criteria for **LDL-C Screening**

- An LDL-C test done during the measurement year or year prior to the measurement year denoted by CPT Codes: 80061, 83715, 83716, or 83721

Exclusions

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

Enrollment File

Variable Name	Format	Length	Start Column	End Column
Health Plan ID	Number	6	1	6
Health Plan Name	Text	25	7	31
Last Name	Text	20	32	51
First Name	Text	10	52	62
Middle Initial	Text	1	62	62
AHCCCS ID	Text	9	63	71
SSN	Number	9	72	80
Date of Birth	Date	8	81	77
Date of Death	Date	8	89	96
Sex	Text	1	97	97
Marital Status	Text	1	98	98
Ethnicity	Text	2	99	100
Street 1	Text	25	101	125
Street 2	Text	25	126	150
City	Text	20	151	170
State	Text	2	171	172
Zip Code	Number	9	173	181
Rate Code	Text	4	182	185
Current Placement	Text	1	186	186
Residential Code	Text	1	187	187
Current Location	Text	3	188	190
Enrollment Date	Date	8	191	198
Disenrollment Date	Date	8	199	206
Facility ID	Number	6	207	212
Placement Begin Date	Date	8	213	220
Placement End Date	Date	8	221	228
Eligibility Type	Text	1	229	229
Fiscal County	Number	2	230	231
Residence County	Number	2	232	233
Medicare Part A	Text	1	234	234
Part A Begin Date	Date	8	235	242
Part A End Date	Date	8	243	250
Medicare Part B	Text	1	251	251
Part B Begin Date	Date	8	252	259
Part B End Date	Date	8	260	267

Description of Variables

Variable Name	Description
Health Plan ID	Six-digit Contractor ID number that indicates with which Contractor The AHCCCS recipient was enrolled
Health Plan Name	Name of Contractor with which the AHCCCS recipient was enrolled
Last Name	Last name of recipient as listed in AHCCCS system
First Name	First name of recipient as listed in AHCCCS system
Middle Initial	Middle initial of recipient as listed in AHCCCS system
AHCCCS ID	Nine-digit alpha numeric number assigned to a recipient upon enrollment in AHCCCS
SSN Date of Birth	Nine digit Social Security number assigned to recipient listed in the Date of members birth MM/DD/YYYY
Date of Death	The date of death for the AHCCCS recipient (if applicable)
Sex	One character designating gender of the AHCCCS recipient
Marital Status	Marital status of AHCCCS recipient
Ethnicity	Ethnicity of the AHCCCS recipient
Street 1	Street address of the AHCCCS recipient
Street 2	Additional street address of the AHCCCS recipient
City	City where the AHCCCS recipient lives
State	State where the AHCCCS recipient lives
Zip Code	Zip code where the AHCCCS recipient lives
Rate Code	The capitation rate code applied to the AHCCCS recipient
Current Placement	Placement of the AHCCCS recipient
Residential Code	Code designating facility of residence determined by case management
Current Location	Type of location where the AHCCCS recipient receives care
Enrollment Date	Date the recipient was enrolled in the AHCCCS system
Disenrollment Date	Date the recipient was disenrolled from the AHCCCS system
Facility ID	Six-digit code identifying the facility in which the recipient was hospitalized during the period and the two-digit location code of the facility
Placement Begin Date	Indicates the date that the recipient's placement in a facility began
Placement End Date	Date that the recipient's placement in a facility ended

Eligibility Type	The AHCCCS program for which the recipient is eligible
Fiscal County	The county paying for services received by the recipient
Residence County	The county in which the recipient resides
Medicare Part A	Indicates if the recipient is entitled to receive Medicare Part A benefit.
Part A Begin Date	The date the recipient started participating in Medicare Part A
Part A End Date	The date that recipient participation in Medicare Part A ended
Medicare Part B	Indicates if the recipient is eligible to participate in Medicare Part B
Part B Begin Date	The date that the recipient started participating in Medicare Part B
Part B End Date	The date that recipient participation in Medicare Part B ended

Included condition(s)

250….Diabetes Mellitus

- 250.0x….Diabetes Mellitus without mention of complications
- 250.1x….Diabetes with ketoacidosis
- 250.2x….Diabetes with hyperosmolarity
- 250.3x….Diabetes with other coma
- 250.4x….Diabetes with renal manifestations
- 250.5x….Diabetes with ophthalmic manifestations
- 250.6x….Diabetes with neurological manifestations
- 250.7x….Diabetes with peripheral circulatory disorders
- 250.8x….Diabetes with other specified manifestations
- 250.9x….Diabetes with unspecified complications

357….Inflammatory and toxic neuropathy

- 357.2x….Polyneuropathy in diabetes

362….Other retinal disorders

- 362.0x….Diabetic retinopathy

366….Cataract

- 366.41….Diabetic cataract

648….Other current conditions in the mother classifiable elsewhere but complicating pregnancy, childbirth, or the puerperium

