

State of Colorado



Department of Health Care Policy and Financing

2005–2006
QUALITY OF CARE FOR DIABETICS
FOCUSED STUDY

August 2006



1600 East Northern Avenue, Suite 100 • Phoenix, AZ 85020
Phone 602.264.6382 • Fax 602.241.0757

1. Executive Summary	1-1
Introduction	1-1
Background	1-1
Study Goal and Objectives	1-2
Methodology	1-3
Results.....	1-3
Key Findings.....	1-4
Recommendations.....	1-5
References	1-5
2. Introduction and Background	2-1
Introduction	2-1
Background	2-1
Semiannual HbA1c Testing.....	2-2
Poor HbA1c Control	2-2
Screening and Control for Hypertension	2-3
Study Goal and Objectives	2-3
References	2-4
3. Methodology	3-1
Overview.....	3-1
Measures.....	3-1
Data Collection	3-2
Limitations	3-3
4. Results.....	4-1
Study Sample Characteristics	4-1
Measure 1: HbA1c Testing.....	4-2
Measure 2: Poor HbA1c Control	4-3
Measure 3: Screening for Hypertension.....	4-5
Measure 4: Controlling High Blood Pressure for Diabetic Members with Hypertension	4-6
Measure 5: Use of an ACEI or ARB for Diabetic Members with HTN	4-7
5. Overall Medicaid Conclusions and Recommendations.....	5-1
Key Findings.....	5-2
Recommendations.....	5-3
Appendix A. 2006 Medical Record Abstraction Tool and Instructions	A-1

ACKNOWLEDGMENTS AND COPYRIGHTS

HEDIS[®] refers to the Health Plan Employer Data and Information Set and is a registered trademark of the National Committee for Quality Assurance (NCQA).

Introduction

The Colorado Department of Health Care Policy and Financing (the Department) administers the Colorado (CO) Medicaid program and is committed to closely monitoring and improving the provision of health services for its clients. On an annual basis, the Department collaborates with its contracted managed care organizations (MCOs) and the external quality review organization, Health Service Advisory Group, Inc. (HSAG), to design and conduct focused studies in areas of health care with the potential for improvement.

This 2005–2006 Quality of Care for Diabetics Focused Study is a modified focused study based on the results of a baseline study conducted in 2003 concerning the care for people with diabetes. The current focused study is based on national HEDIS[®] methodology, as well as recommendations from the American Diabetes Association (ADA). It represents a new baseline focused study that addresses HbA1c testing, HbA1c control, screening for hypertension (HTN), controlling high blood pressure (BP), and use of an angiotensin converting enzyme inhibitor (ACEI) or angiotensin receptor blocker (ARB) for diabetic members with HTN.

The study included analysis of administrative claims data and medical record review for clients in the Colorado Medicaid Primary Care Physician Program (PCPP), the unassigned fee-for-service (FFS) program, and three CO Medicaid MCOs: Colorado Access Plan (CO Access), Denver Health Medicaid Choice (DHMC), and Rocky Mountain Health Plans (RMHP). The administrative and medical record data were collected for services provided during calendar year 2005 and reported in June 2006.

Background

Diabetes mellitus is a metabolic condition in which the pancreas does not produce enough insulin or the body does not effectively use the insulin it produces. Patients with uncontrolled diabetes have a higher risk of developing long-term complications, such as retinopathy, cardiovascular disease, stroke, nephropathy, peripheral vascular disease, and neuropathies. From 2000 to 2003, Colorado had more than 51,000 hospitalizations of patients with a diagnosis of diabetes. Of these hospitalizations, 1,210 discharged patients were diagnosed with end-stage renal disease, 4,034 discharges were diagnosed with eye disease, and more than 38,000 were diagnosed with major cardiovascular disease.¹⁻¹

The Department chose diabetes management as the focus of this study because of the high frequency of diagnosis and high cost of care for the disease in Colorado. In its 2005 State of Health Care Quality report, NCQA estimated avoidable medical costs due to poor HbA1c control to be \$693 million to \$1.2 billion.¹⁻² The Colorado Department of Public Health and Environment (CDPHE) reported that 4.7 percent of Coloradans have diabetes. This number rises to 8.1 percent for those with annual household incomes of less than \$15,000, and it is as high as 10.4 percent for

the African-American/Non-Hispanic population.¹⁻³ The number of people diagnosed with diabetes in Colorado has increased by about 50 percent since 1994, and experts expect these numbers to increase.¹⁻⁴

Study Goal and Objectives

The goal of this focused study was to determine the extent to which diabetes care in the CO Medicaid population met key components of the latest standards of care. The first two measures were national HEDIS measures for HbA1c testing and poor HbA1c control. The study also emphasized how well providers have adopted HEDIS and ADA recommendations for screening and controlling HTN in the diabetic population.

The 2005–2006 Quality of Care for Diabetics Focused Study included five quantifiable measures:

Measure 1—HbA1c Testing

- ◆ Percentage of adult members with diabetes who had an HbA1c test performed during 2005 based on HEDIS 2006 Technical Specifications, Volume 2.

Measure 2—Poor HbA1c Control

- ◆ Percentage of adult members with diabetes in poor glycemic control in 2005 based on HEDIS 2006 Technical Specifications, Volume 2.

Measure 3—Screening for Hypertension

- ◆ Percentage of adult members with diabetes who were screened for HTN during 2005 (i.e., had at least one representative BP documented in the medical record).

Measure 4—Controlling High Blood Pressure for Diabetic members with Hypertension

- ◆ Percentage of adult members with diabetes and a prior diagnosis of HTN with recorded BP measurements indicating control. Control was defined as a BP measurement that fell within one of the following parameters:
 - a. Numerator 4A – systolic BP \leq 140 mm Hg and a diastolic BP \leq 90 mm Hg (HEDIS Controlled)
 - b. Numerator 4B – systolic BP $<$ 140 mm Hg and diastolic BP $<$ 90 mm Hg (ADA Controlled)
 - c. Numerator 4C – systolic BP $<$ 130 mm Hg and diastolic BP $<$ 80 mm Hg (ADA Recommended)

Measure 5—Use of an ACEI or ARB for Diabetic Members with Hypertension

- ◆ Percentage of adult members with diabetes and a diagnosis of HTN on or before June 30, 2005, who received an ACEI or ARB medications during 2005.

Methodology

The eligible population for this study consisted of CO Medicaid beneficiaries with diabetes between 18 and 75 years of age. All eligible members must have been continuously enrolled in a CO Medicaid MCO, the PCPP, or the FFS program for at least 11 months during the study period (i.e., January 1, 2005 – December 31, 2005) and still enrolled as of December 31, 2005. Claims/encounter data or pharmacy data were used to identify all diabetic members, following standards listed for comprehensive diabetes care in the HEDIS® 2006 Technical Specifications.

A sample was selected from each CO Medicaid program using HEDIS methodology. The final sample size for all CO Medicaid programs consisted of 2,094 members with diabetes. Final sample sizes ranged from 411 to 432 cases, and were sufficient to provide accurate rates with a 95 percent minimum confidence level and a maximum 5 percent margin of error.

Results

The results of this baseline study are intended to be used as a tool to assist the MCOs and the Department in identifying opportunities for improvement in the care provided to Colorado’s Medicaid diabetic members. The key findings of the study are listed in Table 1–1.

Study Indicators/Measures		CO Medicaid	CO Access	DHMC	RMHP	PCPP	FFS
Final Sample Sizes		2,094	432	429	411	411	411
1	HbA1c Testing	79.2%	78.7%	83.7%	89.8%	76.6%	67.2%
2	Poor HbA1c Control (Note: Low Rates are Better)	48.5%	39.6%	41.3%	17.3%	70.1%	74.9%
3	HTN Screening	74.5%	85.0%	93.0%	95.9%	49.9%	47.4%
Number of Members with Documented HTN		N = 1,147	N = 269	N = 332	N = 264	N = 157	N = 125
4A	HTN and BP≤140/90 (HEDIS Controlled)	67.0%	70.6%	59.0%	72.4%	70.1%	64.8%
4B	HTN and BP<140/90 (ADA Controlled)	60.2%	60.6%	56.3%	66.3%	60.5%	56.0%
4C	HTN and BP<130/80 (ADA Recommended)	34.9%	35.7%	33.4%	39.0%	31.2%	32.8%
Number of Members with Documented HTN and No Contraindications		N = 1,116	N = 257	N = 330	N = 258	N = 149	N = 122
5	HTN with No Contraindication and Received an ACEI or ARB*	73.7%	73.5%	85.2%	78.7%	49.7%	61.5%

*Members with a documented contraindication for an ACEI or ARB were excluded from Measure 5.

