

# The Hilltop Institute



*analysis to advance the health of vulnerable populations*

## **The New Mexico Salud! Program: Assessment of Access to Care and Quality of Care for Children with Asthma and Adults with Diabetes**

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**UMBC**  
AN HONORS UNIVERSITY IN MARYLAND

*The Hilltop Institute was formerly the Center for Health Program Development and Management.*

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**Table of Contents**

Executive Summary .....	i
Introduction .....	1
Data and Methods .....	3
Populations .....	5
Measures .....	8
Report Findings.....	11
Assessing Salud! MCO Performance Using Available Data .....	11
Assessing Salud! MCO Performance Using New Measures of Access and Quality.....	16
Children with Persistent Asthma .....	16
Adults with Diabetes.....	20
Regional Analysis of Selected Measures .....	23
Children with Persistent Asthma .....	23
Adults with Diabetes.....	25
Race/Ethnicity Analysis of Selected Measures.....	27
Adults with Diabetes.....	27
Measure Limitations .....	29
Conclusion .....	31
Recommendations.....	33



**The New Mexico Salud! Program:  
Assessment of Access to Care and Quality of Care  
for Children with Asthma and Adults with Diabetes**

**List of Tables and Figures**

Table 1. Identification Criteria for Children with Persistent Asthma.....	6
Table 2. Identification Criteria for Adults with Diabetes .....	7
Table 3. Asthma Measures .....	8
Table 4. Diabetes Measures .....	10
Table 5. <i>America’s Best Health Plan</i> Ranking, Top 10 Health Plans in the West .....	11
Table 6. Salud! MCO Performance: HEDIS 2008 ASM Scores.....	12
Table 7. Salud! MCO Performance: Regionally Adjusted HEDIS 2008 CDC Scores .....	13
Table 8. Salud! MCO Performance: HEDIS Appropriate Use of Asthma Medications (ASM) Scores for Children Aged 5 - 17 Years, 2004 – 2008 .....	14
Table 9. Salud! MCO Performance: HEDIS Comprehensive Diabetes Care (CDC) Scores, 2004– 2008.....	15
Figure 1. Percentage of Children with Asthma Aged 5-17 Years with at Least One Preventive/ Ambulatory Visit by MCO, CY 2005 and CY 2007.....	17
Figure 2. Asthma-Related ED Visits per 1,000 Member Months for Children with Persistent Asthma Aged 5-17 Years by MCO, CY 2005 and CY 2007.....	18
Figure 3. Asthma Admission Rate: Inpatient Days per 1,000 Member Months for Children with Persistent Asthma Aged 5-17 Years by MCO, CY 2005 and CY 2007 .....	19
Figure 4. Appropriate Use of Asthma Medications: Percentage of Children with Persistent Asthma Aged 5-17 Years with at Least One Dispensed Prescription for Asthma Medications by MCO, CY 2005 and CY 2007 .....	20
Figure 5. Percentage of Adults with Diabetes Aged 18-64 Years with at Least One Preventive/ Ambulatory Visit by MCO, CY 2005 and CY 2007.....	21
Figure 6. Diabetes-Related ED Visits per 1,000 Member Months for Adults with Diabetes Aged 18-64Years by MCO, CY 2005 and CY 2007.....	22
Figure 7. Diabetes Admission Rate: Inpatient Days per 1,000 Member Months for Adults with Diabetes Aged 18-64 Years by MCO, CY 2005 and CY 2007.....	23
Table 10. Percentage of Children with Persistent Asthma Aged 5-17 Years with at Least One Preventative/Ambulatory Care Visit by Region and MCO, CY 2005 and CY 2007.....	24
Table 11. Asthma-Related ED Visits per 1,000 Member Months for Children with Persistent Asthma Aged 5-17 Years by Region and MCO, CY 2005 and CY 2007.....	24



Table 12. Asthma Admission Rate: Inpatient Days per 1,000 Member Months for Children with Persistent Asthma Aged 5-17 Years by Region and MCO, CY 2005 and CY 2007 ..... 24

Table 13. Appropriate Use of Asthma Medications: Percentage of Children with Persistent Asthma Aged 5-17 Years with at Least One Dispensed Prescription for Asthma Medications by Region and MCO, CY 2005 and CY 2007 .....25

Table 14. Percentage of Adults with Diabetes Aged 18-64 Years with at Least One Preventive/Ambulatory Visit by Region and MCO, CY 2005 and CY 2007 .....25

Table 15. Diabetes-Related Outpatient ED Visits per 1,000 Member Months for Adults with Diabetes Aged 18-64 Years by Region and MCO, CY 2005 and CY 2007..... 26

Table 16. Diabetes Admission Rate: Inpatient Days per 1,000 Member Months for Adults with Diabetes Aged 18-64 Years by Region and MCO, CY 2005 and CY 2007..... 26

Table 17. Percentage of Adults with Diabetes Aged 18-64 Years with at Least One Preventive/ Ambulatory Visit by Race/Ethnicity and MCO, CY 2005 and CY 2007.....27

Table 18. Diabetes-Related Outpatient ED Visits per 1,000 Member Months for Adults with Diabetes Aged 18-64 Years by Race/Ethnicity and MCO, CY 2005 and CY 2007 ..... 28

Table 19. Diabetes Admission Rate: Inpatient Days per 1,000 Member Months for Adults with Diabetes Aged 18-64 Years by Race/Ethnicity and MCO, CY 2005 and CY 2007 ..... 28



**The New Mexico Salud! Program:  
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## **Executive Summary**

This report presents the findings of an independent assessment of New Mexico's Medicaid managed care program, Salud!. The Hilltop Institute at the University of Maryland, Baltimore County (UMBC) conducted this assessment with the intent to provide analysis of access to care and quality of care for children enrolled in Salud! with persistent asthma and adult enrollees with diabetes. The following three policy questions guiding Hilltop's assessment are specific to the effectiveness of care delivered to people with chronic disease by the Salud! managed care organizations (MCOs):

- How does the performance of MCOs in Salud! compare to the performance of other MCOs in the western region of the United States?
- Have quality of and access to care for people with chronic conditions improved?
- Have racial/ethnic and regional disparities in access and quality been reduced?

The Hilltop Institute developed a set of measures for the MCOs based on Healthcare Effectiveness Data and Information Set (HEDIS) and Agency on Healthcare Research & Quality (AHRQ) standards, including preventive/ambulatory care visits, outpatient emergency department (ED) visits, and several measures of inpatient hospital utilization. Analysis is based on the performance of the three MCOs operating in Salud! prior to July 2008: Molina Healthcare (Molina), Presbyterian Health Plan (Presbyterian), and Lovelace Community Health Plan (Lovelace). Measures were collected for calendar years (CYs) 2005 and 2007. Comparisons of Salud! MCOs to other MCOs in the western region of the United States are drawn from published sources. Finally, longitudinal trends in published HEDIS measures for children with persistent asthma and adults with diabetes are compared for each MCO.

## **Brief Summary of Key Findings**

### **Comparison of the Salud! MCOs to Other MCOs in the Western Region**

Publicly available data related to managed care performance in the treatment of individuals with chronic conditions are limited. In regard to overall performance, the Salud! MCOs are among the top ten Medicaid health plans in the western region of the United States, based on the *America's Best Health Plan* ranking system.<sup>1</sup> Compared to HEDIS regional benchmarks for Medicaid MCOs, two Salud! MCOs exceeded the benchmark for the Appropriate Use of Asthma Medications (ASM) measure. Compared to regional benchmarks for the HEDIS Comprehensive

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<sup>1</sup> Comarow, A. (2008, November 7). Behind the health insurance plan rankings. *U.S. News*. Retrieved December 10, 2008, from <http://health.usnews.com/articles/health/health-plans/2008/11/07/behind-the-health-insurance-plan-rankings.html>



Diabetes Care (CDC) measures, the Salud! MCOs demonstrated wide variation in performance. Presbyterian scored above the 50<sup>th</sup> percentile in the region on all five measures available, Lovelace scored above the 50<sup>th</sup> percentile on three measures, and Molina scored above the 50<sup>th</sup> percentile on one measure.

### **MCO Performance Based on Published HEDIS Data**

Trend analysis from published data is limited to available HEDIS measures within the Salud! program. Using the only measure available to assess quality of care for the treatment of asthma—the ASM measure—the overall state average, as well as individual MCO performance, improved considerably between 2004 and 2008. Using the six measures available to assess quality of care for the treatment of diabetes—the CDC measures—trends were generally positive. However, wide variation in MCO performance and across measures suggests that there may be opportunities to create inter-plan learning opportunities to maximize improvements in quality for all program enrollees.

### **Use of Primary Care and Preventive/Ambulatory Services**

Utilization of primary care and preventive/ambulatory care services among enrollees with chronic conditions is high across all three Salud! MCOs. Among children with persistent asthma, Presbyterian and Lovelace demonstrated that nearly all children with persistent asthma had visited a primary care practitioner at least once in 2007, while 90 percent of children with persistent asthma enrolled with Molina had accessed a primary care practitioner.<sup>2</sup> Over 96 percent of adults with diabetes who were enrolled in the Salud! program had received a preventive or ambulatory visit by 2007.

### **Emergency Department Visits**

Visits to EDs for reasons related to a chronic condition demonstrated mixed results over the measurement period. Children with persistent asthma visited EDs for asthma-related treatment less often in 2007 than in 2005, with each MCO demonstrating significant decreases in ED visits. Conversely, Presbyterian and Lovelace demonstrated that diabetes-related visits to the ED increased for adults from 2005 to 2007. Diabetes-related visits to the ED remained unchanged for Molina's adult enrollees.

### **Hospital Admissions**

Hospital admissions related to the chronic conditions that were analyzed decreased from 2005 to 2007. Both asthma-related and diabetes-related hospital admissions as measured by inpatient days decreased across all three MCOs.

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<sup>2</sup> Data issues limit the inter-plan comparability of Molina's asthma measures.



## **Appropriate Use of Asthma Medications**

A fourth measure was analyzed that is specific to the management of persistent asthma: appropriate use of asthma medications by children with persistent asthma. Over 91 percent of children with persistent asthma enrolled in Presbyterian or Lovelace demonstrated appropriate asthma medication use in 2007. Molina's rate of appropriate use of asthma medications was less than 70 percent in 2007. Data issues limit the inter-plan comparability of Molina's measures.

## **Regional Analysis of Selected Measures**

Regional analysis reveals that the percentage of children with asthma and the percentage of adults with diabetes who are using primary care and ambulatory care services is consistently high in both urban and rural/frontier regions. However, trends demonstrated considerable variability across MCOs and between regions for most measures of access and quality for both populations. For instance, although children with asthma generally showed substantial decreases in asthma-related ED visits, which is a positive shift in quality, decreases were mostly concentrated in urban regions. Sizable increases in diabetes-related ED visits appeared to be limited to certain regions specific to each MCO. In turn, every MCO demonstrated large reductions in diabetes-related admissions, but only in some regions.

## **Race/Ethnicity Analysis of Selected Measures**

Trends in the use of preventive and ambulatory care services varied based on the MCO and race/ethnicity group, but generally remained very high across race/ethnicity groups. Analysis did indicate a consistent and downward trend in diabetes-related admissions, a positive shift demonstrated by every MCO for each race/ethnicity group. Some of these shifts occurred in the same regions where diabetes-related visits increased. Thus, these co-occurring trends could indicate a shift from inpatient admissions toward less resource-intensive ED use in some areas. Further study would be needed to identify the underlying factors contributing to these trends.



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## **Introduction**

This report presents the findings of an independent assessment of New Mexico's Medicaid managed care program, Salud!. The Hilltop Institute at the University of Maryland, Baltimore County (UMBC) conducted this assessment for the New Mexico Human Services Department to provide a more in-depth view of the health care service delivery system offered to Salud! enrollees with chronic conditions than is currently available to decision makers in New Mexico.<sup>3</sup> MCO performance was assessed using published sources and measures newly constructed for this analysis. Three questions guided Hilltop's assessment and specifically address access to care and quality of care for people with conditions in Salud!:

- Have access to and quality of care for people with chronic conditions improved?
- Have racial/ethnic and regional disparities in access and quality been reduced?
- How does the performance of MCOs in Salud! compare to the performance of other MCOs in the western region of the United States?

Hilltop selected two populations for assessment to allow examination of the treatment of chronic conditions at different stages of the life cycle: children aged 5 to 17 years with persistent asthma and adults aged 19 to 64 years with diabetes. Given the exploratory nature of this study, selection was limited to two populations. A more thorough evaluation of the Salud! program, however, should begin by considering all stages of the life cycle and by identifying key enrollee groups such as women of child-bearing age and infants.

