Colorado Medicaid HEDIS® 2010 Results
STATEWIDE AGGREGATE REPORT

October 2010

This report was produced by Health Services Advisory Group, Inc. for the Colorado Department of Health Care Policy & Financing.

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1. Executive Summary

Introduction

During 2009, the Colorado Department of Health Care Policy & Financing (the Department) offered managed care services to Colorado Medicaid members through the fee-for-service (FFS) program, the Department-run managed care program (Primary Care Physician Program [PCPP]), one managed care organization (MCO)—Denver Health Medicaid Choice (DHMC), and one prepaid inpatient health plan (PIHP)—Rocky Mountain Health Plans (RMHP). This report refers to these entities as Colorado Medicaid health plans. To evaluate performance levels, the Department implemented a system to provide an objective, comparative review of the Colorado Medicaid health plans' quality-of-care outcomes and performance measures. One component of the evaluation system was based on the National Committee of Quality Assurance's (NCQA's) Healthcare Effectiveness Data and Information Set (HEDIS®).[1-1] The Department selected 20 HEDIS measures from the standard Medicaid HEDIS reporting set to evaluate the Colorado Medicaid health plans' performance and for public reporting.

The Department requires its contracted health plans to support health care claims systems, membership and provider files, and hardware/software management tools that facilitate accurate and reliable reporting of HEDIS measures. The Department has contracted with Health Services Advisory Group, Inc. (HSAG) to analyze Colorado Medicaid HEDIS results objectively and evaluate each health plan's current performance level relative to national Medicaid percentiles.

National performance standards were included, when available, for the Colorado Medicaid measures. The performance levels have been set at specific, attainable rates and are based on national percentiles. Health plans meeting the high performance level (HPL) exhibit rates among the top in the nation. The low performance level (LPL) has been set to identify health plans in the greatest need of improvement. Details describing these performance levels are presented in Section 2, "How to Get the Most From This Report."

HSAG has examined the measures along five different dimensions of care: (1) Pediatric Care, (2) Access to Care, (3) Living With Illness, (4) Preventive Screening, and (5) Utilization of Services. This approach to the analysis is designed to encourage consideration of the measures as a whole rather than in isolation, and to consider the strategic and tactical changes required to improve overall performance.

[1-1] HEDIS® is a registered trademark of the National Committee for Quality Assurance (NCQA).

This report analyzes Colorado Medicaid HEDIS results in several ways.

- A weighted average comparison presents the Colorado Medicaid 2010 results relative to the 2008 and 2009 Colorado Medicaid weighted averages and the national HEDIS 2009 Medicaid 50th percentiles where applicable.
- A performance profile analysis discusses the overall Colorado Medicaid 2010 results and presents a summary of health plan performance relative to the Colorado Medicaid performance levels.
- A health plan ranking analysis provides a more detailed comparison, showing results relative to the Colorado Medicaid performance levels.

In addition, Section 8 ("HEDIS Reporting Capabilities") of the report provides a summary of the HEDIS data collection processes used by the Colorado Medicaid health plans in relation to NCQA's information system (IS) standards.

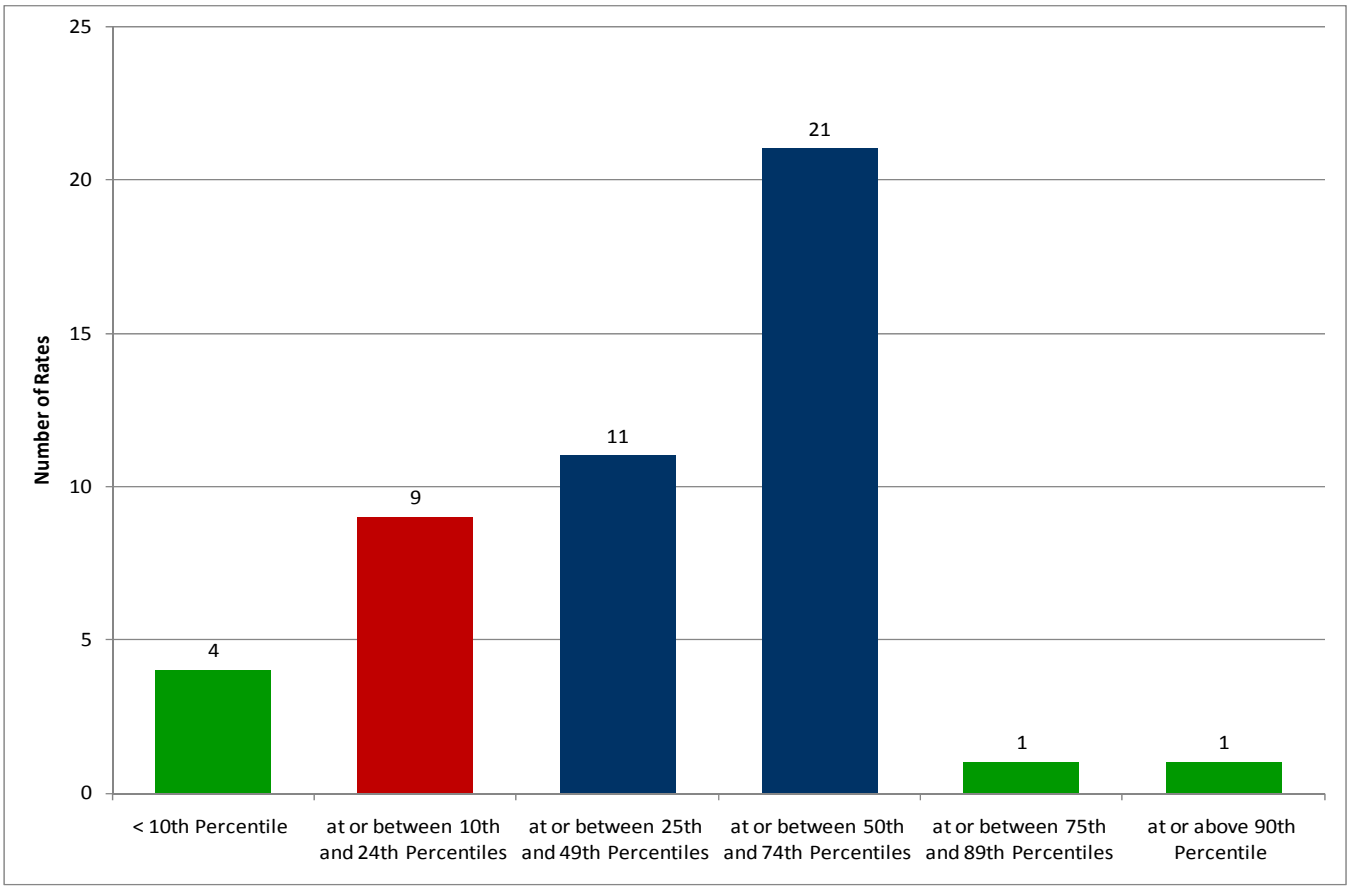
Key Findings

Figure 1-1 shows the Colorado Medicaid program's performance compared with national Medicaid percentiles. The columns represent the number of Colorado Medicaid weighted averages falling into each HEDIS percentile range. Of the 47 weighted averages that were comparable to national percent data:

- Four (or 8.5 percent) were below the 10th percentile
- Nine (or 19.1 percent) were at or between the 10th and 24th percentiles
- 11 (or 23.4 percent) were at or between the 25th and 49th percentiles
- 21 (or 44.7 percent) were at or between the 50th and 74th percentiles
- One (or 2.1 percent) was at or between the 75th and 89th percentiles
- One (or 2.1 percent) was at or above the 90th percentile

Approximately 49 percent of the Colorado Medicaid weighted averages were at or above the 50th percentile. Four of the measures' results were below the 10th percentile, and one was at or above the 90th percentile. It is important to note that for the *Well-Child Visits in the First 15 Months of Life—Zero Visits* rate, where a lower rate represents higher performance, the percentiles were rotated to align with performance (i.e., if the *Well-Child Visits in the First 15 Months of Life—Zero Visits* rate was at or between the 10th and 24th percentiles, it would be inverted to be at or between the 75th and 89th percentiles to represent the level of performance).

Figure 1-1—Colorado Medicaid Weighted Averages



Summary of Performance

The performance for each dimension was summarized through a series of composite measures. The scores were aggregated across all measures within each dimension to create a dimension-level composite score (e.g., a single score for Pediatric Care, Access to Care, Living With Illness, and Preventive Screening). In addition, scores were aggregated across all measures to create an "overall" score (i.e., the health plans' performance across all of the dimensions).

Table 1-1 presents a summary of the health plans' performance compared to HEDIS percentiles for four of the dimensions of care compared to national HEDIS Medicaid percentiles and "overall."[1-2] For example, a health plan with three stars for the Pediatric Care dimension indicates that the health plan performed between the 50th and 74th percentiles for the Pediatric Care dimension, overall.

Table 1-1
Performance Summary

Plan Name	Pediatric Care	Access to Care	Living With Illness	Preventive Screening	Overall
Fee-for-Service	★★	★	★★	★★★	★★
Primary Care Physician Program	★★★	★★	★★★	★	★★★
Denver Health Medicaid Choice	★★★★	★	★★★	★★★★★	★★★
Rocky Mountain Health Plans	★★★★	★★★★	★★	★★	★★★★

0 below HEDIS 2009 Medicaid 10th percentile
★ at or between HEDIS 2009 Medicaid 10th and 24th percentiles
★★ at or between HEDIS 2009 Medicaid 25th and 49th percentiles
★★★ at or between HEDIS 2009 Medicaid 50th and 74th percentiles
★★★★ at or between HEDIS 2009 Medicaid 75th and 89th percentiles
★★★★★ at or above HEDIS 2009 Medicaid 90th percentile

The highest performance by the health plans was on the Pediatric Care dimension. Two of the four health plans had rates at or between the national HEDIS 2009 Medicaid 75th and 89th percentiles. Access to Care, on the other hand, was the dimension where the health plans demonstrated the lowest level of performance. Three of the health plans had rates below the national HEDIS 2009 Medicaid 50th percentile.

The top performing health plan overall was RMHP. RMHP had an "overall" star rating that was at or between the national HEDIS 2009 Medicaid 75th and 89th percentiles. FFS, on the other hand, was a low performing health plan, with an "overall" star rating below the national HEDIS 2009 Medicaid 50th percentile.

[1-2] It should be noted that the Utilization of Services dimension measures were excluded since percentile rankings of these measures do not necessarily correspond to greater or lower performance.

Recommendations

The Department and the health plans should focus on low-performing areas for quality improvement. The dimension where the health plans demonstrated the lowest level of performance was Access to Care, with three of the health plans performing below the national HEDIS 2009 Medicaid 50th percentile. Methods that can be used to improve Access to Care include the following:

- **Geographical Information System (GIS) Evaluation**—Geographic availability is an important determinant that affects access to care. Improving access to primary care physicians (PCPs) will be successful if there are adequate physician levels to meet demand. GIS can be used to manage the geographic distribution of doctors and nurses based on maps of members' residences. Types of visits can be mapped in relation to patient distributions in order to determine if certain regions have proportionately higher ED utilization for non-emergent conditions, for instance, than other regions. Correlations between regions, inappropriate utilization, and the availability of PCPs can indicate where lower access rates are unduly influenced by physical barriers to care.[1-3]

- **Open Access Scheduling**—When scheduling systems lead to poor access at the practice level, they affect the appropriate utilization of primary care services.[1-4] The most common reason that patients report seeking care in urgent care centers is the failure to obtain a timely appointment with a PCP. High no-show rates are also associated with longer delays for appointments. Open access scheduling is designed so that patients can obtain same-day appointments with their PCP (if possible). It also reduces waiting room wait times.

- **Improving Physician-Patient Relationships**—The physician-patient relationship is integral to the successful delivery of primary health care. Studies have shown that continuity of care between patients and physicians is associated with improved use of health services, preventive care, and satisfaction with care.[1-5] Positive physician-patient relationships also result in better compliance and improved self-care. As often as possible, patients should be matched with their primary clinicians.

- **Coordination of Care**—Plans that coordinate care and validate practice guidelines between internists, family practitioners, and PCPs can positively affect members' health. Incorporating alternative types of providers into the delivery process, such as nurses and other clinicians, has been associated with increased member satisfaction. Interventions that incorporate member tools have been shown to improve rates.[1-6]

[1-3] Centers for Disease Control and Prevention. GIS: Linking Public Health Data and Geography. 2007. Available at: http://www.cdc.gov/Features/GIS/. Accessed on: September 20, 2010.

[1-4] Randolph GD, Murray M, Swanson JA, et al. Behind Schedule: Improving Access to Care for Children One Practice at a Time. *Pediatrics*. 2004; 113(3): e320-e327. Available at: http://pediatrics.aappublications.org/cgi/content/full/113/3/e230. Accessed on: May 24, 2010.

[1-5] Kerse N, Buetow S, Mainous AG, et al. Physician-Patient Relationship and Medication Compliance: A Primary Care Investigation. *Annals of Family Medicine*. 2004; 2(5): 455-460.

[1-6] Kerse Center for Health Improvement. *Improving Access to and Use of Prenatal Care in San Joaquin County*. January 2004. Available at: http://www.co.san-joaquin.ca.us/FirstFive/base/documents/prenatalReport.pdf. Accessed on May 5, 2010.

- **Resource Lists**—A barrier to care can be that members simply do not know where to receive health care. A solution to overcome this barrier is to ensure that a resource list that includes provider contact information is readily available to members. For example, a list of resources could be made available to members via health plan mailing and the health plans' Web sites. In addition, resource lists could be disseminated to providers to ensure that their patients are receiving necessary care.[1-7]

- **Provide Transportation**—One potential barrier to care is member's inability to obtain access to consistent transportation. Plans can work with stakeholder and policy makers to increase funding for transportation programs.[1-8] This best practice would likely result in an increase in members obtaining necessary care, particularly in rural areas with less public transportation. Another option is to provide bus tokens or taxi vouchers for transportation.

The measure where the health plans demonstrated the lowest level of performance was *Pharmacotherapy Management of Chronic Obstructive Pulmonary Disease* (*COPD*) *Exacerbation*. All four of the health plans performed below the national HEDIS 2009 Medicaid 25th percentile for both indicators (i.e., Bronchodilator and Systemic Corticosteroid) for this measure. Methods that can be used to improve *Pharmacotherapy Management of COPD Exacerbation* include the following:

- **Provider Education**—Health plans can educate providers on the most up-to-date recommended clinical guidelines for the pharmacotherapy management of COPD exacerbations. These guidelines can also include recommendations for the adjustment of medications and properly distinguishing asthma from chronic COPD.[1-9] For example, health plans can sponsor a presentation that reviews the clinical guidelines for COPD and discusses the COPD-related HEDIS measures.[1-10]

- **Clinical Case Management Services**—A case management program can be established that assigns case managers to patients with COPD. These managers should have a comprehensive understanding of the disease and ensure that patients are following medication instructions. Case managers can educate patients on mechanisms by which the disease progression can be prevented and the types of exercises to perform. In addition, the case manager should set short-term goals with the patient and review the patient's health benefits to implement an effective strategy for managing the disease.[1-11]

Furthermore, it is important to distribute the results of the HEDIS measures to medical directors and those staff most intimately involved with quality improvement efforts aimed at increasing rates. Engaging pertinent staff members will help to promote change throughout the organization. It is also

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[1-7] Tough S, Siever J, Johnson D. Retaining Women in a Prenatal care Randomized Controlled Trial in Canada: Implications for Program Planning. *BMC Public Health.* 2007; 7:148.

[1-8] Ibid.

[1-9] Valley Medical Group. Spirometry Clinic Project Summary. Available at: https://www.harvardpilgrim.org/pls/portal/docs/PAGE/PROVIDERS/MEDMGMT/QUALITYAWARD/2008_PROJECT_SUMMARIES/VMG_08_PROJECT_SUMMARY.PDF. Accessed on: July 21, 2010.

[1-10] Cooper C. Achieving Optimal Management of Chronic Obstructive Pulmonary Disease for Performance Improvement. Prime, Inc. Available at: http://primeinc.org/inc/pdf/course81%5Bwww.primeinc.org%5D.pdf. Accessed on: June 21, 2010..

[1-11] Moreo K. Managing the COPD Patient. Prime, Inc. Available at: http://primeinc.org/casestudies/casemanager/study/526/Case_Managing_the_COPD_Patient. Accessed on: June 22, 2010.

important to provide staff with benchmark data (e.g., national and state data) so that they can see how their health plan is performing relative to comparable entities. In addition, health plans with best practices should be encouraged to share these practices with other health plans and the state Medicaid program.

To identify the reasons for low performance on a measure-by-measure basis, each health plan should make an effort to improve data completeness. Efforts to improve the submission of encounter data has the potential to improve all HEDIS rates as well as reduce the burden of medical record review for health plans. Health plans have found it beneficial to perform a "data refresh" prior to HEDIS reporting to compensate for claims encounter data lag. Another method to improve data completeness is to incorporate supplemental data. Health plans should consider alternate sources of supplemental data that can be made available to them. The use of state registries such as the Colorado Immunization Information System (CIIS) have proved useful in improving health plans' rates. Other sources of supplemental data include disease registries and data from vendors such as labs, radiology facilities, and pharmacies.

To improve performance on HEDIS measures, health plans should also identify barriers that may exist. A comprehensive barrier analysis can assist in targeting interventions that would bring about the most effective results.

Limitations and Considerations

The following potential limitations should be considered when reviewing the reported rates and weighted averages for the Colorado Medicaid health plans:

- It is estimated that almost 30 percent of the Medicaid population receives care in a federally qualified health center (FQHC) or a rural health clinic (RHC). Contractual payment arrangements for FQHCs and RHCs reimburse for only one specific revenue code per claim submission. Any remaining procedures codes are denied. Due to issues with processing denied line items, some FQHCs or RHCs only submit one procedure code per visit. Therefore, other services provided during a given outpatient visit are not consistently submitted. This may result in under-reporting of services provided by these entities.
- In Colorado, health plans assign members a provider and members typically access care from the same provider for each visit. The FFS program, however, does not assign members a provider, which can lead to members accessing care from a different provider for each visit.. This issue may contribute to lower performance measure results for the FFS program.
- In general, health plans could choose to report some measures using the hybrid methodology as allowed by NCQA. Health plans that opted to report rates using the hybrid method use medical record data to augment missing encounter or claims data, unlike health plans that reported measures using only administrative data.
- Some of the measures presented in this report may not have adequate trending information due to 1) the health plans not reporting the measure in the past or 2) the measure had new/major changes to the specifications.

2. How to Get the Most From This Report

Summary of Colorado Medicaid HEDIS 2010 Measures

HEDIS includes a standard set of measures that can be reported by health plans nationwide. The Department selected HEDIS measures from the standard Medicaid set, shown in Table 2-1. These 62 rates represent the 2010 Colorado Medicaid key measures.

Table 2-1
Colorado Medicaid HEDIS 2010 Key Measures

Standard HEDIS 2010 Measures	2010 Colorado Medicaid Key Measures
1. *Childhood Immunization Status*	1. *Childhood Immunization Status—Diptheria, Tetanus, and Acellular Pertussis (DTaP)* 2. *Childhood Immunization Status—Inactivated Polio Vaccine (IPV)* 3. *Childhood Immunization Status—Measles, Mumps, and Rubella (MMR)* 4. *Childhood Immunization Status—Heamophilus Influenza Type B (HiB)* 5. *Childhood Immunization Status—Hepatitis B* 6. *Childhood Immunization Status—Varicella Zoster Virus (VZV)* 7. *Childhood Immunization Status—Pneumococcal Conjugate* 8. *Childhood Immunization Status—Combination 2* 9. *Childhood Immunization Status—Combination 3*
2. *Well-Child Visits in the First 15 Months of Life*	10. *Well-Child Visits in the First 15 Months of Life—Zero Visits* 11. *Well-Child Visits in the First 15 Months of Life—Six or More Visits*
3. *Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life*	12. *Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life*
4. *Adolescent Well-Care Visits*	13. *Adolescent Well-Care Visits*
5. *Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents*	14. *Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Body Mass Index (BMI) Assessment: Ages 3 to 11 Years* 15. *Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Ages 3 to 11 Years* 16. *Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Ages 3 to 11 Years* 17. *Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Ages 12 to 17 Years* 18. *Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Ages 12 to 17 Years* 19. *Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Ages 12 to 17 Years* 20. *Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Total* 21. *Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Total* 22. *Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Total*
6. *Prenatal and Postpartum Care*	23. *Prenatal and Postpartum Care—Timeliness of Prenatal Care* 24. *Prenatal and Postpartum Care—Postpartum Care*
7. *Children's and Adolescents' Access to Primary Care Practitioners*	25. *Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 24 Months* 26. *Children's and Adolescents' Access to Primary Care Practitioners—Ages 25 Months to 6 Years* 27. *Children's and Adolescents' Access to Primary Care Practitioners—Ages 7 to 11Years* 28.*Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 19 Years*

Table 2-1
Colorado Medicaid HEDIS 2010 Key Measures

Standard HEDIS 2010 Measures	2010 Colorado Medicaid Key Measures
8. *Adults' Access to Preventive/Ambulatory Health Services*	29. *Adults' Access to Preventive/Ambulatory Health Services—Ages 20 to 44 Years* 30. *Adults' Access to Preventive/Ambulatory Health Services—Ages 45 to 64 Years* 31. *Adults' Access to Preventive/Ambulatory Health Services—Ages 65 Years and Older*
9. *Annual Monitoring for Patients on Persistent Medications*	32. *Annual Monitoring for Patients on Persistent Medications—Angiotensin Converting Enzyme (ACE) Inhibitors or (Angiotensin Receptor Blockers) ARBs* 33. *Annual Monitoring for Patients on Persistent Medications—Anticonvulsants* 34. *Annual Monitoring for Patients on Persistent Medications—Digoxin* 35. *Annual Monitoring for Patients on Persistent Medications—Diuretics* 36. *Annual Monitoring for Patients on Persistent Medications—Total*
10. *Use of Imaging Studies for Low Back Pain*	37. *Use of Imaging Studies for Low Back Pain*
11. *Controlling High Blood Pressure*	38. *Controlling High Blood Pressure*
12. *Pharmacotherapy Management of COPD Exacerbation*	39. *Pharmacotherapy Management of COPD Exacerbation—Bronchodilator* 40. *Pharmacotherapy Management of COPD Exacerbation—Systemic Corticosteroid*
13. *Antidepressant Medication Management*	41. *Antidepressant Medication Management—Effective Acute Phase Treatment* 42. *Antidepressant Medication Management—Effective Continuation Phase Treatment*
14. *Avoidance of Antibiotic Treatment in Adults With Acute Bronchitis*	43. *Avoidance of Antibiotic Treatment in Adults With Acute Bronchitis*
15. *Chlamydia Screening in Women*	44. *Chlamydia Screening in Women—Ages 16 to 20 Years* 45. *Chlamydia Screening in Women—Ages 21 to 24 Years* 46. *Chlamydia Screening in Women—Combined Rate*
16. *Adult BMI Assessment*	47. *Adult BMI Assessment*
17. *Inpatient Utilization—General Hospital/Acute Care*	48. *General Hospital/Acute Care—Total Inpatient* 49. *General Hospital/Acute Care—Medicine* 50. *General Hospital/Acute Care—Surgery* 51. *General Hospital/Acute Care—Maternity*
18. *Ambulatory Care*	52. *Ambulatory Care—Outpatient Visits* 53. *Ambulatory Care—Emergency Department (ED) Visits* 54. *Ambulatory Care—Ambulatory Surgery/Procedures* 55. *Ambulatory Care—Observation Room Stays*
19. *Frequency of Selected Procedures*	56. *Frequency of Selected Procedures—Myringotomy* 57. *Frequency of Selected Procedures—Tonsillectomy* 58. *Frequency of Selected Procedures—Dilation & Curettage* 59. *Frequency of Selected Procedures—Abdominal Hysterectomy,* 60. *Frequency of Selected Procedures—Vaginal Hysterectomy,* 61. *Frequency of Selected Procedures— Open Cholecystectomy* 62. *Frequency of Selected Procedures— Closed Cholecystectomy* 63. *Frequency of Selected Procedures—Back Surgery* 64. *Frequency of Selected Procedures—Mastectomy* 65. *Frequency of Selected Procedures—Lumpectomy*
20. *Antibiotic Utilization*	66. *Antibiotic Utilization—Average Prescriptions Per Member Per Year (PMPY) for Antibiotics* 67. *Antibiotic Utilization—Average Days Supplied per Antibiotic Prescription* 68. *Antibiotic Utilization—Average Prescriptions PMPY for Antibiotics of Concern* 69. *Antibiotic Utilization—Percentage of Antibiotics of Concern of All Antibiotic Prescriptions*

Key Measure Audit Results

Through the audit process, each measure reported by a health plan is assigned an NCQA-defined audit result. Measures can receive one of four predefined audit results: *Report*, *Not Applicable (NA)*, *Not Report (NR)*, and *No Benefit (NB)*. An audit result of *Report* indicates that the health plan complied with all HEDIS specifications to produce an unbiased, reportable rate or rates, which can be released for public reporting. Although a health plan may have complied with all applicable specifications, the denominator identified may be considered too small to report a valid rate. The measure would have been assigned an *NA* audit result. An audit result of *NR* indicates that the rate could not be publicly reported because the measure deviated from HEDIS specifications such that the reported rate was significantly biased, a health plan chose not to report the measure, or a health plan was not required to report the measure. An *NB* audit result indicates that the health plan did not offer the benefit required by the measure.

It should be noted that NCQA allows health plans to "rotate" select HEDIS measures in some circumstances. A "rotation" schedule enables health plans to use the audited and reportable rate from the prior year. This strategy allows health plans with higher rates for some measures to expend resources toward improving rates for other measures. Rotated measures must have been audited in the prior year and must have received a *Report* audit result. Only hybrid measures are eligible to be rotated. The health plans that met the HEDIS criteria for hybrid measure rotation could exercise that option if they chose to do so. Following NCQA methodology, rotated measures were assigned the same. The health that met the HEDThe health plans that met the HEDIS criteria for hybrid measure rotation could exercise that option if they chose to do so.

Dimensions of Care

HSAG examined five different dimensions of care for Colorado Medicaid members: Pediatric Care, Access to Care, Living With Illness, Preventive Screening, and Utilization of Services. This approach to the analysis is designed to encourage health plans to consider the key measures as a whole rather than in isolation, and to consider the strategic and tactical changes required to improve overall performance.

Changes to Measures

For the 2010 HEDIS reporting year, NCQA made modifications to some of the measures included in this report, which may impact trending and/or comparisons to national data.

Childhood Immunization Status

- Added hepatitis A, rotavirus, and influenza.
- Added Combinations 4 through 10.
- Clarified that pneumococcal conjugate vaccinations administered before 42 days after birth should not be counted as a numerator hit.

Postpartum Care

- Clarified that a notation of "breastfeeding" is acceptable for the evaluation of breasts component of the numerator.

Annual Monitoring for Patients on Persistent Medications

- Clarified numerator criteria for annual monitoring for patients on ACE inhibitors or ARBs, digoxin, and diuretics.

Controlling High Blood Pressure

- Clarified that patient-reported blood pressure readings are not acceptable.

Pharmacotherapy Management of COPD Exacerbation

- Clarified that for ED visits resulting in an inpatient stay only the inpatient stay should be included.
- Clarified that an ED visit for any diagnosis on or seven days after the episode date should be excluded.

Antidepressant Medication Management

- Clarified negative diagnosis history for inpatient claims/encounters and transfers.