Key Findings

Measure 1—HbA1c testing, at 79.2 percent, was similar to the HEDIS 2005 National Medicaid 50th percentile of 78.4 percent. This rate demonstrates that the MCOs and providers routinely conduct HbA1c testing for members with diabetes.

Measure 2—48.5 percent of members had poor HbA1c control. This rate is similar to the HEDIS 2005 national Medicaid 50th percentile of 47.5 percent. Further analysis showed:

- ◆ Results of HbA1c testing (i.e., HbA1c levels) were not consistently found in the medical record for the PCPP and FFS populations. This contributed to higher rates of poor HbA1c control for the PCPP and FFS sample populations because the absence of HbA1c levels counted toward poor HbA1c control.
- ◆ High HbA1c testing does not necessarily correlate to low HbA1c levels.
- ◆ The opportunity to improve diabetic care is readily apparent:
 - 786 out of the 2,094 members (37.5 percent) in this study did not have an HbA1c test with a documented HbA1c level.
 - 229 members had an HbA1c test, a documented level, and were in poor HbA1c control.

Measure 3—HTN screening (i.e., a representative BP reading) was documented at least one time for 74.5 percent of the members in this study, meaning that about one in every four CO Medicaid members in this study did not have documentation that a BP was measured.

Measure 4—Of those members who did have BP documented, about two out of three had a BP of 140/90 or less. For this measure, 60.2 percent had a BP of less than 140/90, and 34.9 percent had a BP of less than 130/80, as recommended by the ADA.

Measure 5—73.7 percent of the members with documented HTN and no documented contraindications to an ACEI or ARB received an ACEI or ARB. An ACEI or ARB is recommended by the ADA in members with diabetes and HTN and has been shown to be effective in lowering BP and protecting the kidneys against nephropathy.

Low performance on any measure may indicate that the member did not have a visit with the provider during the year or the medical record could not be located. In keeping with HEDIS methodology, medical records that could not be located remained in the denominator and negatively impacted the rates. However, low performance may also indicate that the service was not provided, or the service was provided, but not documented. Additionally, services may have been provided by a specialist or laboratory (e.g., HbA1c testing), but the results were not forwarded to the primary care practitioner.

Members in the FFS population do not have an assigned primary care physician and may, in fact, see more than one physician during the year. This made medical record retrieval dependant on the accuracy and completeness of the claims submitted along with the provider information. For this reason, FFS actual rates may be higher than the reported rates for certain measures.

Recommendations

Based on the study findings, HSAG recommends the following:

- ◆ The MCOs should use newsletters and follow-up reminders to educate members concerning glycemic control and HbA1c testing.
- ◆ The MCOs should encourage providers to prescribe an ACEI or ARB for diabetic members with HTN, as recommended by the ADA.
- ◆ The MCOs should use administrative data to link member status to services or tests required, and send out reminder lists to providers and members.
- ◆ The MCOs should consider designing and implementing the use of provider profiles for performance feedback regarding diabetic care rendered.
- ◆ The MCOs and the Department should identify educational resources for diabetes that are available to the programs' networks and to the community. For example, the ADA Web site (which can be accessed at <http://www.diabetes.org/education/eduprogram.asp>) identifies facilities in Colorado that have diabetes education programs recognized for excellence.
- ◆ The MCOs and the Department should continue to disseminate ADA practice guidelines and HEDIS requirements to providers.
- ◆ The Department should reinforce to providers and the MCOs the importance of documentation of services provided to CO Medicaid members.
- ◆ The Department should continue to improve the quality of data captured in its information systems to facilitate implementation of tracking and notification systems to assist PCPPs in identifying members with chronic conditions who have not received services.
- ◆ The Department should investigate methods to improve medical record retrieval for FFS members.

The results of this baseline study are intended to be used as a tool to assist the MCOs and the Department in identifying opportunities and meaningful interventions to improve the care provided to diabetic members. Several areas require focused attention by the individual programs and the Department. All of the CO Medicaid programs have the opportunity to improve these measures.

References

¹⁻¹ Colorado Department of Public Health & Environment. *Colorado Hospitalization Data*. Available at: <http://www.cdphe.state.co.us/pp/diabetes/reports/CHA.pdf>. Accessed on February 13, 2006.

¹⁻² Ibid.

¹⁻³ Colorado Department of Public Health & Environment. *Prevalence, Health Behaviors and Preventative Health Practices Among Adult Coloradans with Diagnosed Diabetes: Results from Behavioral Risk Surveillance System, 1997-2000*. 2002;4. Available at: <http://www.cdphe.state.co.us/pp/diabetes/reports/BRFSS.pdf>. Accessed on January 13, 2006.

¹⁻⁴ Colorado Department of Public Health & Environment. *Colorado Diabetes Prevention and Control*. Available at: <http://www.cdphe.state.co.us/pp/diabetes>. Accessed on January 13, 2006.

Introduction

The CO Medicaid program, managed by the Department, coordinates physical health quality initiatives through its Medical Quality Improvement Committee (QuIC). These initiatives are designed to improve the quality of care delivered to Medicaid clients. In 2003, a baseline focused study concerning diabetes was conducted for the CO Medicaid population to determine the extent of compliance with key components of the latest standards of care for people with diabetes.

This 2005-2006 Quality of Care for Diabetics Focused Study was modified based on the results of the baseline study and represents a new baseline focused study. The 2003 study used the HEDIS 2002 specifications. The new baseline used the new measures defined in the HEDIS 2006 specifications. The study includes clients in the PCPP, FFS program, and three MCOs: CO Access, RMHP, and DHMC.

Background

The Department chose diabetes management as the focus of this study because of the high frequency of diagnosis and high cost of care for the disease in Colorado. This study measures aspects of the quality of care provided to diabetic clients. In 2003, 14.1 million Americans had physician-diagnosed diabetes. It is estimated that 6 million afflicted Americans are undiagnosed.²⁻¹ Diabetes is a major cause of morbidity and ranks fifth among the leading causes of death in the United States across all races, ages, and both genders.²⁻² Medical costs are high when diabetes is uncontrolled. In its The State of Health Care Quality 2005 report, NCQA estimated avoidable medical costs due to poor HbA1c control to be \$693 million to \$1.2 billion.²⁻³ The CDPHE reported that 4.7 percent of Coloradans have diabetes. This number rises to 8.1 percent for those with annual household incomes of less than \$15,000, and it is as high as 10.4 percent for the African-American/Non-Hispanic population.²⁻⁴ The number of people diagnosed with diabetes in Colorado has increased by about 50 percent since 1994, and experts expect these numbers to increase.²⁻⁵

Diabetes mellitus is a metabolic condition in which the pancreas does not produce enough insulin or the body does not effectively use the insulin it produces. Insulin allows glucose (sugar) to enter the cells and be converted to energy. Without sufficient insulin or the ability to use insulin, the level of glucose in the blood rises abnormally high. If the blood sugar level remains high, complications and disability can result. Patients with uncontrolled diabetes have a higher risk of developing long-term complications, such as retinopathy, cardiovascular disease, stroke, nephropathy, peripheral vascular disease, and neuropathies. Diabetes is the leading cause of new blindness and end-stage renal disease. Diabetes can also lead to nontraumatic lower limb amputation. Diabetics are two to four times more likely to have heart disease or a stroke than are nondiabetics. From 2000 to 2003, Colorado had more than 51,000 hospitalizations of patients with a diagnosis of diabetes. Of these hospitalizations, 1,210 discharged patients were diagnosed with end-stage renal disease, 4,034 discharges were diagnosed with eye disease, and more than 38,000 were diagnosed with major cardiovascular disease.²⁻⁶