Asthma is the most common chronic condition affecting children in the United States.<sup>4</sup> In 2006, nearly 7 million children under the age of 18 years had asthma.<sup>5</sup> Children aged 5 to 17 years have the highest prevalence rate of asthma among all children, 99.9 per 1,000 individuals, with more than 5 million children in this age group in 2007.<sup>6</sup> Asthma can affect children of any race/ethnicity, but some race/ethnicity groups are disproportionately impacted. While Puerto Rican and African American children have higher prevalence rates than Caucasian children, the

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<sup>3</sup> The only other recent evaluation of the Salud! program, the 2007 Independent Assessment of Salud! conducted by the Lewin Group,<sup>3</sup> assessed managed care operations as they pertain to the fulfillment of requirements set forth by the Centers for Medicare and Medicaid Services (CMS).

<sup>4</sup> Centers for Disease Control and Prevention. Retrieved February 17, 2009, from <http://www.cdc.gov/asthma/faqs.htm>

<sup>5</sup> Bloom B., Cohen, R. A. (2007). Summary Health Statistics for U.S. Children: National Health Interview Survey, 2006. National Center for Health Statistics. *Vital Health Stat 10*(234).

<sup>6</sup> Trends in Asthma Morbidity and Mortality. American Lung Association, Epidemiology and Statistics Unit, Research and Program Services Division: January 2009. See Table 7: Asthma – Number of Conditions and Prevalence Rate per 1,000 population by age, 1982-1996, 2001-2007 (Current Prevalence).



prevalence rate for children of Mexican descent is lowest among these groups.<sup>7</sup> Income level is also associated with asthma prevalence and individuals with incomes below the federal poverty level have higher prevalence rates than those with higher incomes.<sup>8</sup> The cost of caring for asthma is high. Over \$14 billion was spent on direct asthma care in the United States in 2007.<sup>9</sup> Medicaid provides for proportionately more asthma care due to higher asthma prevalence in the Medicaid population,<sup>10</sup> and it is estimated that asthma costs for Medicaid recipients under the age of 18 years were over \$2 billion in 2003.<sup>11</sup> Medicaid programs can benefit from utilizing asthma care management programs. Research on asthma care management has shown that care management programs can be effective in reducing asthma care costs and improving treatment outcomes.<sup>12</sup> State Medicaid programs that utilize commercial health plans, particularly in managed care environments, can create asthma care management programs that are mutually beneficial to enrollees, commercial partners, and the state.

Diabetes is an epidemic in the United States that will have an economic impact on state Medicaid programs for years to come. Approximately 6 percent of Medicaid enrollees have diabetes, and these enrollees account for 16 percent of all Medicaid spending.<sup>13</sup> More than one-quarter of people with diabetes in the United States are unaware that they have the disease, and more than one million new cases are diagnosed every year.<sup>14</sup> Costs related to diabetes are sensitive to the quality of primary care, and costs to the Medicaid program for potentially preventable hospital stays were estimated to be \$386 million in 2001.<sup>15</sup> Individuals who are of a racial/ethnic minority population are disproportionately impacted by the diabetes epidemic. Medicaid care management programs that target diabetes have demonstrated improvements in self-management of care, clinical outcomes, and higher rates of screenings for complications.<sup>16</sup> Thus, MCOs can be a crucial partner with states in controlling the impact of diabetes on Medicaid programs.

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<sup>7</sup> Moorman, J. E., Rudd, R.A., Johnson, C.A., King, M. Minor, P., Bailey, C., et al. (2007, October 19). National Surveillance for Asthma - United States, 1980—2004. MMWR Surveillance Summaries. *Morbidity and Mortality Weekly Report/* 56(SS08);1-14;18-54.

<sup>8</sup> Ibid.

<sup>9</sup> Trends in Asthma Morbidity and Mortality. American Lung Association, Epidemiology and Statistics Unit, Research and Program Services Division: January 2009. See Table 20 Economic Cost of Asthma, United States, 2007.

<sup>10</sup> Agency for Healthcare Research and Quality. (2008, March). *Designing and Implementing Medicaid Disease and Care Management Programs: A User's Guide*. Pub #07(08)-0063. See Section 8, p. 2-3.

<sup>11</sup> Asthma Care Quality Improvement: A Resource Guide for State Action. Prepared for: Agency for Healthcare Research and Quality U.S. Department of Health and Human Services. See Table 1.4. Medicaid eligible population and estimated asthma prevalence and expenditures for medical care for age groups 0-18, 19-64, and 65 and over, by State, 2003. <http://www.ahrq.gov/qual/asthmacare/asthmaappb.htm>

<sup>12</sup> Agency for Healthcare Research and Quality. (2008, March). *Designing and Implementing Medicaid Disease and Care Management Programs: A User's Guide*. Pub #07(08)-0063. See Section 8.

<sup>13</sup> Based on FY2003 data. See Cohen, M. (2007). *An Overview of Medicaid Enrollees with Diabetes in 2003*. Kaiser Commission on Medicaid and the Uninsured: Washington, D.C.

<sup>14</sup> Sipkoff, M. (2006, May). Health plans are ill-prepared for looming diabetes epidemic. *Managed Care*.

<sup>15</sup> Agency for Healthcare Research and Quality. (2005, January). *H-CUP Highlights – Economic and Health Costs of Diabetes*. Pub #05-0034.

<sup>16</sup> Agency for Healthcare Research and Quality. (2008, March). *Designing and Implementing Medicaid Disease and Care Management Programs: A User's Guide*. Pub #07(08)-0063. See Section 8, p. 1-2.



This assessment examines the performance of the three MCOs operating in Salud! prior to July 2008: Molina Healthcare (Molina), Presbyterian Health Plan (Presbyterian), and Lovelace Community Health Plan (Lovelace). Comparisons of their performance to the performance of other MCOs in the western region of the United States are drawn from published sources. However, these comparative data are limited because performance scores reflect a summary of measures and are not specific to the treatment of people with chronic conditions. Moreover, published Healthcare Effectiveness Data and Information Set (HEDIS) data specific to the treatment of people with diabetes and asthma are limited.

To better understand how MCOs in New Mexico’s Medicaid managed care program are delivering care to people with chronic conditions, Hilltop developed additional measures that examine access to and quality of care specifically for children with persistent asthma and adults with diabetes. These measures were selected to be representative of a wide spectrum of services—primary care, emergency services, and inpatient services—but are not comprehensive and have important limitations. For instance, the measures have no benchmarks for comparison. Moreover, specifications rely heavily on HEDIS-like constructs. While HEDIS measures seek to provide a comprehensive measurement system across an array of conditions and age groups, there are important aspects of both chronic disease care and self management that are not addressed. Moreover, quality measurement should take into account the quality improvement activities and disease management programs being conducted by MCOs, as well as the priorities of program administrators. Other limitations, as well as further considerations that would need to be made in the next stage of quality measurement development, are discussed extensively at the end of this report.

## Data and Methods

We assess MCO performance using published sources and measures newly constructed for this analysis. Comparisons of the performance of Salud! MCOs with the performance of other MCOs in the western region of the United States are drawn from published sources, including HEDIS reports and the *America’s Best Health Plan* ranking system. Medicaid HEDIS measures at the plan level for neighboring states are not publicly available. Therefore, comparisons are made to the HEDIS regional benchmarks and national percentiles for Medicaid MCOs. The *America’s Best Health Plan* ranking system, developed by the National Committee for Quality Assurance (NCQA) and *U.S. News*, allows for regional comparison of Medicaid MCOs on overall performance. This ranking system provides summarized information and does not allow for comparison on individual or disease-specific measures.

We also examine annual HEDIS data produced by each Salud! MCO because these measures are standardized across MCOs and can be used to compare MCO performance over time when specifications of the measure do not change dramatically. HEDIS measures available over the most recent five-year period include one measure for people with asthma and six measures for people with diabetes.

To further examine access to and quality of care for people with chronic disease, Hilltop developed technical specifications for a new set of “HEDIS-like” measures and requested each MCO produce these measures using its own Medicaid claims and encounter data. These



measures are based on measurement procedures set forth by HEDIS and the Agency on Healthcare Research & Quality (AHRQ) Prevention Quality Indicators.<sup>17</sup> These new measures allow assessment of the quality of care for the two populations with chronic disease selected for study in greater detail than typically reported through HEDIS or other state reporting requirements.

Measures were produced by all three MCOs for calendar years (CYs) 2005 and 2007.<sup>18</sup> The measurement period was limited by the capacity of MCOs to access data and produce measures in a short time frame. Presbyterian was able to provide data for the measurement year 2003. This additional year of Presbyterian data helped identify changes that may reflect year-to-year variation rather than long-term trends, but these data are not presented in this report.

Each MCO generated the requested measures through modification of HEDIS software programming, and in the case of two MCOs, in partnership with their respective HEDIS vendors.<sup>19</sup> Although all MCOs are audited and certified as HEDIS-compliant, vendors may interpret HEDIS technical specifications differently. Our measurement process revealed some challenges in developing new measures that are standard in specification and thus comparable. These challenges include possible variation in software interpretation of HEDIS specifications and reporting by one MCO of incomplete encounter data. Thus, rates may not be fully comparable across MCOs. This variation may impact, in different ways, the quality of measures for the two populations studied.

With respect to the asthma population, the HEDIS specification for identifying children with asthma requires that children meet diagnostic criteria over two years of data (the measurement year and the year prior). Due to a change in ownership, Molina does not have access to complete encounter data in CY 2004. Thus, Hilltop requested that Molina produce the asthma measures using the measurement year only for both CY 2005 and CY 2007 measures. This approach sought to improve consistency in methodology at the plan level between years. However, data between years are still not fully consistent because Molina only retains complete enrollment data for 10 months in CY 2005. Moreover, Molina's sample size of the asthma population in both years is less than half the size of the sample produced by Lovelace, despite the fact that these two MCOs serve a comparable share of the Medicaid market. This suggests that Molina's sample is a selective subgroup of the full population that would have met the criteria for inclusion if complete data were available. Thus, due to the incompleteness of data and despite the modification in specifications, Molina's rates are not directly comparable to the rates of the other two MCOs.

The incompleteness of Molina's data may affect the diabetes measures somewhat differently. The HEDIS specification for identifying adults with diabetes requires that adults meet diagnostic

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<sup>17</sup> Department of Health and Human Services, Agency of Healthcare Research and Quality (DHHS, AHRQ). (2008, February 29). *AHRQ Quality Indicators Prevention Quality Indicators: Technical Specifications*. Version 3.2. Retrieved February 17, 2009, from <http://www.qualityindicators.ahrq.gov>

<sup>18</sup> Measurement years 2005 and 2007 refer to calendar years 2005 and 2007.

<sup>19</sup> Lovelace outsources production of HEDIS performance measures to VIPS, an NCQA-certified vendor; Molina outsources production to Catalyst Technologies, Inc., an NCQA-certified vendor; and Presbyterian produces the measures through software purchased from Catalyst Technologies.



criteria only in one year of data, but allows the MCO to pick up additional members to be included if diagnosis criteria are met in the year prior to measurement (and not the measurement year). This is a somewhat looser criteria compared to the asthma criteria. Hilltop made no modification to specification of diabetes measures for Molina. Yet, Molina's sample size of the diabetes population in 2005 is almost 40 percent larger than the sample produced by Lovelace in the same year. In 2007, Molina's sample size is less than 10 percent larger than the Lovelace sample. We anticipate that Molina's rates are more comparable to the rates of other MCOs in 2007, but may be discrepant in 2005. Additional analysis would be needed to determine the nature and degree of the discrepancy in either population.

Because evidence arose in the process of measure production to suggest that Molina's measures are not comparable to Presbyterian and Lovelace measures, we do not combine the rates of each MCO into a combined statewide average MCO rate for either population.

## **Populations**

### **Asthma Population**

The asthma population selected for study in this report is children with persistent asthma aged 5 to 17 years. Children with asthma were identified using HEDIS technical specifications for the Appropriate Use of Asthma Medications (ASM) measure (Table 1).<sup>20</sup> These specifications require the child to have continuous enrollment in the MCO for the measurement year and the year prior to the measurement year, as well as meet at least one of four clinical criteria to identify a diagnosis of persistent asthma in both years.

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<sup>20</sup> NCQA. (2008). *HEDIS 2008 Technical Specifications*. Volume 2. pp. 106-108.