Chlamydia Screening in Women

- Clarified the lower age range in the description to reflect the look-back period.

Performance Levels

The purpose of identifying performance levels is to compare the quality of services provided to Colorado Medicaid health plan consumers to national percentiles and ultimately improve the Colorado Medicaid weighted average for all of the key measures. The HPL represents current high performance in national Medicaid managed care, and the LPL represents low performance nationally. Health plans should focus their efforts on reaching and/or maintaining the HPL for each key measure, rather than comparing themselves to other Colorado health plans.

Comparative information in this report is based on NCQA's national HEDIS 2009 Medicaid percentiles, which are the most recent data available from NCQA. The results displayed in this report were rounded to the first decimal place to be consistent with the display of national percentiles. There are some instances in which the rounded rate may appear the same; however, the more precise rates are not identical. In these instances, the hierarchy of the scores in the graphs is displayed in the correct order.

For most measures included in this report, the 90th percentile indicates the HPL and the 25th percentile represents the LPL. This means that Colorado Medicaid health plans with reported rates above the 90th percentile (HPL) rank in the top 10 percent of all health plans nationally. Similarly, health plans reporting rates below the 25th percentile (LPL) rank in the bottom 25 percent nationally of all health plans nationally.

There is one measure for which this differs—i.e., the 10th percentile (rather than the 90th percentile) represents excellent performance and the 75th percentile (rather than the 25th percentile) represents below average performance—given that for this measure only, a *lower* rate indicates better performance. The one measure is: *Well-Child Visits in the First 15 Months of Life—Zero Visits*, for which lower rates of no visits indicate better care.

Star Ratings

The Performance Summary tables depict each health plan's performance using a zero- to five-star rating system. The star assignments are based on a comparison of each measure's results to NCQA's HEDIS 2009 Medicaid percentiles.

★★★★★	- indicates a score at or above the 90th percentile
★★★★	- indicates a score at or between the 75th and 89th percentiles
★★★	- indicates a score at or between the 50th and 74th percentiles
★★	- indicates a score at or between the 25th and 49th percentiles
★	- indicates a score at or between the 10th and 24th percentiles
0	- indicates a score below the 10th percentile
NA	- indicates Not Applicable (i.e., too small denominator size)
NC	- indicates Not Comparable (i.e., measure not comparable to national percentiles)
NR	- indicates Not Reportable

For the *Well-Child Visits in the First 15 Months of Life—Zero Visits* rate, where a lower rate represents higher performance, the percentiles were rotated to align with performance (i.e., if the *Well-Child Visits in the First 15 Months of Life—Zero Visits* rate was at or between the 10th and 24th percentiles, it would be switched to be at or between the 75th and 89th percentiles to represent the level of performance).

The performance for each dimension was also summarized through a series of composite measures. The scores were aggregated across all measures within each dimension to create a dimension-level composite score (e.g., a single score for Pediatric Care). In addition, scores were aggregated across all measures to create an "overall" score (i.e., health plans' performance across all of the dimensions). For example, a health plan with three stars for the Pediatric Care dimension indicates that the health plan performed between the 50th and 74th percentiles for the Pediatric Care dimension, overall.

The following performance summary tables are presented for each dimension of care:

- Overall Performance Summary—presents the health plans' composite result.
- Performance Summary—presents the health plans' star performance on each measure.
- Star Ratings Summary—presents the number of measures that fell into each star rating category (i.e., zero to five stars and NA/NB).

Performance Trend Analysis

Appendix C provides the results of the trend analysis. For purposes of this analysis, the health plans' 2009 results were compared to the 2010 results for each measure, where applicable. Trends are shown using the following:

- ↑ The 2010 score is significantly higher than the 2009 score.
- ↔ The 2010 score is comparable to the 2009 score.
- ↓ The 2010 score is significantly lower than the 2009 score.

Different symbols (▲▼) are used to indicate a performance change for *Well-Child Visits in the First 15 Months of Life—Zero Visits* where a decrease in the rate indicates better performance. A downward triangle (▼) denotes a significant *decline* in performance, as denoted by a significant increase in the 2010 rate from the 2009 rate. An upward triangle (▲) denotes significant *improvement* in performance, as indicated by a significant *decrease* of the 2010 rate from the 2009 rate.

Colorado Medicaid Weighted Averages

The principal measure of overall Colorado Medicaid health plan performance on a given key measure is the *weighted* average rate. The use of a weighted average, based on the health plan's eligible population for that measure, provides the most representative rate for the overall Colorado Medicaid population. Weighting the rate by the health plan's eligible population size ensures that rates for a health plan with 125,000 members, for example, had a greater impact on the overall Colorado Medicaid rate than a rate for a health plan with only 10,000 members. Rates reported as *NA*, *NR* or *NB* were not included in the calculations of these averages.

Calculation Methods: Administrative Versus Hybrid

Administrative Method

The administrative method requires health plans to identify the eligible population (i.e., the denominator) using administrative data, derived from claims and encounters (i.e., statistical claims). In addition, the numerator(s), or services provided to the members in the eligible population, are derived solely from administrative data. Medical records cannot be used to retrieve information. When using the administrative method, the entire eligible population becomes the denominator, and sampling is not allowed. There are measures in each of the four dimensions of care in which HEDIS methodology requires that the rates be derived using only the administrative method, and medical record review is not permitted.

Hybrid Method

The hybrid method requires health plans to identify the eligible population using administrative data and then extract a systematic sample of members from the eligible population, which becomes the denominator. Administrative data are used to identify services provided to those members.

Medical records must then be reviewed for those members who do not have evidence of a service being provided using administrative data.

The hybrid method generally produces higher rates because the completeness of documentation in the medical record exceeds what is typically captured in administrative data; however, the medical record review component of the hybrid method is considered more labor intensive. For example, a health plan has 10,000 members who qualify for the *Prenatal and Postpartum Care* measure. The health plan chooses to use the hybrid method. After randomly selecting 411 eligible members, the health plan finds that 161 members had evidence of a postpartum visit using administrative data. The health plan then obtains and reviews medical records for the 250 members who did not have evidence of a postpartum visit using administrative data. Of those 250 members, 54 were found to have a postpartum visit recorded in the medical record. Therefore, the final rate for this measure, using the hybrid method, would be (161 + 54)/411, or 52 percent.

Interpreting Results

HEDIS results can differ among health plans and even across measures for the same health plan.

The following questions should be asked when examining these data:

1. How accurate are the results?
2. How do Colorado Medicaid rates compare to national percentiles?
3. How are Colorado health plans performing overall?

1. How accurate are the results?

All Colorado Medicaid health plans are required by the Department to have their HEDIS results confirmed through an NCQA HEDIS Compliance Audit™.[2-1] As a result, any rate included in this report has been verified as an unbiased estimate of the measure. NCQA's HEDIS protocol is designed so that the hybrid method produces results with a sampling error of ± 5 percent at a 95 percent confidence level.

How sampling error affects the accuracy of results is best explained using an example. Suppose a health plan uses the hybrid method to derive a *Postpartum Care* rate of 52 percent. Because of sampling error, the true rate is actually ± 5 percent of this rate—somewhere between 47 percent and 57 percent at a 95 percent confidence level. If the target is a rate of 55 percent, it cannot be said with certainty whether the true rate between 47 percent and 57 percent meets or does not meet the target level.

[2-1] NQCA HEDIS Compliance Audit™ is a trademark of NCQA.

To prevent such ambiguity, this report uses a standardized methodology that requires the reported rate to be at or above the threshold level to be considered as meeting the target. For internal purposes, health plans should understand and consider the issue of sampling error when evaluating HEDIS results.

2. How do Colorado Medicaid rates compare to national percentiles?

For each measure, a health plan ranking presents the reported rate in order from highest to lowest, with bars representing the established HPL, LPL, and the national HEDIS 2009 Medicaid 50th percentile. In addition, the 2008, 2009, and 2010 Colorado Medicaid weighted averages are presented for comparison purposes.

Colorado Medicaid health plans with reported rates above the 90th percentile (HPL) rank in the top 10 percent of all health plans nationally. Similarly, health plans reporting rates below the 25th percentile (LPL) rank in the bottom 25 percent nationally for that measure.

3. How are Colorado health plans performing overall?

For each dimension, a performance profile analysis compares the 2010 Colorado Medicaid weighted average for each rate with the 2008 and 2009 Colorado Medicaid weighted averages and the national HEDIS 2009 Medicaid 50th percentile.

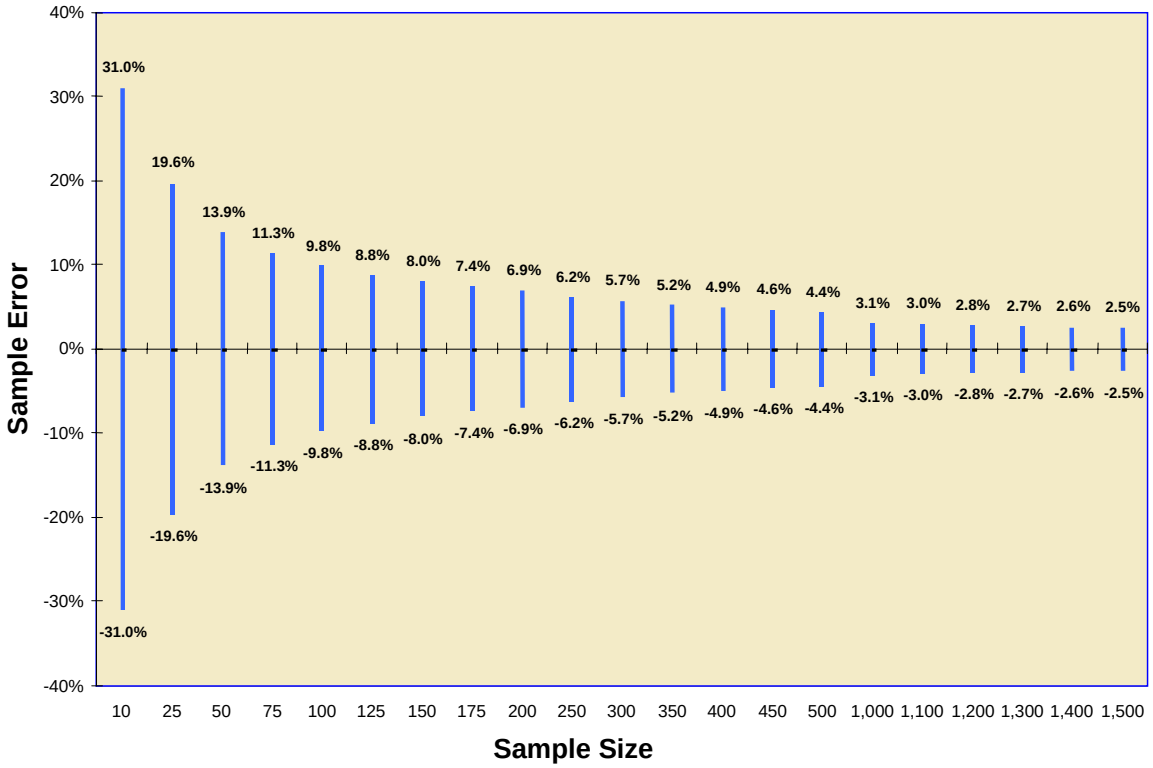
Understanding Sampling Error

Correct interpretation of results for measures collected using the HEDIS hybrid methodology requires an understanding of sampling error. It is rarely possible, logistically or financially, to do medical record review for the entire eligible population for a given measure. Measures collected using the HEDIS hybrid method include only a sample from the eligible population, and statistical techniques are used to maximize the probability that the sample results reflect the experience of the entire eligible population.

For results to be generalized to the entire eligible population, the process of sample selection must be such that everyone in the eligible population has an equal chance of being selected. The HEDIS hybrid method prescribes a systematic sampling process selecting at least 411 members of the eligible population. Health plans may use a 5 percent, 10 percent, 15 percent, or 20 percent oversample to replace invalid cases (e.g., a male selected for *Postpartum Care*).

Figure 2-1 shows that if 411 health plan members are included in a measure, the margin of error is approximately ± 4.9 percentage points. Note that the data in this figure are based on the assumption that the size of the eligible population is greater than 2,000. The smaller the sample included in the measure, the larger the sampling error.

Figure 2-1—Relationship of Sample Size to Sample Error



As Figure 2-1 shows, sample error gets smaller as the sample size gets larger. Consequently, when sample sizes are very large and sampling errors are very small, almost any difference is statistically significant. This does not mean that all such differences are important. On the other hand, the difference between two measured rates may not be statistically significant but may, nevertheless, be important. The judgment of the reviewer is always a requisite for meaningful data interpretation.

3. Pediatric Care

Introduction

Pediatric primary health care involves health promotion and disease prevention for children and adolescents. Immunizations and health check-ups, when provided in a timely manner, are particularly important for young children. Failure to detect problems with growth, hearing, and vision may adversely affect children's future abilities and experiences. Early detection allows health care providers the best opportunity to detect developmental issues early and intervene, providing children with the chance to grow and learn without health-related limitations.

The following section provides detailed analysis of the Colorado Medicaid health plans' performance for the Pediatric Care dimension.

The Pediatric Care dimension encompasses the following measures:

- *Childhood Immunization Status—DTaP*
- *Childhood Immunization Status—IPV*
- *Childhood Immunization Status—MMR*
- *Childhood Immunization Status—HiB*
- *Childhood Immunization Status—Hepatitis B*
- *Childhood Immunization Status—VZV*
- *Childhood Immunization Status—Pneumococcal Conjugate*
- *Childhood Immunization Status—Combination 2*
- *Childhood Immunization Status—Combination 3*
- *Well-Child Visits in the First 15 Months of Life—Zero Visits*
- *Well-Child Visits in the First 15 Months of Life—Six or More Visits*
- *Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life*
- *Adolescent Well-Care Visits*
- *Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Ages 3 to 11 Years*
- *Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Ages 3 to 11 Years*
- *Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Ages 3 to 11 Years*
- *Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Ages 12 to 17 Years*
- *Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Ages 12 to 17 Years*

- *Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Ages 12 to 17 Years*
- *Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Total*
- *Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Total*
- *Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Total*

Childhood Immunization Status

Measure Definitions

Childhood Immunization Status—DTaP calculates the percentage of enrolled children who turned 2 years of age during the measurement year, who were continuously enrolled for 12 months immediately preceding their second birthday, and who were identified as having four DTaP vaccinations within the allowable time period and by the member's second birthday.

Childhood Immunization Status—IPV calculates the percentage of enrolled children who turned 2 years of age during the measurement year, who were continuously enrolled for 12 months immediately preceding their second birthday, and who were identified as having three IPV vaccinations within the allowable time period and by the member's second birthday.

Childhood Immunization Status—MMR calculates the percentage of enrolled children who turned 2 years of age during the measurement year, who were continuously enrolled for 12 months immediately preceding their second birthday, and who were identified as having one MMR vaccination within the allowable time period and by the member's second birthday.

Childhood Immunization Status—HiB calculates the percentage of enrolled children who turned 2 years of age during the measurement year, who were continuously enrolled for 12 months immediately preceding their second birthday, and who were identified as having two HiB vaccinations within the allowable time period and by the member's second birthday.

Childhood Immunization Status—Hepatitis B calculates the percentage of enrolled children who turned 2 years of age during the measurement year, who were continuously enrolled for 12 months immediately preceding their second birthday, and who were identified as having three hepatitis B vaccinations within the allowable time period and by the member's second birthday.

Childhood Immunization Status—VZV calculates the percentage of enrolled children who turned 2 years of age during the measurement year, who were continuously enrolled for 12 months immediately preceding their second birthday, and who were identified as having one VZV (chicken pox) vaccination within the allowable time period and by the member's second birthday.

Childhood Immunization Status—Pneumococcal Conjugate calculates the percentage of enrolled children who turned 2 years of age during the measurement year, who were continuously enrolled for 12 months immediately preceding their second birthday, and who were identified as having four pneumococcal conjugate vaccinations within the allowable time period and by the member's second birthday.

Childhood Immunization Status—Combination 2 calculates the percentage of enrolled children who turned two years old during the measurement year, who were continuously enrolled for 12 months immediately preceding their second birthdays, and who were identified as having the following vaccinations: four DTaP; three IPV; one MMR; two HiB; three hepatitis B; and one VZV, on or before the child's second birthday.

Childhood Immunization Status—Combination 3 calculates the percentage of enrolled children who turned two years old during the measurement year, who were continuously enrolled for 12 months immediately preceding their second birthdays, and who were identified as having four DTaP, three IPV, one MMR, two HiB, three hepatitis B, one VZV, and four pneumococcal conjugate vaccinations, on or before the child's second birthday.

Importance

Disease prevention is the key to public health, and one of the most basic methods for the prevention of diseases is immunizations. Immunizations are the safest and most effective tools for protecting children from various potentially serious childhood diseases. Vaccines are proven to help children stay healthy and avoid the harmful effects of diseases such as diphtheria, tetanus, hepatitis, polio, measles, mumps, and rubella. While the rates of vaccine-preventable diseases are very low in the United States, the viruses and bacteria that cause these infectious diseases still exist. Without proper immunization, the potential to pass on vaccine-preventable diseases such as measles, mumps, and pertussis (whooping cough) to unprotected persons increases drastically.[3-1] Measles is one of the most prevalent infectious diseases in the world and frequently is imported into the United States. More than 90 percent of people who are not immunized will acquire the virus if exposed and as many as three out of every 1,000 cases will result in death in the United States.[3-2] Additionally, the Centers for Disease Control and Prevention (CDC) estimates that one-third of the lifelong hepatitis B virus infections in the United States resulted from infections acquired during infancy or during the first few years of life.[3-3]

The social and direct economic costs of ensuring each child receives the CDC Advisory Committee for Immunization Practices' (ACIP's) recommended schedule of vaccines outweighs the costs of not providing routine immunizations. Childhood vaccines prevent 10.5 million diseases among all children born in the United States in a given year and are a cost-effective preventive measure. It is estimated that for every $1 spent on immunizations, up to $29 can be saved in direct and indirect costs.[3-4] Based on an estimate of the 2001 U.S. birth cohort, routine childhood immunizations (as recommended by the ACIP) net an economic and societal cost savings of $9.9 billion and $43.3 billion, respectively.[3-5]

Despite the established guidelines and documented benefits and risks associated with childhood immunization, a gap in coverage still exists. Evidence has shown that the population at greatest risk for under-immunization is minority children from low-income families or children that live in inner-cities or rural areas.[3-6] In 2007, almost 25 percent of children in the United States ages 19 to 35 months did not receive recommended vaccinations.[3-7] For these reasons, leading health care organizations and

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3-1 Centers for Disease Control and Prevention. Mumps Outbreaks. Available at: http://www.cdc.gov/mumps/outbreaks.html#e. Accessed on: June 1, 2010.

3-2 Centers for Disease Control and Prevention. What Would Happen If We Stopped Vaccinations? Available at: http://www.cdc.gov/vaccines/vac-gen/whatifstop.htm. Accessed on: June 1, 2010.

3-3 National Committee for Quality Assurance. *The State of Health Care Quality in 2009*. Washington, D.C.: NCQA; 2009.

3-4 Ibid.

3-5 Zhou F, Santoli J, Messonier ML, et al. Economic Evaluation of the 7-Vaccine Routine Childhood Immunization Schedule in the United States, 2001. *Archives of Pediatrics Adolescent Medicine*. 2005; 159(12): 1136-1144.

3-6 American Academy of Pediatrics, Committee on Practice and Ambulatory Medicine and Council on Community Pediatrics. Increasing Immunization Coverage. *Pediatrics*. 2003; 112(4): 993-996.

3-7 Agency for Healthcare Research and Quality. "Childhood immunization status." *National Quality Measures Clearinghouse*. Available at http://www.qualitymeasures.ahrq.gov/summary/summary.aspx?doc_id=14920&string=CIS. Accessed on: June 1, 2010 .

professionals widely agree that the need to focus on increasing childhood immunization rates in the United States remains crucial.[3-8]

Colorado ranked last among all 50 states in terms of immunizations given as recently as 2003, according to National Immunization Survey (NIS) data.[3-9] However, Colorado has improved its rates in recent years, ranking ninth in 2008 with a coverage rate of 79.4 percent.[3-10] In 2008, 78.6 percent of Colorado children 19 to 35 months of age received four or more doses of DTaP, three or more doses of IPV, one or more doses of any measles-containing vaccine, three or more doses of HiB, and three or more doses of Hepatitis B vaccine. Additionally, in the past five years, immunization coverage has increased from 67.5 to 80.7 percent in children ages 19 to 25 months receiving complete immunizations.[3-11]

The Colorado Immunization Information System (CIIS) is a computerized system used to collect and disseminate immunization information. CIIS data has been used for HEDIS reporting since 2008, and has contributed to improved rates for the immunization measures. Providers can use CIIS to send notices to families of children who are overdue for immunizations, which can improve coverage rates. It also consolidates all immunizations into one easily accessible record for each individual.[3-12]

[3-8] Centers for Disease Control and Prevention. *Epidemiology and Prevention of Vaccine-Preventable Diseases*. 11th ed. Washington, DC: Public Health Foundation; 2009. Available at: http://www.cdc.gov/vaccines/pubs/pinkbook/pink-chapters.htm. Accessed on: May 18, 2010.

[3-9] America's Health Rankings™. Immunization Coverage; Available at http://www.americashealthrankings.org/Measure/2003/List%20All/Immunization%20Coverage.aspx. Accessed on October 19, 2010.

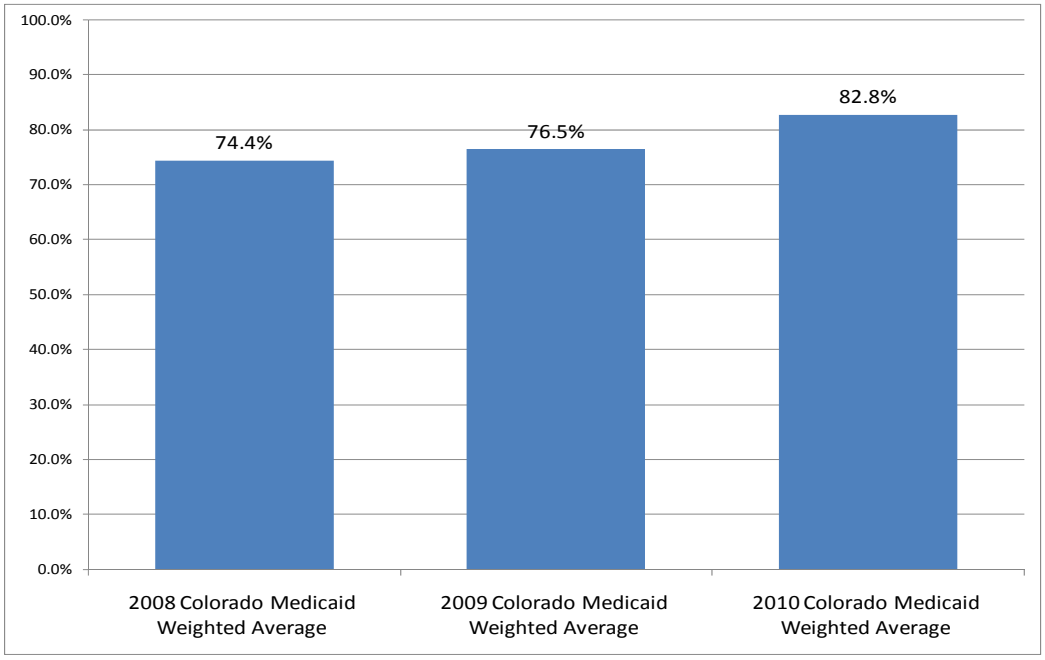
[3-10] Colorado Children's Immunization Coalition. Vaccine-Preventable Diseases in Colorado's Children, 2009. Available at: http://www.childrensimmunization.org/index.php?s=60&item=249. Accessed on: September 1, 2010.

[3-11] United Health Foundation. America's Health Rankings. Available at: http://www.americashealthrankings.org/2008/pdfs/co.pdf. Accessed on: August 31, 2010.

[3-12] Colorado Immunization Information System. Available at: http://www.cdphe.state.co.us/dc/immunization/ciis/. Accessed on: September 1, 2010.

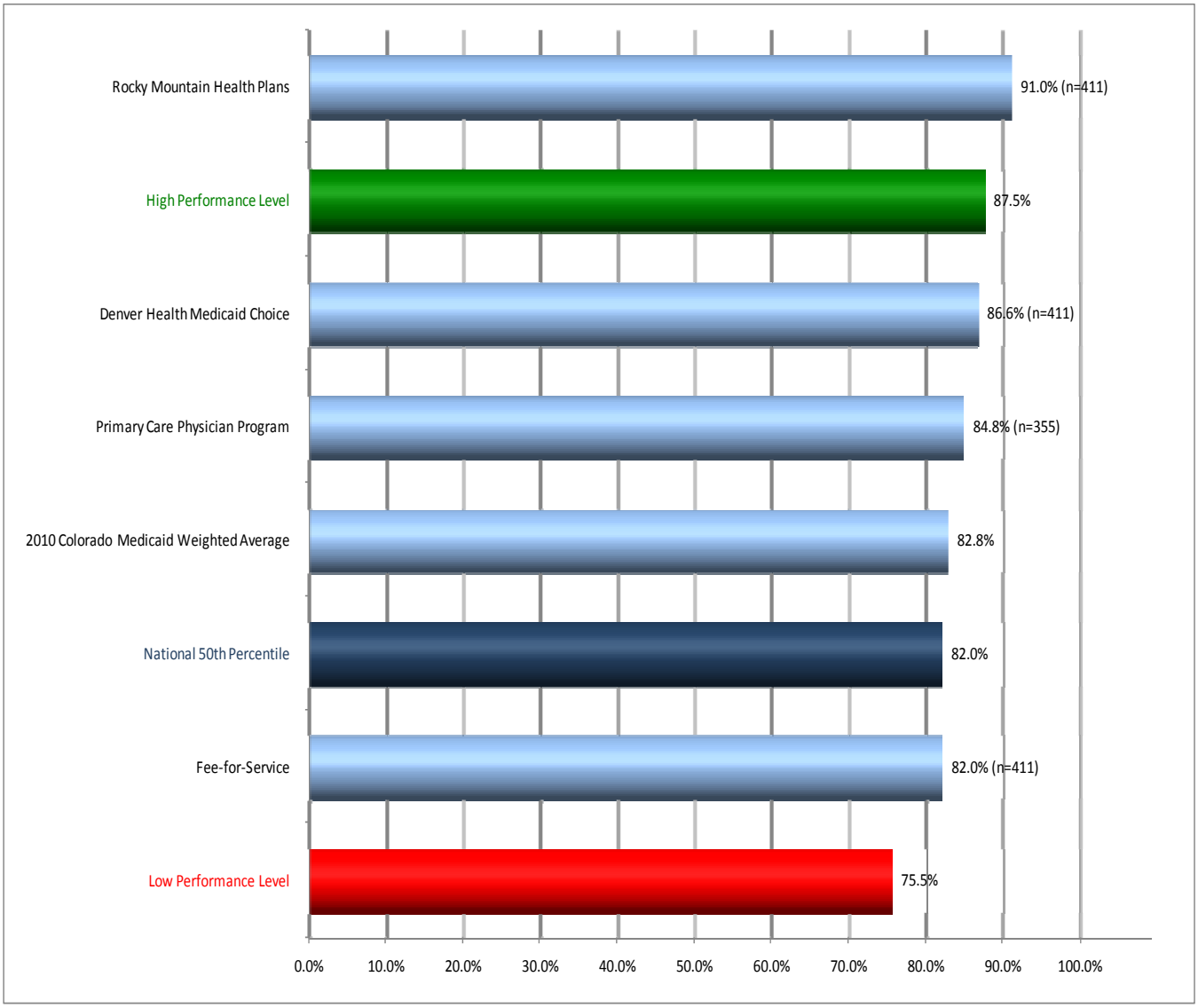
Performance Results

Figure 3-1
Childhood Immunization Status—DTaP
Colorado Medicaid Weighted Averages



The weighted averages for *Childhood Immunization Status—DTaP* have increased each year from 2008 to 2010. The 2010 weighted average increased 8.4 and 6.3 percentage points from the 2008 and 2009 weighted averages, respectively.