For Type 2 diabetics, “insulin resistance may cause hypertension by increasing sympathetic activity, renal reabsorption of sodium, or vascular tone.”²⁻⁷ For people with diabetes, HTN or high BP is defined as two separate occurrences of a level of 140/90 or higher. Approximately 73 percent of adults with diabetes have HTN. Diabetics with HTN have a greater incidence of complications than nondiabetics with HTN.²⁻⁸ Having diabetes along with high BP dramatically raises the risk of silent strokes²⁻⁹ as well as the risk of other forms of cardiovascular disease. Behavioral and medical control of diabetes can reduce these risks. Every 10 millimeters of mercury reduction in systolic BP for diabetics results in a 12 percent reduction in complications from diabetes-related HTN.²⁻¹⁰ Two-thirds to three-fourths of people with diabetes die of cardiovascular disease. As many as 32,000 deaths nationwide could be averted each year if diagnosed HTN were controlled.²⁻¹¹

Complications can be reduced or prevented when diabetes is diagnosed and managed. Patient behavior has a significant impact on how well diabetes is controlled. Research has shown that the HbA1c laboratory test (also known as the hemoglobin A1c test or glycosylated hemoglobin test), which measures blood sugar levels over the previous two to three months, is the best single indicator of glycemic control for diabetics. The HEDIS[®] comprehensive diabetes care measures assess important features of effective, multirisk-factor management of diabetes and its potential complications. Among these measures is the estimated percentage of health plan members who had an HbA1c test during the measurement year. For every 1 percent reduction in the HbA1c level, there is a 15 to 40 percent reduction of risk for developing complications from diabetes.²⁻¹²

Semiannual HbA1c Testing

The Diabetes Control and Complications Trial (DCCT) and the United Kingdom Prospective Diabetes Study (UKPDS), two landmark studies on diabetes, revealed the significance of glycemic control and its impact on reduction of microvascular complications.²⁻¹³ The ADA expert consensus states, “Perform the A1c test at least two times a year in patients who are meeting treatment goals (and who have stable glycemic control) and quarterly in patients whose therapy has changed or who are not meeting glycemic goals.”²⁻¹⁴

Poor HbA1c Control

In 2000, 57.7 percent of people with diabetes in the CO Medicaid program had poor glycemic control, with HbA1c levels greater than 9.5.²⁻¹⁵ (Note that the 57.7 percent rate cannot be directly compared with results reported in this focused study because a different definition of poor control was used in 2000.)

The latest HEDIS standards have defined poor HbA1c control as having either: (1) a most recent HbA1c result of more than 9.0 or (2) no results found during the measurement year, which is categorized as an HbA1c level of more than 9.0.²⁻¹⁶ Patients with HbA1c levels greater than 9.0 are considered not in control and at higher risk for developing complications.

When looking at HbA1c results at the individual patient level, it is valuable to compare results to the ADA’s goal of 7.0. This information is useful to identify and implement quality improvement initiatives to improve outcomes. A survey conducted by the American Association of Diabetes Educators found that only 24 percent of diabetics knew their HbA1c level.²⁻¹⁷

Screening and Control for Hypertension

According to the ADA, all patients with diabetes should have their BP measured at the time of diagnosis or initial office evaluation and at each scheduled diabetes visit.²⁻¹⁸ The ADA recommends a target BP of less than 130/80 for people with diabetes. The ADA defines a controlled BP as less than 140/90.

HTN can be controlled by behavioral intervention, drug therapy, or both approaches. Behavioral intervention includes restriction of dietary sodium, weight loss, increased physical activity, smoking cessation, and moderation of alcohol consumption. Drug therapy can include using an ACEI, an ARB, beta blockers, and/or diuretics.²⁻¹⁹

Moderate dietary sodium restriction in controlled clinical trials has shown a reduction of approximately 5 mm Hg systolic pressure and 2 mm Hg diastolic pressure. Weight loss of 1 kg has resulted in decreases in mean arterial pressure of 1 mm Hg, independent of sodium restriction. In the Heart Outcomes Prevention Evaluation trial, using the ACEI, ramipril, resulted in a reduction of cardiovascular mortality as well as cardiovascular events, including heart attack and stroke. In the Systolic Hypertension in the Elderly Program study, a low-dose thiazide diuretic was shown to reduce the cardiovascular event rate by 34 percent compared to the use of a placebo.²⁻²⁰

Study Goal and Objectives

The goal of the 2005-2006 Quality of Care for Diabetics Focused Study was to determine the extent to which diabetes care in the CO Medicaid population met key components of the latest standards of care. The emphasis was to understand how well CO Medicaid providers have adopted the national standards for HbA1c testing and how many Medicaid clients are in poor control. The study also emphasized how well providers have adopted recommendations for screening and controlling HTN in the diabetic population.

The study's main objectives were to:

- ◆ Provide a baseline assessment and measure the frequency of semiannual HbA1c testing as recommended by national guidelines for each CO Medicaid program.
- ◆ Identify the number of CO Medicaid diabetic clients in poor control.
- ◆ Identify the number of diabetic clients who have been screened for HTN as recommended by HEDIS guidelines.
- ◆ Identify the percentage of adult clients with diabetes and HTN whose BP is defined as controlled.
- ◆ Provide the Department with an overall assessment of diabetes care rendered by the CO Medicaid health care program, including plan-to-plan and program-to-program comparisons.

References

- ²⁻¹ National Committee for Quality Assurance. *The State of Health Care Quality*. 2005.
- ²⁻² Ibid.
- ²⁻³ Ibid.
- ²⁻⁴ Colorado Department of Public Health & Environment. *Prevalence, Health Behaviors and Preventative Health Practices Among Adult Coloradans with Diagnosed Diabetes: Results from Behavioral Risk Surveillance System, 1997-2000*. 2002;4. Available at: <http://www.cdphe.state.co.us/pp/diabetes/reports/BRFSS.pdf>. Accessed on January 13, 2006.
- ²⁻⁵ Colorado Department of Public Health & Environment. *Colorado Diabetes Prevention and Control*. Available at: <http://www.cdphe.state.co.us/pp/diabetes>. Accessed on January 13, 2006.
- ²⁻⁶ Colorado Department of Public Health & Environment. *Colorado Hospitalization Data*. Available at: <http://www.cdphe.state.co.us/pp/diabetes/reports/CHA.pdf>. Accessed on February 13, 2006.
- ²⁻⁷ National Guideline Clearinghouse. *Management of type 2 diabetes mellitus*. Available at: <http://diabetes.niddk.nih.gov>. Accessed on January 23, 2006.
- ²⁻⁸ American Heart Association. *Heart Disease & Stroke Statistics*. 2006.
- ²⁻⁹ American Heart Association. *Stroke Journal Report*. 2006.
- ²⁻¹⁰ American Diabetes Association. Diabetes & Cardiovascular Disease Review. *Hypertension in Diabetes*. Issue 2.
- ²⁻¹¹ National Committee for Quality Assurance. *The State of Health Care Quality*. 2005.
- ²⁻¹² American Heart Association. *Heart Disease & Stroke Statistics*. 2006.
- ²⁻¹³ American Diabetes Association. Standards of medical care for patients with diabetes mellitus. *Diabetes Care*. 2002; 25:1.
- ²⁻¹⁴ Standards of Medical Care for Patients With Diabetes Mellitus, American Diabetic Association (2002) *Diabetes Care* Vol 25:1
- ²⁻¹⁵ Colorado Department of Health Care Policy and Financing. *Colorado Medicaid PCP, HMO, and FFS HEDIS® Report Total for 1999, 2000, 2001*.
- ²⁻¹⁶ National Committee for Quality Assurance. *The State of Health Care Quality*. 2005.
- ²⁻¹⁷ Griffin M. *Beyond Blood Sugar: Testing A1C*. American Diabetes Association. March 18, 2003.
- ²⁻¹⁸ American Diabetes Association. Treatment of Hypertension in Adults with Diabetes. *Diabetes Care*. 2003; 26:1.
- ²⁻¹⁹ Ibid.
- ²⁻²⁰ Ibid.

Overview

The 2005-2006 Quality of Care for Diabetics Focused Study is a modified study based on the results and HEDIS measure changes from a baseline quantitative focused study conducted in 2003 concerning the care for people with diabetes. The current focused study is based on national HEDIS[®] methodology (including continuous enrollment criteria). It represents a new baseline focused study that addresses HbA1c testing, HbA1c control, screening for HTN, controlling high BP, and the use of an ACEI or ARB for diabetic members with HTN.