**Table 1. Identification Criteria for Children with Persistent Asthma**

<b>Children with Persistent Asthma</b>
<p><b>Age Criteria</b></p> <p>Each member must be aged 5 years through 17 years as of Dec. 31 of the measurement year.</p>
<p><b>Enrollment Criteria</b></p> <p>Each member of the cohort must have:</p> <ul style="list-style-type: none"> <li>▪ Enrollment as of Dec. 31 of the measurement year</li> <li>▪ Continuous enrollment in the measurement year AND the year prior to the measurement year</li> <li>▪ No more than one gap in enrollment of up to 45 days, or one month if enrollment is verified monthly, during EACH year of continuous enrollment</li> </ul>
<p><b>Clinical Criteria</b></p> <p>The asthma cohort includes all enrollees aged 5 through 17 years who met or exceeded at least one of the following utilization thresholds of medical care services in the measurement year AND the year prior to the measurement year:</p> <ul style="list-style-type: none"> <li>▪ At least one ED visit based on the visit codes below (see Table ASM-B) with asthma as the principal diagnosis</li> <li>▪ One acute inpatient discharge based on the visit codes in Table ASM-B with asthma as the principal diagnosis</li> <li>▪ Four outpatient asthma visits in Table ASM-B with asthma as one of the listed diagnoses and at least two asthma medication dispensing events in Table ASM-C</li> <li>▪ At least four asthma dispensing events (i.e., an asthma medication was dispensed on four different occasions, see Table ASM-C)</li> </ul> <p>See p. 108 of the HEDIS 2008 Technical Specifications for a modification of the criteria.</p>

Notes: Refer to Table ASM-B for codes to identify visit types. See HEDIS 2008 Technical Specifications, p. 107. Refer to Table ASM-C to identify asthma medication dispensing events. Available online at <http://www.ncqa.org/tabid/598/Default.aspx>.

Source: NCQA. (2008). *HEDIS 2008 Technical Specifications*. Volume 2. pp. 106-108.

## Diabetes Population

The population with diabetes selected for study in this report is adults aged 18 to 64 years with diabetes. Adults with diabetes were identified by each MCO using HEDIS technical specifications for the Comprehensive Diabetes Care measures (Table 2). These specifications require continuous enrollment in the MCO for the measurement year, as well as a set of four clinical criteria to identify a diabetes diagnosis. The enrollee must meet one of these clinical criteria in the measurement year or the year prior to the measurement year. Molina could not access claims data prior to the CY 2005 cohort and thus could not identify additional members to the cohort using the “prior year” data. Moreover, data between years are not fully consistent because Molina only retains complete enrollment data for 10 months in CY 2005. Thus,



Molina’s population of adults with diabetes may differ from the other two MCOs. Additional analysis would be required to determine the nature of these differences.

**Table 2. Identification Criteria for Adults with Diabetes**

<b>Adults with Diabetes</b>
<p><b>Age Criteria</b></p> <p>Each member must be aged 18 years through 64 years as of Dec 31 of the measurement year.</p>
<p><b>Enrollment Criteria</b></p> <p>Each member of the cohort must have:</p> <ul style="list-style-type: none"> <li>▪ Enrollment as of Dec. 31 of the measurement year</li> <li>▪ Continuous enrollment in the measurement year</li> <li>▪ No more than one gap in enrollment of up to 45 days, or one month if enrollment is verified monthly</li> </ul>
<p><b>Clinical Criteria</b></p> <p>The diabetes cohort includes all enrollees aged 18 through 64 years who met or exceeded at least one of the following utilization thresholds of medical care services in the measurement year OR the year prior to the measurement year:</p> <ul style="list-style-type: none"> <li>▪ One dispensed insulin or oral hypoglycemic/antihyperglycemic event (see Table CDC-A)</li> <li>▪ One ED visit (see Table CDC-C) with a diabetes diagnosis</li> <li>▪ One acute inpatient visit (see Table CDC-C) with a diabetes diagnosis; or</li> <li>▪ Two visits in outpatient or nonacute inpatient setting (see Table CDC-C) with a diabetes diagnosis</li> </ul> <p>ICD-9-CM diagnosis codes and DRG codes from Table CDC-B:</p> <p>ICD-9-CM codes: 250,357.2,362.0,366.41,648.0</p> <p>DRG codes: 294, 295</p>

Notes: Refer to Table CDC-A in the NDC list to identify insulin and oral hypoglycemic/antihyperglycemic events. Available online at <http://www.ncqa.org/tabid/598/Default.aspx>. Refer to Table CDC-B for diagnosis codes to identify diabetes. See HEDIS 2008 Technical Specifications, p. 128. Refer to Table CDC-C for codes to identify visit types. See HEDIS 2008 Technical Specifications, p.128.

Source: NCQA. (2008). *HEDIS Technical Specifications*. Volume 2. pp. 126-140.



## Measures

### Asthma Measures

The four measures constructed to assess access to and quality of care for children with asthma are listed in Table 3. All measures are drawn from the population of children with asthma, as defined in Table 1. The first measure represents the percentage of children with asthma who made at least one visit to a primary care practitioner during the measurement year. This visit may have been for preventive care; acute care, such as treatment of an ear infection; or the management of asthma or another chronic condition. For purposes of this report, ambulatory care utilization is treated as a measure of access. This indicator does not measure quality of primary care and may be affected by the underlying risk of the population based on age, race, sex, and other factors. An important factor affecting access is parental education about the proper management of asthma.

**Table 3. Asthma Measures**

Measure	Description	Original Source (Measure Acronym)
<b>Children and Adolescents' Access to Primary Care Practitioners</b>	Percentage of children who had a visit with any primary care practitioner	HEDIS 2008 (CAP)
<b>Ambulatory Care-ED Outpatient Visits:</b> ED outpatient visits with asthma-related primary diagnosis	Visits per 1,000 member months	HEDIS 2008 (AMB-B)
<b>Asthma-Related Admissions:</b> Inpatient days	Number of inpatient days per 1,000 member months	AHRQ Prevention Quality Indicator (PDI 14)
<b>Appropriate Use of Asthma Medications</b>	Percentage of children who had at least one dispensed prescription of appropriate asthma medication	HEDIS 2008 (ASM)

The second measure represents the number of asthma-related visits per 1,000 member months to an emergency department (ED) that did not lead to an inpatient admission. This indicator examines the number of ED visits with a primary diagnosis of asthma. Asthma-related ED visits are an indicator of access to primary care because many ED visits can be for care that could be received in a physician's office and may demonstrate the quality of asthma management. When asthma is well-managed in primary care settings, fewer ED visits are necessary.

The third measure represents the total number of hospital inpatient admissions with a primary diagnosis of asthma per 1,000 member months that occurred during the measurement year. These admissions are captured based on the primary diagnosis at discharge because the discharge diagnosis (rather than the diagnosis at admission) usually provides a clearer picture of the actual



cause of admission, after proper diagnosis and treatment have taken place. The asthma-related inpatient admissions rate is intended to give some indication of the quality of asthma management provided in a physician's office through proper outpatient care, appropriate use of medication, and parental and child education of appropriate administration of inhalers. Data is presented for asthma-related admissions inpatient days.

The fourth measure represents the percentage of children who had at least one dispensed prescription of appropriate asthma medication during the measurement year. The asthma medications deemed appropriate as preferred therapy through HEDIS specifications were selected because they are "considered acceptable as primary therapy for long-term control of asthma."<sup>21</sup> Long-acting inhaled beta-2 agonists and short-acting "rescue" inhaled beta-2 agonists, such as albuterol, are not counted as "appropriate" under these criteria because they are not considered appropriate as primary therapy for persistent asthma.<sup>22</sup> This indicator is intended to measure access to outpatient care, yet it may reflect patient compliance as well. Furthermore, it should be noted that this measure in itself may not be an adequate indicator of all aspects of appropriate asthma care as defined by the National Heart Lung and Blood Institute's 2007 Guidelines for the Diagnosis and Management of Asthma.<sup>23</sup>

## Diabetes Measures

The three measures constructed to assess access to and quality of care for adults with diabetes are listed below in Table 4. All measures are drawn from the population of adults with diabetes as defined in Table 3. The first measure represents the percentage of adults with diabetes who received at least one preventive or ambulatory visit during the measurement year. This visit may have been for preventive care; acute care, such as treatment of an infection; or the management of diabetes or another chronic condition. Unlike the access measure for asthma, this indicator includes visits to a specialist. This indicator measures access to—not quality of—primary care and may be affected by the underlying risk of the population based on age, race, sex, and other factors. An important factor affecting access is patient education about the proper management of diabetes.

The second measure represents the number of visits per 1,000 member months to an ED that did not lead to an inpatient admission. This indicator examines the number of ED visits with a primary diagnosis of diabetes. The diabetes-related ED visit rate is an indicator of access to primary care because many ED visits can be for care that could be received in a physician's office. When diabetes is well-managed in primary care settings, fewer ED visits are necessary and can demonstrate the quality of diabetes management.

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<sup>21</sup> NCQA. (2008). *HEDIS® Technical Specifications*. Volume 2. p. 108.

<sup>22</sup> Ibid.

<sup>23</sup> Available at [www.nhlbi.nih.gov/guidelines/asthma/asthsumm.htm](http://www.nhlbi.nih.gov/guidelines/asthma/asthsumm.htm).



**Table 4. Diabetes Measures**

Measure	Description	Original Source (Measure acronym)
<b>Adults' Access to Preventive/Ambulatory Health Services</b>	Percentage of adults with any preventive or ambulatory visit	HEDIS 2008 (AAP)
<b>Ambulatory Care-ED Outpatient Visits:</b> ED outpatient visits with diabetes-related primary diagnosis	Visits per 1,000 member months	HEDIS 2008 (AMB-B)
<b>Diabetes-Related Admissions: Diabetes Short-Term Complications and Uncontrolled Diabetes Admission Rate</b> (combined) Inpatient days	Number of inpatient days per 1,000 member months	AHRQ Prevention Quality Indicator (PQI1 & PQI 14)

The third measure represents the number of hospital inpatient admissions with a primary diagnosis of diabetes per 1,000 member months that occurred during the measurement year. Data were analyzed for diabetes-related admissions inpatient days. These admissions are captured based on the primary diagnosis at discharge because the discharge diagnosis (rather than the diagnosis at admission) usually provides a clearer picture of the actual cause of admission, after proper diagnosis and treatment have taken place. Avoidable complications arising from diabetes, such as renal failure and blindness, contribute to roughly two-thirds of hospital costs associated with diabetes.<sup>24</sup> Diabetes-related inpatient utilization is important to monitor because diabetes is so often accompanied by additional comorbidities. Treatment of these individuals should include management of these co-occurring conditions.

This third measure actually combines two types of diabetes-related admissions that are expected to measure the quality of diabetes management and monitoring through proper outpatient care, administration of insulin, proper diet, and patient compliance with other treatment plans. Hospital admission for diabetes *short-term complications* and admission for *uncontrolled diabetes* arise when a patient experiences an imbalance in glucose and insulin that can be life-threatening. Short-term complications include admissions with a principal diagnosis of ketoacidosis, hyperosmolarity, and coma. This list excludes long-term complications, such as admissions for renal, eye, neurological, and circulatory conditions, which are generally a consequence of long-term poor control of diabetes. Uncontrolled diabetes includes admissions with a principal diagnosis of uncontrolled diabetes, without mention of a short-term or long-term complication.<sup>25</sup> These two types of admissions are combined into a single measure of *diabetes-related* admissions for presentation in this report.<sup>26</sup>

<sup>24</sup> H-CUP Highlights – Economic and Health Costs of Diabetes.

<sup>25</sup> Department of Health and Human Services, Agency of Healthcare Research and Quality (DHHS, AHRQ). (2007, March 12). *Guide to Prevention Quality Indicators: Hospital Admission for Ambulatory Care Sensitive Conditions*. Version 3.1. pp.20-25, 42-43. Retrieved February 17, 2009, from <http://www.qualityindicators.ahrq.gov>

<sup>26</sup> These two rates are constructed by AHRQ Prevention Quality Indicator to be combined into a single measure. All references to diabetes-related admissions in this report exclude admissions related to long-term diabetes complications.



## Report Findings

### Assessing Salud! MCO Performance Using Available Data

This section assesses the performance of Salud! MCOs based on published sources and available data. These sources allow limited benchmarking against regional performance, and assessment of longitudinal trends within a limited array of measures specific to people with chronic conditions.

#### Comparison of the Salud! MCOs to Other MCOs in the Western Region

One method of evaluating MCO performance is through comparison to other states and national benchmarks. However, publicly available data on this is quite limited, and is not specific to the asthma and diabetes measures discussed elsewhere in this report. The *America's Best Health Plan* ranking system provides a standardized method of comparing MCOs across the country.<sup>27</sup> In 2008, this system ranked 186 Medicaid MCOs on 39 performance measures, based on consumer assessment, prevention, and treatment.<sup>28</sup> Table 5 below lists the top performing Medicaid MCOs in the western region<sup>29</sup> of the United States and includes the overall national rank. Of the 58 Medicaid MCOs in the western region, all 3 of the Salud! MCOs ranked among the top 10, with Presbyterian earning second in the region. However, 26 Medicaid MCOs in the western region did not submit data and 15 submitted data that were not comparable. While these omissions limit comparisons, they also suggest that a substantial number of MCOs in the western region have fundamental problems with data capacity that are not evident among New Mexico MCOs.