- 648.0x….Diabetes Mellitus (classifiable to 250)

UB-92 Revenue Codes

<u>Outpatient/non-acute inpatient:</u>

49X…. Ambulatory Surgical Care

50X…. Outpatient Services

51X…. Clinic
52X..... Free-Standing Clinic
53X..... Osteopathic Services
55X..... Skilled Nursing
56X..... Medical Social Services
57X..... Home Health – Home Health Aide
58X..... Home Health – Other Visits
59X..... Home Health – Units of Service
65X…. Hospice Service
66X..... Respite Care (HHA only)
76X..... Treatment/Observation Room
82X..... Hemodialysis – Outpatient or Home
83X..... Peritoneal Dialysis – Outpatient or Home
84X..... Continuous Ambulatory Peritoneal Dialysis (CAPD) - Outpatient or Home
85X..... Continuous Cycling Peritoneal Dialysis (CCPD)
88X..... Miscellaneous Dialysis
92X..... Other Diagnostic Services
94X..... Other Therapeutic Services
96X..... Professional Fees
972….. Professional Fees - Radiology - Diagnosis
973….. Professional Fees - Radiology - Therapeutic
974….. Professional Fees - Radiology – Nuclear Medicine
975….. Professional Fees - Operating Room
976….. Professional Fees - Respiratory Therapy
977..... Professional Fees - Physical Therapy
978..... Professional Fees - Occupational Therapy
979..... Professional Fees - Speech Pathology
982….. Outpatient Services
983..... Clinic
984….. Medical Social Services
985..... EKG
986..... EEG
988….. Consultation
989….. Professional Fees: Private Duty Nurse

UB-92 Revenue Codes

<u>Outpatient/non-acute inpatient:</u>
10X…. All Inclusive Rate
11X…. Room & Board – Private (Medical or General)
12X…. Room & Board – Semi-Private Two Bed (Medical and General)
13X…. Room & Board – Semi-Private—Three & Four Beds
14X…. Room & Board – Private (Deluxe)
15X…. Room & Board – Ward (Medical or General)
16X…. Room & Board - Other
20X…. Intensive Care

21X…. Coronary Care
22X…. Special Charges
45X…. Emergency Room
72X…. Labor Room/Delivery
80X…. Inpatient Renal Dialysis
981….. Professional Fees – Emergency Room
987….. Professional Fees –Hospital Visit

In conjunction with CPT Codes – HCFA 1500

Outpatient/non-acute inpatient:
92002-92014….General Ophthalmological Services (New & Established Patient)
99201-99205….New Patient: Office or other outpatient visit
99211-99215….Established Patient: Office or other outpatient visit
99217-99220….Observation Care Discharge Services and Initial Observation Care (New or Established Patients
99241-99245….Office or Other Outpatient Consultations (New or Established Patients)
99241-99245….Office or Other Outpatient Consultations (New or Established Patients)
99271-99275….Confirmatory Consultations (New or Established Patients)
99301-99303….Evaluation and Management (New or Established Patients)
99311-99313….Subsequent Nursing Facility Care (New or Established Patients)
99321-99323….Domiciliary Rest Home or Custodial Care Services (New Patient)
99331-99333….Domiciliary Rest Home or Custodial Care Services (Established Patient)
99341-99355….Home Services & Prolonged Services (New or Established Patients)
99381-99387….Preventive Medicine (New Patient)
99391-99397….Preventive Medicine (Established Patient)
99401-99404….Preventive Medicine (Individual Counseling)
99411……Preventive Medicine - Group Counseling (30 minutes)
99412……Preventive Medicine - Group Counseling (approx. 60 minutes)
99420-99429….Other Preventive Medicine Services
99499……Other Evaluation and Management Services

CPT Codes

Acute inpatient/ED:
99221-99223…..Initial Hospital Care (New or Established Patient)
99231-99233…..Subsequent Hospital Care
99238-99239…..Hospital Discharge Services
99251-99255…..Initial Inpatient Consultations (New or Established Patient)
99261-99263…..Follow-up Inpatient Consultations (Established Patient)
99281-99288…..Emergency Department Services and Physician Direction
99291-99292…..Critical Care Services
99356-99357…..Prolonged Physician Service – Inpatient Setting*

CPT Code for Hb A1c

83036….Hemoglobin; glycated

CPT Codes for identification of Eye Exams

67101….Repair of retinal detachment, one or more sessions; cryotheraphy or diathermy,with or without drainage of subretinal fluid

67105….Repair of retinal detachment, one or more sessions; photocoagulation, with or without drainage of subretinal fluid