Measures

The 2005–2006 Quality of Care for Diabetics Focused Study included five quantifiable measures. The first two measures were based on the HEDIS 2006 *Comprehensive Diabetes Care* measures for HbA1c testing and poor HbA1c control. The third measure, screening for hypertension for diabetic members, was based on ADA guidelines. The denominator for these first three indicators was the full sample of CO Medicaid members with diabetes who were 18 to 75 years of age (adult members) as of December 31, 2005. The final two measures were based on a subset of the diabetic members in the sample and consisted of those members with a confirmed diagnosis of hypertension in the medical record. A summary of the measures or quality indicators used for this study are as follows:

- ◆ Measure 1—HbA1c Testing
 - Percentage of adult members with diabetes who had an HbA1c test performed during 2005.
- ◆ Measure 2—Poor HbA1c Control
 - Percentage of adult members with diabetes in poor glycemic control in 2005 based on HEDIS 2006 technical specifications (i.e., there was no HbA1c test conducted or a most recent HbA1c level of more than 9.0).
- ◆ Measure 3—Screening for Hypertension for Diabetic Members
 - Percentage of adult members with diabetes who were screened for HTN (i.e., they had a representative BP during 2005). The HEDIS 2006 technical specifications for controlling high BP define a representative BP as the most recent visit with a BP measurement during 2005. BP levels must be recorded in the medical record (e.g., a notation that BP was checked would not be sufficient). The HEDIS 2006 technical specifications include additional information for a representative BP (e.g., multiple BP readings on the same visit).
- ◆ Measure 4—Controlling High Blood Pressure for Diabetic members with Hypertension
 - Percentage of adult members with diabetes and a prior diagnosis of HTN with recorded BP measurements indicating control. Diagnosis was defined as one or more of the following notations in the medical record on or before June 30, 2005: HTN, high blood pressure, HBP, elevated blood pressure (↑BP), borderline HTN, intermittent HTN, or history of HTN.

Control was defined as a BP measurement that fell within one of the following parameters: systolic BP \leq 140 mm Hg **and** a diastolic BP \leq 90 mm Hg (Numerator 4a: HEDIS—Controlled); systolic BP <140 mm Hg **and** diastolic BP <90 mm Hg (Numerator 4b: ADA—Controlled); systolic BP <130 mm Hg **and** diastolic BP <80 mm Hg (Numerator 4c: ADA—Recommended). Members without a recorded BP level (e.g., they did not have a visit during 2005 but did have HTN noted in the medical record) were considered a negative numerator event.

- ◆ Measure 5—Use of an ACEI or ARB for Diabetic Members with Hypertension
 - Percentage of adult members with diabetes and a diagnosis of HTN on or before June 30, 2005, as defined in Measure 4, who received ACEI or ARB medications during 2005.

Data Collection

Following the HEDIS cycle, administrative data were collected for calendar year 2005 for reporting in June 2006. The population included members of CO Access, RMHP, DHMC, the PCPP, and the FFS program statewide.

The data collection methodologies and data sources are displayed in Table 3-1. Medical/treatment data were collected through medical/treatment record abstraction. Administrative data were collected through a programmed pull from claims/encounter files of a sample of members and through pharmacy data. The sampling method was a random/systematic sample by health plan of diabetic members who met HEDIS eligibility criteria.

Table 3-1—Colorado Medicaid Quality of Care for Diabetics Focused Study Data Collection Methodology and Data Sources		
Quantifiable Measure	Data Collection Methodology	Data Sources
1—HbA1c Testing	HEDIS (HEDIS 2006 specifications).	Hybrid (medical/treatment records and administrative data).
2—Poor HbA1c Control	HEDIS (HEDIS 2006 specifications).	Hybrid (medical/treatment records and administrative data) and lab results in the medical record.
3—Screening for Hypertension for Diabetic Members	HEDIS 2006 specifications were used to identify the diabetic population and to define the representative BP.	Hybrid (medical/treatment records and administrative data).
4—Controlling High Blood Pressure for Diabetic Members with Hypertension	HEDIS 2006 specifications were used to identify the diabetic population. Numerator 4a used the HEDIS 2006 definition of controlled BP, and Numerators 4b and 4c used the ADA guidelines for controlled and recommended (goal) BPs.	Hybrid (medical/treatment records and administrative data).
5—Use of an ACEI or ARB for Diabetic Members with Hypertension	HEDIS 2006 specifications were used to identify the diabetic population. ADA recommendations were used regarding treatment of HTN with ACEI or ARB medications.	Hybrid (medical/treatment records and administrative data) and pharmacy data.

Baseline rates for HbA1c testing from the 2003 focused study are displayed in Table 3-2.

Medicaid Program	2003
CO Access	68.6%
RMHP	69.7%
PCPP	50.7%
FFS	25.2%
Note: DHMC was not a Medicaid participating health plan in Colorado in 2003.	

Comparison to the baseline study is not appropriate for the HbA1c poor control measure because the 2003 study, using the HEDIS 2002 technical specifications, defined poor control as a most recent HbA1c level of more than 9.5. The 2006 definition was an HbA1c level of more than 9.0. In addition, the baseline study required two HbA1c tests, and poor control was also defined as fewer than two tests. Rates of HTN screening, high BP control, and use of an ACEI or ARB for diabetic members with HTN were not measured in 2003.

Limitations

Analysis of administrative data (claims and encounter data) was subject to potential data biases such as inaccurate or missing data elements, which can result in underreporting. However, this potential impact was minimized by the fact that most providers were paid for the services they provided on a fee-for-service basis, which meant that a provider must submit a claim for reimbursement. The augmentation of administrative data with medical/treatment records data further minimized potential data biases.

Study Sample Characteristics

The eligible population for this study consisted of CO Medicaid clients who had a diagnosis of diabetes and were between 18 and 75 years of age. All study-eligible clients must have been continuously enrolled in a CO Medicaid MCO, the PCPP, or the FFS program for at least 11 months during the study period (i.e., January 1, 2005 – December 31, 2005) and still enrolled as of December 31, 2005. Claims/encounter data or pharmacy data were used to identify all diabetic clients, following standards listed for comprehensive diabetes care in the HEDIS[®] 2006 Technical Specifications.

A sample was selected from each CO Medicaid health plan using HEDIS methodology. The final sample sizes were sufficient to provide accurate rates with a 95 percent minimum confidence level and a maximum 5 percent margin of error.

Table 4–1 shows the distribution of age and gender for the final sample cases along with the final sample size for each CO Medicaid health plan. The final sample size for all CO Medicaid health plans consisted of 2,094 members with diabetes and individual health plan sample sizes ranged from 411 to 432 cases.

Overall, the average age for members in the study was 56.0 years. The majority (53.6 percent) of members were between 45-64 years of age, while 17.7 percent were between 18 and 44 years of age, and 28.7 percent were 65 years of age or older. DHMC and RMHP members were older, on average, than the other CO Medicaid health plans, while PCPP and FFS had the youngest members. The overwhelming majority of members (69.4 percent) in this study were female. The gender distributions for DHMC, RMHP, the PCPP, and the FFS program were similar to the overall distribution. The sample for CO Access contained more females and fewer males (i.e., 74.5 percent and 25.5 percent, respectively) compared to the overall distribution.