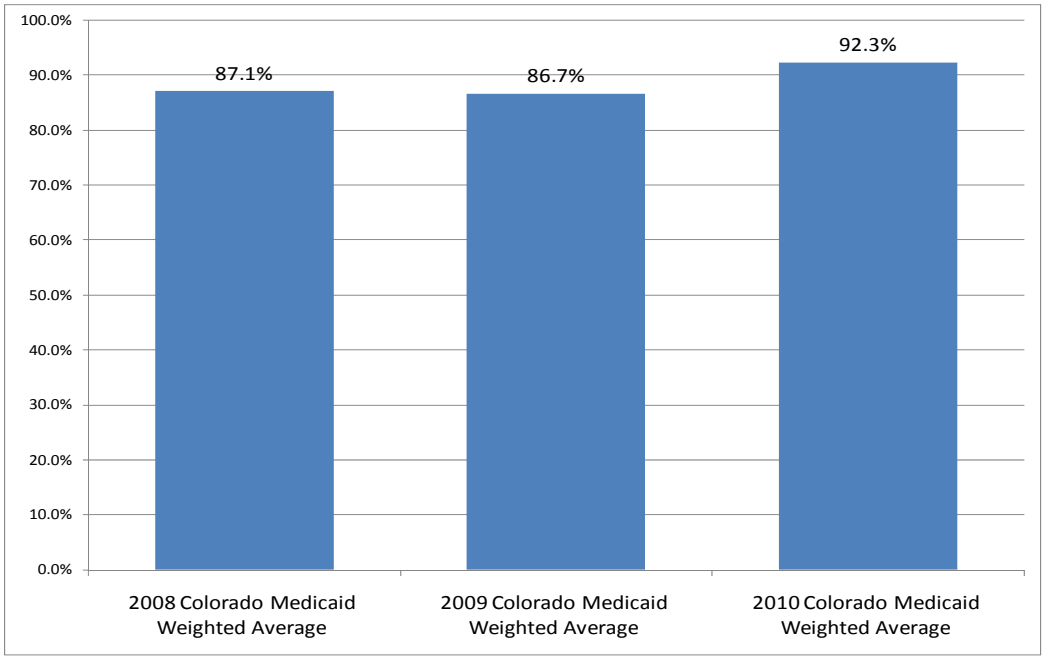
Figure 3-2
Childhood Immunization Status—DTaP



One health plan exceeded the HPL of 87.5 percent, and none of the health plans were below the LPL of 75.5 percent. Three of the health plans, including the one above the HPL, reported rates above the national HEDIS 2009 Medicaid 50th percentile.

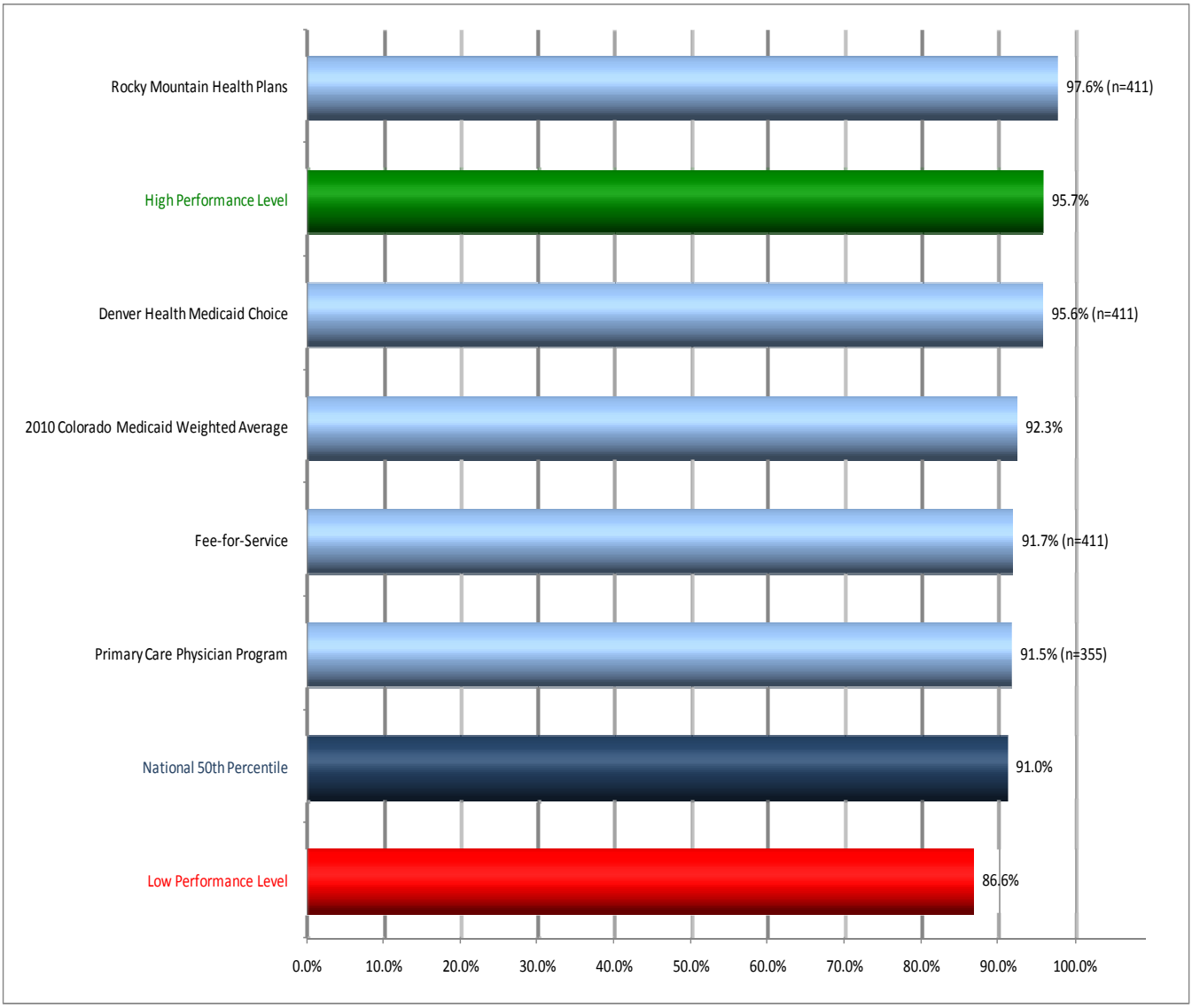
The 2010 Colorado Medicaid weighted average of 82.8 percent exceeded the national HEDIS 2009 Medicaid 50th percentile by 0.8 percentage points.

Figure 3-3
Childhood Immunization Status—IPV
Colorado Medicaid Weighted Averages



The weighted averages for *Childhood Immunization Status—IPV* decreased from 2008 to 2009, but increased from 2009 to 2010. The 2010 weighted average increased 5.2 and 5.6 percentage points from the 2008 and 2009 weighted averages, respectively.

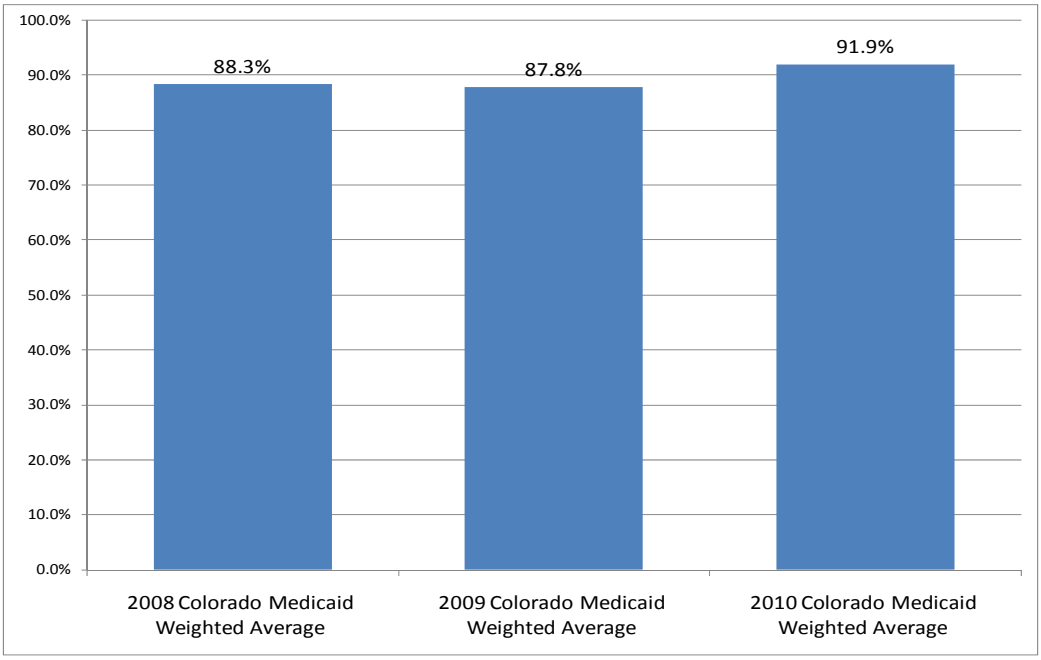
Figure 3-4
Childhood Immunization Status—IPV



One health plan exceeded the HPL of 95.7 percent, and none of the health plans were below the LPL of 86.6 percent. All four health plans reported rates above the national HEDIS 2009 Medicaid 50th percentile.

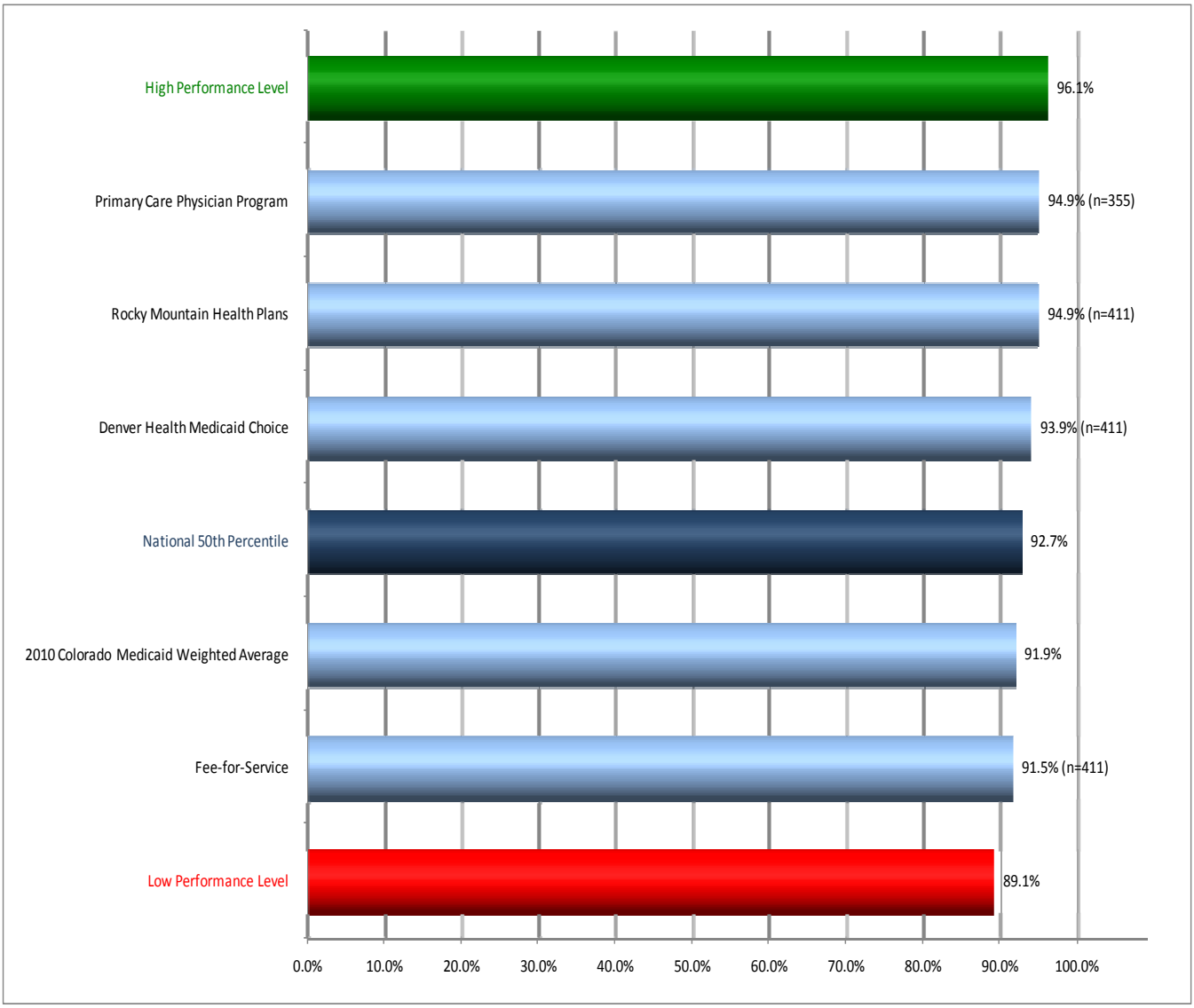
The 2010 Colorado Medicaid weighted average of 92.3 percent exceeded the national HEDIS 2009 Medicaid 50th percentile by 1.3 percentage points.

Figure 3-5
Childhood Immunization Status—MMR
Colorado Medicaid Weighted Averages



The weighted averages for *Childhood Immunization Status—MMR* decreased between 2008 and 2009, but increased between 2009 and 2010. The 2010 weighted average increased 3.6 and 4.1 percentage points from the 2008 and 2009 weighted averages, respectively.

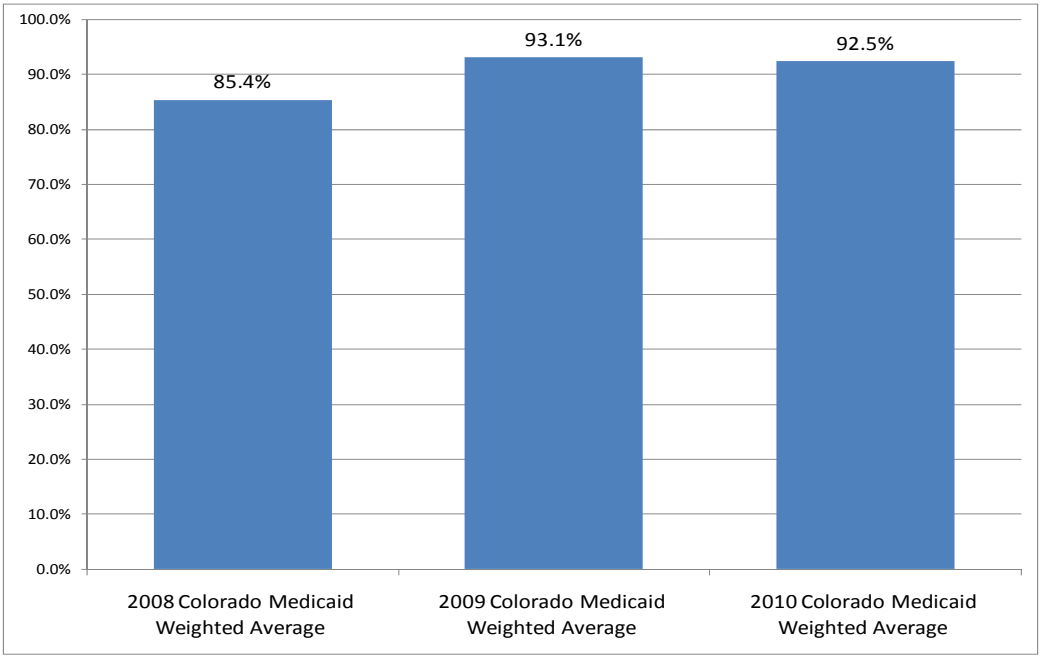
Figure 3-6
Childhood Immunization Status—MMR



None of the health plans exceeded the HPL of 96.1 percent, and none of the health plans were below the LPL of 89.1 percent. Three of the health plans reported rates above the national HEDIS 2009 Medicaid 50th percentile.

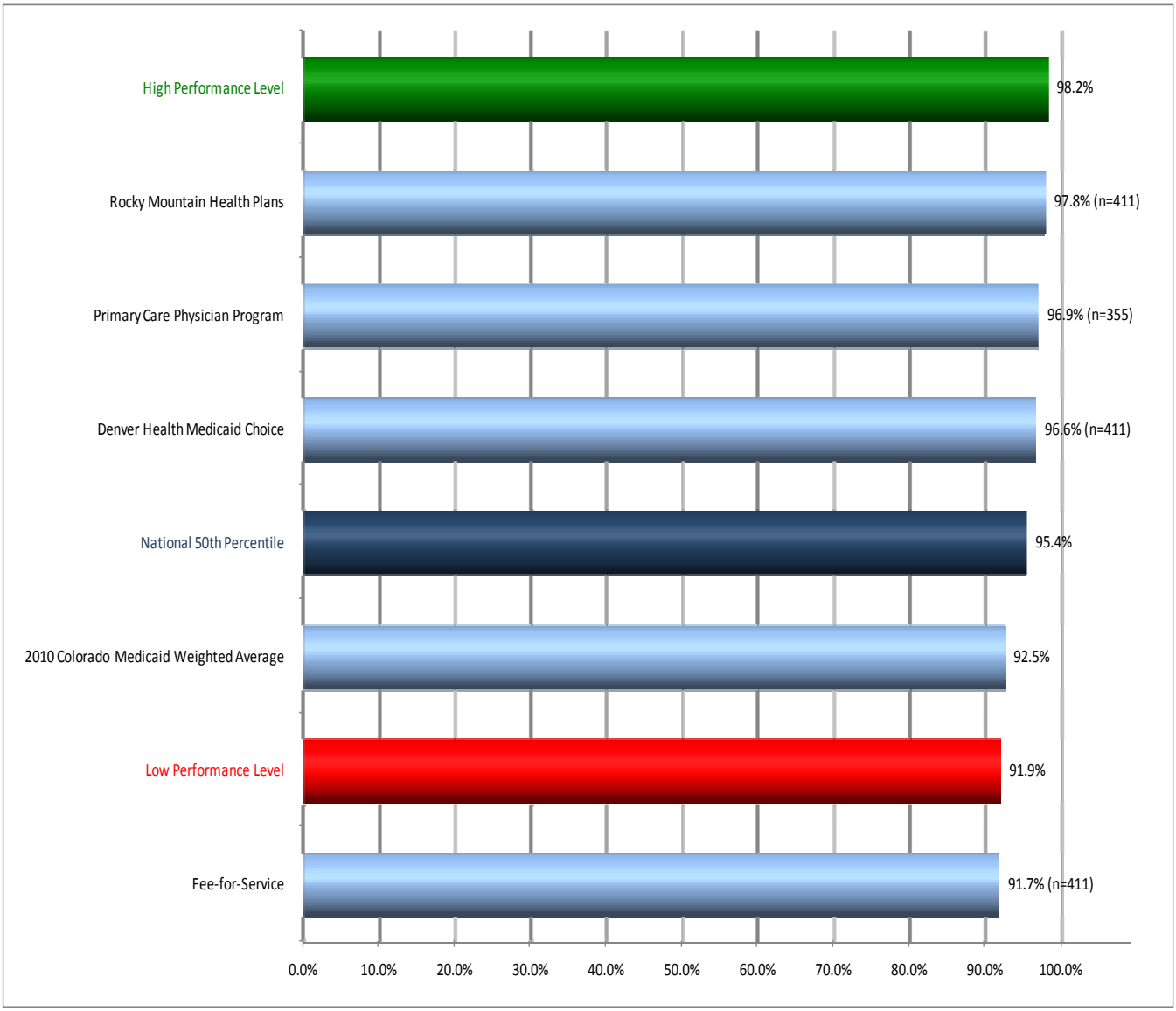
The 2010 Colorado Medicaid weighted average of 91.9 percent was below the national HEDIS 2009 Medicaid 50th percentile by 0.8 percentage points.

Figure 3-7
Childhood Immunization Status—HiB
Colorado Medicaid Weighted Averages



The weighted averages for *Childhood Immunization Status—HiB* increased between 2008 and 2009, but decreased between 2009 and 2010. The 2010 weighted average increased 7.1 percentage points from 2008, but decreased 0.6 percentage points from 2009.

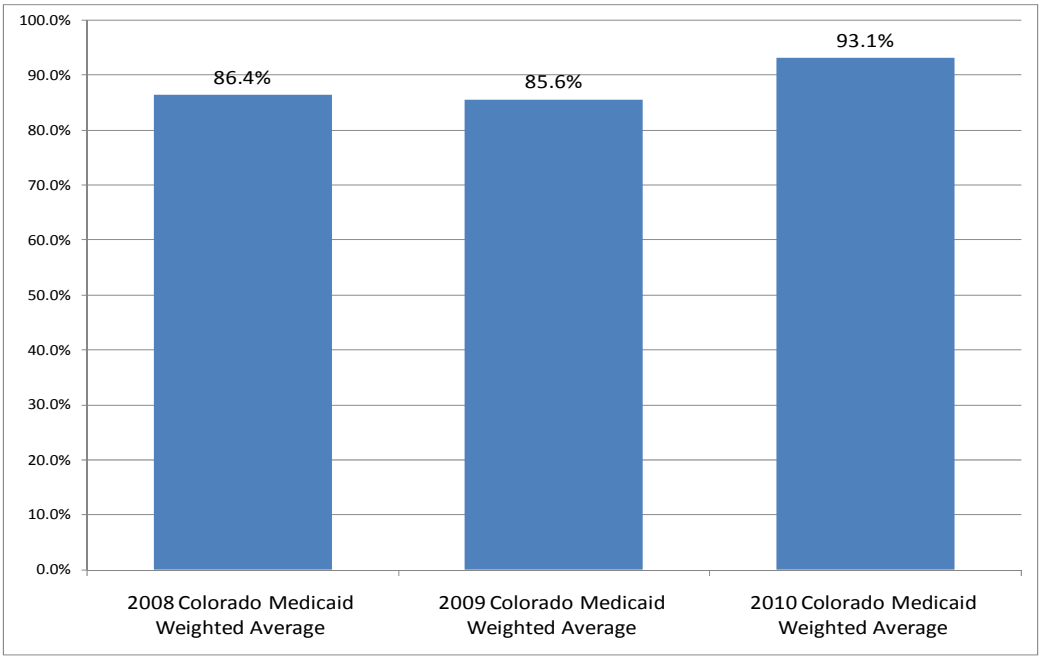
Figure 3-8
Childhood Immunization Status—HiB



None of the health plans exceeded the HPL of 98.2 percent, and one of the health plans was below the LPL of 91.9 percent. A total of three health plans reported rates above the national HEDIS 2009 Medicaid 50th percentile.

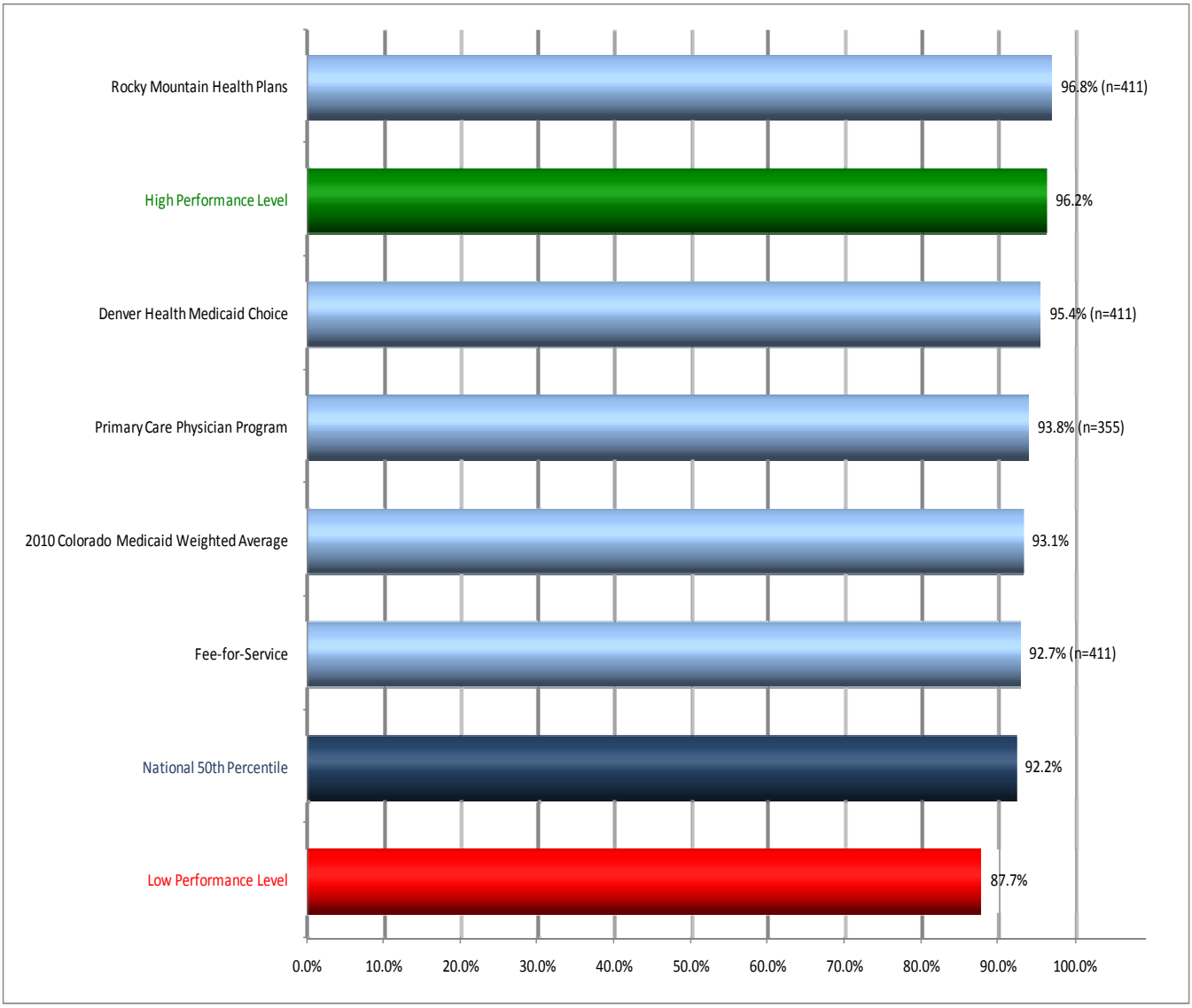
The 2010 Colorado Medicaid weighted average of 92.5 percent was below the national HEDIS 2009 Medicaid 50th percentile by 2.9 percentage points.