**Table 5. America's Best Health Plan Ranking, Top 10 Health Plans in the West**

Region Rank	U.S. Rank	State	Health Plan	Score
1	5	HI	Kaiser Health Plan of HI	88.3
<b>2</b>	<b>22</b>	<b>NM</b>	<b>Presbyterian Health Plan</b>	<b>84.3</b>
3	23	UT	Molina Health Care of UT	84.1
<b>4</b>	<b>40</b>	<b>NM</b>	<b>Lovelace Health Plan</b>	<b>82.1</b>
5	41	WA	Molina Health Care of WA	82.1
<b>6</b>	<b>45</b>	<b>NM</b>	<b>Molina Health Care of NM</b>	<b>81.7</b>
7	52	CA	Inland Empire Health Plan	80.6
8	56	CA	Health Net of CA	78.1
9	62	CA	L.A. Care Health Plan	74.0
10	64	CA	Anthem Blue Cross of CA Partnership Plan	73.3

<sup>27</sup> Comarow, A. (2008, November 7). Behind the health insurance plan rankings. *U.S. News*. Retrieved December 10, 2008, from <http://health.usnews.com/articles/health/health-plans/2008/11/07/behind-the-health-insurance-plan-rankings.html>

<sup>28</sup> Rankings are based on overall scores for each health plan, which may range from 0 to 100.

<sup>29</sup> The western region includes AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, and WI.



## Regional Comparisons: Children with Asthma

In addition to the health plan ranking system, comparisons are available for a limited set of measures specific to individuals with asthma. HEDIS, developed annually by the NCQA, is used to measure the performance of more than 90 percent of MCOs in the United States.<sup>30</sup> HEDIS assesses the quality of care for people with asthma based on the ASM measure, which evaluates the percentage of enrolled members with asthma, aged 5 to 56 years, who were appropriately prescribed asthma medication during the measurement year.

Each year, the NCQA publishes regional HEDIS benchmarks for its Medicare, Medicaid, and commercial product lines.<sup>31</sup> Because a limited number of Medicaid MCOs submit audited HEDIS results, the NCQA compares MCO scores to a national benchmark, the 90<sup>th</sup> percentile of national Medicaid results. For measures where the national Medicaid 90<sup>th</sup> percentile is 90 or above and the thresholds for the subsequent percentiles are within 5 percentage points, the NCQA sets the benchmark at the 75<sup>th</sup> percentile. To account for regional differences, the NCQA adds adjustment points to some measures in particular regions.<sup>32</sup> The benchmarks for Medicaid MCOs are much lower than those for commercial and Medicare MCOs.

Hilltop compared the performance of the Salud! MCOs to the HEDIS 2008 ASM regional benchmark. For this measure, the NCQA does not assign additional adjustments points to New Mexico's region. Because the national Medicaid 90<sup>th</sup> percentile for the ASM measure is above 90, the regional benchmark is set at the Medicaid national 75<sup>th</sup> percentile. Table 6 below compares the Salud! HEDIS ASM scores to the Medicaid benchmark. Because the NCQA sets the benchmark for the full HEDIS asthma cohort, the figures in this table reflect the ASM rate for individuals aged 5 to 56 years. Both Presbyterian and Lovelace exceeded the benchmark, while Molina scored between the 25<sup>th</sup> and 50<sup>th</sup> percentiles.

**Table 6. Salud! MCO Performance: HEDIS 2008 ASM Scores**

	ASM
National 90 <sup>th</sup> Percentile <sup>33</sup>	93
Benchmark: National 75 <sup>th</sup> Percentile	90
National 50 <sup>th</sup> Percentile	87
National 25 <sup>th</sup> Percentile	84
Molina Adjusted Score	85.3
Presbyterian Adjusted Score	90.2
Lovelace Adjusted Score	90.4

<sup>30</sup> NCQA. *HEDIS® and Quality Compass*. Retrieved December 12, 2008, from <http://www.ncqa.org/tabid/187/Default.aspx>

<sup>31</sup> NCQA. *Benchmarks and Thresholds: 2008 Accreditation*. Retrieved December 11, 2008, from <http://www.ncqa.org/tabid/123/Default.aspx>

<sup>32</sup> Regional adjustments are based on the U.S. Department of Health and Human Services' regions. New Mexico falls in region 6, which also includes AK, TX, LA, and OK.

<sup>33</sup> All national percentiles presented in this table are specific to Medicaid health plans.



## Regional Comparisons: People with Diabetes

Similarly, regional comparisons were made for adults with diabetes. To evaluate appropriate and timely screening and treatment for adults with diabetes, HEDIS includes a composite set of measures, Comprehensive Diabetes Care (CDC). The CDC measures include the percentage of the HEDIS population with diabetes that received eye exams for diabetic retinal disease, hemoglobin A1c (HbA1c) testing, low-density lipoprotein cholesterol (LDL-C) screening, screening for evidence of nephropathy, and the percentage that have poorly controlled HbA1c levels, and LDL-C control less than 100 mg/dL.<sup>34</sup>

Hilltop compared the performance of Salud! MCOs on CDC measures against the HEDIS regional benchmarks set by the NCQA. As discussed above, a limited number of Medicaid MCOs submit audited HEDIS results; therefore, the NCQA compares MCO scores to a national benchmark, the 90<sup>th</sup> percentile of national Medicaid results. For some of the CDC measures, the NCQA assigns adjustment points to New Mexico's region.<sup>35</sup>

Table 7 below compares Salud! *regionally adjusted* scores on selected HEDIS CDC measures to the national Medicaid benchmark.<sup>36</sup> Presbyterian exceeded the national Medicaid benchmark on the HbA1c testing and poorly controlled HbA1c measures; the other two MCOs fell below the 50<sup>th</sup> percentile on poorly controlled HbA1c. Presbyterian and Lovelace ranked between the 50<sup>th</sup> and 75<sup>th</sup> percentiles on the LDL-C screening measure, while Molina fell just below the 50<sup>th</sup> percentile. All three MCOs achieved scores between the 75<sup>th</sup> and 90<sup>th</sup> percentiles on diabetes eye exams.

**Table 7. Salud! MCO Performance: Regionally Adjusted HEDIS 2008 CDC Scores**

	HbA1c Testing	Poorly Controlled HbA1c*	Eye Exams	LDL-C Screening	Medical Attention for Nephropathy
Benchmark: 90 <sup>th</sup> Percentile <sup>37</sup>	89	31	68	81	86
National 75 <sup>th</sup> Percentile	84	38	63	78	82
National 50 <sup>th</sup> Percentile	79	48	54	73	77
National 25 <sup>th</sup> Percentile	70	58	42	67	69
Molina Adjusted Score	82.9	52.7	65.5	72.9	76.6
Presbyterian Adjusted Score	91.8	30.9	64.0	75.5	79.4
Lovelace Adjusted Score	85.2	57.9	66.5	73.5	75.0

\*A lower score is preferable for this measure.

<sup>34</sup> Nephropathy refers to kidney disease or damage.

<sup>35</sup> Regional adjustments are based on the U.S. Department of Health and Human Services' regions. New Mexico falls in region 6, which also includes AK, TX, LA, and OK.

<sup>36</sup> HEDIS only provided regional adjustments for the five measures listed in Table 7.

<sup>37</sup> All national percentiles presented in this table are specific to Medicaid health plans.



## Trends in MCO Performance Using HEDIS Measures: Children with Asthma

There is no publicly available data that allows analysis of MCO performance against regional benchmarks over time. Instead, Hilltop examined time trends between Salud! MCOs based on available HEDIS measures. The only measure available to assess quality of care for children with asthma is the ASM measure. Comparable data for the ASM measure are available for HEDIS years 2004 through 2008, which correspond to the measurement years 2003 through 2007. These results are presented in Table 8, which includes data specific to children aged 5 to 17 years in the HEDIS asthma cohort.

**Table 8. Salud! MCO Performance: HEDIS Appropriate Use of Asthma Medications (ASM) Scores for Children Aged 5 - 17 Years, 2004 – 2008**

	2004	2006	2008	Percentage Point Change 2004-2008
Presbyterian	69.4	89.9	92.5	23.1
Lovelace	67.2	94.2	91.1	23.9
Molina	65.6	87.5	87.9	22.4
<b>State Average</b>	67.4	90.5	90.5	23.1

The overall state average for the HEDIS ASM measure for children aged 5 to 17 years improved by 23.1 percentage points between 2004 and 2006 (see Table 8). The state average remained stable at 90.5 between 2004 and 2006. All three MCOs experienced similar trends, with their rates improving considerably between 2004 and 2006.

## Trends in MCO Performance Using HEDIS Measures: People with Diabetes

To assess quality of care in the treatment of people with diabetes, there are six HEDIS constructs available within the CDC HEDIS measure. Hilltop examined trends in MCO performance using the CDC measure for HEDIS years 2004 through 2008, which correspond to the measurement years 2003 through 2007. These results are presented in Table 9.

The overall Salud! state average<sup>38</sup> on five of the six CDC measures improved during the measurement period (Table 9). The average rate of adults with diabetes receiving HbA1c testing increased 3.1 percentage points to 83.6 percent in 2008. Lovelace and Presbyterian experienced steady improvement on the HbA1c testing measure, while Molina experienced a decline between 2006 and 2008. The average rate of poorly controlled HbA1c levels decreased<sup>39</sup> by only 1 percentage point during the measurement period. Again, Presbyterian and Lovelace experienced overall improvement, while Molina's performance declined between 2006 and 2008. The average rates for eye exams and nephropathy also improved. The rate of eye exams did not

<sup>38</sup> The overall state average is calculated as the simple mean of the three Salud! MCOs rates.

<sup>39</sup> A lower percentage is preferable for this measure.



follow a consistent upward trend for each MCO, but the state average increased by 9.1 percentage points to 55.3 percent in 2008.

The average rate of nephropathy screening increased by more than 24 percentage points, and each MCO experienced considerable improvement between 2006 and 2008. Finally, the average percentage of adults with LDL-C levels less than 100 mg/dL improved by nearly 5 percentage points. While Presbyterian and Lovelace improved steadily, Molina's performance decreased for this measure between 2006 and 2008.

**Table 9. Salud! MCO Performance: HEDIS Comprehensive Diabetes Care (CDC)  
Scores, 2004– 2008**

	2004	2006	2008	Percentage Point Change 2004-2008
<b>HbA1c Testing</b>				
Presbyterian	79.3%	83.4%	88.8%	9.5
Lovelace	79.3%	81.8%	82.2%	2.9
Molina	83.0%	84.8%	79.9%	-3.1
<b>State Average</b>	<b>80.5%</b>	<b>83.3%</b>	<b>83.6%</b>	<b>3.1</b>
<b>HbA1c Poor Control *</b>				
Presbyterian	40.9%	46.0%	32.9%	-8.0
Lovelace	64.5%	51.8%	59.9%	-4.6
Molina	45.7%	45.2%	54.7%	9.0
<b>State Average</b>	<b>50.4%</b>	<b>47.7%</b>	<b>49.1%</b>	<b>-1.3</b>
<b>Eye Exams</b>				
Presbyterian	52.1%	47.1%	54.0%	1.9
Lovelace	34.1%	57.9%	56.5%	22.4
Molina	52.6%	60.7%	55.5%	2.9
<b>State Average</b>	<b>46.2%</b>	<b>55.2%</b>	<b>55.3%</b>	<b>9.1</b>
<b>LDL-C Screening</b>				
Presbyterian	78.1%	83.0%	73.5%	-4.6
Lovelace	72.5%	81.5%	71.5%	-1.0
Molina	82.7%	83.3%	70.9%	-11.8
<b>State Average</b>	<b>77.8%</b>	<b>82.6%</b>	<b>72.0%</b>	<b>-5.8</b>
<b>LDL-C Level &lt; 100 mg/dL</b>				
Presbyterian	26.5%	34.7%	37.5%	11.0
Lovelace	19.5%	24.8%	25.3%	5.8
Molina	31.9%	37.9%	29.1%	-2.8
<b>State Average</b>	<b>26.0%</b>	<b>32.5%</b>	<b>30.6%</b>	<b>4.6</b>
<b>Medical Attention for Nephropathy</b>				
Presbyterian	47.0%	47.1%	77.4%	30.4
Lovelace	53.8%	48.7%	73.0%	19.2
Molina	50.9%	50.3%	74.6%	23.7
<b>State Average</b>	<b>50.5%</b>	<b>48.7%</b>	<b>75.0%</b>	<b>24.5</b>

\* A lower percentage is preferable for this measure.