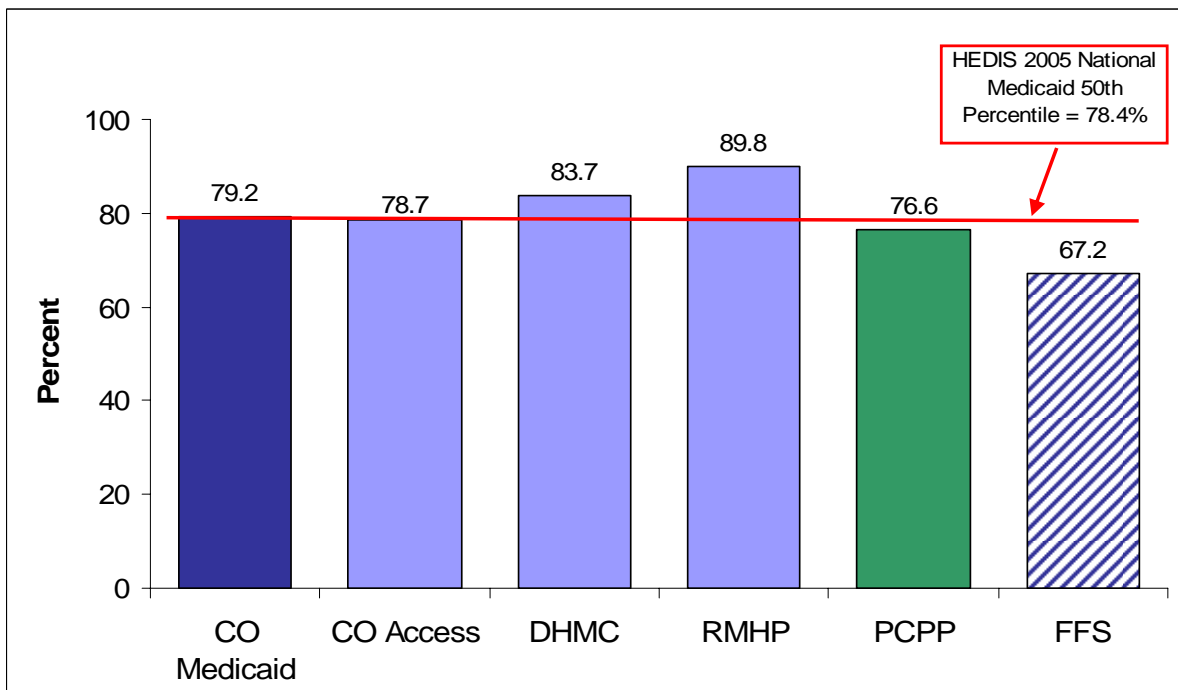
	CO Medicaid	CO Access	DHMC	RMHP	PCPP	FFS
Final Sample Size	2,094	432	429	411	411	411
Age Distribution						
18-44 Years	17.7%	19.4%	13.5%	14.6%	18.5%	22.6%
45-64 Years	53.6%	50.7%	52.9%	50.1%	62.5%	51.8%
65+ Years	28.7%	29.9%	33.6%	35.3%	19.0%	25.5%
Average Age (Years)	56.0 yrs	55.4 yrs	57.9 yrs	57.6 yrs	54.2 yrs	54.9 yrs
Gender Distribution						
Percent Female	69.4%	74.5%	66.7%	69.8%	68.6%	67.2%
Percent Male	30.6%	25.5%	33.3%	30.2%	31.4%	32.8%

Measure 1: HbA1c Testing

The purpose of this measure was to determine what percentage of members with diabetes received annual HbA1c testing. Figure 4-1 illustrates a comparison of Measure 1 among the CO Medicaid health plans. The overall rate for the CO Medicaid program was 79.2 percent, or less than one percentage point above the HEDIS 2005 national Medicaid 50th percentile of 78.4 percent. With the FFS population excluded, the overall rate was 82.2 percent.

The rates for RMHP (89.8 percent), DHMC (83.7 percent), and CO Access (78.7 percent) were above the national 50th percentile of 78.4 percent. The rate for PCPP, at 76.6 percent, was close to the national 50th percentile, while the rate for FFS was 11.2 percentage points below the national 50th percentile.

Figure 4-1—Percent with at Least One HbA1c Test During 2005



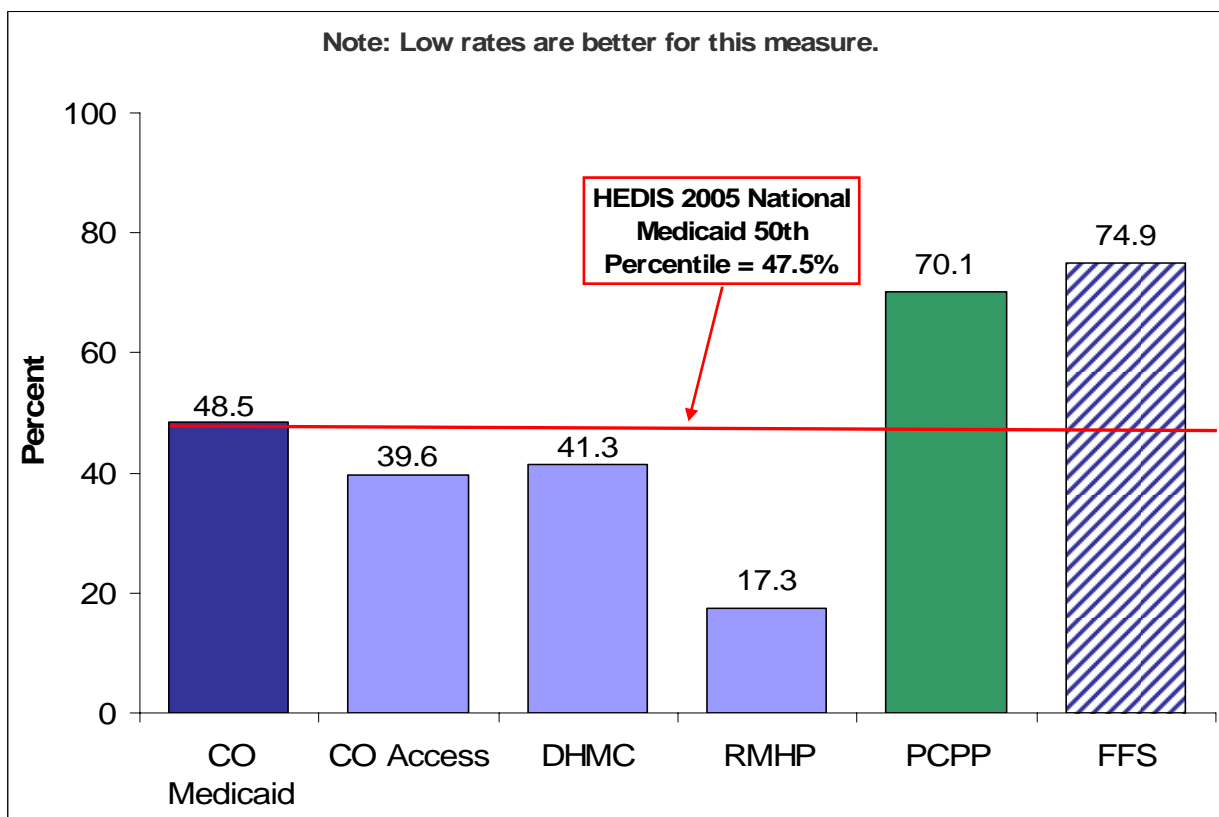
The FFS rate was significantly lower than the MCO rates, which may have been due to diabetes case management at the MCOs.

Measure 2: Poor HbA1c Control

The HbA1c test is a laboratory test that reveals average blood glucose over a period of two to three months. HbA1c levels are a leading indicator of many diabetic complications and, consequently, lower rates are better for this measure because high rates indicate the member has poor HbA1c control.

The overall rate was 48.5 percent, which was above the HEDIS 2005 national Medicaid 50th percentile of 47.5 percent, indicating that CO Medicaid members have a similar percentage of members in poor control of their HbA1c levels compared to members of other Medicaid programs in the nation. Excluding the FFS population, the overall rate was 42.0 percent. The rates for all three MCOs were below the 50th percentile, indicating that members in the MCOs are in better control of their HbA1c levels than the PCPP and FFS programs. The PCPP and FFS rates were significantly higher than the three MCOs and the HEDIS 2005 national Medicaid 50th percentile.

Figure 4-2—Poor HbA1c Control for Members with Diabetes



Poor HbA1c control indicates that either an HbA1c level was greater than 9.0 mg/dL, or that no HbA1c test was conducted during the measurement year. This is an important distinction since members who did not have an HbA1c test during 2005 may not necessarily be in poor control. Table 4–2 below displays the results of poor HbA1c control based on documented HbA1c levels.