Figure 3-9
Childhood Immunization Status—Hepatitis B
Colorado Medicaid Weighted Averages



The weighted averages for *Childhood Immunization Status—Hepatitis B* decreased between 2008 and 2009, but increased between 2009 and 2010. The 2010 weighted average increased 6.7 and 7.5 percentage points from the 2008 and 2009 weighted averages, respectively.

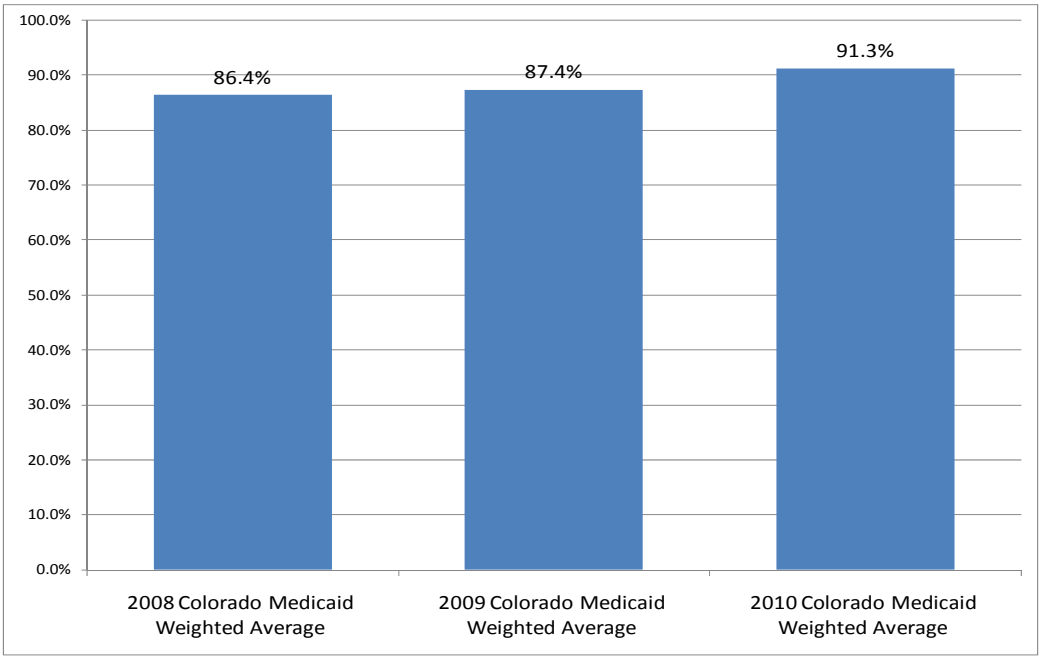
Figure 3-10
Childhood Immunization Status—Hepatitis B



One health plan exceeded the HPL of 96.2 percent, and none of the plans were below the LPL of 87.7 percent. All four of the health plans reported rates above the national HEDIS 2009 Medicaid 50th percentile.

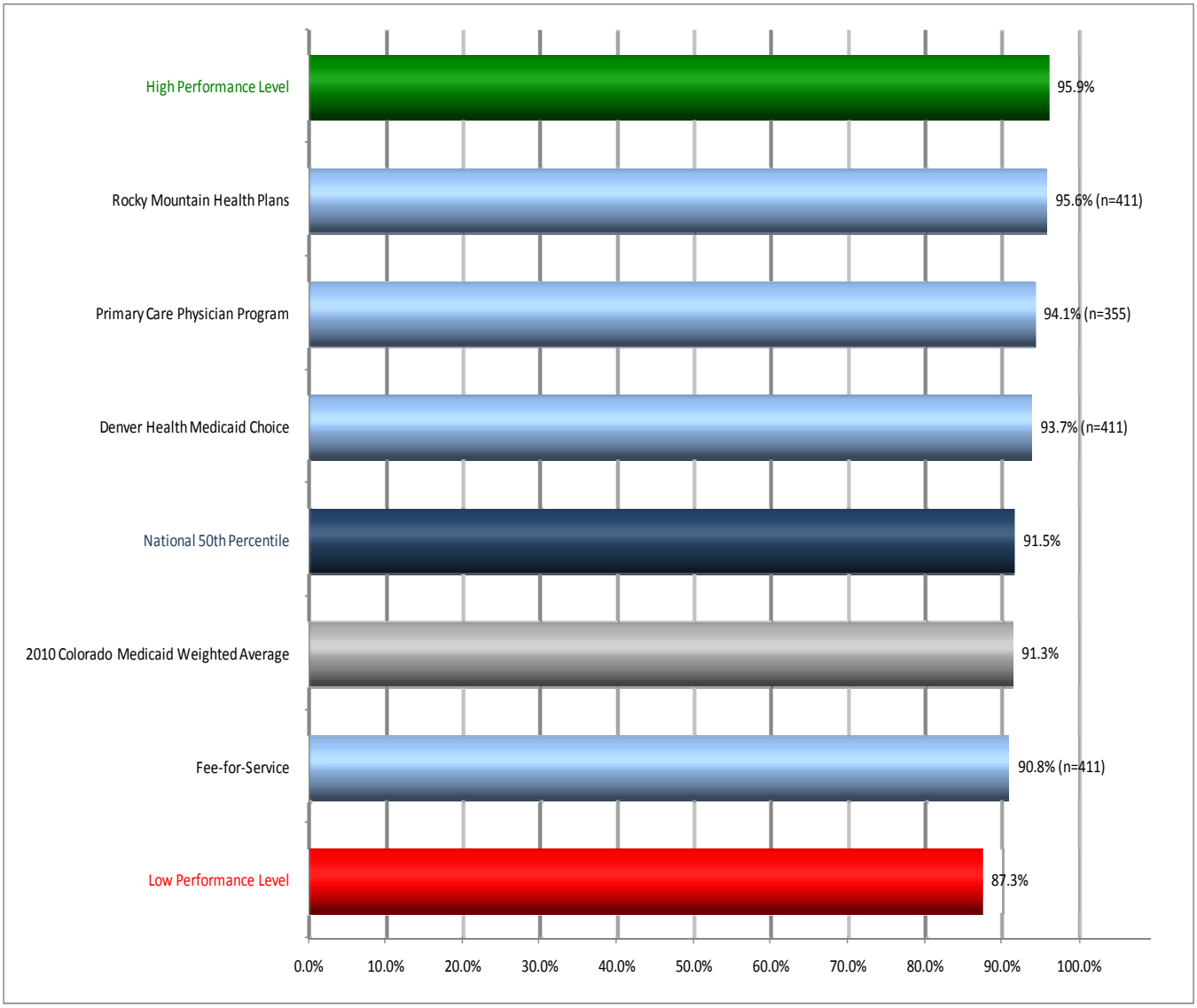
The 2010 Colorado Medicaid weighted average of 93.1 percent exceeded the national HEDIS 2009 Medicaid 50th percentile by 0.9 percentage points.

Figure 3-11
Childhood Immunization Status—VZV
Colorado Medicaid Weighted Averages



The weighted averages for *Childhood Immunization Status—VZV* have increased each year from 2008 to 2010. The 2010 weighted average increased 4.9 and 3.9 percentage points from the 2008 and 2009 weighted averages, respectively.

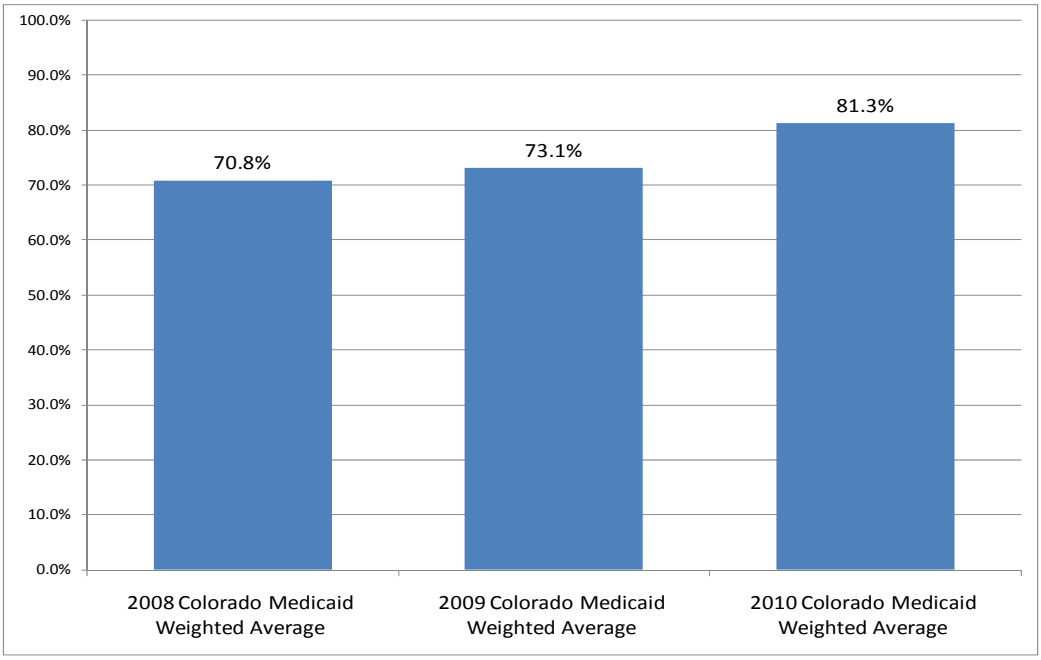
Figure 3-12
Childhood Immunization Status—VZV



None of the health plans exceeded the HPL of 95.9 percent, and none of the health plans were below the LPL of 87.3 percent. A total of three health plans reported rates above the national HEDIS 2009 Medicaid 50th percentile.

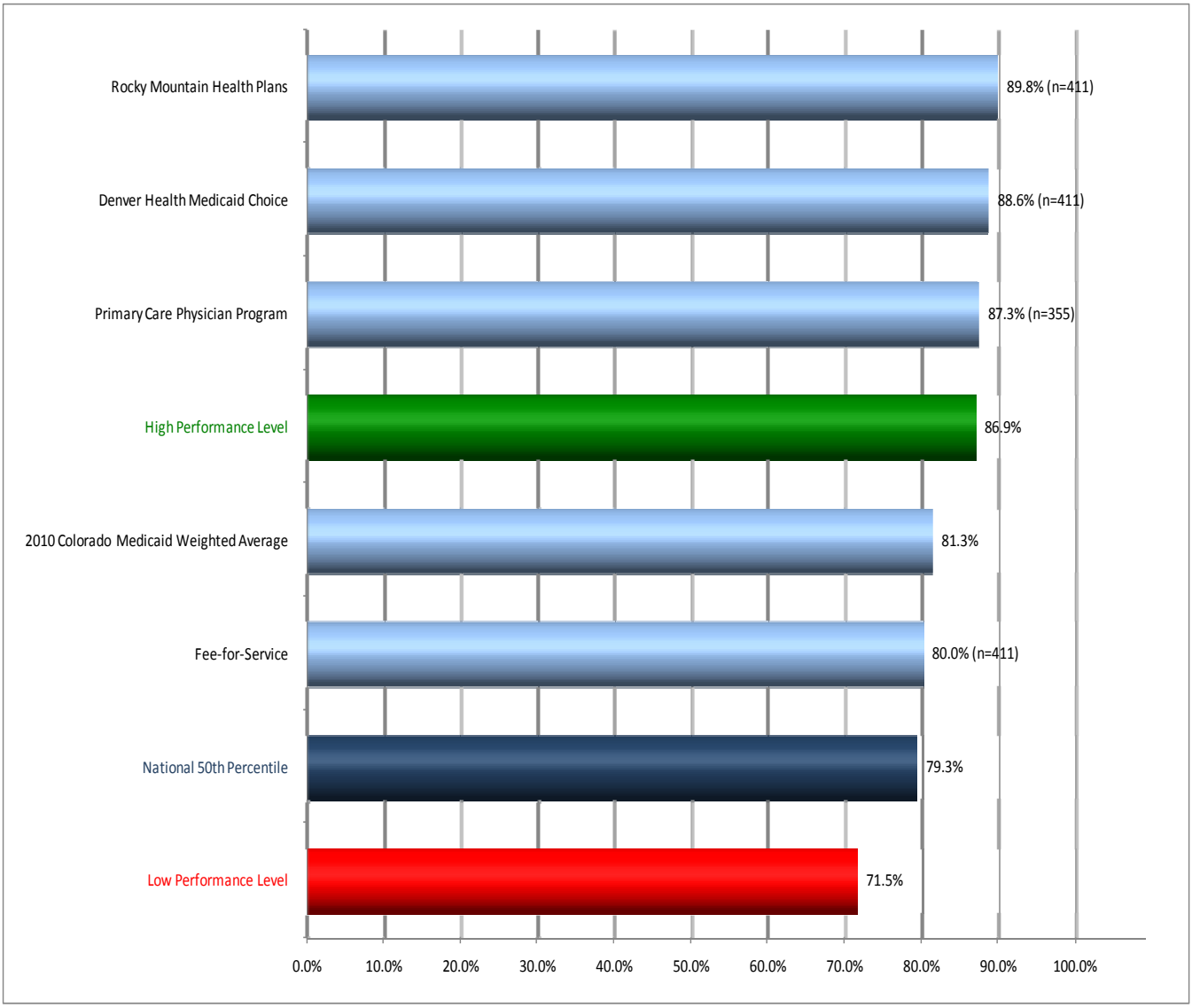
The 2010 Colorado Medicaid weighted average of 91.3 percent was below the national HEDIS 2009 Medicaid 50th percentile by 0.2 percentage points.

Figure 3-13
Childhood Immunization Status—Pneumococcal Conjugate
Colorado Medicaid Weighted Averages



The weighted averages for *Childhood Immunization Status—Pneumococcal Conjugate* have increased each year from 2008 to 2010. The 2010 weighted average increased 10.5 and 8.2 percentage points from the 2008 and 2009 weighted averages, respectively.

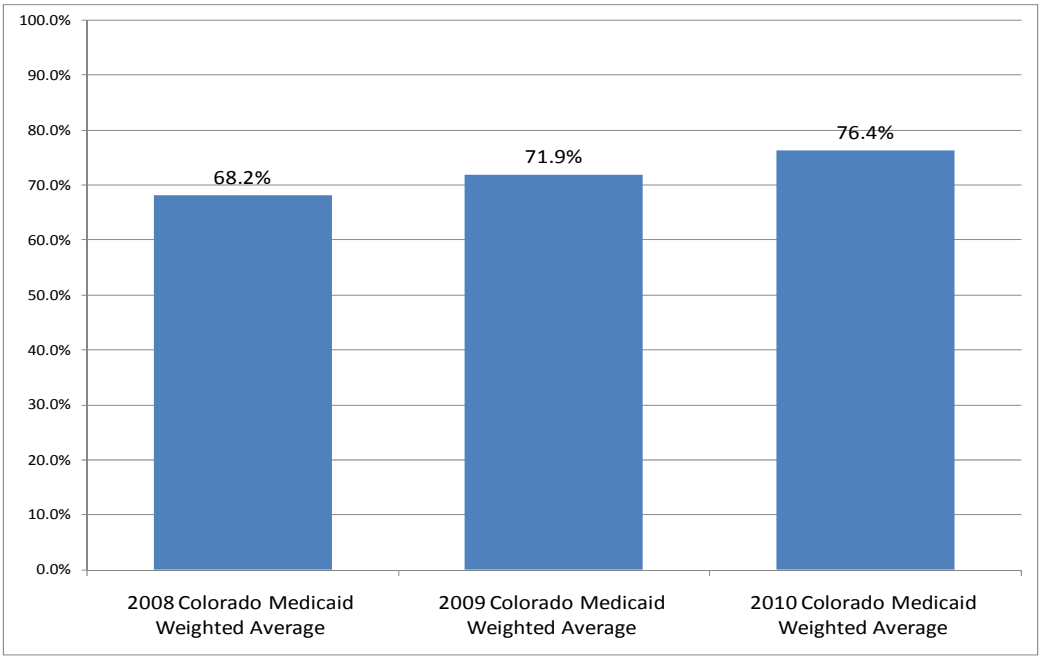
Figure 3-14
Childhood Immunization Status—Pneumococcal Conjugate



Three health plans exceeded the HPL of 86.9 percent, and none of the health plans were below the LPL of 71.5 percent. All four of the health plans reported rates above the national HEDIS 2009 Medicaid 50th percentile.

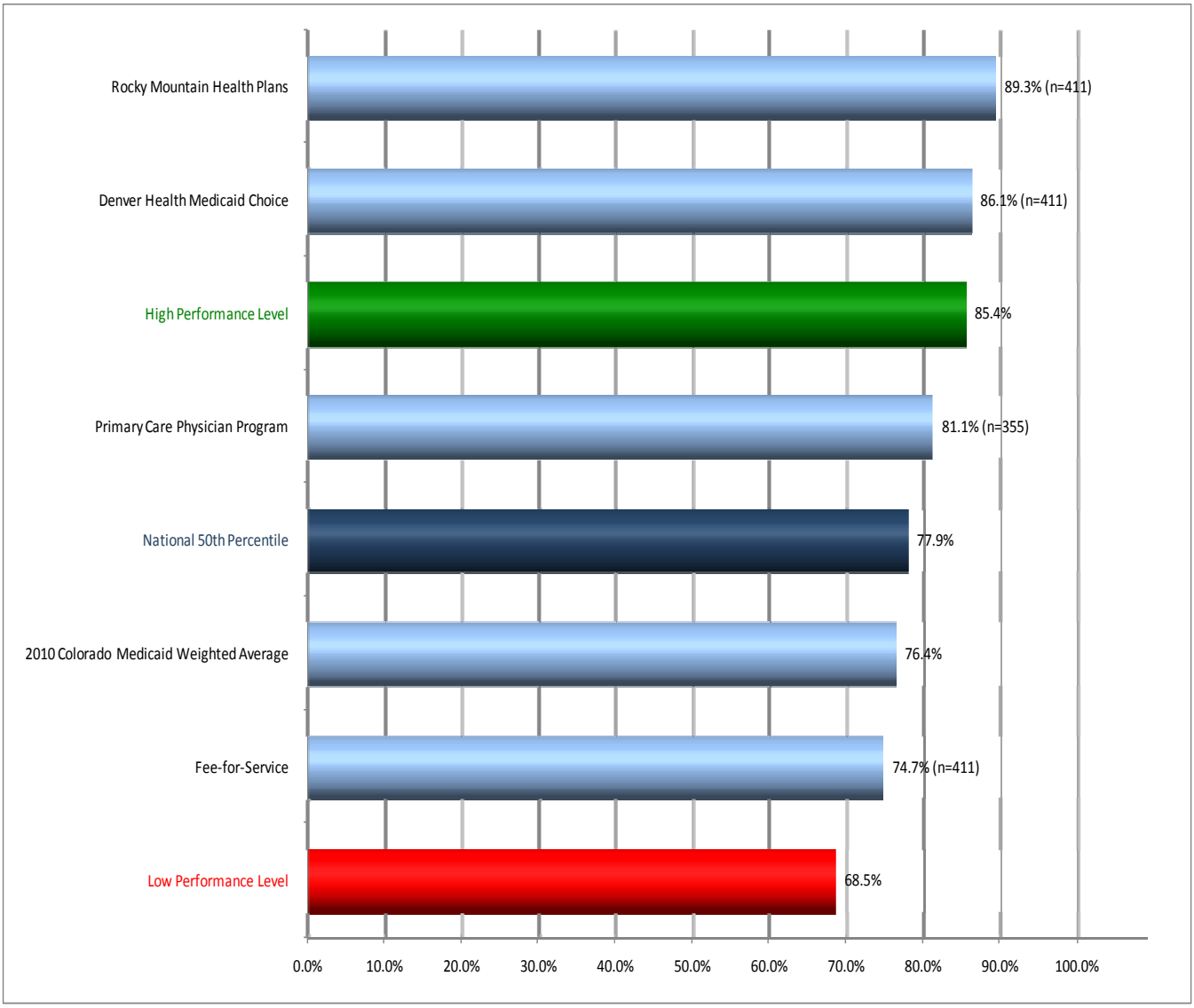
The 2010 Colorado Medicaid weighted average of 81.3 percent exceeded the national HEDIS 2009 Medicaid 50th percentile by 2.0 percentage points.

Figure 3-15
Childhood Immunization Status—Combination 2
Colorado Medicaid Weighted Averages



The weighted averages for *Childhood Immunization Status—Combination 2* have increased each year from 2008 to 2010. The 2010 weighted average increased 8.2 and 4.5 percentage points from the 2008 and 2009 weighted averages, respectively.

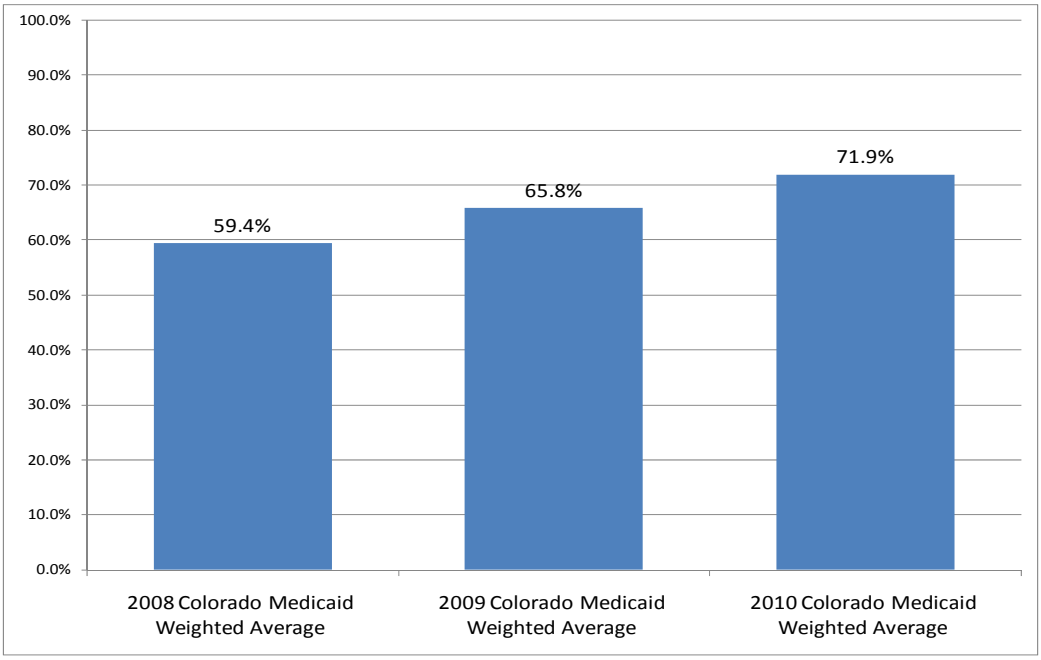
Figure 3-16
Childhood Immunization Status—Combination 2



Two health plans exceeded the HPL of 85.4 percent, and none of the health plans were below the LPL of 68.5 percent. Three health plans, including the two above the HPL, reported rates above the national HEDIS 2009 Medicaid 50th percentile.

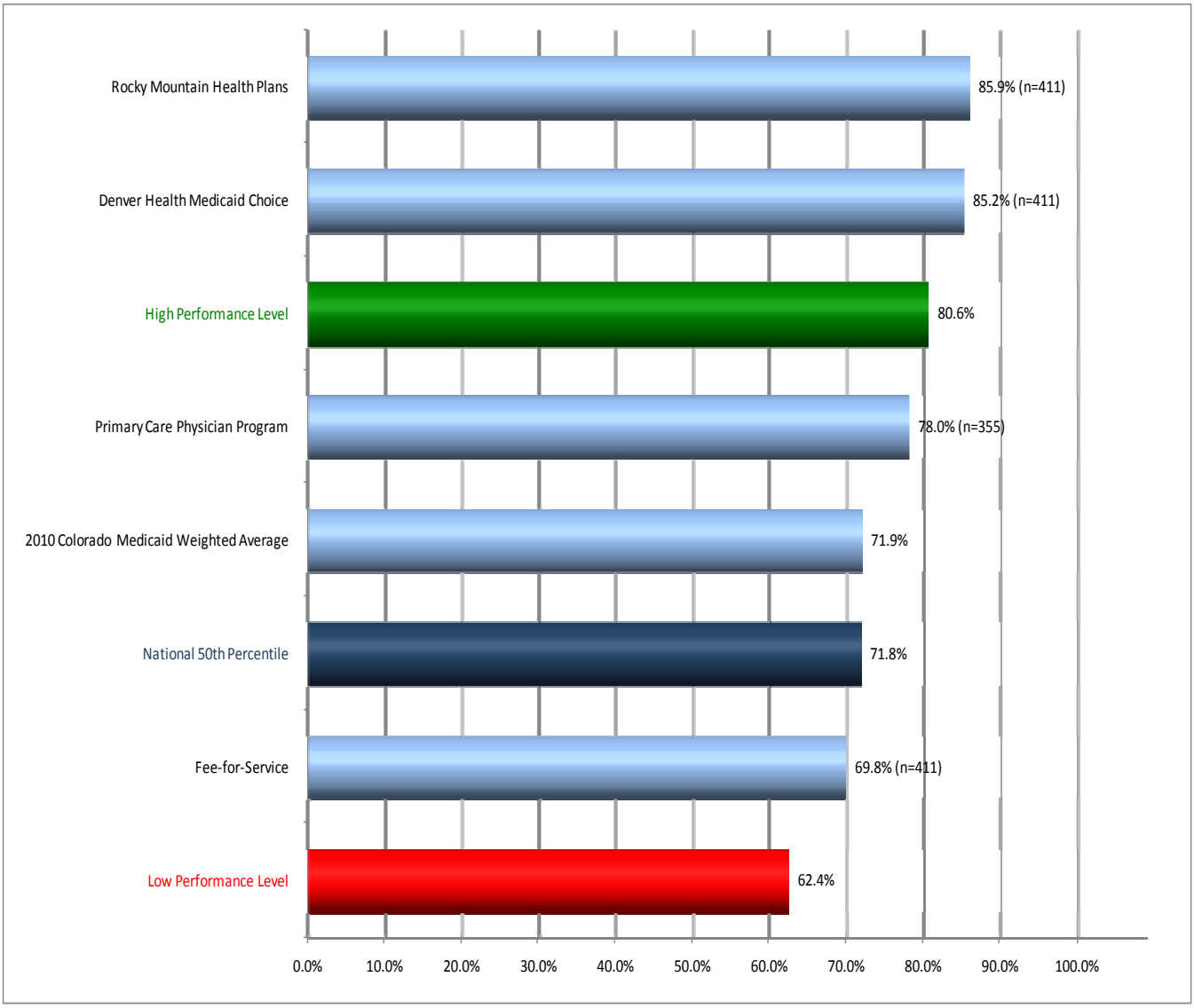
The 2010 Colorado Medicaid weighted average of 76.4 percent was below the national HEDIS 2009 Medicaid 50th percentile by 1.5 percentage points.

Figure 3-17
Childhood Immunization Status—Combination 3
Colorado Medicaid Weighted Averages



The weighted averages for *Childhood Immunization Status—Combination 3* have increased each year from 2008 to 2010. The 2010 weighted average increased 12.5 and 6.1 percentage points from the 2008 and 2009 weighted averages, respectively.

Figure 3-18
Childhood Immunization Status—Combination 3



Two health plans exceeded the HPL of 80.6 percent, and none of the health plans were below the LPL of 62.4 percent. Three health plans, including the two above the HPL, reported rates above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 71.9 percent was above the national HEDIS 2009 Medicaid 50th percentile by 0.1 percentage points.