The overall state performance on the LDL-C screening measure decreased during the measurement period. The average percentage of adults with diabetes receiving an LDL-C screen decreased by 5.8 percentage points between 2004 and 2008 and by 10.6 percentage points between 2006 and 2008. This sharp decline between 2006 and 2008 was experienced across MCOs and does not appear to be correlated with any major changes to the specifications of the measure.

## **Summary**

Previously published sources and data provide very limited means by which to assess the ongoing performance of managed care in the treatment of people with chronic conditions. The Salud! MCOs are among the top performing Medicaid MCOs in the western region of the United States on the basis of overall performance. However, such a scoring system does not evaluate the aspects of MCO performance that are relevant to the treatment of people with chronic conditions. Compared to regional benchmarks for asthma, Lovelace and Presbyterian exceeded the national ASM benchmark for the full asthma cohort while Molina fell below the national Medicaid 50<sup>th</sup> percentile. Compared to regional benchmarks for diabetes, Salud! MCOs demonstrated wide variation in performance. Presbyterian scored above the 50<sup>th</sup> percentile in the region on all measures, Lovelace scored above the 50<sup>th</sup> percentile on three measures, and Molina scored above the 50<sup>th</sup> percentile on one measure. Regional benchmarking data is limited to a single measurement year.

Monitoring trends over time is limited to available HEDIS measures within the Salud! program. Using the only measure available to assess quality of care for the treatment of asthma—the ASM measure—the overall state average for children aged 5 to 17 years improved considerably. All three MCOs experienced improvement across the measurement period. Using six measures available to assess quality of care for the treatment of diabetes—the CDC measures—trends were generally positive but with significant variation in MCO performance. The wide variation in MCO performance suggests that a system-wide approach to quality improvement could maximize learning opportunities across MCOs.

## ***Assessing Salud! MCO Performance Using New Measures of Access and Quality***

The next sections presents findings based on the HEDIS-like measures produced specifically for this report. The first section presents the measures for children with asthma; the second section presents the measures for adults with diabetes. Each MCO produced data for these measures based on specifications provided by Hilltop. We present the rates for each MCO, and where sample sizes are sufficient, we present rates for subgroups, including Caucasian and Hispanic race/ethnicity subgroups, and regional subgroups within New Mexico.

### ***Children with Persistent Asthma***

#### **Visits to a Primary Care Practitioner**

This measure represents the percentage of children aged 5 to 17 years with persistent asthma who made at least one visit to a primary care practitioner during the measurement year. This visit

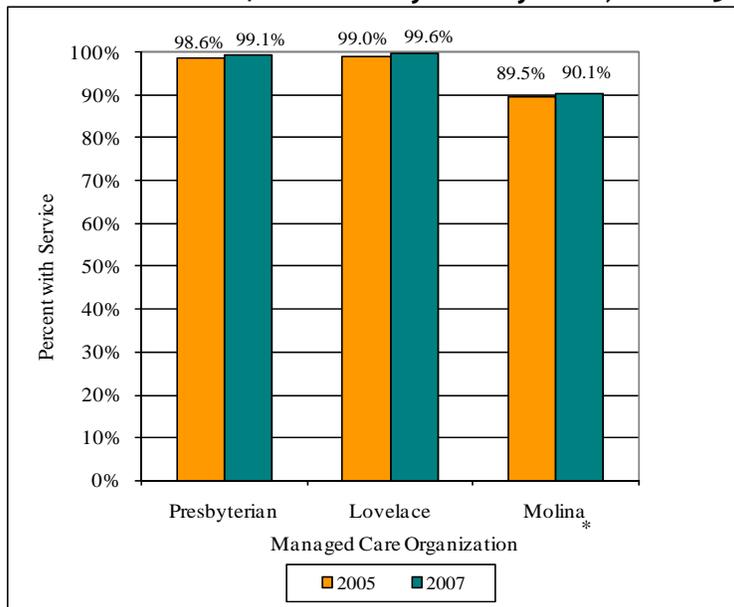


may have been for preventive care; acute care, such as treatment of an ear infection; or the management of asthma or another chronic condition.

Presbyterian and Lovelace demonstrated that nearly all children with persistent asthma (99 percent) had visited a primary care practitioner at least once in CY 2005 and sustained these rates in CY 2007. Access by Molina’s enrollees remained stable at 90 percent. Data issues limit the inter-plan comparability of Molina’s measures, as noted in the Data and Methods section.

No benchmark is available for these estimates because this measure is not collected for diagnostic subgroups in HEDIS reporting. However, these rates are higher than the rates reported for the full HEDIS population aged 2 to 19 years in Salud! The statewide average rate for the HEDIS sample aged 2 to 19 years increased from 86.4 percent in 2004 to 90.5 percent in 2008.<sup>40</sup> All school-aged children should receive at least one visit each year to a primary care practitioner for a well-child visit, so ideally the rates of access should be universal for both healthy children and children with chronic conditions.

**Figure 1. Percentage of Children with Asthma Aged 5-17 Years with at Least One Preventive/ Ambulatory Visit by MCO, CY 2005 and CY 2007**



\*Note: Data issues limit comparison of Molina to other MCO measures.

Source: The Hilltop Institute analysis of measures prepared by Salud! MCOs based on technical specifications.

<sup>40</sup> The Hilltop Institute analysis of HEDIS 2004, 2006, and 2008 data from the Children’s Access to Primary Care Practitioner (CAP) measure.

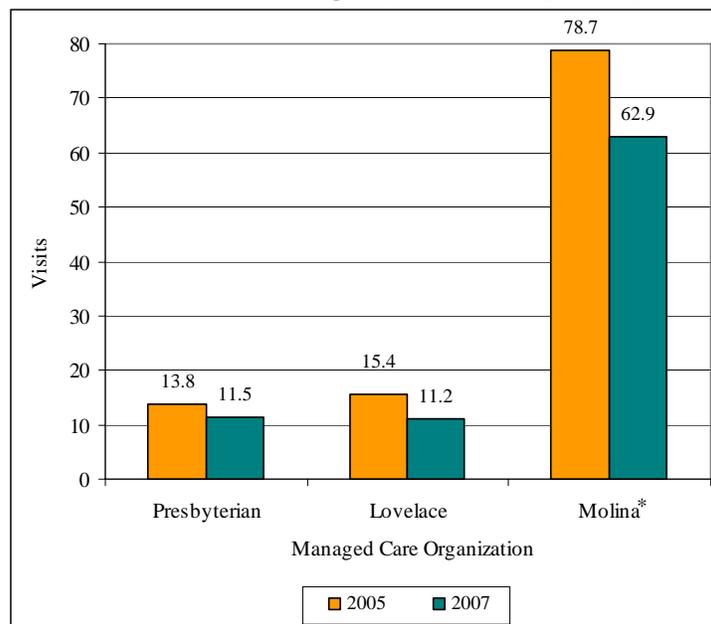


## Asthma-Related ED Visits

This measure represents the number of visits per 1,000 member months to an ED that did not lead to an inpatient admission (outpatient visits only). This indicator examines the number of ED visits with a primary diagnosis of asthma (*asthma-related ED visits*).

Data from each MCO show decreases in the number of asthma-related ED visits from CY 2005 to CY 2007. Presbyterian's rate decreased 16 percent and Lovelace's rate decreased 27 percent, with both falling to 11 visits per 1,000 member months by CY 2007. Molina's rates decreased by 20 percent, falling from 78.7 visits to 62.9. Data issues limit the inter-plan comparability of Molina's measures. However, the consistent trends across plans suggest a system-wide improvement in the quality of primary care for children with asthma that has led to a reduction in avoidable trips to the emergency departments for asthma-related treatment. This trend contrasts with the state average ED visit rate for the full HEDIS child population aged 1 to 19 years, which increased slightly from 33.8 visits in 2004 to 34.8 visits in 2008.<sup>41</sup>

**Figure 2. Asthma-Related ED Visits per 1,000 Member Months for Children with Persistent Asthma Aged 5-17 Years by MCO, CY 2005 and CY 2007**



\*Note: Data issues limit comparison of Molina to other MCO measures.

Source: The Hilltop Institute analysis of measures prepared by Salud! MCOs based on technical specifications.

## Asthma Admission Rate

This measure represents the total number of inpatient days associated with hospital inpatient admissions with a primary diagnosis of asthma per 1,000 member months that occurred during the measurement year. These admissions are captured based on the primary diagnosis at

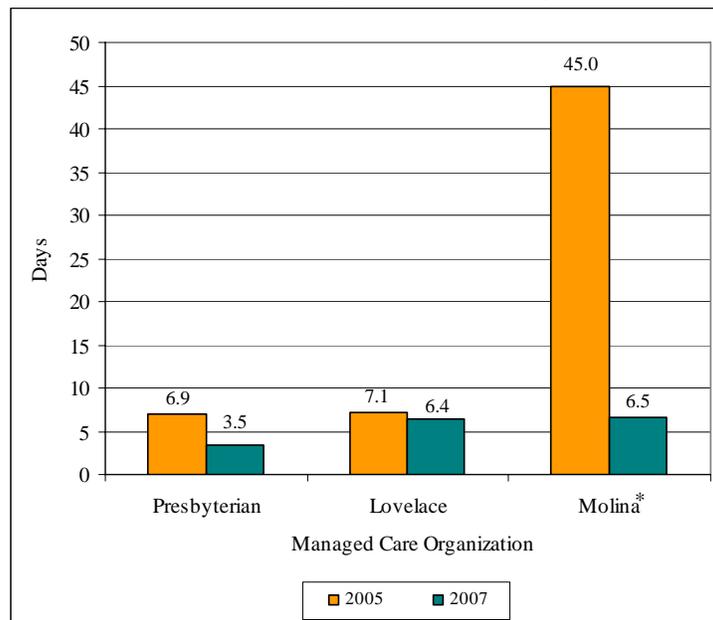
<sup>41</sup> The Hilltop Institute analysis of HEDIS 2004, 2006, and 2008 data from the Ambulatory Care-Emergency Department Outpatient Visits (AMB-B) measure. The HEDIS denominator for outpatient visits includes individuals enrolled for any period during the measurement year.



discharge because the discharge diagnosis (rather than the diagnosis at admission) usually provides a clearer picture of the actual cause of admission after proper diagnosis and treatment have taken place.

All three MCOs showed improvements in asthma-related admission rates, as measured by a reduction in hospital inpatient days per 1,000 member months. Data from Presbyterian show a nearly 50 percent decrease, from 6.9 inpatient days per 1,000 member months in CY 2005 to 3.5 in CY 2007. Data for Lovelace show a decrease of 11 percent, from 7.1 in CY 2005 to 6.4 in CY 2007. Data from Molina show an 85 percent decrease in inpatient days per 1,000 member months, from 45 in CY 2005 to 6.5 in CY 2007.

**Figure 3. Asthma Admission Rate: Inpatient Days per 1,000 Member Months for Children with Persistent Asthma Aged 5-17 Years by MCO, CY 2005 and CY 2007**



\*Note: Data issues limit comparison of Molina to other MCO measures.

Source: The Hilltop Institute analysis of measures prepared by Salud! MCOs based on technical specifications.

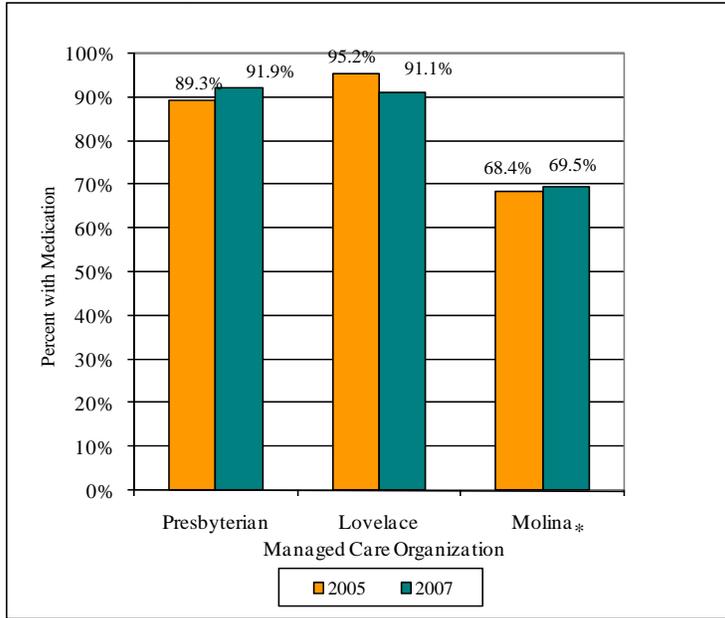
### Appropriate Use of Asthma Medications

This measure represents the percentage of children who had at least one dispensed prescription of appropriate asthma medication during the measurement year, based on a list of asthma medications selected by NCQA as appropriate primary therapy for persistent asthma.