Table 4–2—Poor HbA1c Control Based on Actual HbA1c Levels		
Medicaid Program	Number with HbA1c Test and Level Documented	Percent with HbA1c Level > 9.0 mg/dL (Poor Control)
CO Access	316	17.4%
DHMC	348	27.6%
RMHP	369	7.1%
PCPP	148	16.9%
FFS	127	18.9%
CO Medicaid	1,308	16.6%

HbA1c testing was conducted and a level was documented for 1,308 of the 2,094 members in the focused study. For these 1,308 members with an HbA1c test and documented HbA1c level, 16.6 percent had HbA1c levels greater than 9.0 mg/dL and were in poor HbA1c control. RMHP had the highest testing rate (89.8 percent, Figure 4-1) and the lowest percentage of members who tested in poor control (7.1 percent). DHMC, with the second-highest HbA1c testing rate, had 27.6 percent of members who tested in poor control. CO Access, PCPP, and FFS samples showed similar percentages of members in poor control. These findings suggest the following:

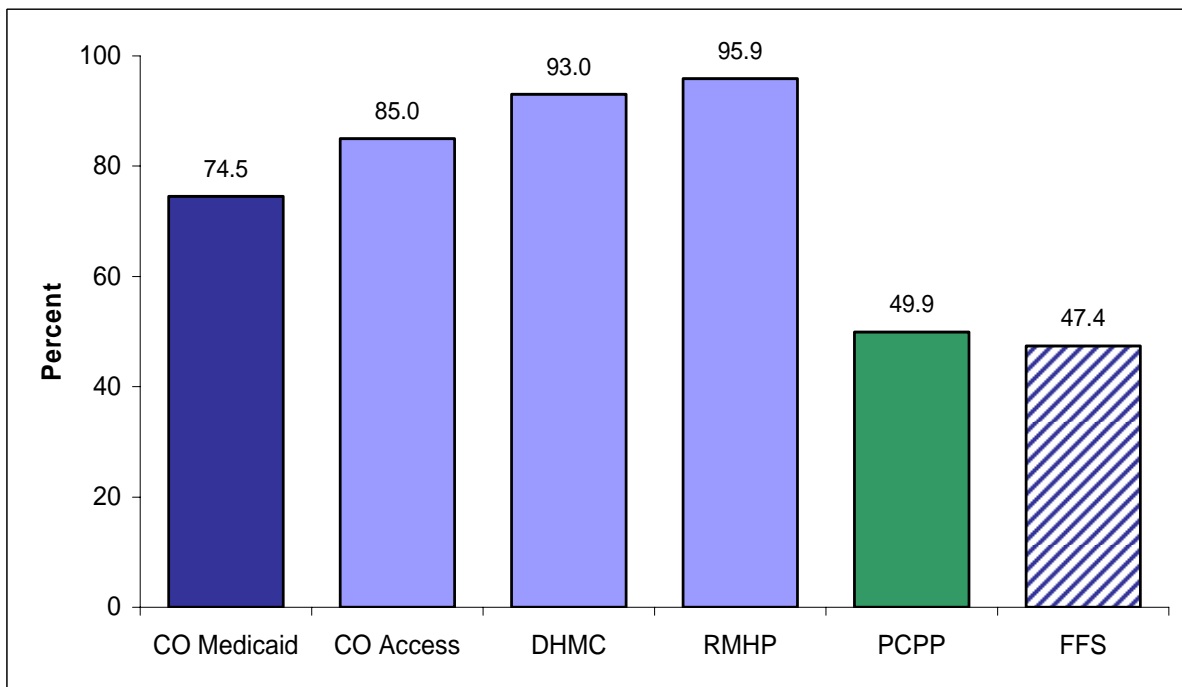
- ◆ High HbA1c testing does not necessarily correlate to low HbA1c levels
- ◆ Results of HbA1c testing (i.e., HbA1c levels) were not consistently found in the medical record for the PCPP and FFS populations, contributing to higher rates of poor HbA1c control for the PCPP and FFS sample populations
- ◆ The opportunity to improve diabetic care is readily apparent:
 - 786 out of the 2,094 (37.5 percent) members in this study did not have an HbA1c test with a documented HbA1c level.
 - 229 members had an HbA1c test, a documented level, and were in poor HbA1c control.

Measure 3: Screening for Hypertension

HTN, defined as a BP level of greater than 140/90 (i.e., a systolic BP of 140 mm Hg or more, or a diastolic BP of 90 mm Hg or more), is a common comorbidity of diabetes and a major risk factor for cardiovascular disease and complications such as retinopathy and nephropathy. The ADA recommends that BP be measured at every routine diabetes visit. The purpose of Measure 3 was to determine the percentage of members with diabetes who received at least one BP reading during 2005.

Figure 4-3 shows that the overall rate for HTN screening was 74.5 percent. With the FFS population excluded, the overall rate was 81.1 percent. The rates for the three MCOs ranged from 85.0 percent to 95.9 percent, while the PCPP and FFS were at 49.9 percent and 47.4 percent, respectively.

Figure 4-3—Screening Members with Diabetes for HTN



Since this measure required only one documented BP reading during 2005 and BP is routinely performed during physician office visits, low rates most likely indicate that the member did not have a visit with the provider during the year. However, low rates may also indicate that the member’s medical record could not be located, the provider did not conduct a BP reading, or the provider did not document the reading. The MCOs and the Department should further investigate their specific findings to determine areas to target for interventions for this measure.

Measure 4: Controlling High Blood Pressure for Diabetic Members with Hypertension

Table 4–3 displays various levels of BP control for members who were identified with HTN and had a diagnosis of HTN confirmed in the medical record. The three levels represent standards of care based on ADA guidelines and HEDIS requirements. The levels represented in the table are not mutually exclusive, and members may qualify for more than one level (e.g., a member with a BP of 120/75 would be represented in all three BP levels).

Of the 2,094 members in the study, 54.8 percent (1,147 members) had HTN documented in the medical record. Overall, 67.0 percent of members had a BP level of 140/90 or less and were considered to be in control (HEDIS). The rates ranged from 59.0 percent to 72.4 percent. The rates for CO Access, RMHP, and PCPP were notably similar, while FFS and DHMC had the lowest percentage of members in control.

The definition for ADA control is a BP reading of less than 140/90. Overall, the ADA control rate was 60.2 percent, with rates ranging from 56.0 percent to 66.3 percent. The ADA recommends that diabetics maintain a BP of less than 130/80, which is displayed in the bottom row of Table 4–3. The overall ADA-recommended rate was 34.9 percent. The rates ranged from 31.2 percent to 39.0 percent.

Table 4–3—Controlling High Blood Pressure for Diabetic Members with Hypertension Documented in the Medical Record

	CO Medicaid	CO Medicaid Program				
		CO Access	DHMC	RMHP	PCPP	FFS
HTN Documented in the Medical Record	N = 1,147	N = 269	N = 332	N = 264	N = 157	N = 125
Most Recent BP \leq 140/90 (HEDIS Controlled)	67.0%	70.6%	59.0%	72.4%	70.1%	64.8%
Most Recent BP <140/90 (ADA Controlled)	60.2%	60.6%	56.3%	66.3%	60.5%	56.0%
Most Recent BP \leq 130/80 (ADA Recommended)	34.9%	35.7%	33.4%	39.0%	31.2%	32.8%

Measure 5: Use of an ACEI or ARB for Diabetic Members with HTN

Currently, the ADA recommends that all patients with diabetes found to have HTN should be treated with a regimen that includes either an ACEI or ARB unless contraindicated. The list of contraindications used for this focused study may be found in Appendix A. Members with a documented contraindication for an ACEI or ARB were excluded from this measure. Figure 4-4 below displays the percentage of members with HTN who were given an ACEI or ARB.

Overall, 73.7 percent of members with HTN received an ACEI or ARB. With the FFS population excluded, the overall rate was 75.2 percent. The rates ranged from a low of 49.7 percent to a high of 85.2 percent. MCO performance for this measure was higher than PCPP and FFS performance, and the PCPP rate was significantly lower than the rates for all of the other CO Medicaid programs.