67107.…Repair of retinal detachment; scleral buckling (such as lamellar scleral dissection, imbrication or encircling procedure), with or without implant, with or without cryotheraphy, photocoagulation, and drainage of subretinal fluid

67108....Repair of retinal detachment; with vitrectomy, any method, with or without air or gas tamponade, focal endolaser photocoagulation, cryotheraphy, and drainage of subretinal fluid, scleral buckling and/or removal of lens by same technique

67110….Repair of retinal detachment; by injection of air or other gas (eg. Pneumatic retinopexy)

67112.…Repair of retinal detachment; by scleral buckling or vitrectomy, on patient having previous ipsilateral retinal detachment repair(s) using scleral buckling or vitrectomy techniques

67141.…Prophylaxis of retinal detachment (eg. retinal break, lattice degeneration) without drainage, one or more sessions; cryotheraphy, diathermy

67145.…Prophylaxis of retinal detachment (eg. retinal break, lattice degeneration) without drainage, one or more sessions; photocoagulation (laser or xenon arc)

67208….Destruction of localized lesion of retina (eg. macular edema, tumors), one or more session; cryotheraphy, diathermy

67210....Destruction of localized lesion of retina (eg. macular edema, tumors), one or more sessions; photocoagulation

67218….Destruction of localized lesion of retina (eg. macular edema, tumors), one or more session; radiation by implantation of source (includes removal of source)

67227….Destruction of extensive or progressive retinopathy (eg. diabetic retinopathy), one or more sessions; cryotheraphy, diathermy

67228….Destruction of extensive or progressive retinopathy (eg. diabetic retinopathy), one or more sessions; photocoagulation (laser or xenon arc)

92002….Ophthalmological services: medical examination and evaluation with initiation of diagnostic and treatment program; intermediate, new patient

92004….Ophthalmological services: medical examination and evaluation with initiation of diagnostic and treatment program; comprehensive, new patient, one or more visits

92012….Ophthalmological services: medical examination and evaluation with initiation or continuation of diagnostic and treatment program; intermediate, established patient

92014.…Ophthalmological services: medical examination and evaluation with initiation or continuation of diagnostic and treatment program; comprehensive, established patient, one or more visits

92019….Ophthalmological examination and evaluation, under general anesthesia, with or without manipulation of globe for passive range of motion or other manipulation to facilitate diagnostic examination; limited

99204….Office or other outpatient visit (45 minutes face-to-face with patient and/or family)

92018….Ophthalmological examination and evaluation, under general anesthesia, with or without manipulation of globe for passive range of motion or other manipulation to facilitate diagnostic examination; complete

99205….Office or other outpatient visit (60 minutes face-to-face with patient and/or family)

99214….Office or other outpatient visit (25 minutes face-to-face with patient and/or family)

99215….Office or other outpatient visit (40 minutes face-to-face with patient and/or family)

99242….Office consultation for new or established patient (30 minutes face-to-face with patient and/or family)

99243….Office consultation for new or established patient (40 minutes face-to-face with patient and/or family)

99244....Office consultation for new or established patient (60 minutes face-to-face with patient and/or family)

99245….Office consultation for new or established patient (80 minutes face-to-face with patient and/or family)

ICD-9-CM Codes

14.1…..Diagnostic procedures on retina, choroids, vitreous and posterior chamber
14.2.….Destruction of lesion of retina and choroids
14.3.….Repair of retinal tear
14.4…..Repair of retinal detachment with scleral buckling and implan
14.5.….Other repair of retinal detachment
14.9…...Other operations on retina, choroid, and posterior chamber
95.02….Comprehensive eye examination
95.03….Extended ophthalmologic work-up
95.04….Eye examination under anesthesia
95.11….Fundus photography
95.12….Fluorescein angiography or angioscopy of eye
95.16….P_{32} and other tracer studies of eye
V80.2….Other eye conditions

CPT Codes for LDL-C Screening

80061.…Lipid Panel
83715.…Lioprotein, blood; electrophoretic separation and quantitation
83716….Lioprotein, blood; high resolution fractionation and quantitation of lipoprotein cholesterols (eg, electrophoresis, nuclear magnetic resonance, ultracentrifugation)
83721.…Lipoprotein, direct measurement; LDL cholesterol

Excluded Condition (s)

251.8…Steroid induced diabetes
256.4…Polycystic Ovaries
648..…Other current conditions in the mother classifiable elsewhere, but complicating pregnancy, childbirth, or the puerperium
648.8x ..Gestational diabetes (classifiable to 790.2)
775……Endocrine and metabolic disturbances specific to the fetus and newborn
775.1x…Neonatal Diabetes Mellitus
790……Nonspecific findings on examination of blood
790.2….Abnormal glucose tolerance test
790.6….Hyperglycemia NOS
962.0….Adrenal and anabolic congeners