MCOs demonstrated only marginal improvements in the rate of appropriate use of asthma medications among children with persistent asthma over the measurement period. Presbyterian demonstrated the largest improvement with an increase of just over 2 percentage points. However, in CY 2007, Presbyterian and Lovelace demonstrated rates of appropriate use over 91 percent. Molina's rate of appropriate use of asthma medications remained unchanged at just less than 70 percent. Data issues limit the inter-plan comparability of Molina's measures.



**Figure 4. Appropriate Use of Asthma Medications: Percentage of Children with Persistent Asthma Aged 5-17 Years with at Least One Dispensed Prescription for Asthma Medications by MCO, CY 2005 and CY 2007**



\*Note: Data issues limit comparison of Molina to other MCO measures.

Source: The Hilltop Institute analysis of measures prepared by Salud! MCOs based on technical specifications

**Adults with Diabetes**

**Preventive and Ambulatory Care Visits**

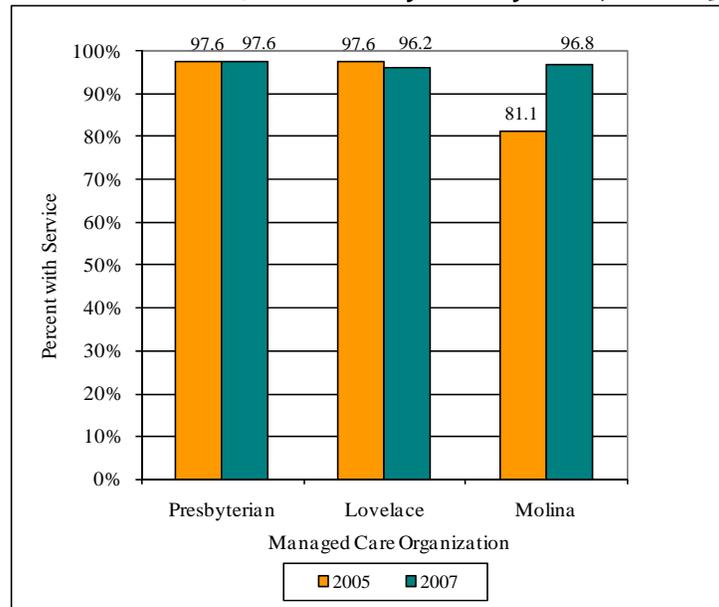
This measure represents the percentage of adults with diabetes who received at least one preventive or ambulatory visit during the measurement year. This visit may have been for preventive care, acute care, or the management of diabetes or another chronic condition. The visit may have been with a primary care practitioner or a specialist.

Adults with diabetes are almost universally receiving at least one preventive or ambulatory care visit, with over 96 percent receiving services in each MCO in CY 2007. Presbyterian and Lovelace already demonstrated very high rates of access in 2005 (Figure 5). Molina demonstrated comparably high rates of access in CY 2007. However, it is difficult to assess whether the significant increase in Molina’s rates between 2005 and 2007 is due to improvement in access. Trends observed in Molina’s rates may be the result of the more limited data Molina had access to when constructing the 2005 rate. Because Molina’s claims data are more complete for the 2007 rate, we would expect greater comparability between Molina and the other two MCOs on all measures for the 2007 rates.



No benchmark is available for these estimates because this measure is not collected for diagnostic subgroups in HEDIS reporting. However, these rates are higher than rates reported for the full HEDIS populations aged 20 to 64 years in Salud!. Rates for the HEDIS samples increased from 66.8 percent in 2004 to 85.5 percent in 2005, but remained stable at 85 percent in 2007.<sup>42</sup> Rates of access among adults with chronic conditions are expected to be higher than rates of access among the general adult enrolled population, and it appears that almost all individuals with diabetes who are continuously enrolled are accessing primary care.

**Figure 5. Percentage of Adults with Diabetes Aged 18-64 Years with at Least One Preventive/ Ambulatory Visit by MCO, CY 2005 and CY 2007**



Source: The Hilltop Institute analysis of measures prepared by Salud! MCOs based on technical specifications.

### Diabetes-Related ED Visits

This measure represents the number of visits per 1,000 member months to an ED that did not lead to an inpatient admission (outpatient visits only). This indicator examines the number of ED visits with a primary diagnosis of diabetes (*diabetes-related* ED visits).

Data from Lovelace and Presbyterian showed increases in diabetes-related ED visits from CY 2005 to CY 2007, with Presbyterian experiencing a 51 percent increase in visits, from 6.2 to 9.4 visits per 1,000 member months. Molina’s diabetes-related ED visit rate remained relatively unchanged over the measurement period. Trends observed in Molina’s rates may be the result of the more limited data Molina had access to when constructing the 2005 rate. Because Molina’s claims data are more complete for the 2007 rate, we would expect greater comparability between Molina and the other two MCOs on all measures for the 2007 rates.

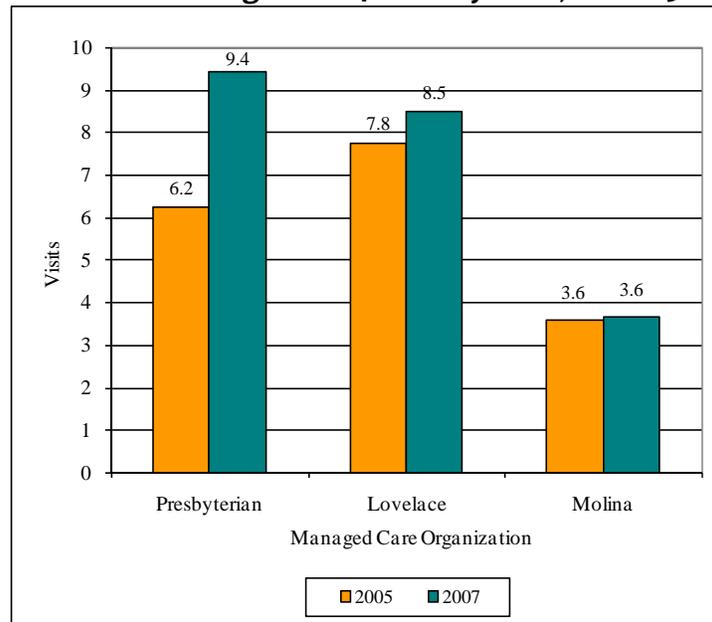
<sup>42</sup> The Hilltop Institute analysis of HEDIS 2004, 2006, and 2008 data from the Adults’ Access to Preventive/Ambulatory Health Services (AAP) measure.



Diabetes-related ED visits increased at a similar pace with ED visits for the HEDIS samples, which increased 15 percent from 65.4 visits in 2003 to 75.1 visits in 2007.<sup>43</sup> This trend is consistent with upward trends in ED use observed nationally.<sup>44</sup>

In sum, despite improved access to primary care, reliance on the ED appears to be increasing among Medicaid managed care enrollees with diabetes in New Mexico.

**Figure 6. Diabetes-Related ED Visits per 1,000 Member Months for Adults with Diabetes Aged 18-64 Years by MCO, CY 2005 and CY 2007**



Source: The Hilltop Institute analysis of measures prepared by Salud! MCOs based on technical specifications.

### Diabetes Admission Rate

This measure represents the total number of inpatient days associated with hospital inpatient admissions with a primary diagnosis of diabetes per 1,000 member months that occurred during the measurement year. The diabetes admission rate is a combination of two types of diabetes-related admissions: admission for diabetes *short-term complications* and admission for *uncontrolled diabetes*. These admissions exclude long-term complications, such as admissions for renal, eye, neurological, and circulatory conditions.

Diabetes-related admission inpatient days declined over the measurement period across the three Salud! MCOs. Lovelace demonstrated a 56 percent decrease in the number of diabetes-related admissions inpatient days, Presbyterian demonstrated a 44 percent decrease, and Molina demonstrated a 29 percent decrease from 2005 to 2007. All three MCOs demonstrated comparable diabetes-related admission rates in 2007.

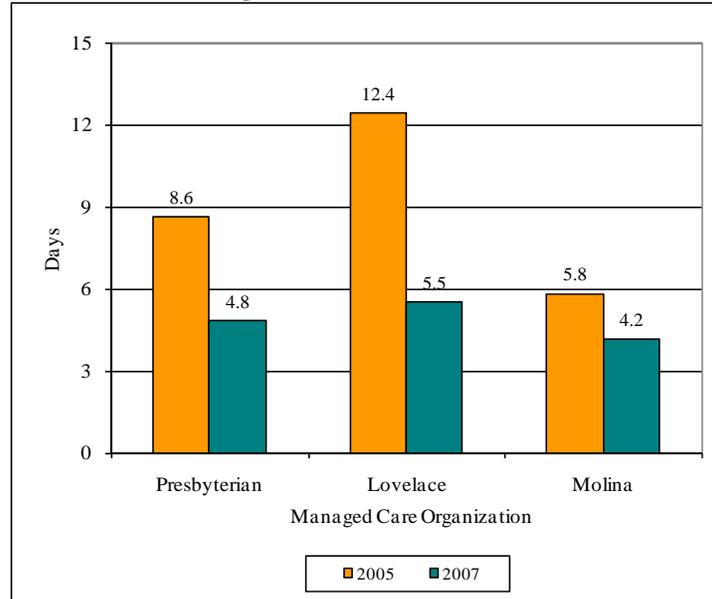
<sup>43</sup> The Hilltop Institute analysis of HEDIS 2004, 2006, and 2008 data from the Ambulatory Care-Emergency Department Outpatient Visits (AMB-B) measure. The HEDIS denominator for outpatient visits includes individuals enrolled for any period during the measurement year.

<sup>44</sup> American Hospital Association (2008, April). *Trends Affecting Hospitals and Health Systems, April 2007*. Chapter 3: Utilization and Volume.



Trends observed in Molina’s rates may be the result of the more limited data Molina had access to when constructing the 2005 rate. Because Molina’s claims data are more complete for the 2007 rate, we would expect greater comparability between Molina and the other two MCOs on all measures for the 2007 rates.

**Figure 7. Diabetes Admission Rate: Inpatient Days per 1,000 Member Months for Adults with Diabetes Aged 18-64 Years by MCO, CY 2005 and CY 2007**



Source: The Hilltop Institute analysis of measures prepared by Salud! MCOs based on technical specifications.

## Regional Analysis of Selected Measures

In this section, a regional analysis of selected measures is presented for both populations. The MCOs reported measurement data divided into three regions based on county of the enrollee: urban, rural, and frontier.<sup>45</sup> Due to some small sample sizes within MCOs, the rural and frontier regions were combined for analysis. Although selected measures are presented in this section for brevity, all measures were analyzed, and trends of the omitted measures were found to be consistent with the measures reported.

### Children with Persistent Asthma

#### Visits to a Primary Care Practitioner by Region

The percentages of children aged 5 to 17 years with persistent asthma receiving at least one visit to a primary care practitioner were very similar between urban and rural/frontier regions of the state as demonstrated within each MCO, with one exception. Molina demonstrated somewhat lower rates in rural/frontier regions than in urban regions across the measurement period. The

<sup>45</sup> These classifications were designated by the Human Services Department. The urban region includes Santa Fe, Bernalillo, Los Alamos, and Dona Ana counties. The rural region includes Chaves, Curry, Eddy, Grant, Lea, Luna, McKinley, Otero, Rio Arriba, Roosevelt, San Juan, Sandoval, Taos, and Valencia counties. The frontier region includes Catron, Cibola, Colfax, De Baca, Guadalupe, Harding, Hidalgo, Lincoln, Mora, Quay, San Miguel, Sierra, Socorro, Torrance, and Union counties.



MCOs demonstrated no major changes during the measurement period, and access by this measure remained high.

**Table 10. Percentage of Children with Persistent Asthma Aged 5-17 Years with at Least One Preventative/Ambulatory Care Visit by Region and MCO, CY 2005 and CY 2007**

% Eligible Children with a Visit	Presbyterian		Lovelace		Molina*	
	2005	2007	2005	2007	2005	2007
Urban	98.1%	99.1%	98.6%	99.7%	92.0%	93.5%
Rural/Frontier	99.0%	99.1%	99.3%	99.5%	87.6%	88.1%

\*Note: Data issues limit comparison of Molina to other MCO measures.