Figure 4-4—Use of an ACEI or ARB for Diabetic Members with HTN

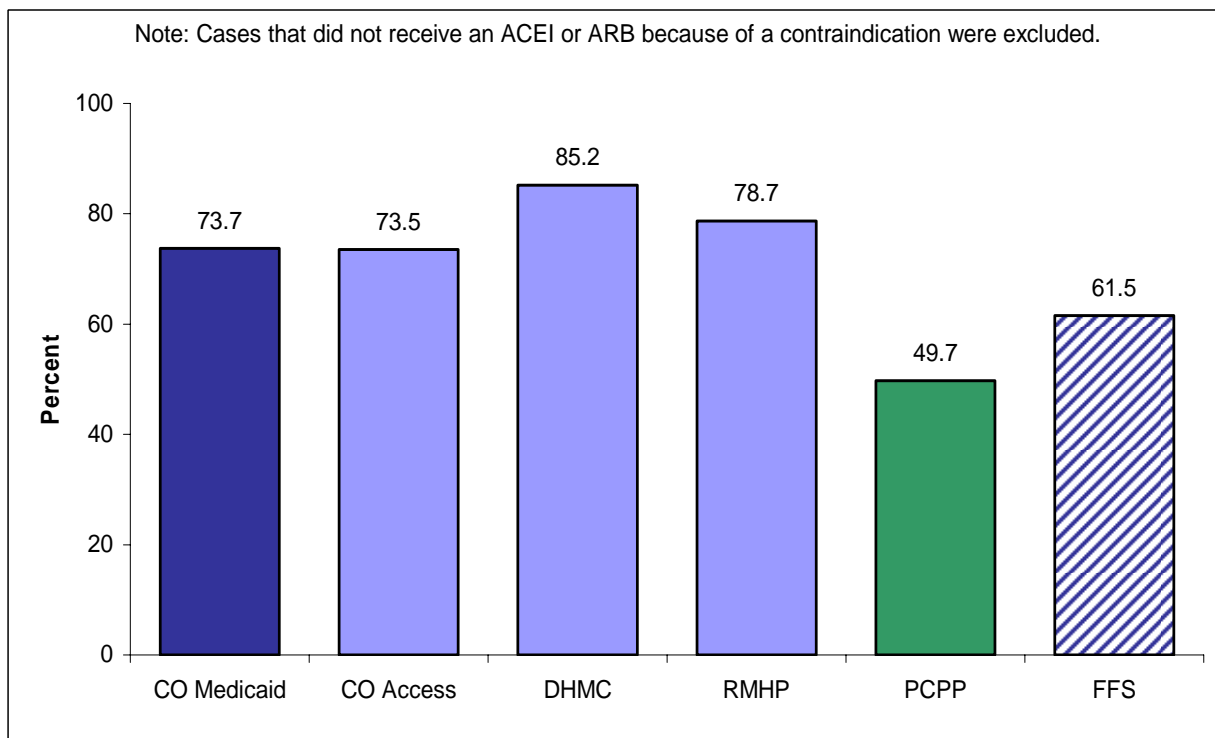


Table 4–4 shows the number of members who had a documented contraindication but received an ACEI or ARB despite the contraindication. There are several reasons this may have occurred:

- ◆ The member developed a contraindication, or was determined to have a contraindication, after being placed on an ACEI or ARB.
- ◆ The provider was aware of the member’s contraindication but determined the benefits of an ACEI or ARB outweighed the risks.
- ◆ There was a data error (e.g., a data abstraction error or a false indication in the medical record that an ARB was given).
- ◆ The provider may not have been aware of the member’s contraindication.

There were 18 members with HTN who had a documented contraindication and who received an ACEI or ARB medication. However, it was not possible from the results of this focused study to determine the reasons the 18 members with contraindications received the medication. The MCOs and the Department examined the medical records for these 18 members to determine the potential reasons. Although data abstraction errors were the cause in a few cases, in most of the cases, the contraindication occurred after the member was placed on the medication. The provider then switched the member to a more appropriate medication. Additional research conducted by the MCOs and the Department showed the providers were aware of the potential issues and provided appropriate care.

Table 4–4—Number of Members with HTN and a Contraindication for an ACEI or ARB			
Medicaid Program	Contraindicated for an ACEI or ARB	Received an ACEI or ARB	
		No	Yes
CO Access	12	3	9
DHMC	2	1	1
RMHP	6	3	3
PCPP	8	5	3
FFS	3	1	2
CO Medicaid	31	13	18

5. Overall Medicaid Conclusions and Recommendations

The goal of this focused study was to determine the extent to which diabetes care in the CO Medicaid population met key components of the latest standards of care. The first two measures were national HEDIS measures for HbA1c testing and poor HbA1c control. The study also emphasized how well providers adopted HEDIS and ADA recommendations for screening and controlling HTN in the diabetic population.

Table 5–1 displays a summary of the rates for all the measures in this study. The results of this baseline focused study are intended to be used as a tool to assist the MCOs and the Department in identifying opportunities for improvement in care provided to Colorado’s Medicaid members with diabetes. Key findings in the study are listed in Table 5–1.

Table 5–1—Summary of Rates for Study Indicators/Measures

Study Indicators/Measures		CO Medicaid	CO Access	DHMC	RMHP	PCPP	FFS
Final Sample Sizes		2,094	432	429	411	411	411
1	HbA1c Testing	79.2%	78.7%	83.7%	89.8%	76.6%	67.2%
2	Poor HbA1c Control (Note: Low Rates are Better)	48.5%	39.6%	41.3%	17.3%	70.1%	74.9%
3	HTN Screening	74.5%	85.0%	93.0%	95.9%	49.9%	47.4%
Number of Members with Documented HTN		N = 1,147	N = 269	N = 332	N = 264	N = 157	N = 125
4A	HTN and BP \leq 140/90 (HEDIS Controlled)	67.0%	70.6%	59.0%	72.4%	70.1%	64.8%
4B	HTN and BP<140/90 (ADA Controlled)	60.2%	60.6%	56.3%	66.3%	60.5%	56.0%
4C	HTN and BP<130/80 (ADA Recommended)	34.9%	35.7%	33.4%	39.0%	31.2%	32.8%
Number of Members with Documented HTN and No Contraindications		N=1,116	N = 257	N = 330	N = 258	N = 149	N = 122
5	HTN with No Contraindication and Received an ACEI or ARB*	73.7%	73.5%	85.2%	78.7%	49.7%	61.5%

*Members with a documented contraindication for an ACEI or ARB were excluded from Measure 5.

Low performance for any measure most likely indicates that either the member did not have a visit with the provider during the year or the medical record could not be located. However, low performance may indicate that the service was provided by a specialist or laboratory but the results were not forwarded to the primary care practitioner, the service was not provided, or the service was provided but not documented.

Key Findings

Measure 1—HbA1c testing, at 79.2 percent, was similar to the HEDIS 2005 national Medicaid 50th percentile of 78.4 percent. This rate demonstrates that the MCOs and providers routinely conduct HbA1c testing for members with diabetes.

Measure 2—48.5 percent of members had poor HbA1c control. This rate was similar to the HEDIS 2005 national Medicaid 50th percentile of 47.5 percent. Further analysis showed:

- ◆ Results of HbA1c testing (i.e., HbA1c levels) were not consistently found in the medical record for the PCPP and FFS populations, contributing to higher rates of poor HbA1c control for the PCPP and FFS sample populations.
- ◆ High HbA1c testing does not necessarily correlate to low HbA1c levels.
- ◆ The opportunity to improve diabetic care was readily apparent:
 - 786 out of the 2,094 members in this study (37.5 percent) did not have an HbA1c test with a documented HbA1c level.
 - 229 members had an HbA1c test, a documented level, and were in poor HbA1c control.

Measure 3—HTN screening (i.e., a representative BP reading) was documented at least one time for 74.5 percent of the members in this study, meaning that about one of every four CO Medicaid members in this study did not have documentation that BP was measured.

Measure 4—Of members who had BP documented, about two out of three had a BP of 140/90 or less. For this measure, 60.2 percent had a BP of less than 140/90, and 34.9 percent had a BP of less than 130/80, as recommended by the ADA.

Measure 5—73.7 percent of members with documented HTN and no documented contraindications to an ACEI or ARB received an ACEI or ARB. An ACEI or ARB is recommended by the ADA for members with diabetes and HTN and has been shown to be effective for lowering BP and protecting the kidneys against nephropathy.

Recommendations

Based on the study findings, HSAG recommends the following:

- ◆ The MCOs should use newsletters and follow-up reminders to educate members concerning glycemic control and HbA1c testing.
- ◆ The MCOs should encourage providers to prescribe an ACEI or ARB for diabetic members with HTN, as recommended by the ADA.
- ◆ The MCOs should use administrative data to link member status to services or tests required, and send out reminder lists to providers and members.
- ◆ The MCOs should consider designing and implementing the use of provider profiles for performance feedback regarding diabetic care rendered.
- ◆ The MCOs and the Department should identify educational resources for diabetes that are available to the programs' networks and to the community. For example, the ADA Web site (which can be accessed at <http://www.diabetes.org/education/eduprogram.asp>) identifies facilities in Colorado that have diabetes education programs recognized for excellence.
- ◆ The MCOs and the Department should continue to disseminate ADA practice guidelines and HEDIS requirements to providers.
- ◆ The Department should reinforce to providers and the MCOs the importance of documentation of services provided to CO Medicaid members.
- ◆ The Department should continue to improve the quality of data captured in its information systems to facilitate implementation of tracking and notification systems to assist PCPPs in identifying members with chronic conditions who have not received services.
- ◆ The Department should investigate methods to improve medical record retrieval for FFS members.