Well-Child Visits

Measure Definitions

Well-Child Visits in the First 15 Months of Life—Zero Visits calculates the percentage of enrolled members who turned 15 months old during the measurement year, who were continuously enrolled in the health plan from 31 days of age through 15 months of age, and who received zero visits with a primary care practitioner (PCP) during their first 15 months of life.

Well-Child Visits in the First 15 Months of Life—Six or More Visits calculates the percentage of enrolled members who turned 15 months old during the measurement year, who were continuously enrolled in the health plan from 31 days of age through 15 months of age, and who received six or more visits with a PCP during their first 15 months of life.

Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life calculates the percentage of members who were three, four, five, or six years old during the measurement year, who were continuously enrolled during the measurement year, and who received one or more well-child visit with a PCP during the measurement year.

Importance

Regular check-ups are crucial to detect physical, developmental, behavioral, and emotional problems at an early stage, and well-child exams include many needed medical services important to the health and well-being of infants and children. Doctors may perform health exams and tests, such as vision, hearing, or lab services. Vaccinations are often performed concurrently, resulting in a reduction in disease, as well as savings in health costs over time. Furthermore, there is evidence that timely preventive care in children has a positive impact on overall health care utilization. Medicaid children who are up-to-date with well-child visits are approximately 48 percent less likely to have an avoidable hospitalization.[3-13]

The American Medical Association (AMA) and the American Academy of Pediatrics (AAP) recommend timely, comprehensive well-child visits for children. These periodic check-ups allow clinicians to assess a child's physical, behavioral, and developmental status and provide any necessary treatment, intervention, or referral to a specialist.[3-14] Children with poorer health status are more likely not to receive recommended well-child visits since these children tend to use more acute or specialty care.[3-15] Furthermore, there is evidence that timely preventive care in children has a positive impact on overall health care utilization. Researchers have found associations between increased well-child visits and reductions in avoidable hospitalizations, reductions in ED use, and improved child health.[3-16]

[3-13] Hakim RB, Bye BV. Effectiveness of Compliance with Pediatric Preventive Care Guidelines Among Medicaid Beneficiaries. *Pediatrics*. 2001; 108(1): 90-97.

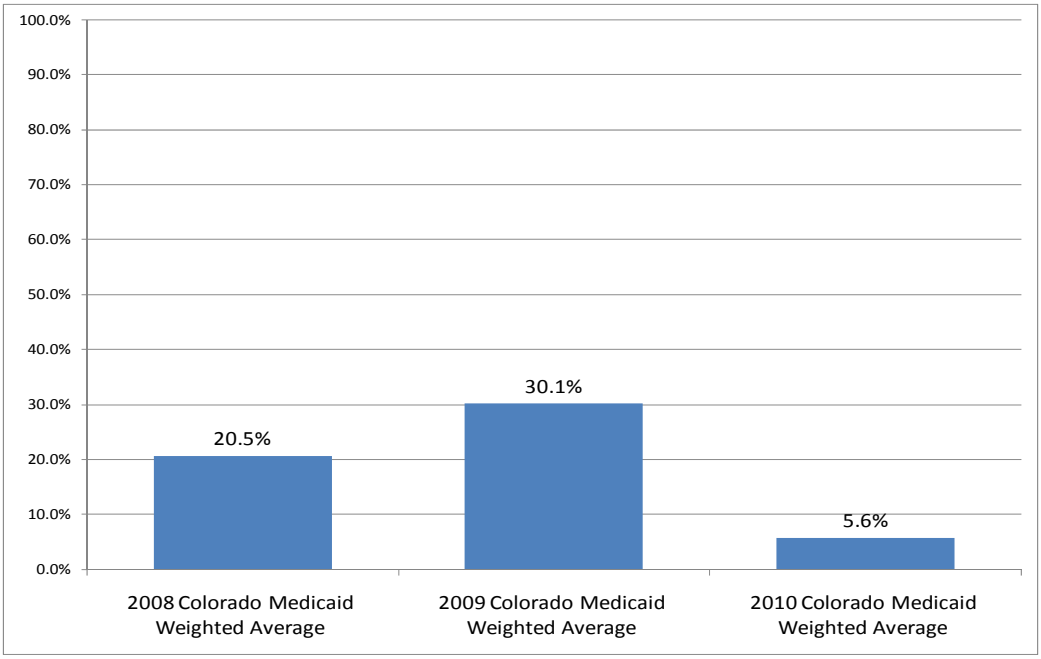
[3-14] Ibid.

[3-15] Yu SM, Bellamy HA, Kogan MD, et al. Factors That Influence Receipt of Recommended Preventive Pediatric Health and Dental Care. *Pediatrics.* 2002; 110(6): 73.

[3-16] Selden TM. Compliance with Well-Child Visit Recommendations: Evidence From the Medical Expenditure Panel Survey, 2000-2002. *Pediatrics.* 2006; 118(6): 1766-1778.

Performance Results

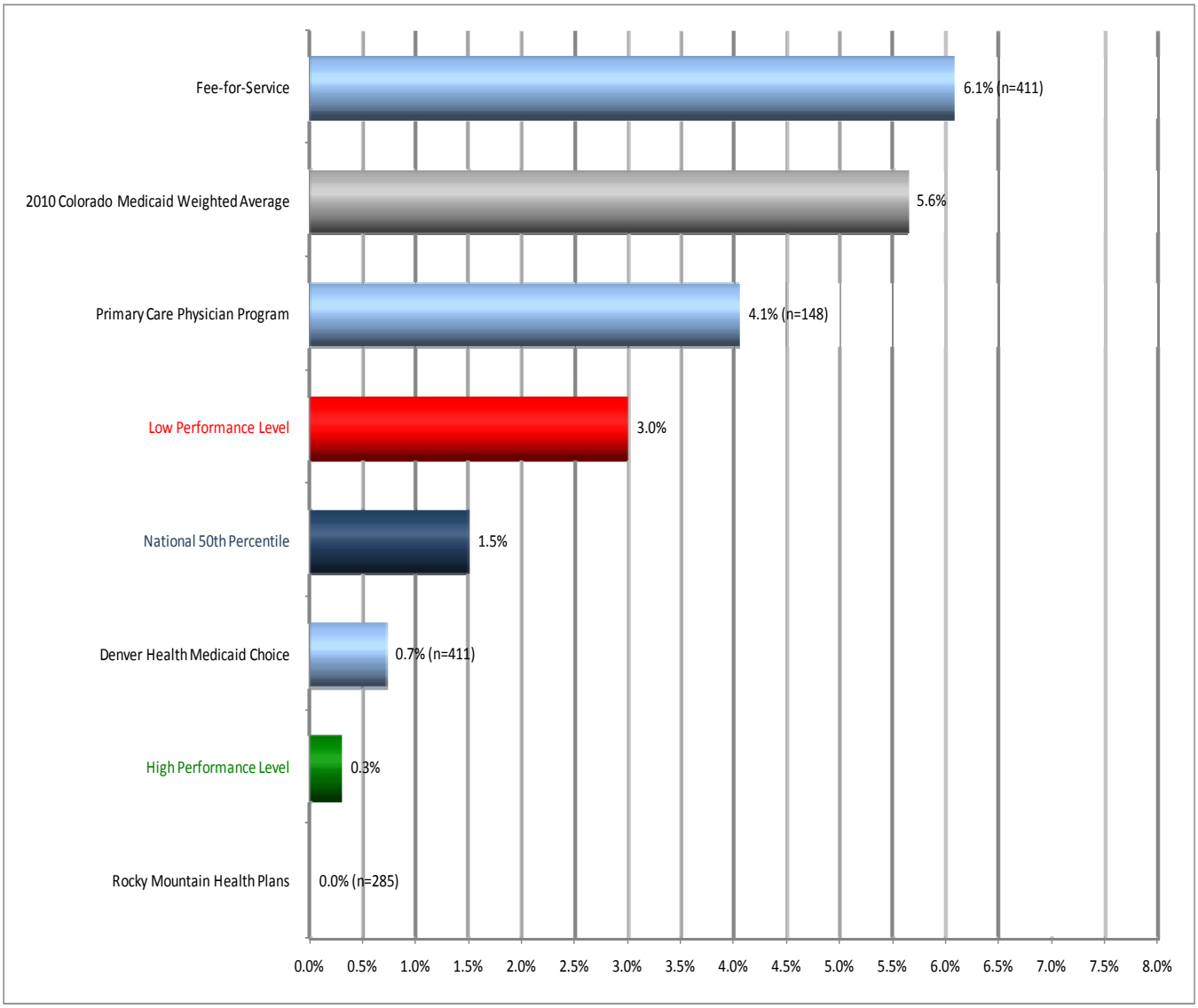
Figure 3-19
Well-Child Visits in the First 15 Months of Life—Zero Visits
Colorado Medicaid Weighted Averages



For this key measure, a *lower* rate indicates better performance, since low rates of zero visits indicate better care.

The weighted averages for *Well-Child Visits in the First 15 Months of Life—Zero Visits* increased between 2008 and 2009, but decreased between 2009 and 2010. The 2010 weighted average decreased 14.9 and 24.5 percentage points from the 2008 and 2009 weighted averages, respectively. These declines in the rate indicate an *improvement* in performance on this measure (e.g., less children with no well-child visits).

Figure 3-20
Well-Child Visits in the First 15 Months of Life—Zero Visits

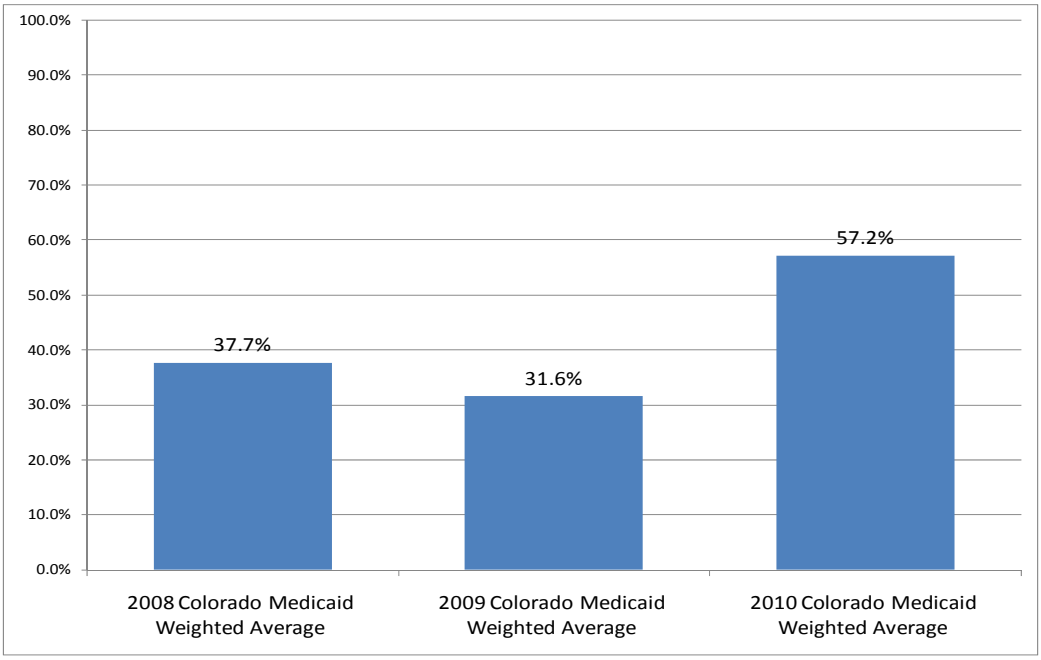


For this measure a *lower* rate indicates better performance, since low rates of zero visits indicate better care.

One health plan was below the HPL of 0.3 percent, and two of the health plans were above the LPL of 3.0 percent. A total of two health plans, including the one below the HPL, reported rates below the national HEDIS 2009 Medicaid 50th percentile.

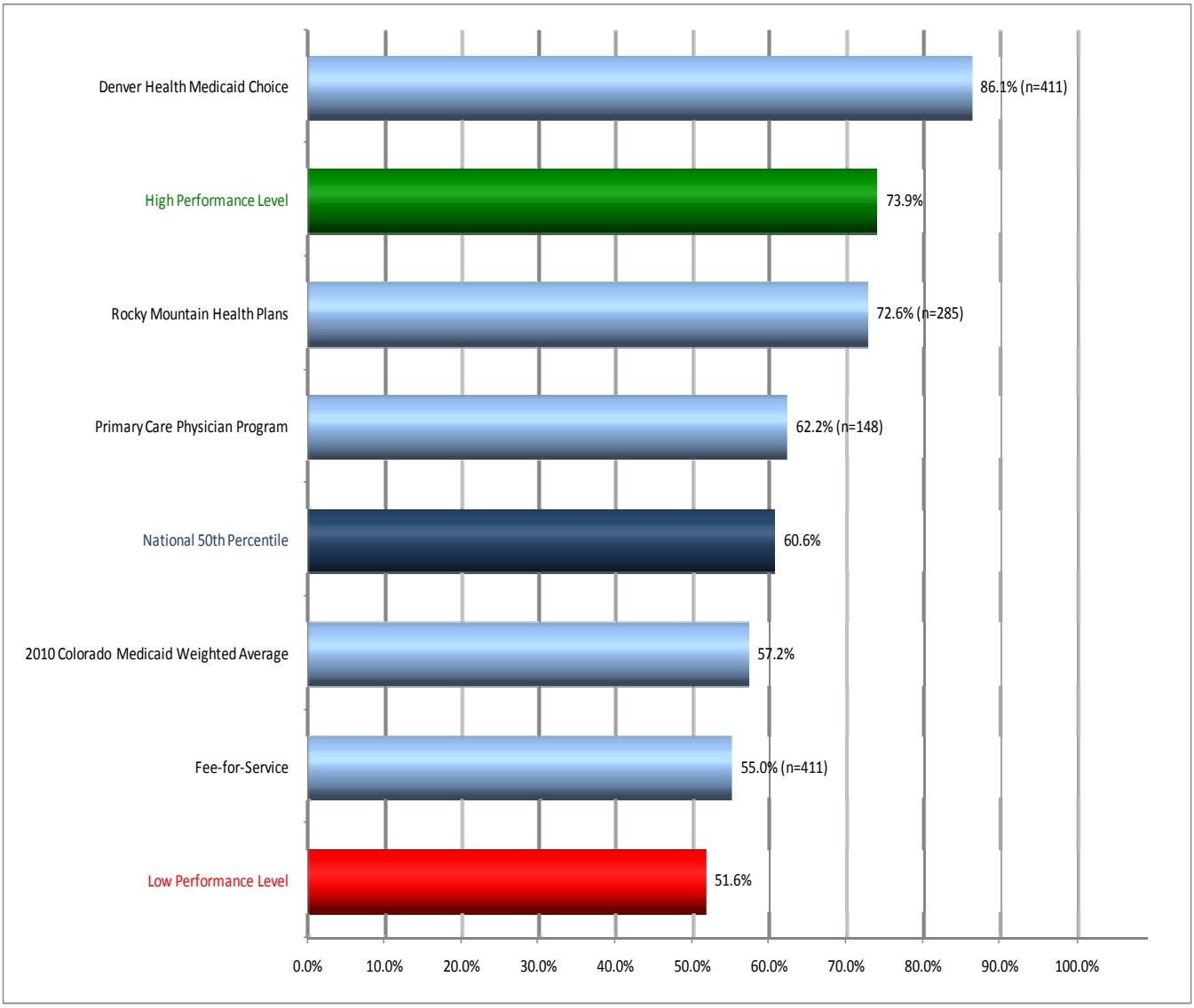
The 2010 Colorado Medicaid weighted average of 5.6 percent exceeded the national HEDIS 2009 Medicaid 50th percentile by 4.1 percentage points. This indicates that when compared to the HEDIS 2009 Medicaid 50th percentile, Colorado Medicaid's performance is worse than the national average.

Figure 3-21
Well-Child Visits in the First 15 Months of Life—Six or More Visits
Colorado Medicaid Weighted Averages



The weighted averages for *Well-Child Visits in the First 15 Months of Life—Six or More Visits* decreased between 2008 and 2009, but increased between 2009 and 2010. The 2010 weighted average increased 19.5 and 25.6 percentage points from the 2008 and 2009 weighted averages, respectively.

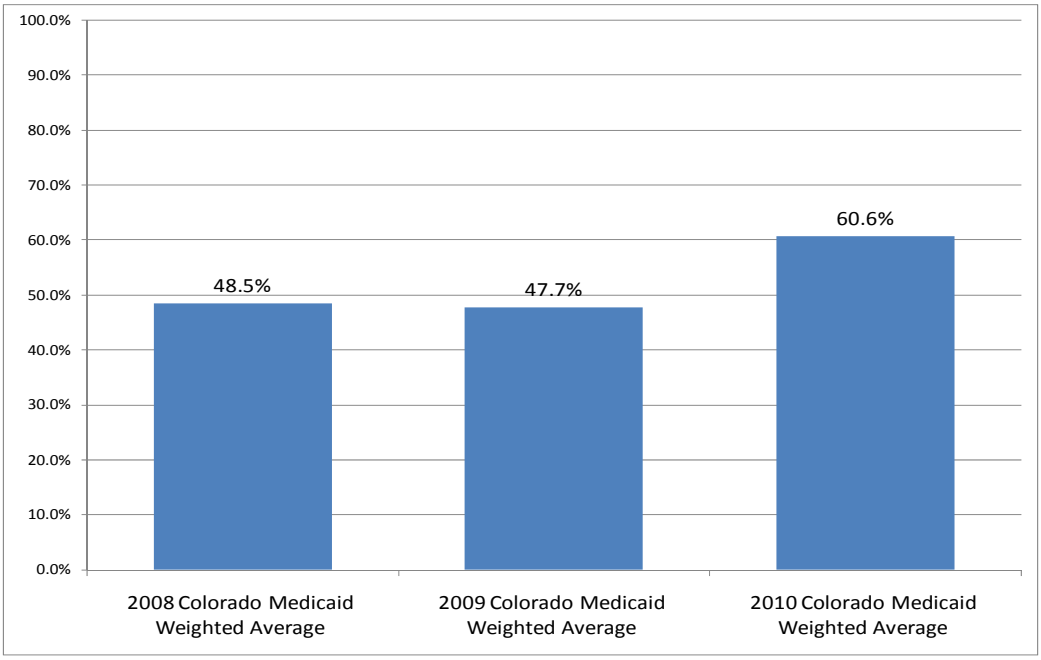
Figure 3-22
Well-Child Visits in the First 15 Months of Life—Six or More Visits



One health plan exceeded the HPL of 73.9 percent, and none of the health plans were below the LPL of 51.6 percent. Three health plans, including the one above the HPL, reported rates above the national HEDIS 2009 Medicaid 50th percentile.

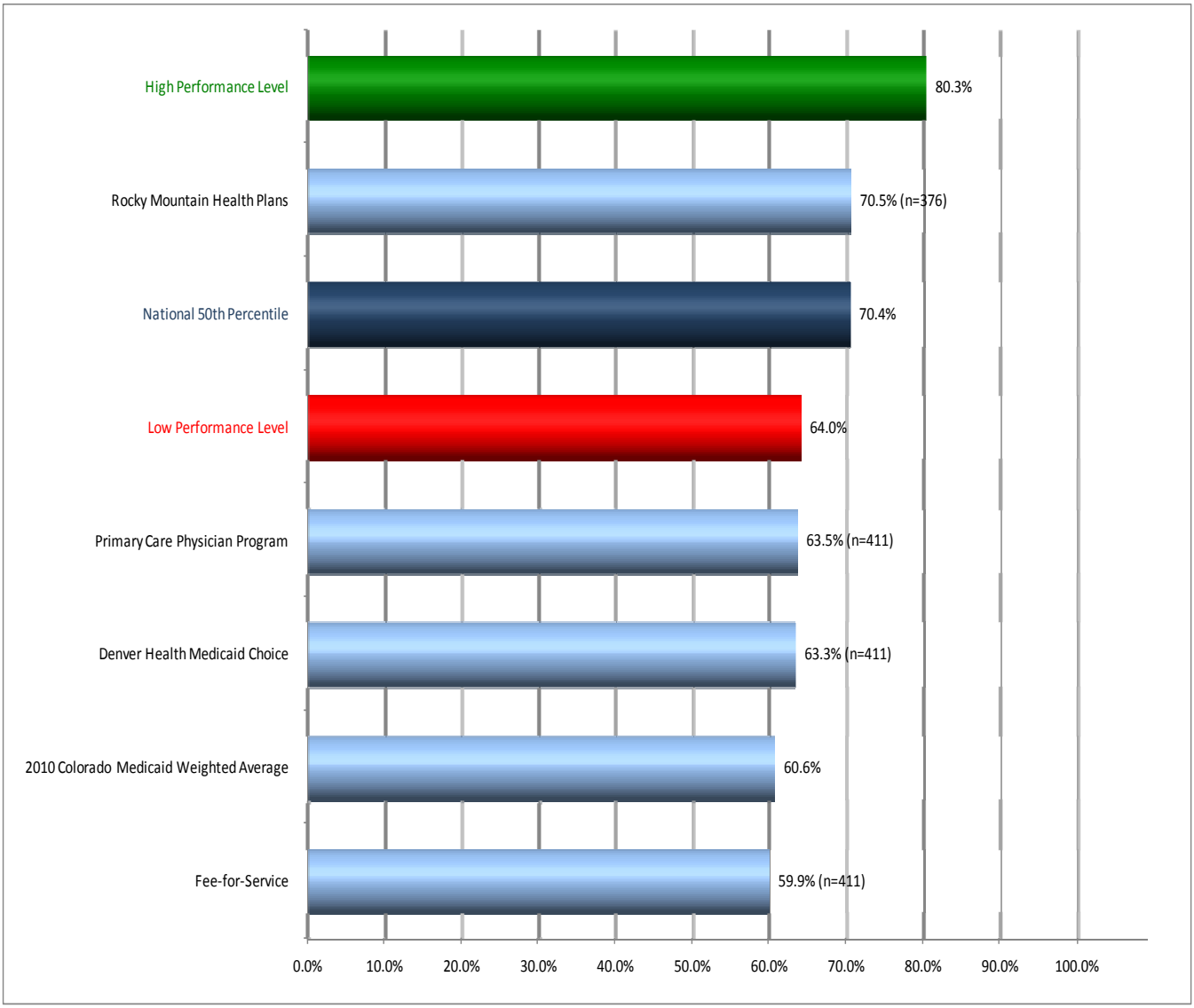
The 2010 Colorado Medicaid weighted average of 57.2 percent was below the national HEDIS 2009 Medicaid 50th percentile by 3.4 percentage points.

Figure 3-23
Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life
Colorado Medicaid Weighted Averages



The weighted averages for *Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life* decreased between 2008 and 2009, but increased between 2009 and 2010. The 2010 weighted average increased 12.1 and 12.9 percentage points from the 2008 and 2009 weighted averages, respectively.

Figure 3-24
Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years



None of the health plans exceeded the HPL of 80.3 percent, and three of the health plans were below the LPL of 64.0 percent. One health plan reported a rate above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 60.6 was below the national HEDIS 2009 Medicaid 50th percentile by 9.8 percentage points. In fact, the 2010 Colorado Medicaid weighted average was 3.4 percentage points below the LPL.

Adolescent Well-Care Visits

Measure Definition

Adolescent Well-Care Visits reports the percentage of enrolled members who were 12 to 21 years of age during the measurement year, who were continuously enrolled during the measurement year, and who had at least one comprehensive well-care visit with a PCP or an obstetrician/gynecologist (OB/GYN) during the measurement year.

Importance

Adolescents have a unique set of health care needs. Social experiences and changes in cognitive abilities lead many adolescents to experiment with activities that can threaten current health or have long-term health consequences. At least half of adolescents engage in health risk behaviors such as smoking, alcohol and drug use, aggressive behavior, and a sedentary lifestyle.[3-17] Furthermore, over 80 percent of adults who are addicted to tobacco began smoking as adolescents. Adolescents who begin drinking before age 15 are four times as likely to be alcohol dependent as those who delay drinking until at least age 21.[3-18]

Physicians can play a unique role in the counseling of young people about their behaviors and risks to their health. Annual visits can reinforce health promotion messages, identify at-risk adolescents, and build relationships that foster open disclosure of future health information.[3-19] Furthermore, regular health care visits aid in the prevention, early diagnosis, and treatment of health care conditions so that the transition from youth to adulthood is a healthy one. Adolescent well-care visits can help prevent the following physical, mental, and emotional health issues:[3-20]

- Hypertension, hyperlipidemia, and other illnesses.
- The use and abuse of alcohol, tobacco, and other drugs.
- Severe or recurrent depression and suicide.
- Physical, sexual, and emotional abuse.
- Infectious diseases.

In 2005, unintentional injury was the leading cause of death among the adolescent age group, accounting for 48.3 percent of all deaths. Homicide and suicide were the next leading causes of death, accounting for 15.2 and 11.8 percent, respectively, of all adolescent deaths.[3-21] Sexually transmitted diseases (STDs), substance abuse, pregnancy, and antisocial behavior are important causes of physical, emotional, and social problems in this age group. The AMA's Guidelines for Adolescent Preventive

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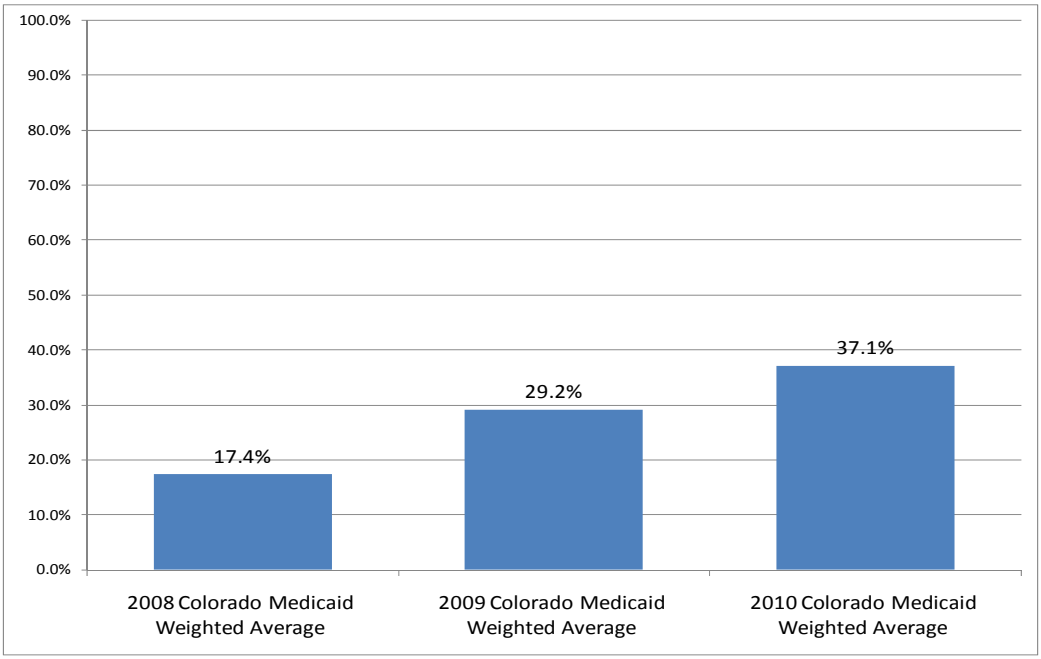
[3-17] The Robert Wood Johnson Foundation with the Child and Health Measurement Initiative. *A Portrait of Adolescents in America, 2001*. Available at: http://cahmi.org/ViewDocument.aspx?DocumentID=88. Accessed on: April 27, 2010.
[3-18] MacKay AP, Duran C, Adolescent Health in the United States, 2007. National Center for Health Statistics, 2007.
[3-19] American Medical Association. Guidelines for Adolescent Preventive Services (GAPS). Available at: http://www.ama-assn.org/ama/upload/mm/39/gapsmono.pdf. Accessed on: April 27, 2010.
[3-20] Ibid.
[3-21] U.S. Department of Health and Human Services. *Child Health USA 2007*. Available at: ftp://ftp.hrsa.gov/mchb/chusa_07/c07.pdf. Accessed on: August 26, 2010.