Source: The Hilltop Institute analysis of measures prepared by Salud! MCOs based on technical specifications.

### Asthma-Related ED Visits by Region

Regional trends followed the MCOs' overall asthma-related ED visit trends, with decreases in visits demonstrated by all MCOs for each region. However, the largest decreases occurred in the urban regions.

**Table 11. Asthma-Related ED Visits per 1,000 Member Months for Children with Persistent Asthma Aged 5-17 Years by Region and MCO, CY 2005 and CY 2007**

Visits per 1,000 Member Months	Presbyterian		Lovelace		Molina*	
	2005	2007	2005	2007	2005	2007
Urban	11.5	8.2	20.1	11.4	77.2	54.6
Rural/Frontier	15.5	14.3	12.1	11.0	79.8	68.0

\*Note: Data issues limit comparison of Molina to other MCO measures.

Source: The Hilltop Institute analysis of measures prepared by Salud! MCOs based on technical specifications.

### Asthma Admission Rate by Region

Trends in admission rates for asthma diagnoses varied by MCO and improvements were not demonstrated in all regions. Presbyterian demonstrated improvements only in the rural/frontier regions and Lovelace demonstrated improvements only in the urban region. Molina demonstrated large improvements in both urban and rural/frontier regions. However, the absolute level of admissions demonstrated by Molina was very high in 2005, suggesting a lack of comparability in Molina's data between years.

**Table 12. Asthma Admission Rate: Inpatient Days per 1,000 Member Months for Children with Persistent Asthma Aged 5-17 Years by Region and MCO, CY 2005 and CY 2007**

Days per 1,000 Member Months	Presbyterian		Lovelace		Molina*	
	2005	2007	2005	2007	2005	2007
Urban	2.0	2.4	8.2	5.3	35.1	9.1
Rural/Frontier	10.8	4.4	6.4	7.1	52.1	5.0

\*Note: Data issues limit comparison of Molina to other MCO measures.

Source: The Hilltop Institute analysis of measures prepared by Salud! MCOs based on technical specifications.



## Use of Appropriate Asthma Medications by Region

MCOs demonstrated no consistent trends by region in the percentage of children receiving at least one dispensed prescription of appropriate asthma medication. Presbyterian demonstrated small increases across regions, Lovelace demonstrated decreases across regions, and Molina demonstrated a mix of trends but notably an increase of almost 5 percentage points in urban regions.

**Table 13. Appropriate Use of Asthma Medications:  
Percentage of Children with Persistent Asthma Aged 5-17 Years with at Least One  
Dispensed Prescription for Asthma Medications by Region and MCO, CY 2005 and CY 2007**

% Eligible Children with a Visit	Presbyterian		Lovelace		Molina*	
	2005	2007	2005	2007	2005	2007
Urban	90.3%	93.2%	95.2%	91.3%	62.5%	67.4%
Rural/Frontier	88.5%	90.9%	95.2%	91.0%	72.7%	70.9%

\*Note: Data issues limit comparison of Molina to other MCO measures.

Source: The Hilltop Institute analysis of measures prepared by Salud! MCOs based on technical specifications.

## Adults with Diabetes

This section presents the diabetes measures for regional subgroups. Due to some small sample sizes within MCOs, the rural and frontier regions were combined for analysis. Only selected measures are presented in this section for brevity. However, all measures were analyzed, and trends of the omitted measures were found to be consistent with the measures reported.

### Preventive and Ambulatory Care Visits by Region

The percentage of adults with diabetes having at least one preventive/ambulatory visit was very comparable between regions within each MCO across the measurement period. Presbyterian and Lovelace demonstrated very high rates in 2005 and little change in 2007. Molina demonstrated large and comparable increases in preventive/ambulatory visits in both the urban regions and the rural/frontier regions of the state.

**Table 14. Percentage of Adults with Diabetes Aged 18-64 Years with at Least One  
Preventive/Ambulatory Visit by Region and MCO, CY 2005 and CY 2007**

% Eligible Adults with a Visit	Presbyterian		Lovelace		Molina	
	2005	2007	2005	2007	2005	2007
Urban	96.9%	97.7%	97.0%	95.6%	79.5%	95.9%
Rural/Frontier	98.1%	97.6%	98.0%	96.6%	82.3%	97.4%

Source: The Hilltop Institute analysis of measures prepared by Salud! MCOs based on technical specifications.

### Diabetes-Related ED Visits by Region

MCOs demonstrated no consistent trend across regions for diabetes-related ED visits. Generally, ED visit rates were higher in rural/frontier regions. Rates remained virtually stable with two exceptions. Presbyterian demonstrated a relatively large increase in visit rates in rural/frontier regions, while Lovelace demonstrated a relatively large increase in urban regions.



**Table 15. Diabetes-Related Outpatient ED Visits per 1,000 Member Months for Adults with Diabetes Aged 18-64 Years by Region and MCO, CY 2005 and CY 2007**

Visits per 1,000 Member Months REGION	Presbyterian		Lovelace		Molina	
	2005	2007	2005	2007	2005	2007
Urban	7.7	7.9	4.9	6.8	2.5	2.2
Rural/Frontier	5.3	10.5	9.8	9.7	4.4	4.7

Source: The Hilltop Institute analysis of measures prepared by Salud! MCOs based on technical specifications.

### Diabetes Admission Rate by Region

While every MCO demonstrated large declines in diabetes-related admission rates overall, regional analysis reveals that reductions were concentrated in certain regions depending on the MCO. The largest reductions occurred for Presbyterian and Molina in urban regions, and for Lovelace in rural regions. Other regions demonstrated much smaller declines or no change.

**Table 16. Diabetes Admission Rate: Inpatient Days per 1,000 Member Months for Adults with Diabetes Aged 18-64 Years by Region and MCO, CY 2005 and CY 2007**

Inpatient Days per 1,000 Member Months REGION	Presbyterian		Lovelace		Molina	
	2005	2007	2005	2007	2005	2007
Urban	11.6	3.0	8.6	7.0	6.8	3.1
Rural/Frontier	6.7	6.1	15.1	4.4	5.1	5.0

Source: The Hilltop Institute analysis of measures prepared by Salud! MCOs based on technical specifications.

### Summary

Regional analysis reveals that the percentage of children with persistent asthma and the percentage of adults with diabetes that are using primary care and ambulatory care services is consistently high across regions. However, trends demonstrated considerable variability across MCOs and between regions for most measures of access and quality for both populations. Although children with persistent asthma generally showed substantial decreases in asthma-related ED visits, which is a positive shift in quality, these decreases were mostly concentrated in urban regions. Asthma-related admissions declined considerably overall, but the regions affected by this shift varied with each MCO. Trends in the appropriate use of asthma medications did not reveal marked improvements generally but indicated modest improvement by two MCOs.

In general, trends among adults with diabetes were less encouraging. There was much variation across both regions and MCOs. Sizable increases in diabetes-related ED visits appeared to be limited to certain regions specific to each MCO. In turn, all three MCOs demonstrated large reductions in diabetes-related admissions, but only in some regions. It is worth noting that the areas demonstrated to have the largest reductions in diabetes-related admissions were not the same areas that MCOs demonstrated as having increases in diabetes-related ED visits. Thus, the two trends do not appear to represent a shift from inpatient admissions toward less resource-intensive ED use.



## Race/Ethnicity Analysis of Selected Measures

In this section, we analyze measures by racial/ethnic groups: Caucasians and Hispanics, and all other groups combined.<sup>46</sup> Data for all other race/ethnicity groups are combined and presented as a third group labeled as “Other” in the data tables (See Table 6 through Table 16). This “Other” race/ethnicity category includes Native Americans (listed as “American Indian” in administrative files), Asian/Pacific Island, Black, and a category specified as “Other” by MCO submissions. Data for each of these groups were too small to analyze independently (less than n=100) and may be vulnerable to bias or a significant amount of random error from year to year. The Other category is included in tables so that general comparisons with the Caucasian and Hispanic group trends can be made. Only selected measures are presented in this section for brevity. However, all measures were analyzed, and trends of the omitted measures were found to be consistent with the measures demonstrated. Only the diabetes population is analyzed by race/ethnicity subgroups. Due to limited sample sizes, race/ethnicity data for the asthma measures were not analyzed.

### Adults with Diabetes

#### Preventive and Ambulatory Care Visits by Race/Ethnicity

Trends by Caucasian and Hispanic groups in the percentage of adults with diabetes having at least one preventive/ambulatory visit were mixed across the MCOs over the measurement period. Percentages demonstrated by Presbyterian and Lovelace were comparably high for Caucasians and Hispanics in 2005. Lovelace demonstrated a decline of over 5 percentage points for Hispanics in 2007, while this percentage remained stable for Presbyterian. Molina demonstrated large improvements (over 10 percentage points) for all race/ethnicity groups between 2005 and 2007.

**Table 17. Percentage of Adults with Diabetes Aged 18-64 Years with at Least One Preventive/ Ambulatory Visit by Race/Ethnicity and MCO, CY 2005 and CY 2007**

% Eligible Adults with a Visit	Presbyterian		Lovelace		Molina	
	2005	2007	2005	2007	2005	2007
Caucasian	97.5%	98.7%	98.9%	98.8%	86.1%	97.8%
Hispanic	97.6%	97.1%	98.8%	93.4%	75.9%	95.4%
*Other	97.7%	97.4%	96.6%	98.5%	85.8%	98.6%

\*Note: The “Other” race/ethnicity category includes Asian/Pacific Island, Black, Native American, and Other categories.

Source: The Hilltop Institute analysis of measures prepared by Salud! MCOs based on technical specifications.

#### Diabetes-Related ED Visits by Race/Ethnicity

Trends in the diabetes-related outpatient ED visit rate by Caucasian and Hispanic groups were mixed across the MCOs over the measurement period. Although Presbyterian and Lovelace demonstrated large increases in ED visit rates overall, these increases appear to be concentrated among Caucasians for Lovelace, which actually demonstrated small declines in visits among

<sup>46</sup> Racial and ethnic groups are identified based on a classification scheme used in administrative data and are not necessarily based on self-reported data.



Hispanics. In contrast, Presbyterian demonstrated increases across race/ethnicity groups, including the combined category of “Other” race/ethnicities.

**Table 18. Diabetes-Related Outpatient ED Visits per 1,000 Member Months for Adults with Diabetes Aged 18-64 Years by Race/Ethnicity and MCO, CY 2005 and CY 2007**

Visits per 1,000 Member Months RACE/ETHNICITY	Presbyterian		Lovelace		Molina	
	2005	2007	2005	2007	2005	2007
Caucasian	6.0	10.1	7.1	12.8	5.2	3.7
Hispanic	7.3	9.7	8.8	6.9	2.9	3.7
*Other	4.3	7.9	6.5	5.0	2.5	3.4

\*Note: The “Other” race/ethnicity category includes Asian/Pacific Island, Black, Native American, and Other categories.

Source: The Hilltop Institute analysis of measures prepared by Salud! MCOs based on technical specifications.

### Diabetes Admission Rate by Race/Ethnicity

The diabetes-related admission rate measured as inpatient days showed consistent decreases across the MCOs over the measurement period. Every MCO demonstrated declines in admission rates for each race/ethnicity group, including the combined category of “Other.”

**Table 19. Diabetes Admission Rate: Inpatient Days per 1,000 Member Months for Adults with Diabetes Aged 18-64 Years by Race/Ethnicity and MCO, CY 2005 and CY 2007**

Inpatient Days per 1,000 Member Months RACE/ETHNICITY	Presbyterian		Lovelace		Molina	
	2005	2007	2005	2007	2005	2007
Caucasian	10.5	8.4	24.8	9.9	3.7	0.5
Hispanic	4.5	3.2	6.5	4.7	8.8	7.4
*Other	14.9	3.4	6.0	0	2.1	1.9

\*Note: The “Other” race/ethnicity category includes Asian/Pacific Island, Black, Native American, and Other categories.

Source: The Hilltop Institute analysis of measures prepared by Salud! MCOs based on technical specifications.

In sum, trends in the use of preventive and ambulatory care services varied based on the MCO and race/ethnicity group, but generally remained very high across race/ethnicity groups. Analysis did indicate a consistent and downward trend in diabetes-related admissions, a positive shift demonstrated by every MCO for each race/ethnicity group. Some of these shifts occurred in the same regions where diabetes-related visits increased. Thus, these co-occurring trends could indicate a shift from inpatient admissions toward less resource-intensive ED use in some areas. Further study would be needed to identify the underlying factors contributing to these trends.