Appendix A. 2006 Medical Record Abstraction Tool and Instructions

DEMOGRAPHIC INFORMATION	
Last Name: _____	First Name: _____
Date of Birth: _____	Gender: <i>(circle one)</i> M F
Plan Name: _____	Member ID#: _____
EXCLUSIONS	
Member Was Excluded: <input type="checkbox"/> YES <i>(Exclude members who are not diabetic or who have gestational or steroid-induced diabetes or polycystic ovary disease)</i>	
HbA1c TESTING	HbA1c POOR CONTROL
1. Record the date of the most recent HbA1c testing: (1/1/05 through 12/31/05) ___/___/___ (Date)	2. Record the corresponding level of the HbA1c testing from box 1: ___ . ___ (Level) 3. <input type="checkbox"/> Check here if no level was recorded in 2005 If no level, count as exceeding threshold of > 9.0%
RECORD MOST RECENT BLOOD PRESSURE (BP) IN 2005	DOCUMENTATION CONFIRMING A DIAGNOSIS OF HYPERTENSION (HTN)
4. Date of the most recent visit in which a BP was recorded during 2005: ___/___/___ (Date) 5. BP Reading: ___/___ (most recent in 2005) 6. <input type="checkbox"/> Check here if no BP was recorded in 2005	7. <input type="checkbox"/> YES: Diagnosis of HTN was confirmed by documentation in the medical record on or before 6/30/05 as evidenced by one of the following: HTN, borderline HTN, history of HTN, intermittent HTN, high blood pressure, HBP, or ↑BP. <input type="checkbox"/> NO: Diagnosis of HTN was not confirmed by the medical record. <i>(Such statements as: rule out hypertension, possible hypertension, consistent with hypertension, are not sufficient to confirm the diagnosis.)</i>
USE OF AN ACE INHIBITOR OR ARB MEDICATION	CONTRAINDICATIONS TO THE USE OF AN ACE OR ARB
8. During 2005: Was an ACE inhibitor prescribed? <input type="checkbox"/> YES <input type="checkbox"/> NO Was an ARB medication prescribed? <input type="checkbox"/> YES <input type="checkbox"/> NO	9. Does the patient have a contraindication for the use of: ACE <input type="checkbox"/> YES <input type="checkbox"/> NO ARB <input type="checkbox"/> YES <input type="checkbox"/> NO
DOCUMENTATION OF CONTRAINDICATIONS TO THE USE OF ACE AND/OR ARB	
10. There is documentation in the medical record for the following contraindication(s) for the use of an ACE or ARB :	
<input type="checkbox"/> Pregnancy <input type="checkbox"/> Lactation <input type="checkbox"/> Angioedema due to previous treatment with ACE inhibitors <input type="checkbox"/> Hypersensitivity or allergy to previous ACE or ARB treatment	<input type="checkbox"/> Renal artery stenosis <input type="checkbox"/> Hypertrophic cardiomyopathy <input type="checkbox"/> No specific reason documented

2006 Medical Record Abstraction Tool Instructions

Demographic Information

- ◆ Complete the member's last name followed by the first name and date of birth.
- ◆ Circle the gender.
- ◆ Record the name of the managed care plan.
- ◆ Record the member identification number.

Members 18–75 years old as of December 31 of the measurement year (2005) who had Type 1 or Type 2 diabetes.

Exclusions: *Exclude members who are not diabetic or who have gestational or steroid-induced diabetes or polycystic ovary disease.*

No retrospective entries are accepted (i.e., entries made on or after January 1, 2006 are not accepted, even though the entry may reflect services rendered during 2005).

1. HbA1c Testing

Record the **date** of the most recent **HbA1c** screening during the measurement year (**2005**).

Documentation in the medical record **must** include, **at a minimum**, a note indicating the **date** the HbA1c was performed **and** the **results**. The MCO may count notation of the following in the medical record:

- ◆ A1c
 - ◆ HbA1c
 - ◆ hemoglobin A1c
 - ◆ HgbA1c
 - ◆ Glycohemoglobin
2. Record the corresponding level from the HbA1c screening.
 3. Check here if there is no documentation of an HbA1c test in the review year.
 4. Record the **date** of the **most recent** visit in which a blood pressure (BP) measurement was recorded.
 5. Record the corresponding **BP reading** from the most recent visit dated in #4.

In the event of multiple BP readings in different positions, the following *rule* applies: Defer first to the sitting, next to the lying (supine) and last to the standing BP. For example: *if a BP of 150/84 was recorded in the sitting position, and 139/89 was recorded in the lying down position (at the same visit), you would defer to the sitting position (150/84). This member would register a BP that is not controlled.* If two blood pressures were recorded without reference to position, record the lower reading.

6. Check here if there is no documentation of a BP screening during 2005.
7. **Confirm** the **diagnosis of hypertension (HTN)** in the medical record (from either the PCP who most recently provided care to the member **or** the practitioner who is managing the member's HTN) with **one** of the following:
 - ◆ HTN, borderline HTN, high blood pressure, HBP, history of HTN or ↑BP, intermittent HTN, **on or before 6/30/05**.

The following statements are not acceptable as confirmation of HTN:

- ◆ “Rule out HTN,” “consistent with HTN,” “possible HTN,” white-coat HTN, or questionable HTN.

You may use information from the following areas of the medical record:

- ◆ Encounter form
 - ◆ Diagnostic report
 - ◆ Hospital discharge summary
 - ◆ Office note
 - ◆ Problem list (this may include a diagnosis prior to June 30 of the measurement year, or an undated notation of HTN on a problem list)
 - ◆ Subjective objective assessment plan (SOAP) notes
 - ◆ Telephone call record
8. If an **ACE** inhibitor was prescribed during 2005, check **YES**. If an **ACE** inhibitor was not prescribed, check **NO**. Following is a list of commonly prescribed **ACE** inhibitors:
 - ◆ Accupril
 - ◆ Aceon
 - ◆ Altace
 - ◆ Capoten
 - ◆ Lotensin
 - ◆ Mavik
 - ◆ Monopril
 - ◆ Univase
 - ◆ Vasotec
 - ◆ Zestril

If an **ARB** medication was prescribed during 2005, check **YES**. If an **ARB** medication was not prescribed, check **NO**. Following is a list of commonly prescribed **ARB** medications:

- ◆ Atacand
- ◆ Avapro
- ◆ Benicar
- ◆ Cozaar
- ◆ Diovan
- ◆ Teveten

9. If the provider documents in the medical record that a patient has a contraindication for the use of an ACE medication, check **YES**. If there is no documentation regarding a contraindication for the use of an ACE, check **NO**. If the provider documents in the medical record that a patient has a contraindication for the use of an ARB medication, check **YES**. If there is no documentation regarding a contraindication for the use of an ARB, check **NO**.

10. If there is documentation in the medical record that there is a contraindication to an ACE or ARB medication due to lactation, pregnancy, history of angioedema due to previous treatment with an ACE inhibitor, hypersensitivity or allergy to previous ACE or ARB, renal artery stenosis, or hypertrophic cardiomyopathy, check the box next to the corresponding contraindication. If the provider documents that the patient has a contraindication to the use of an ACE or ARB, but does not document the reason, check the box next to “no specific reason documented.”

Fill in your **abstractor ID#** and the **date** the abstraction was completed.

Prescriptions Commonly Prescribed for Diabetics

Insulin Prescriptions

70/30	Lantus
Continuous subcutaneous infusion of insulin	Lente
Insulin pen	Multiple daily injections
Insulin pump	Novolin
Insulace	Novolog
Insulatard	Penfill
Humalog	Regular insulin
Humulin	Ultralente
Iletin	Velosulin

Oral Hypoglycemics/Antihyperglycemic Prescriptions

Acetohexamide	Glyset
Actos	Micronase
Amaryl	Micronized Glyburide
Avandia	Oribetic
Chlorabetic	Orinase
Chlorpropamide	Prandin (Repaglinide)
DiaBeta	Precose
Diabinese	Relion
Dymelor	Rezulin,
Glipizide	Starlix
Glucotrol	Tol-Tab
Glucovance	Tolazamide
Glyburide	Tolbutamide
Glycron	Tolinase
Glynase	Troglitazone