Services recommend that all adolescents 11 to 21 years of age have an annual preventive services visit that focuses on both the biomedical and psychosocial aspects of health.[3-22] Adolescents, however, tend to have greater difficulty obtaining appropriate health care services on their own due to developmental characteristics and lack of experience negotiating medical systems. They often need specialized planning to respond to their needs for confidentiality, quality service, and coordination of care.[3-23]

Performance Results

Figure 3-25
Adolescent Well-Care Visits
Colorado Medicaid Weighted Averages

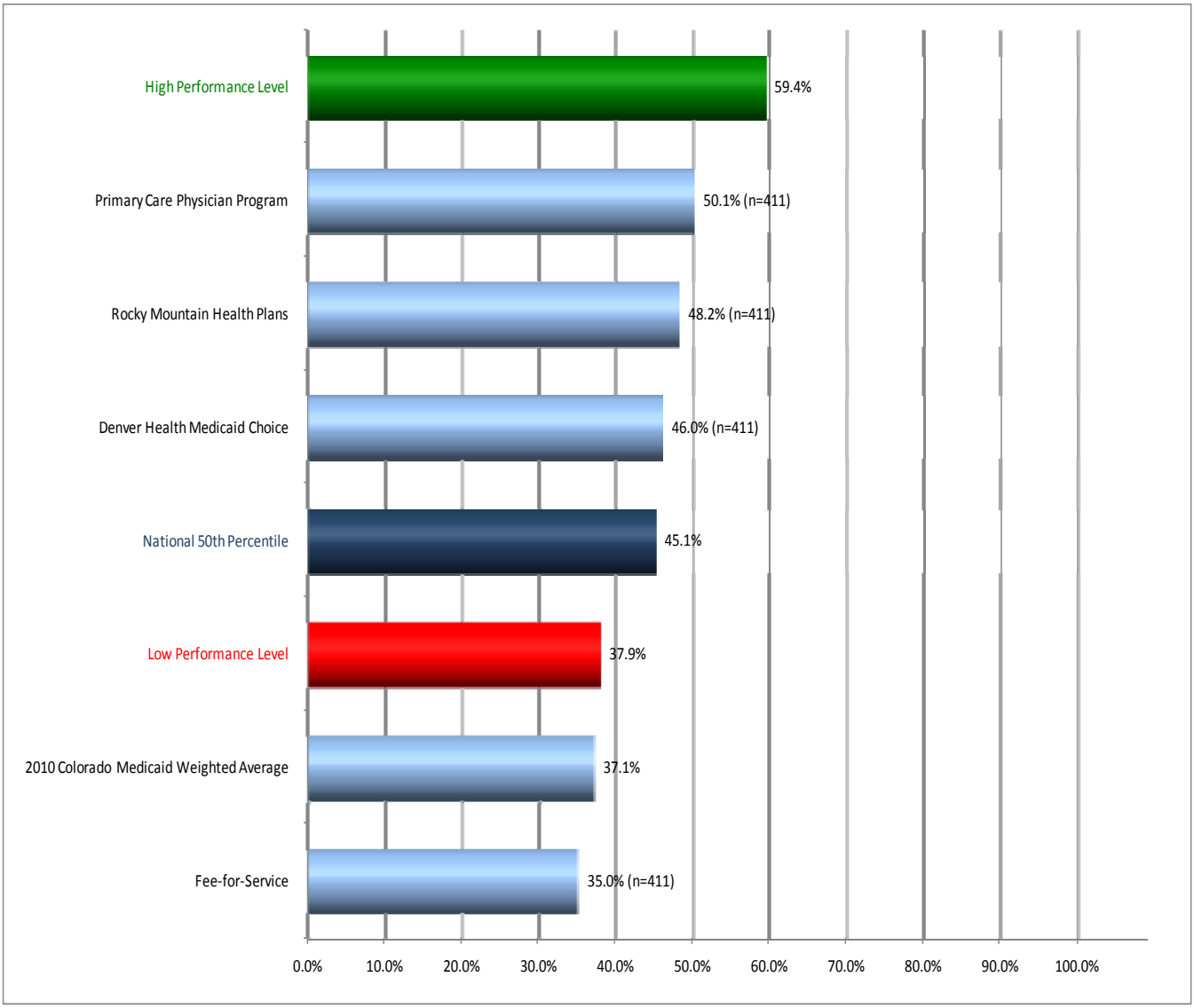


The weighted averages for *Adolescent Well-Care Visits* have increased each year from 2008 to 2010. The 2010 weighted average increased 19.7 and 7.9 percentage points from the 2008 and 2009 weighted averages, respectively.

[3-22] American Medical Association. Guidelines for Adolescent Preventive Services (GAPS). Available at: http://www.ama-assn.org/ama/upload/mm/39/gapsmono.pdf. Accessed on: August 26, 2010.

[3-23] National Adolescent Health Information Center. Assuring the Health of Adolescents in Managed Care: A Quality Checklist for Planning and Evaluating Components of Adolescent Health Care. Available at: http://nahic.ucsf.edu/downloads/Assuring_Hlth_Checklist.pdf. Accessed on: August 26, 2010.

Figure 3-26
Adolescent Well-Care Visits



None of the health plans exceeded the HPL of 59.4 percent, and one of the health plans was below the LPL of 37.9 percent. Three health plans reported rates above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 37.1 percent was below the national HEDIS 2009 Medicaid 50th percentile by 8.0 percentage points. In fact, the 2010 Colorado Medicaid weighted average was 0.8 percentage points below the LPL.

Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents

Measure Definition

Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents calculates the percentage of enrolled members between 3 and 17 years of age, who were continuously enrolled in a Colorado health plan for the measurement year, and who had an outpatient visit with a PCP or OB/GYN and who had evidence of BMI percentile documentation, counseling for nutrition, and counseling for physical activity during the measurement year.

Importance

The emergence of obesity in children and adolescents has been one of the most important developments in pediatrics, and its rapidly increasing prevalence is one of the most challenging dilemmas pediatricians face today in the United States.[3-24] In 1980, it was estimated that 6.9 percent of children 6 to 11 years of age and 5 percent of adolescents 12 to 19 years of age were obese. However, in the past 30 years the prevalence of obesity among children and adolescents has increased sharply. Results from the 2007-2008 National Health and Nutrition Examination Survey (NHANES) showed that obesity among children and adolescents increased to 19.6 percent and 18.1 percent, respectively.[3-25] Also of great concern are children who are overweight and at risk for becoming obese. Overweight children and adolescents are more likely to become obese as adults. One study found that approximately 80 percent of children who were overweight at 10 to 15 years of age were obese at age 25.[3-26]

Additionally, according to a study conducted by the CDC, it was reported that almost 25 percent of children 9 to 13 years of age did not engage in any free-time physical activity.[3-27] For young people in grades 9 through 12, the level of physical activity decreases drastically. Almost two-thirds of young people in grades 9 through 12 do not engage in the recommended levels of physical activity, and only 54 percent participate in physical education class at least once a week. Evidence has also shown that daily participation in physical education classes among high school students has dropped from 42 percent in 1991 to 33 percent in 2005.[3-28]

3-24 Agency for Healthcare Research and Quality. "Weight assessment and counseling for nutrition and physical activity for children and adolescents." *National Quality Measures Clearinghouse*. Available at: http://www.qualitymeasures.ahrq.gov/content.aspx?id=14919. Accessed on: March 9, 2010.

3-25 Ogden C, Carroll M. Prevalence of Obesity Among Children and Adolescents: United States, Trends 1963-1965 Through 2007-2008. 2010. Available at: http://www.cdc.gov/nchs/data/hestat/obesity_child_07_08/obesity_child_07_08.pdf. Accessed on: June 16, 2010.

3-26 Agency for Healthcare Research and Quality. "Weight assessment and counseling for nutrition and physical activity for children and adolescents." *National Quality Measures Clearinghouse*. Available at: http://www.qualitymeasures.ahrq.gov/content.aspx?id=14919. Accessed on: March 9, 2010.

3-27 Physical Activity Levels Among Children 9-13 Years—United States, 2002. *Morbidity and Mortality Weekly Report*. 2003; 52(33): 785-788. Available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5233a1.htm. Accessed on: June 16, 2010.

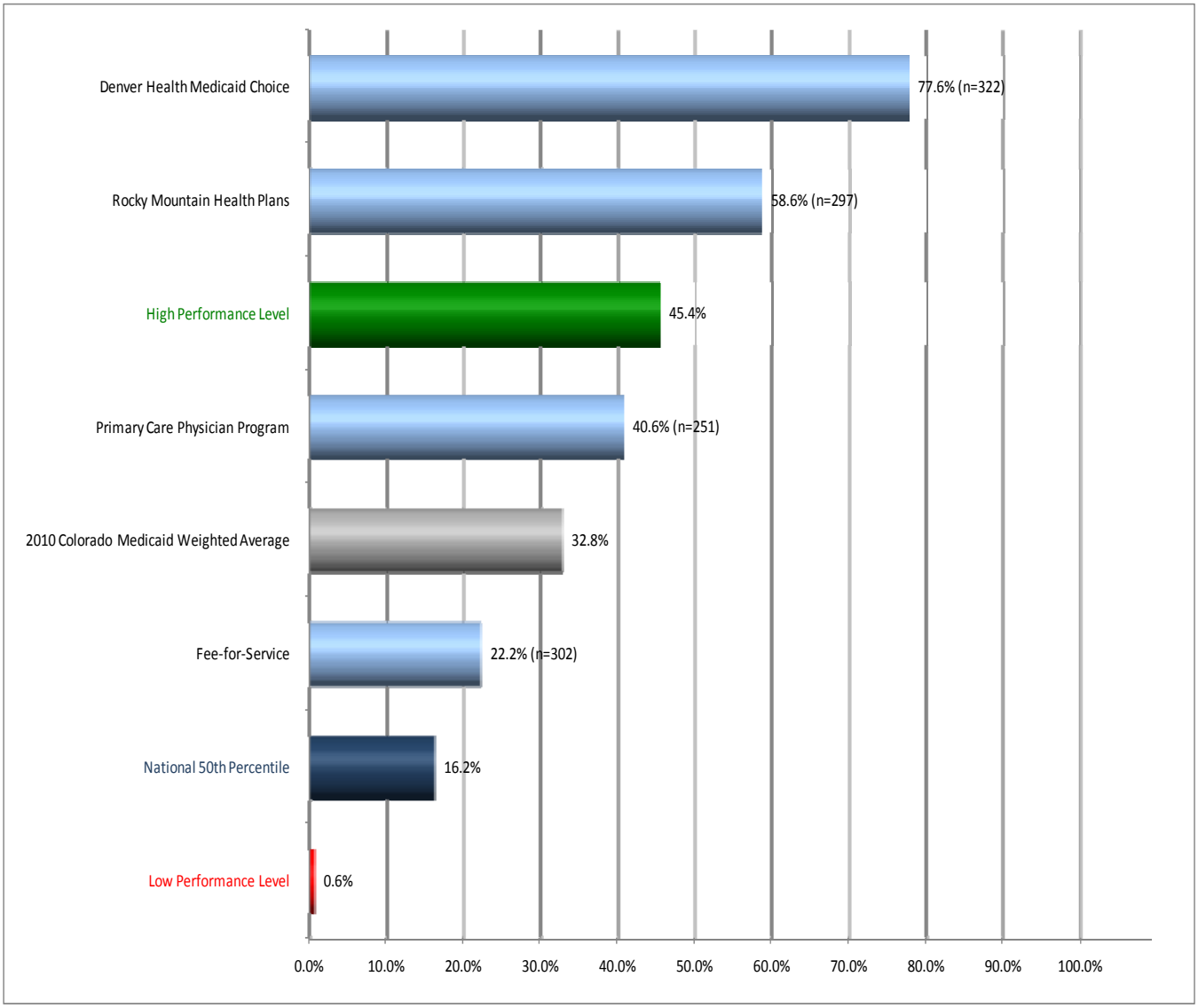
3-28 Centers for Disease Control and Prevention. Youth Behavior Surveillance – United States, 2009. Surveillance Summaries. *Morbidity and Mortality Weekly Report*. 2010; 59(No. SS-5). Available at: http://www.cdc.gov/mmwr/pdf/ss/ss5905.pdf. Accessed on: June 16, 2010

For these reasons, it is essential that children and adolescents in the United States receive adequate weight assessment and counseling for nutrition and physical activity. The first step involves screening for overweight and obesity in the physicians' offices with the calculation of a BMI. BMI is a useful screening tool for assessing and tracking the degree of obesity among children and adolescents. To address the lack of physical activity and nutritional education among children and adolescents in the United States, health care providers should promote regular physical activity and healthy eating, as well as assist parents to create an environment that supports these healthy habits.[3-29]

[3-29] U.S. Department of Health and Human Services. *Physical Activity and Health: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 1996.

Performance Results

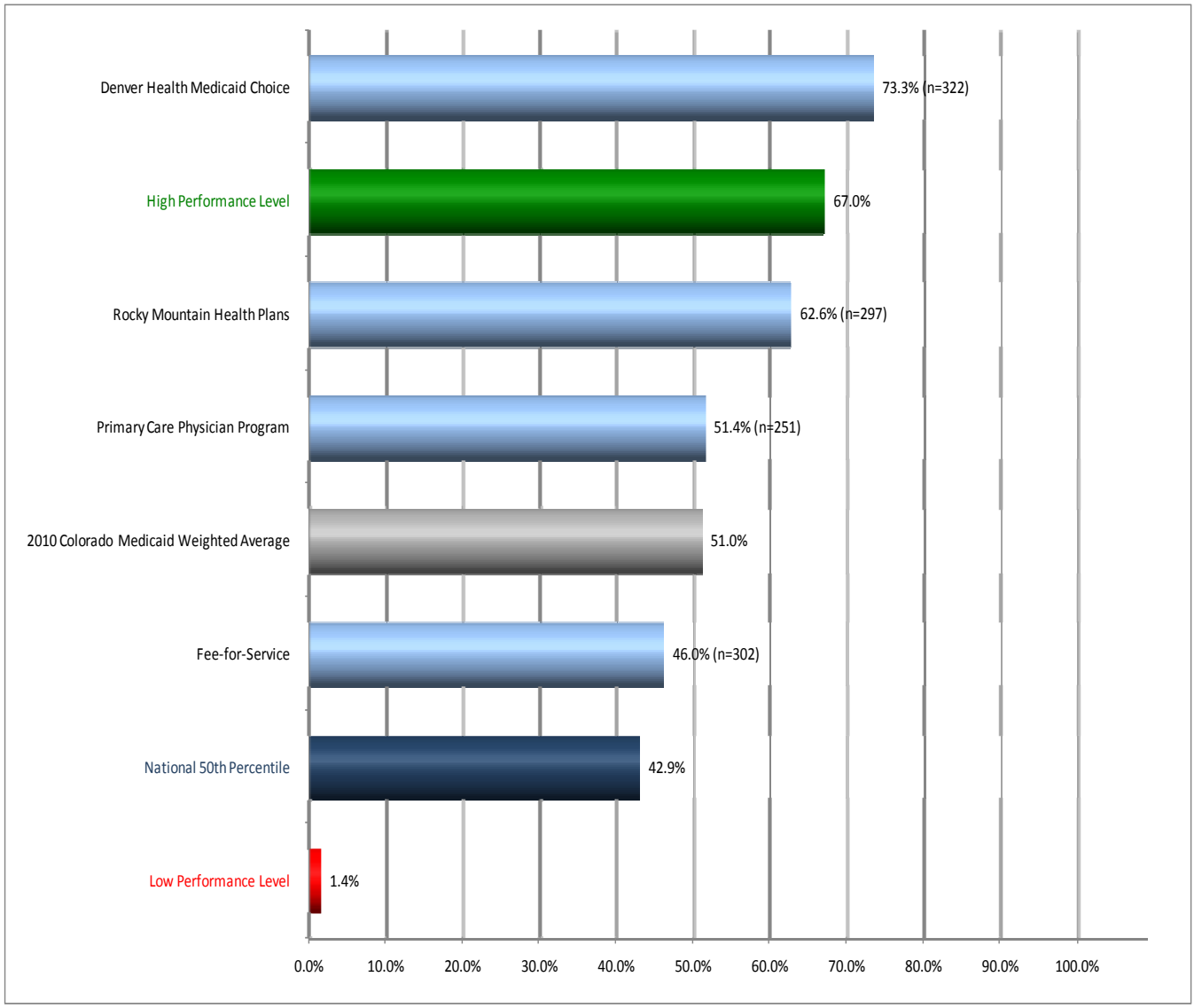
Figure 3-27
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Ages 3 to 11 Years



Two health plans exceeded the HPL of 45.4 percent, and none of the health plans were below the LPL of 0.6 percent. All four of the health plans reported rates above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 32.8 percent exceeded the national HEDIS 2009 Medicaid 50th percentile by 16.6 percentage points.

Figure 3-28
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Ages 3 to 11 Years

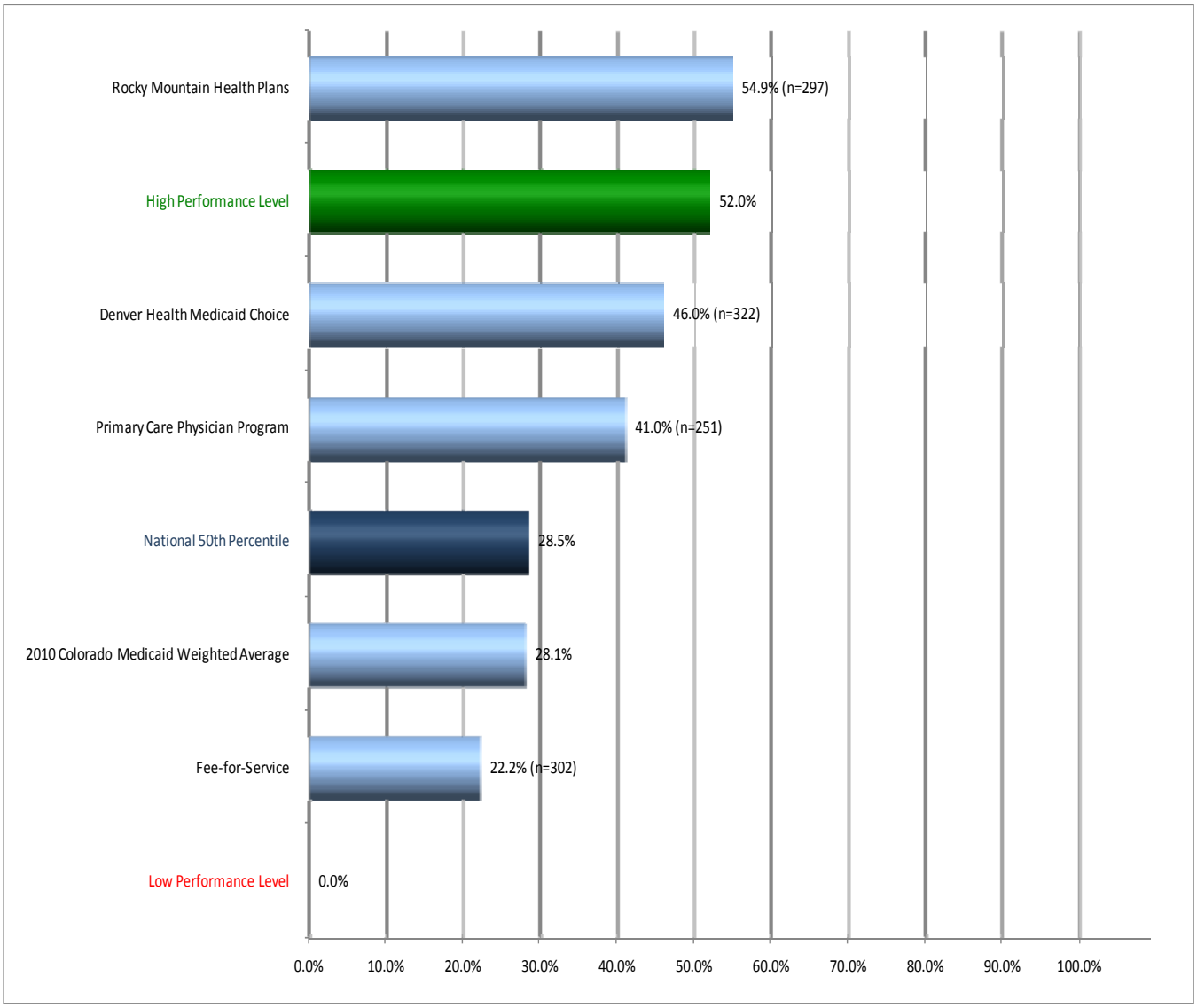


One health plan exceeded the HPL of 67.0 percent, and none of the health plans were below the LPL of 1.4 percent. All four of the health plans reported rates above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 51.0 percent exceeded the national HEDIS 2009 Medicaid 50th percentile by 8.1 percentage points.

Figure 3-29

Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Ages 3 to 11 Years

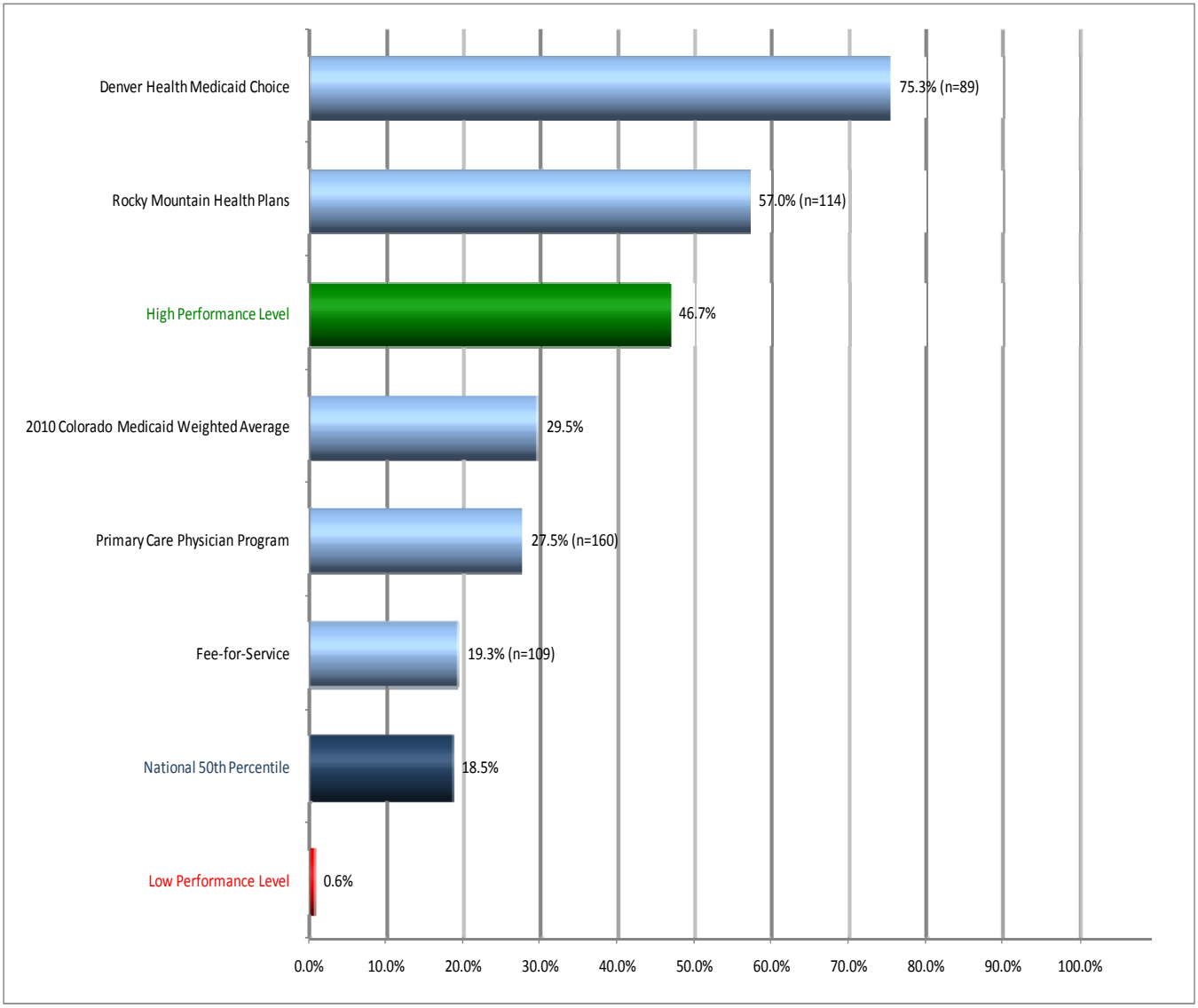


One health plan exceeded the HPL of 52.0 percent, and none of the health plans met the LPL of 0.0 percent. Three health plans, including the one above the HPL, reported rates above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 28.1 percent was below the national HEDIS 2009 Medicaid 50th percentile by 0.4 percentage points.