## Measure Limitations

Measures used in this analysis were designed to leverage data and programming already produced through development of HEDIS-like performance measures, with modifications to achieve the goals of this study. While measures designed for this assessment begin to provide a fuller picture of the access to and quality of care for children with persistent asthma and adults with diabetes enrolled in Salud! than was previously available, these measures have limitations.

First, the measures of utilization of primary and ambulatory care services analyzed in this report—the percentage of children with persistent asthma receiving at least one visit to a primary care practitioner and the percentage of adults with diabetes receiving at least one preventive/ambulatory visit—are limited in how they measure access to primary care. These measures do not indicate whether enrollees are receiving preventive care and monitoring of their chronic condition, preventive care for their general health, or treatment for a problem related to a chronic condition. Having at least one visit measures a base threshold of access to a physician but does not measure the adequacy of this access. For instance, current standards of medical care for adults with poorly controlled diabetes recommend at least four visits to a physician during the year to monitor diabetes care.<sup>47</sup>

Second, the use of primary care services, ED use, and inpatient care are all measured in the same calendar year. The causal relationship at the patient level between these services cannot be determined based on these measures. Readers may expect to observe downward trends in ED and inpatient use at the same time that use of primary care services rise. However, it is also possible that higher ED and inpatient use are leading to more follow-up care in ambulatory settings. This would raise access levels because physicians are responding appropriately.

Third, current measures are based on a population that has been continuously enrolled for the measurement year and may include individuals enrolled for a long time. MCO performance related to access may be better measured by how quickly new enrollees are screened for special health needs and engaged by primary care providers. However, constructing such a measure for people with chronic conditions using claims and encounter data presents challenges because the presence of a chronic disease may only be identified through contact with a provider. Thus, to better understand and monitor care management of people with chronic conditions, analyzing data other than claims and encounter data may be necessary.

Finally, measures in this report are not risk-adjusted to account for population differences (such as age, sex, and race) across MCOs that are beyond the plan's control and may contribute to differences in utilization patterns. While risk adjustment is an appropriate strategy to use in some respects when assessing plan performance, it may not be appropriate for measures in which there is a reasonable expectation that such factors act as barriers to care that should be overcome by care management strategies. A cautious application of risk adjustment may assist in the comparison of MCO performance.

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<sup>47</sup> American Diabetes Association. (2009, January). Standards of medical care in diabetes—2009. *Diabetes Care*, 32(1), S13-S61.



In addition to limitations in the conception and scope of the selected measures, several data challenges were discovered during this study. These challenges place limitations on the direct comparison of MCO performance. These issues should be considered in this report and when developing new quality measures over the long term:

- Each MCO generated HEDIS performance measures using a different system (outsourced/in-house) and different vendor software. Although all MCOs are audited and certified as HEDIS-compliant, vendors may interpret HEDIS technical specifications differently. This practice may lead to comparability issues.
- Hilltop requested application of the 2008 HEDIS technical specifications to all measures in order to ensure a standard specification across years. Two MCOs, Presbyterian and Molina, had the capacity to comply with this request. However, Lovelace used 2006 HEDIS specifications to identify the 2005 study population, and 2008 specifications to identify the 2007 study population. Some variation in measures may be due to differences in these specifications.
- The additional modification applied to Molina's specification to account for incomplete encounter data could have led to significant differences in the population identified.<sup>48</sup> Additional sensitivity analysis would be needed to understand these differences. As a result of discrepancies in methodology and incomplete encounter data, Molina's rates are not directly comparable to the rates of Presbyterian and Lovelace, and such comparison in this report is discouraged.

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<sup>48</sup> Notably, Molina would have difficulty capturing a count of any children with persistent asthma who meet the third clinical criteria of four outpatient asthma visits (typically spaced three months apart) and at least two asthma-dispensing events. Because children who meet the third clinical criteria have utilized available care with some consistency, they may be healthier and may be receiving better asthma management than children who meet other clinical criteria, which emphasizes inpatient and ED use. Thus, the Molina study sample (particularly the 2005 sample) may represent a much higher risk and more severely ill population. The sample sizes produced by Molina are half those of Lovelace even though these two MCOs report similar shares of the enrolled child population. Moreover, a preliminary run on 2007 data using the two-year specification identified more than twice as many children.



## Conclusion

This assessment sought to provide a more in-depth view of the access to and quality of care for people with chronic disease enrolled in New Mexico’s Salud! program. Hilltop chose two populations—children aged 5 to 17 years with persistent asthma and adults aged 18 to 64 years with diabetes—to examine MCO performance in the management of chronic disease in different stages of the life cycle. In summary, analysis showed that almost all children with persistent asthma and adults with diabetes continuously enrolled in Salud! received at least one primary care or preventive/ambulatory service during the year. Additional analysis would be needed to determine whether enrollees are receiving a sufficient number of visits to adequately manage chronic conditions. Analysis demonstrated more consistent MCO performance for children with persistent asthma than for adults with diabetes. MCO performance demonstrated significant improvements in quality of care through the reduction of both asthma-related ED visits and asthma-related hospital admissions. However, these improvements were sometimes concentrated in specific regions, and there was little marked improvement in the appropriate use of asthma medications generally. Data limitations did not allow analysis of asthma measures by race/ethnicity subgroups.

Among adults with diabetes, analysis revealed significant variation in MCO performance—using both published HEDIS benchmarks and new data. Analysis also revealed variation in the trends observed within regional subgroups in New Mexico. Furthermore, measures did not provide a consistent indication as to whether access to care or quality of care was improving or deteriorating. Notably, two MCOs reported sizable increases in the rate of ED visits for diabetes-related diagnoses, though increases can be attributed to specific regions or certain race/ethnicity groups for each MCO. This upward trend is consistent with upward trends in the rate of total ED visits reported by MCOs through HEDIS measures and in trends in ED use observed nationally. Thus, additional emphasis may be needed in disease management activities toward reducing reliance on the ED in this population.

While the increased ED use would suggest deterioration in either access or quality of care, there were also indications that the quality of care for adults with diabetes is improving. Diabetes-related hospital admissions decreased across all three MCOs. This apparent improvement in quality extended to all race and ethnicity groups analyzed, and while these reductions were modest in places, they were evident across urban and rural/frontier regions of the state. It is worth noting that MCOs did not report reductions in diabetes-related admissions and increases in diabetes-related ED visits in the same regions. Thus, the two trends do not appear to be explained by a shift from inpatient admissions toward less resource-intensive ED use. Finally, the overall state average on five of the six HEDIS CDC measures improved during the study period. MCO-specific trends were not consistent across measures, but they may indicate that some disease management programs are succeeding in some respects.

In general, the often MCO-specific and sometimes region-specific trends suggest that new approaches to disease management—and new strategies for monitoring program performance—may need to be launched to improve quality of care and control spending at the program and system levels. Where some MCOs are demonstrating success with some aspects of care, there



may be opportunities to create inter-plan learning opportunities to maximize improvements in quality for all program enrollees.

In contrast to these mixed findings, available data comparing the performance of Salud! MCOs to the performance of other MCOs in the Western region of the United States indicate that New Mexico's overall plan performance is relatively strong. The disparity between a strong overall MCO performance and the more detailed analysis of utilization that has produced mixed findings demonstrates the utility of delving below standard measures that states often rely on to measure program performance.

This study does not tie measures to the strategies that MCOs are using for quality improvement. Quality measurement should take into account the quality improvement activities and disease management programs being conducted by MCOs, as well as the priorities of program administrators. Moreover, the measures developed for this study were limited in scope and relied heavily on HEDIS constructs. While HEDIS measures seek to provide a comprehensive measurement system across an array of conditions and age groups, these measures have limitations.

Appropriate management of chronic conditions hinges on activities that occur in primary care settings as well as on activities and circumstances that arise outside that venue. The management of asthma in childhood, for example, requires medical systems that provide accurate diagnosis, appropriate treatment, and parent/patient education on both the pathophysiology of the condition and the proper use of medications designed to control it. Asthma-related outcomes also are contingent on non-medical factors such as parental/patient understanding of and ability to control exposure to asthma triggers. Since HEDIS indicators do not measure many of these parameters, reliance on HEDIS measures alone likely will lead to an inadequate assessment of the quality of asthma care received by Salud! children with persistent asthma. Review of the National Heart Lung and Blood Institute's 2007 Guidelines for the Diagnosis and Management of Asthma,<sup>49</sup> as well as indicators housed in the National Quality Measures Clearinghouse,<sup>50</sup> may be helpful in developing more definitive measures.

Similar caution is recommended for assessing the management of diabetes in adults. While monitoring control of blood sugar and blood pressure levels and screening for complications of diabetes are key, other factors such as diabetes self-management and coordination of care among primary and specialty care providers are important as well. HEDIS measures do not address these critical factors; however, medical record review and abstraction using indicators found in the National Quality Measures Clearinghouse and/or instruments such as the Assessment of Chronic Illness Care tool<sup>51</sup> may.

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<sup>49</sup> [www.nhlbi.nih.gov/guidelines/asthma/asthsumm.htm](http://www.nhlbi.nih.gov/guidelines/asthma/asthsumm.htm)

<sup>50</sup> [www.qualitymeasures.ahrq.gov](http://www.qualitymeasures.ahrq.gov)

<sup>51</sup> Bonomi, A.E., Wagner, E.H., Glasgow, R.E., & VonKorff, M. (2002, June). Assessment of Chronic Illness Care (ACIC): A practical tool to measure quality improvement. *Health Services Research, 37*(3), 791-820.



## Recommendations

In this section, Hilltop provides recommendations of potential options for continuing the process to improve the quality monitoring capacity of the Human Services Department in the Salud! program:

- Conduct a comprehensive and independent review of the chronic care and disease management programs currently in place, including vendor arrangements, with the aim to assess strategies at each plan against the most recent evidence-based research on the effectiveness of chronic care and disease management activities.
- Identify missed opportunities to maximize effectiveness of disease management investments, including identifying key enrollee populations that have been overlooked, and identifying models that have demonstrated effectiveness to improve quality of care and/or produce program cost savings that are underutilized.
- Conduct a comprehensive assessment of system- and plan-level capacity to produce new quality measures that reflect a diverse and broad array of enrollee populations. Identify critical weaknesses and strengths in data capacity to inform priorities for investment to build system capacity in this area.
- Engage stakeholders and experts to identify the priorities and goals for a system-wide monitoring and measurement initiative.
- If “HEDIS-like” measures are to be developed, design a common program for the construction of these measures for application by each MCO. In addition, sensitivity analysis could be conducted to better understand how modifications to HEDIS programming affect output across MCOs when relying on certified HEDIS software. A better understanding of how HEDIS vendor choices may affect comparability of performance measures currently produced is recommended.
- Assess encounter data completeness in the Salud! program. Completeness of encounter data may be affected by subcapitation methods MCOs use and incentives given to MCOs and their providers to submit complete data. Thus, data completeness may vary by MCO, and it is important to understand how this variation may affect performance measurement.<sup>52</sup>
- Broaden quality measurement strategies beyond HEDIS and HEDIS-like measures to provide monitoring capacity of larger portions of the entire enrolled population (including large cohorts), such as new program enrollees. Use data collected at the plan and provider level, such as the documentation of screening for special health needs.
- Explore the potential to develop a cooperative agreement between the Human Services Department and participating Salud! plans with the goals to: create a system-wide strategy for monitoring quality; identify opportunities for program cost savings through broader dissemination of effective disease management strategies; identify cross-plan learning opportunities; and develop methods to standardize comparisons of quality between plans.

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<sup>52</sup> Volpel, A., O’Brien, J., Weiner, J. *Strategies for Assessing Health Plan Performance on Chronic Disease: Selecting Performance Indicators and Applying Health-Based Risk Adjustment*. March 2005. Center for Health Care Strategies, Inc.: Washington, D.C.



- Assess limitations in current systems to collect data on racial and ethnic identities, measured by self-identification with a specific community, tribal affiliation, and/or country of origin. The assessment should examine data collection processes at critical provider partners, plans, and partner agencies to the Salud! program. Compare current classification schemes and data collection processes against federal standards and other emerging standards identified by experts in culturally competent care.
- Develop a system-wide roadmap to improve data collection of racial and ethnic information that will support quality improvement initiatives for different racial and ethnic groups, including Native Americans, subgroups of the Native American population, Hispanics, subgroups of the Hispanic population based on country of origin, and immigrant populations.
- Explore the role that public health initiatives could play to complement initiatives pursued for the Salud! program. In communities where there are significant deficits in health literacy and health education, public health campaigns may maximize public resources. Such community deficits can directly influence patient willingness to seek care, engage in healthy behaviors, and to play an active role in the management of chronic conditions.





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