Figure 3-30

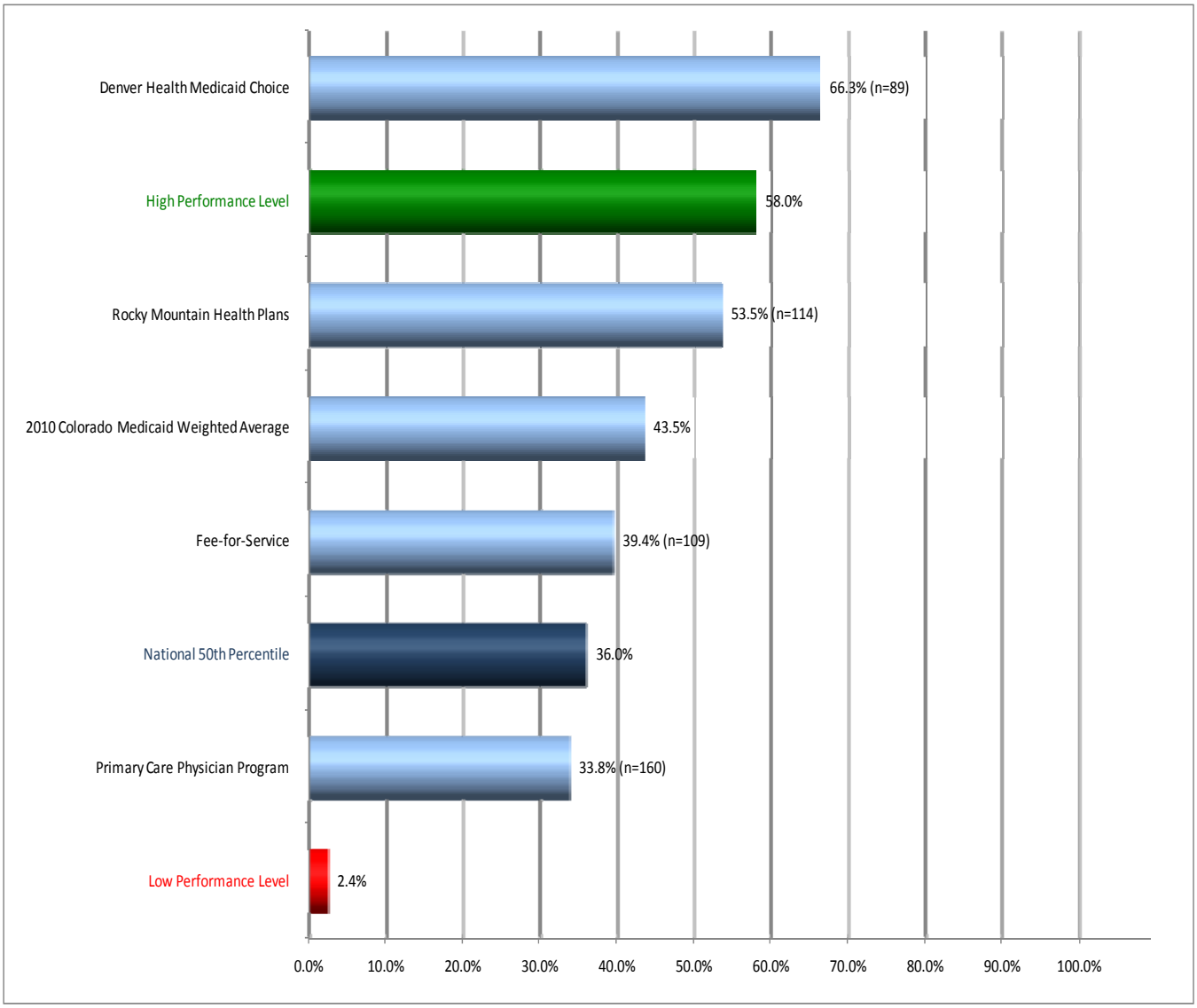
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Ages 12 to 17 Years



Two health plans exceeded the HPL of 46.7 percent, and none of the health plans were below the LPL of 0.6 percent. All four of the health plans reported rates above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 29.5 percent exceeded the national HEDIS 2009 Medicaid 50th percentile by 11.0 percentage points.

Figure 3-31
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Ages 12 to 17 Years

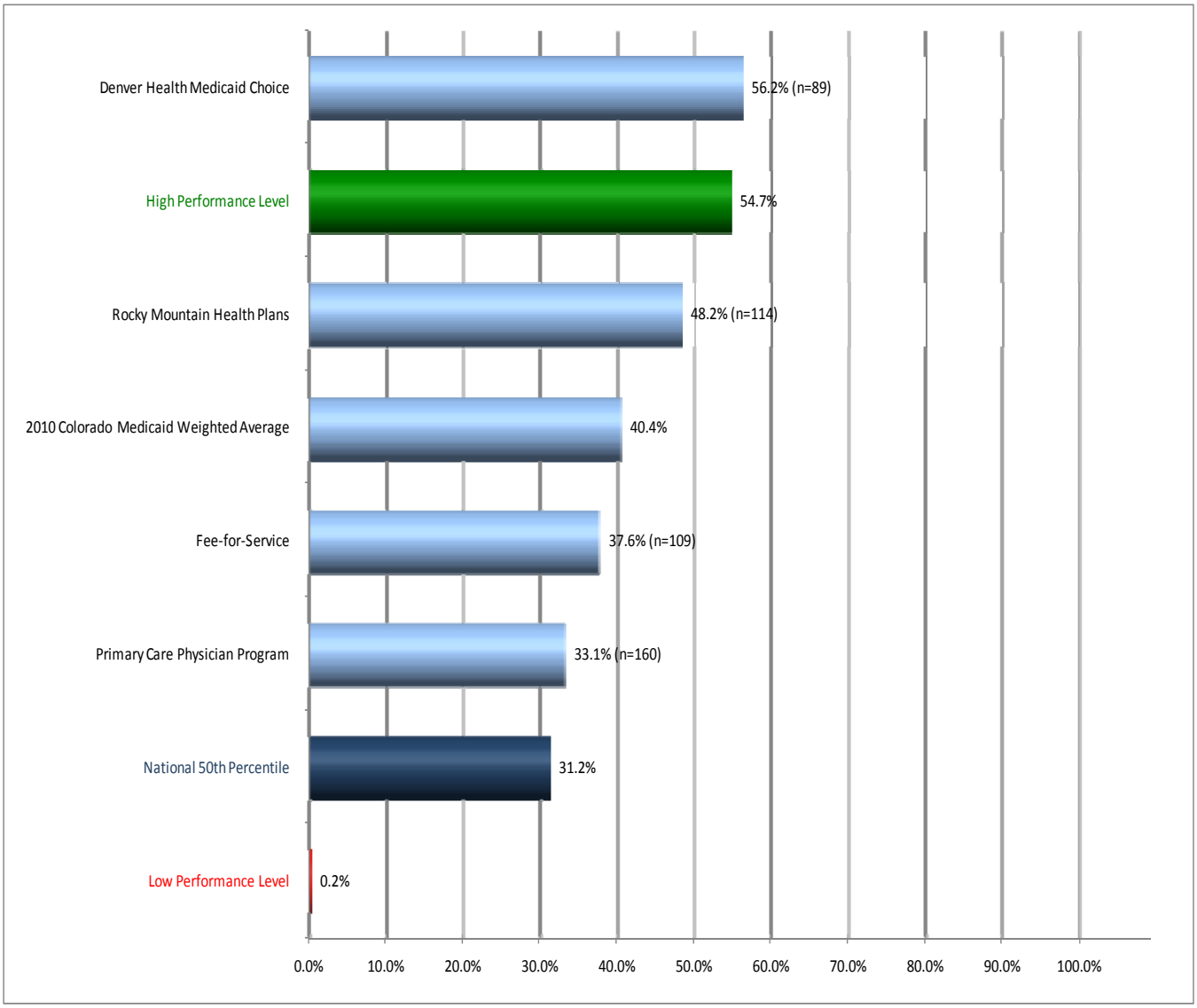


One health plan exceeded the HPL of 58.0 percent, and none of the health plans were below the LPL of 2.4 percent. A total of three health plans, including the one above the HPL, reported rates above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 43.5 percent exceeded the national HEDIS 2009 Medicaid 50th percentile by 7.5 percentage points.

Figure 3-32

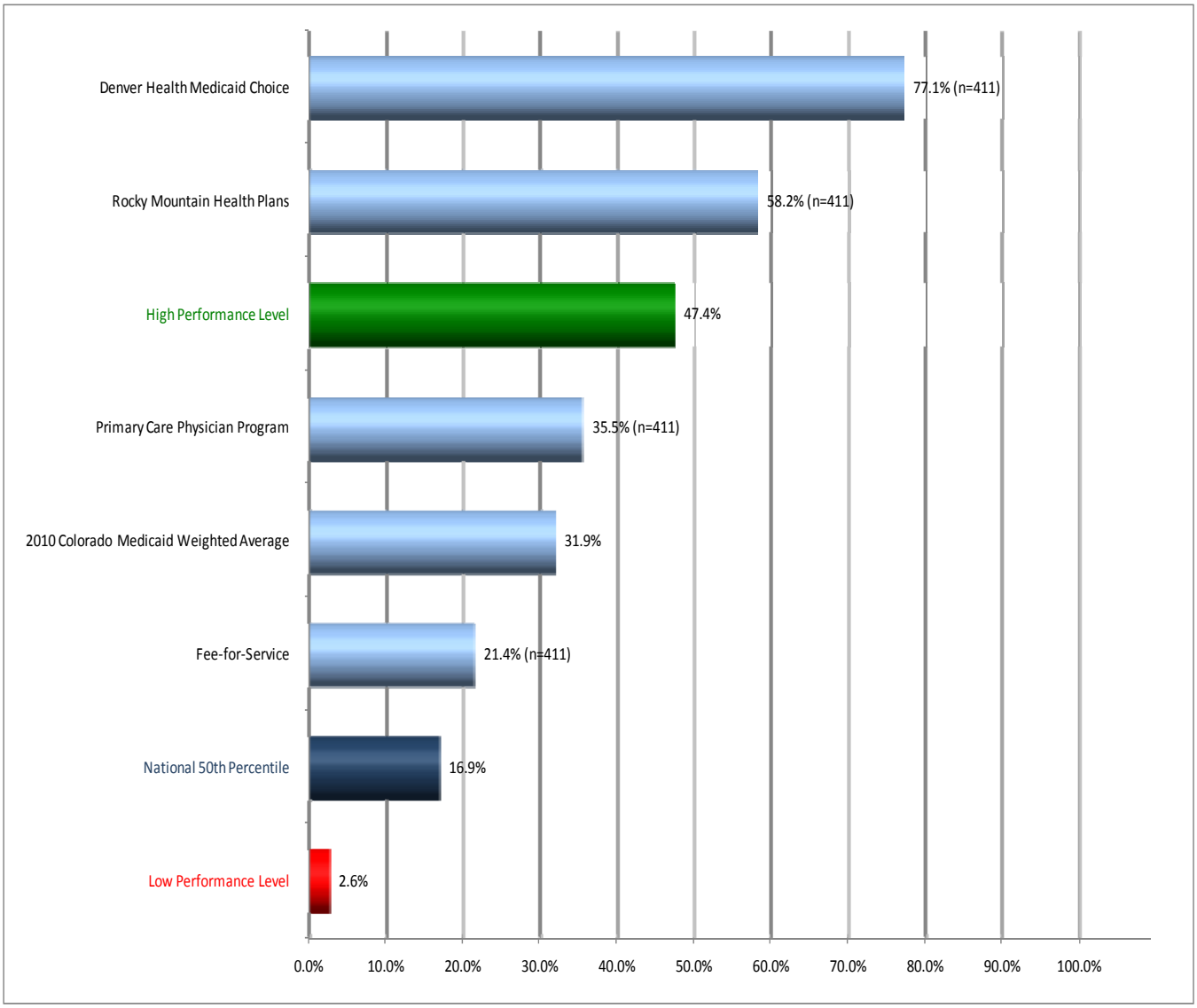
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Ages 12 to 17 Years



One health plan exceeded the HPL of 54.7 percent, and none of the health plans were below the LPL of 0.2 percent. All four of the health plans reported rates above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 40.4 percent exceeded the national HEDIS 2009 Medicaid 50th percentile by 9.2 percentage points.

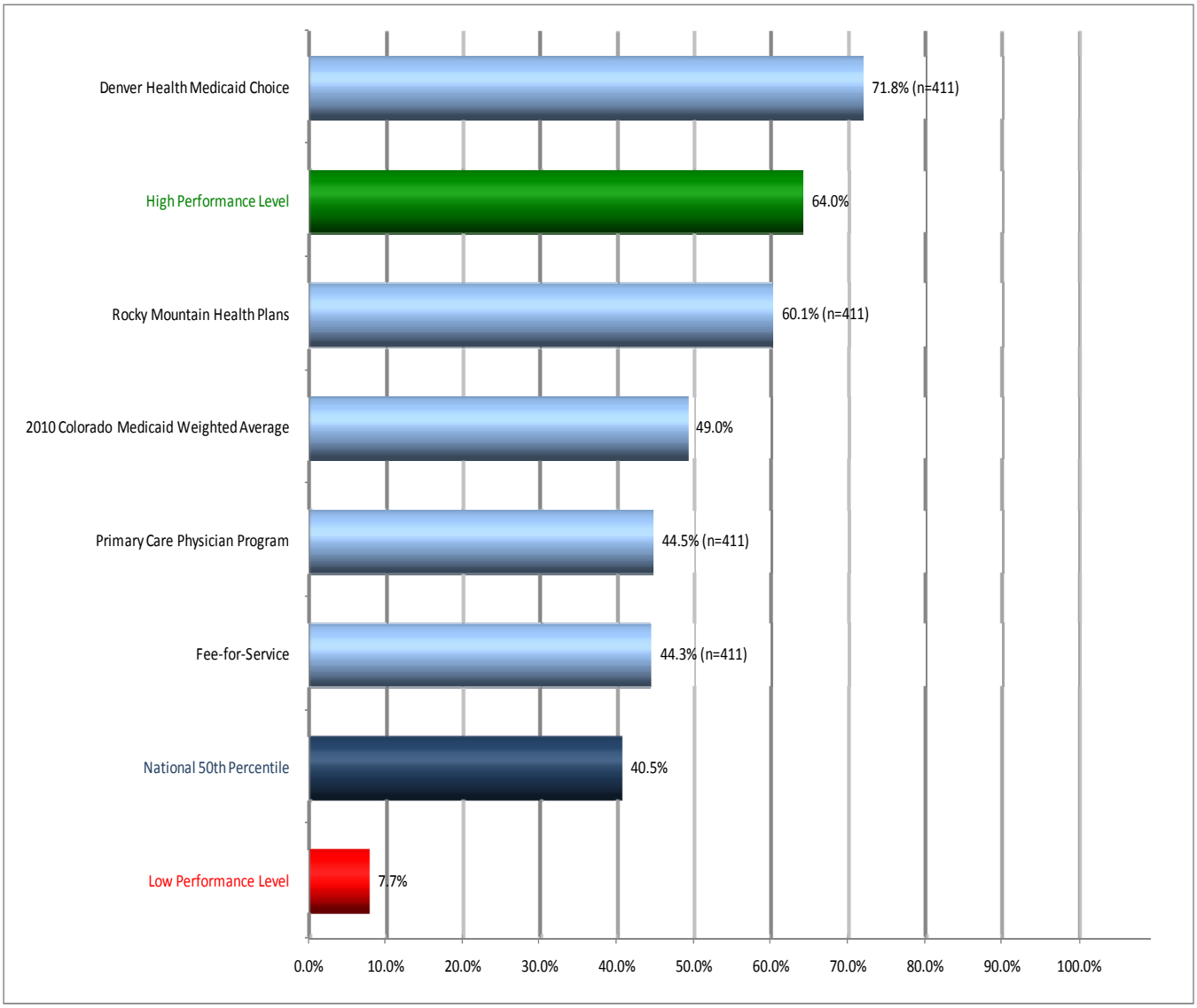
Figure 3-33
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Total



Two health plans exceeded the HPL of 47.4 percent, and none of the health plans were below the LPL of 2.6 percent. All four of the health plans reported rates above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 31.9 percent exceeded the national HEDIS 2009 Medicaid 50th percentile by 15.0 percentage points.

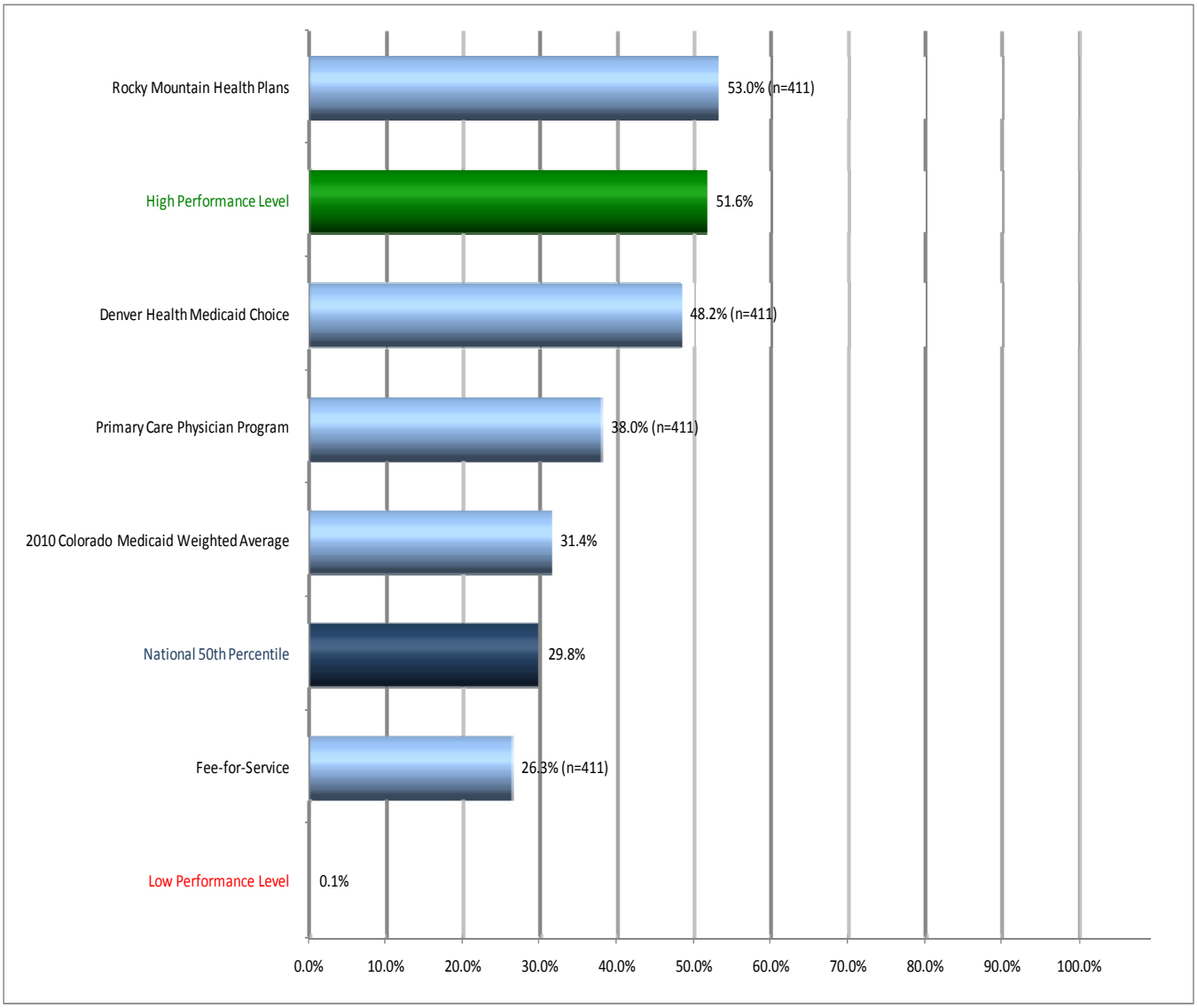
Figure 3-34
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Total



One health plan exceeded the HPL of 64.0 percent, and none of the health plans were below the LPL of 7.7 percent. All four of the health plans reported rates above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 49.0 percent exceeded the national HEDIS 2009 Medicaid 50th percentile by 8.5 percentage points.

Figure 3-35
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Total



One health plan exceeded the HPL of 51.6 percent, and none of the health plans were below the LPL of 0.1 percent. Three health plans, including the one above the HPL, reported rates above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 31.4 percent exceeded the national HEDIS 2009 Medicaid 50th percentile by 1.6 percentage points.

Pediatric Care Findings and Recommendations

Summary of Findings

Table 3-1 presents a summary of the health plans' overall performance (in rank order from highest-to-lowest performing health plan) on the Pediatric Care dimension.

Table 3-1
Overall Pediatric Care Performance Summary

Health Plan Name	Pediatric Care
RMHP	★★★★
DHMC	★★★★
PCPP	★★★
FFS	★★

The highest performing health plans in the Pediatric Care dimension were RMHP and DHMC. FFS, on the other hand, was the lowest performing health plan in this dimension.

Table 3-2 presents a summary of the health plans' performance for each of the measures in the Pediatric Care dimension.

Table 3-2
Pediatric Care Performance Summary

Measure	FFS	PCPP	DHMC	RMHP
Childhood Immunization Status—DTaP	★★★	★★★	★★★★	★★★★★
Childhood Immunization Status—IPV	★★★	★★★	★★★★	★★★★★
Childhood Immunization Status—MMR	★★	★★★★	★★★	★★★★
Childhood Immunization Status—HiB	★	★★★★	★★★	★★★★
Childhood Immunization Status—Hepatitis B	★★★	★★★	★★★★	★★★★★
Childhood Immunization Status—VZV	★★	★★★★	★★★	★★★★
Childhood Immunization Status—Pneumococcal Conjugate	★★★	★★★★★	★★★★★	★★★★★
Childhood Immunization Status—Combination 2	★★	★★★	★★★★★	★★★★★
Childhood Immunization Status—Combination 3	★★	★★★★	★★★★★	★★★★★
Well-Child Visits in the First 15 Months of Life—Zero Visits*	0	★	★★★★	★★★★★
Well-Child Visits in the First 15 Months of Life—Six or More Visits	★★	★★★	★★★★★	★★★★
Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life	★	★	★	★★★
Adolescent Well-Care Visits	★	★★★	★★★	★★★
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Ages 3 to 11 Years	★★★	★★★★	★★★★★	★★★★★
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Ages 3 to 11 Years	★★★	★★★	★★★★★	★★★★
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Ages 3 to 11 Years	★★	★★★★	★★★★	★★★★★
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Ages 12 to 17 Years	★★★	★★★	★★★★★	★★★★★
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Ages 12 to 17 Years	★★★	★★	★★★★★	★★★★
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Ages 12 to 17 Years	★★★	★★★	★★★★★	★★★★
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Total	★★★	★★★★	★★★★★	★★★★★
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Total	★★★	★★★	★★★★★	★★★★
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Total	★★	★★★	★★★★	★★★★★

*Note: For this indicator a *lower* rate indicates better performance; therefore, the star ratings are based on rotated percentiles.

Table 3-3 presents a summary of the number of measures that fell into each star rating category for the Pediatric Care dimension for each health plan.

Table 3-3
Pediatric Care Star Ratings Summary

Health Plan Name	5 Stars	4 Stars	3 Stars	2 Stars	1 Star	0 Stars	NA/NR
FFS	0	0	11	7	3	1	0
PCPP	1	7	11	1	2	0	0
DHMC	11	6	4	0	1	0	0
RMHP	12	8	2	0	0	0	0

RMHP scored at or above the national HEDIS 2009 Medicaid 90th percentile (i.e., five stars) on 12 measures in the Pediatric Care dimension. FFS, on the other hand, scored below the national HEDIS 2009 Medicaid 10th percentile (i.e., zero stars) on one measure in this domain.

Best Practices

Childhood Immunization Status

Patient Reminders/Recalls: A Stepped Intervention

A stepped intervention has been found to improve childhood immunization rates.[3-30] The steps involve:

- Mailing language-appropriate reminder postcards to members before every visit.
- Following up by postcard and telephone to non-responders for missed appointments and/or immunizations.
- Offering case management and/or home visits for children missing or behind on immunizations.

This multi-level stepped approach has proven to be successful in achieving higher immunization rates for children who were at risk for receiving delayed immunizations.

Parent Education

Educating parents through language appropriate materials about the benefits, safety, and risks associated with vaccine-preventable diseases and the impact immunizations have on the prevalence of these diseases has been shown to improve coverage. In addition, providing parents with information as to where they can find reliable and accurate immunization and vaccine information online can assist in minimizing the negative impact of false and inaccurate information.[3-31]

Provider Reminders

Studies have shown that provider reminders are helpful in increasing childhood immunization rates. Plans can provide providers with a list of patients who are due or past due for receiving routine immunizations so that they can follow up with them. In addition, providers should be encouraged to use internal reminder systems, such as posting notices on patients' charts when certain vaccines are not on record or an immunization is due/past due. These reminders can prompt providers to offer immunizations to patients during routine or sick visits.[3-32]

Identify Alternative Venues and Expand Access to Immunizations

Identifying alternative settings where children can receive immunizations and notifying members and providers of these settings can be helpful in improving the delivery and rates of vaccinations. Additional venues could include public health department clinics; Women, Infants, and Children (WIC) program offices; school-based health clinics; child care centers; and where permissible, pharmacies. Coupled with identifying and collaborating with alternative venues, health plans need to

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[3-30] Hambridge SJ, Phibbs SL, Chandramouli V, et al. A Stepped Intervention Increases Well-Child Care and Immunization Rates in a Disadvantaged Population. *Pediatrics*. 2009; 124(2): 455-464.

[3-31] American Academy of Pediatrics. Increasing Immunization Coverage. *Pediatrics*. 2010; 125(6): 1299-1304.

[3-32] Centers for Disease Control and Prevention. *Epidemiology and Prevention of Vaccine-Preventable Diseases*. 11th ed. Washington, DC: Public Health Foundation; 2009. Available at: http://www.cdc.gov/vaccines/pubs/pinkbook/pink-chapters.htm. Accessed on: May 18, 2010.

capture the services provided at these alternative sites either by receiving claims or capturing in a supplemental database. Additionally, multi-component interventions to expand access to immunizations in health care settings, such as reducing the distance from vaccination settings to patient homes, increasing or changing hours to include after-hours or weekend services, developing "drop-in" clinics or "express lane" vaccination services, have proven to be effective in increasing childhood immunization rates.[3-33]

Conduct Regular Assessments

Conducting regular assessments of immunization rates are proven to increase vaccination coverage in a range of clinical settings and across populations. Ongoing evaluations of each child's immunization status are most effective when they combine chart reviews with providing the results to health care professionals and staff. Effective interventions may also include provider incentives or a comparison of performance to a goal or standard (i.e., benchmarking). This process is commonly referred to as assessment, feedback, incentives, and exchange of information (AFIX). Annual assessment of immunization levels are recommended so that reasons for low coverage can be identified and addressed.[3-34]

Well-Child and Well-Care Visits

Improve Access

Open access appointments can increase compliance by expanding provider availability.[3-35] Evening or weekend clinic hours for providers can accommodate parents who cannot take time off from work. For example, one Saturday a month could be set aside for children and adolescents, with clinicians designated to perform well visits on that day. Visits on certain days could be made available on a walk-in, first-come, first-serve basis. Additionally, parents should be encouraged to schedule their next visit before leaving the clinic.

Providing improved access to transportation would likely increase well visit compliance. One method to improve transportation issues would be to coordinate with community volunteers and other outreach services to provide transportation to and from doctors' offices and clinics.

Reminder Systems

Postcards are an easy and effective tool for increasing well-visits. They can be sent to parents as a reminder to schedule their child's well-visit. To be most effective, postcards should include contact information for either doctors' offices near the member's address or the member's assigned PCP. In addition, age-specific forms, detailing what services should be provided and why they are important to the well-being of the child, can help educate parents.

[3-33] Shefer A, Briss P, Rodewald L, et al. Improving Immunization Coverage Rates: And Evidence-based Review of the Literature. *Epidemiological Reviews*. 1999. Available at: http://epirev.oxfordjournals.org/cgi/reprint/21/1/96. Accessed on: May 18, 2010.

[3-34] Institute for Clinical Systems Improvement. Health Care Guideline: Immunizations. 2010. Available at: http://www.icsi.org/immunizations___guideline_/immunizations__guideline__38400.html. Accessed on: June 1, 2010.

Physician Education

Quarterly provider reports that highlight children and adolescents in need of well-visits are useful for promoting visit reminders and helping providers track their performance. Members who saw a doctor but did not have a well-visit can be flagged as missed opportunities. To make this information pertinent to providers, their performance may be tied to a recognition program for providers who display outstanding performance. Another practice that can improve well visit compliance is to educate providers on proper billing codes for well-child visits, which can reduce missed opportunities.

Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents

Educate Parents and Guardians

Educating parents and guardians on the importance of providing children and adolescents with a healthy diet and the significance of encouraging daily physical activity can be highly beneficial. Educational information and resources can include written or Web-based materials with information on the value of BMI assessment and information on community-based physical activity/weight management programs. Evidence also suggests that providing information and practical strategies related to good nutrition and meal preparation will lead to an increase in knowledge about healthy nutrition and an increase in health eating behaviors.[3-36]

Educate Health Care Professionals

Educating health care professionals and providing them with the tools, skills, and knowledge necessary to identify and screen children and adolescents for obesity in a primary care setting is crucial. Physician visits offer health care providers and other clinicians the opportunity to provide preventive services, such as BMI assessments, dietary counseling, and related weight management and nutrition services. Studies indicate that adolescents view their physicians as a trustworthy source of health information and that parents want clinicians to provide these services.[3-37]

[3-35] O'Connor ME, Matthews BS, Gao D. Effect of Open Access Scheduling on Missed Appointments, Immunizations, and Continuity of Care for Infant Well-Child Care Visits. *Archives of Pediatrics & Adolescent Medicine.* 2006; 160: 889-893.

[3-36] U.S. Department of Health and Human Services (HHS) and United States Department of Agriculture (USDA). *Dietary Guidelines for Americans, 2005*. Washington, D.C.: HHS; 2005. Available at: http://www.health.gov/dietaryguidelines/dga2005/report/. Accessed on: August 28, 2010.

[3-37] Ibid.

4. Access to Care

Introduction

Access to routine health care is essential to effectively diagnose and treat health problems, to ensure continuity of care, and to increase the duration and quality of life. Establishing a relationship with a PCP is necessary to improve access to care for both adults and children. To increase access to quality care, health plans should focus on identifying barriers to existing health services and eliminating access-related disparities. Through this process, health plans can increase preventive care.

Statistics regarding access to care often vary considerably by race. The CDC reports that during 2006, approximately 902 million visits were made to office-based physicians in the United States. The visit rate for Whites was higher than the rate for African-American and Hispanic individuals (323.9 versus 235.4 and 271.0 visits per 100 individuals per year, respectively).[4-1] Furthermore, the type or lack of insurance coverage has a significant impact on the ability to obtain timely access to care. Individuals with Medicaid coverage were less likely to receive an appointment than those with private coverage (34.2 percent for Medicaid compared with 63.3 percent for private insurance).[4-2]

Better primary care improves equity in health.[4-3] Areas with high income inequality have a one-third higher rate of reporting poor or fair health if coincident with a poor supply of PCPs. Several studies have compared patients at community health centers (CHCs), which provide high quality primary care services, to the general population and found health disparities are significantly decreased in these settings.[4-4]

Higher continuity of care is correlated with improved utilization in primary care settings. This includes better treatment compliance, lower ED usage, and lower hospitalization rates.[4-5] Having a regular source of care was found to be the most important factor associated with receiving preventive care services, even after considering the effect of demographic characteristics, financial status, and need for ongoing care.

The following pages provide detailed analysis of the Colorado health plans' performance.

4.1 Centers for Disease Control and Prevention. National Ambulatory Medical Care Survey: 2006 Summary. Available at: http://www.cdc.gov/nchs/data/nhsr/nhsr003.pdf. Accessed on: August 26, 2010.

4-2 Asplin BR, Rhodes KV, Levy H, et al. Insurance Status and Access to Urgent Ambulatory Care Follow-up Appointments. *Journal of the American Medical Association*. 2005; 294: 1248–1254.

4-3 Murray M, Swanson JA, Margolis PA. Behind Schedule: Improving Access to Care for Children One Practice at a Time. *Pediatrics.* 2004; 113(3): e230-237.

4-4 Starfield B, Shi L. The Medical Home, Access to Care, and Insurance: A Review of Evidence. *Pediatrics.* 2004; 113(5): 1493-1498.

4-5 Murray M, Swanson JA, Margolis PA. Behind Schedule: Improving Access to Care for Children One Practice at a Time. *Pediatrics.* 2004; 113(3): e230-237.

The Access to Care dimension encompasses the following measures:

- *Prenatal and Postpartum Care—Timeliness of Prenatal Care*
- *Prenatal and Postpartum Care—Postpartum Care*
- *Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 24 Months*
- *Children's and Adolescents' Access to Primary Care Practitioners—Ages 25 Month to 6 Years*
- *Children's and Adolescents' Access to Primary Care Practitioners—Ages 7 to 11 Years*
- *Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 19 Years*
- *Adults' Access to Preventive/Ambulatory Health Services—Ages 20 to 44 Years*
- *Adults' Access to Preventive/Ambulatory Health Services—Ages 45 to 64 Years*
- *Adults' Access to Preventive/Ambulatory Health Services—Ages 65 Years and Older*

Prenatal and Postpartum Care

Timeliness of Prenatal Care

Measure Definition

The *Timeliness of Prenatal Care* measure calculates the percentage of women who delivered a live birth between November 6 of the year prior to the measurement year and November 5 of the measurement year, who were continuously enrolled at least 43 days prior to delivery through 56 days after delivery, and who received a prenatal care visit as a member of the health plan in the first trimester or within 42 days of enrollment in the health plan.

Importance

More than four million infants are born in the United States each year. Approximately 520,000 of these infants are born preterm, and another 338,000 are of low birth weight. Low birth weight increases the risk for neurodevelopmental handicaps, congenital abnormalities, and respiratory illness compared to infants with a normal birth weight. In 2009, Colorado's infant mortality rate was 6.1 deaths per 1,000 live births, which ranked 16th in the United States.[4-6] With comprehensive prenatal care, the incidence of low birth weight and infant mortality can be reduced. Compared to women who received prenatal care, women who did not receive prenatal care were three to four times more likely to die from complications of pregnancy and were three times more likely to have an infant death.[4-7]

Effective prenatal care aids in the identification of high-risk pregnancies and provides educational opportunities to prevent subsequent poor birth outcomes.[4-8] Timely and frequent prenatal care visits allow health problems to be detected early. A lack of timely prenatal care may indicate weak therapeutic alliances, lack of peer support, hesitation toward health plans, and residential instability throughout the gestational period. Studies reveal that women in the United States who are at risk for inadequate use of prenatal care are more likely to be non-Caucasian, to have not graduated from high school, to be enrolled in Medicaid, to be unmarried, to smoke, to use illicit drugs, and to be under 20 years of age.[4-9] Socioeconomic factors that present barriers to consistent care are common in the Medicaid population. Due to this lack of care, poor birth outcomes are particularly high among Medicaid members.[4-10] In 2008, only 82 percent of Medicaid members received timely prenatal care, compared to approximately 92 percent for members in commercial Medicaid health plans.[4-11]

4-6 United Health Foundation. America's Health: State Health Rankings 2009. Available at: http://www.americashealthrankings.org/Measure/2009/List%20All/Infant%20Mortality.aspx. Accessed on: September 22, 2010.

4-7 National Committee for Quality Assurance. *The State of Health Care Quality 2009*. Washington, D.C.: NCQA; 2009.

4-8 Ibid.

4-9 Tough S, Siever J, Johnson D. Retaining Women in a Prenatal care Randomized Controlled Trial in Canada: Implications for Program Planning. *BMC Public Health.* 2007; 7: 148.

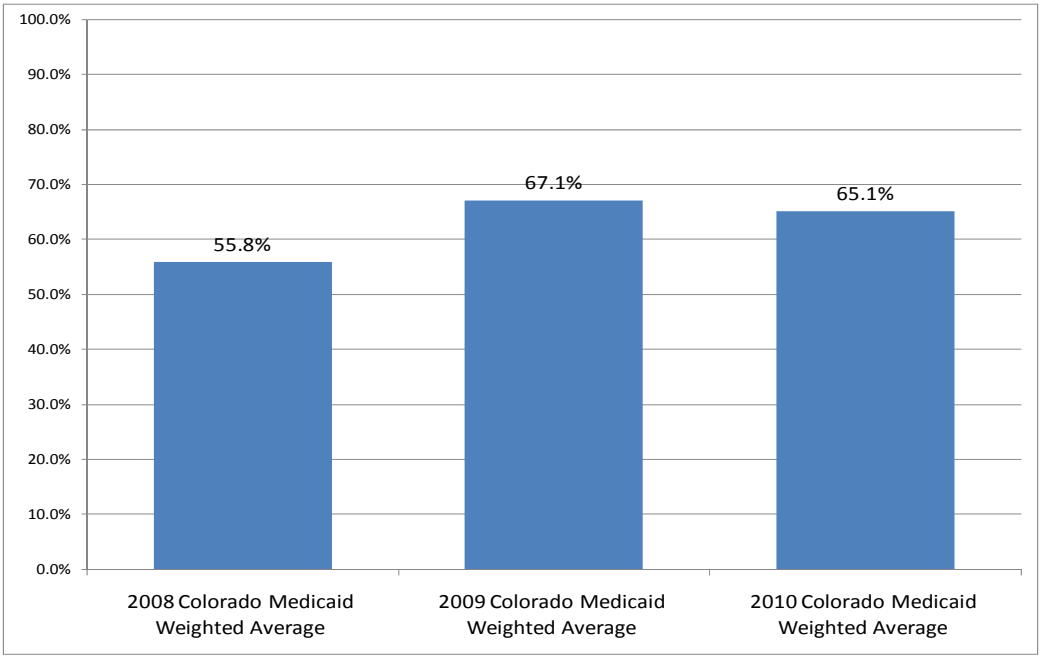
4-10 Shulman, S. Poor Preventive Care Achievement and Program Retention Among Low Birth Weight Infant Medicaid Enrollees. *Pediatrics*. 2006; 118(5): 1509-1515.

4-11 National Committee for Quality Assurance. *The State of Health Care Quality 2009*. Washington, D.C.: NCQA; 2009.

In 2006, women who received early prenatal care (i.e., beginning in the first trimester) accounted for 79.7 percent of live births in Colorado, while 4.5 percent of infants were born to mothers who received late (beginning in the third trimester) or no prenatal care.[4-12]

Performance Results

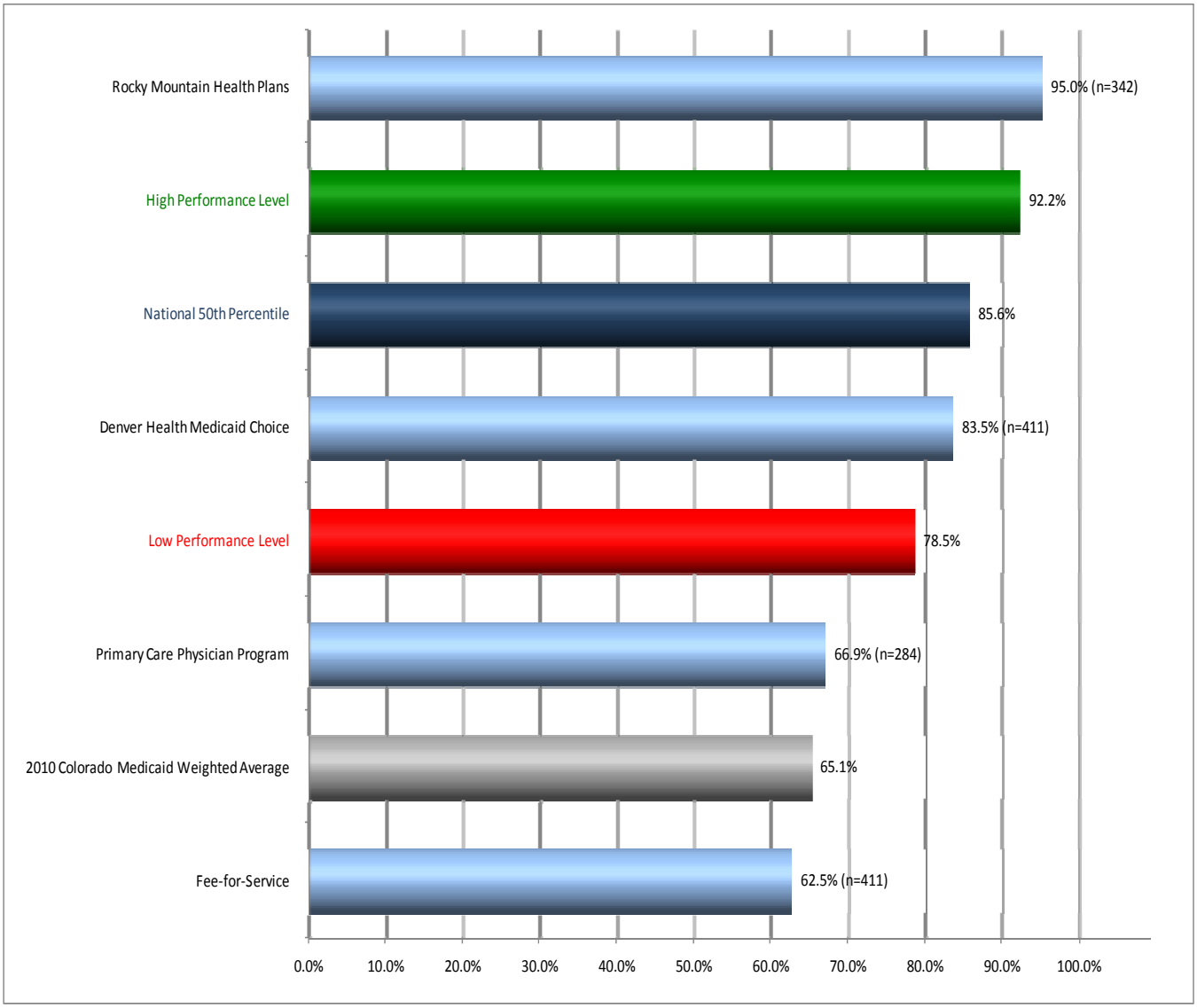
Figure 4-1
Prenatal and Postpartum Care—Timeliness of Prenatal Care
Colorado Medicaid Weighted Averages



The weighted averages for *Prenatal and Postpartum Care—Timeliness of Prenatal Care* increased between 2008 and 2009, but decreased between 2009 and 2010. The 2010 weighted average increased 9.3 percentage points from the 2008 weighted average, but decreased 2.0 percentage points from 2009 weighted average.

[4-12] March of Dimes. Colorado Prenatal Care Overview. Available at: http://www.marchofdimes.com/peristats/tlanding.aspx?dv=lt&reg=08&top=5&lev=0&slev=4. Accessed on September 1, 2010.

Figure 4-2
Prenatal and Postpartum Care—Timeliness of Prenatal Care



One health plan exceeded the HPL of 92.2 percent, and two of the health plans were below the LPL of 78.5 percent. One health plan, the one above the HPL, reported a rate above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 65.1 percent was below the national HEDIS 2009 Medicaid 50th percentile by 20.5 percent. In fact, the 2010 Colorado Medicaid weighted average was 13.4 percentage points below the LPL.

Postpartum Care

Measure Definition

The *Postpartum Care* measure reports the percentage of women who delivered a live birth between November 6 of the year prior to the measurement year and November 5 of the measurement year, who were continuously enrolled at least 43 days prior to delivery through 56 days after delivery, and who received a postpartum visit on or between 21 days and 56 days after delivery.

Importance

While care strategies tend to emphasize the prenatal period, appropriate care during the postpartum period is also important. Socioeconomic factors that present barriers to consistent care are common in the Medicaid population. In 2008, almost 82 percent of members enrolled in commercial health plans received timely postpartum care; however, only 63 percent of Medicaid members received timely postpartum care.[4-13]

Postpartum care is an important determinant of health outcomes for women giving birth. Since medical complications and death can occur after a woman has given birth, postpartum visits can address any adverse effects, such as persistent bleeding, inadequate iron levels, elevated blood pressure, pain, emotional changes, and infections.

Postpartum depression is one of the most prevalent complications that can occur after delivery. It is estimated that up to 70 percent of women experience postpartum sadness immediately after delivery (i.e., within the first week).[4-14] An estimated 10 percent of these women suffer from postpartum depression for which a postpartum care visit is needed.[4-15] This figure increases to 25 percent if the woman has a history of postpartum depression. If untreated, postpartum depression usually lasts around 7 months.[4-16] Receiving appropriate postpartum care can address these emotional issues.

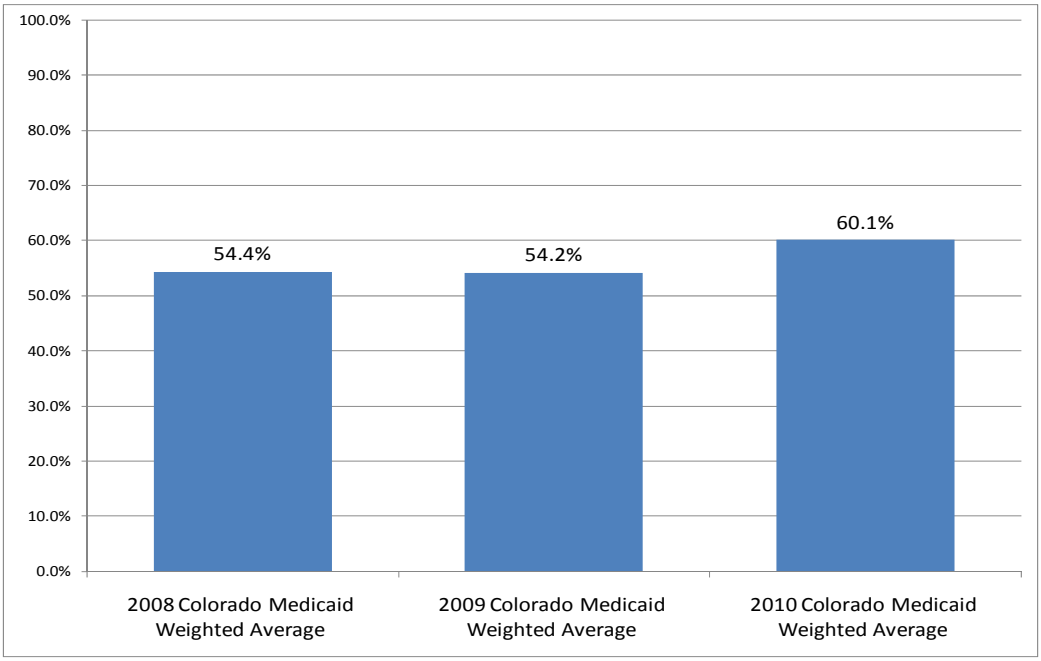
In addition to emotional issues, there are physical issues associated with pregnancy that should be closely monitored during the postpartum period. For example, 1 to 3 percent of vaginal deliveries result in postpartum endometriosis. Urinary incontinence is prevalent in up to 23 percent of pregnancies after the first year of delivery. Approximately 4 to 7 percent of pregnancies result in a thyroid disorder during the first year of pregnancy. Women at risk for any of these complications should be tested and treated during the postpartum period.[4-17]

The measure defines the appropriate window of time to receive a postpartum care visit as 21 days through 56 days after delivery. Visits that occurred on or before 20 days after delivery or later than 56 days after delivery would not be considered to meet the requirement.

4-13 National Committee for Quality Assurance. *The State of Health Care Quality in 2009*. Washington, D.C.: NCQA; 2009.
4-14 Blenning C, Paladine H. An Approach to the Postpartum Office Visit. *American Family Physician.* 2005; 72(12): 2491-2496.
4-15 Centers for Disease Control and Prevention. *PRAMS and Postpartum Depression*. Atlanta, GA: CDC; June 2004.
4-16 Blenning C, Paladine H. An Approach to the Postpartum Office Visit. *American Family Physician.* 2005; 72(12): 2491-2496.
4-17 Ibid.

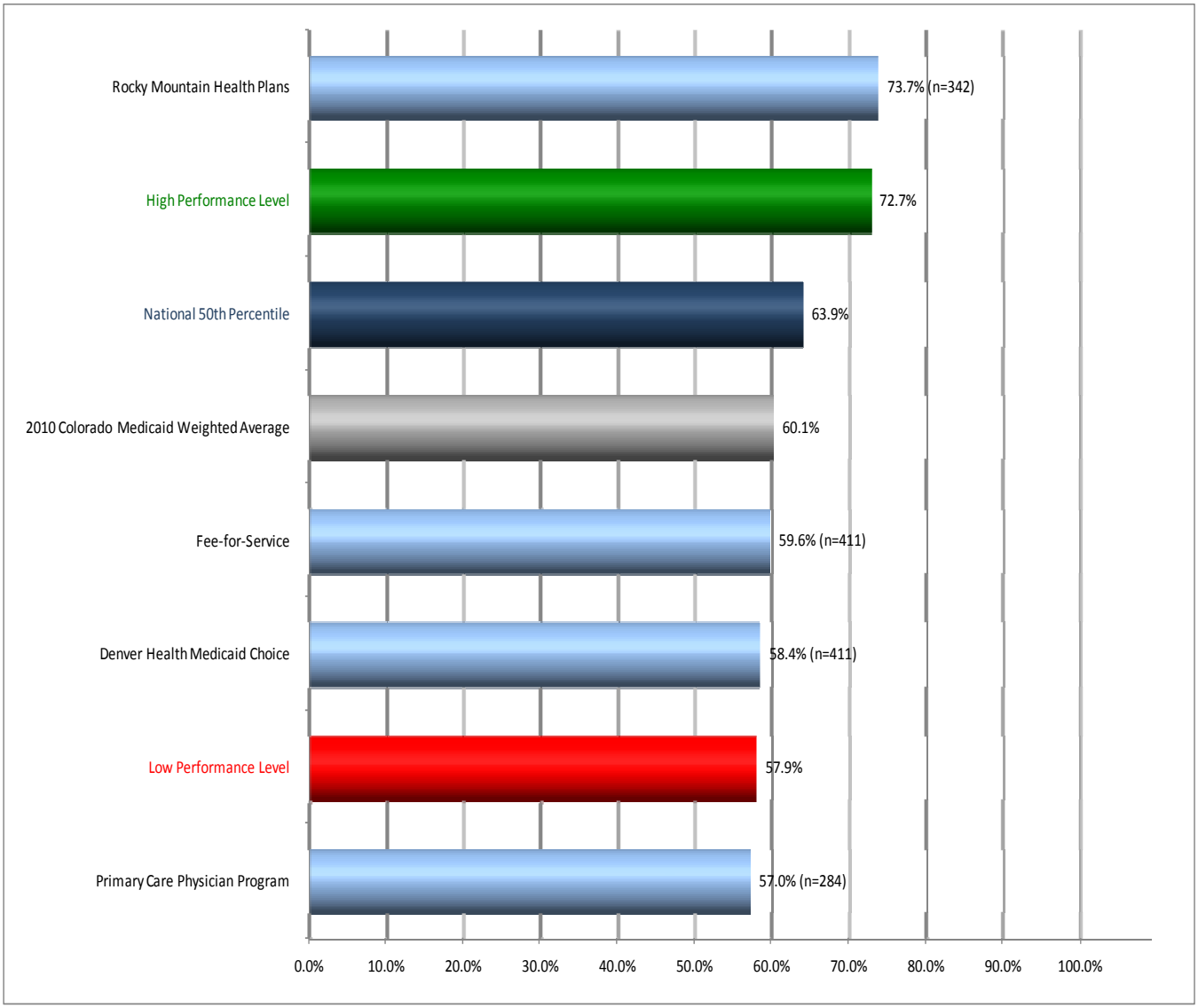
Performance Results

Figure 4-3
Prenatal and Postpartum Care—Postpartum Care
Colorado Medicaid HEDIS Weighted Averages



The weighted averages for *Prenatal and Postpartum Care—Postpartum Care* decreased between 2008 and 2009, but increased between 2009 and 2010. The 2010 weighted average increased 5.7 and 5.9 percentage points from the 2008 and 2009 weighted averages, respectively.

Figure 4-4
Prenatal and Postpartum Care—Postpartum Care



One health plan exceeded the HPL of 72.7 percent, and one of the health plans was below the LPL of 57.9 percent. One health plan, the one above the HPL, reported a rate above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 60.1 percent was below the national HEDIS 2009 Medicaid 50th percentile by 3.8 percentage points.

Children's and Adolescents' Access to Primary Care Practitioners

Measure Definition

Children's and Adolescents' Access to Primary Care Practitioners calculates the percentage of:

- Children 12 to 24 months and 25 months to 6 years who had a visit with a PCP during the measurement year.
- Children 7 to 11 years and adolescents 12 to 19 years who had a visit with a PCP during the measurement year or the year prior to the measurement year.

This measure is reported in four age groups: 12 to 24 months, 25 months to 6 years, 7 to 11 years, and 12 to 19 years.

Importance

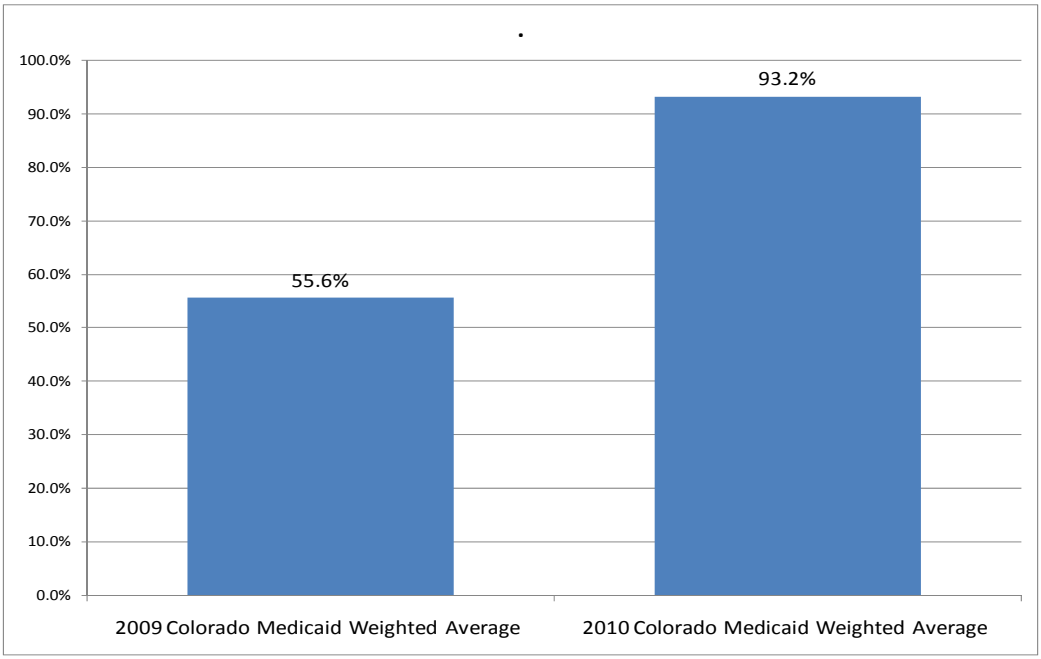
The *Children's and Adolescents' Access to Primary Care Practitioners* measure looks at visits to pediatricians, family physicians, and other PCPs as a way to assess general access to care for children. Regular access to primary care assures continuity of care and provides essential preventative and acute care services to children and adolescents. According to a report from The Commonwealth Fund, Colorado ranked 48th in the country in terms of the best access to care for children.[4-18] One important component in this ranking was insurance coverage. The report ranked Colorado 44th nationwide for having the lowest rate of uninsured children. In addition, Colorado ranks 28th in the United States for children with a reported regular source of primary health care. However, the proportion of children who have a medical home declined from 87 percent to 62 percent between 2004 and 2007.[4-19]

[4-18] The Commonwealth Fund. United States Variations in Child Health System Performance: A State Scorecard. Available at: http://www.commonwealthfund.org/usr_doc/site_docs/slideshows/ChildScorecard/ChildScorecard.html. Accessed on: September 1, 2010.

[4-19] The 2008 Colorado Health Report Card. The Colorado Health Foundation. Available at: http://www.coloradohealthreportcard.org/ReportCard/2009/subdefault.aspx?id=2774. Accessed on: August 31, 2009.

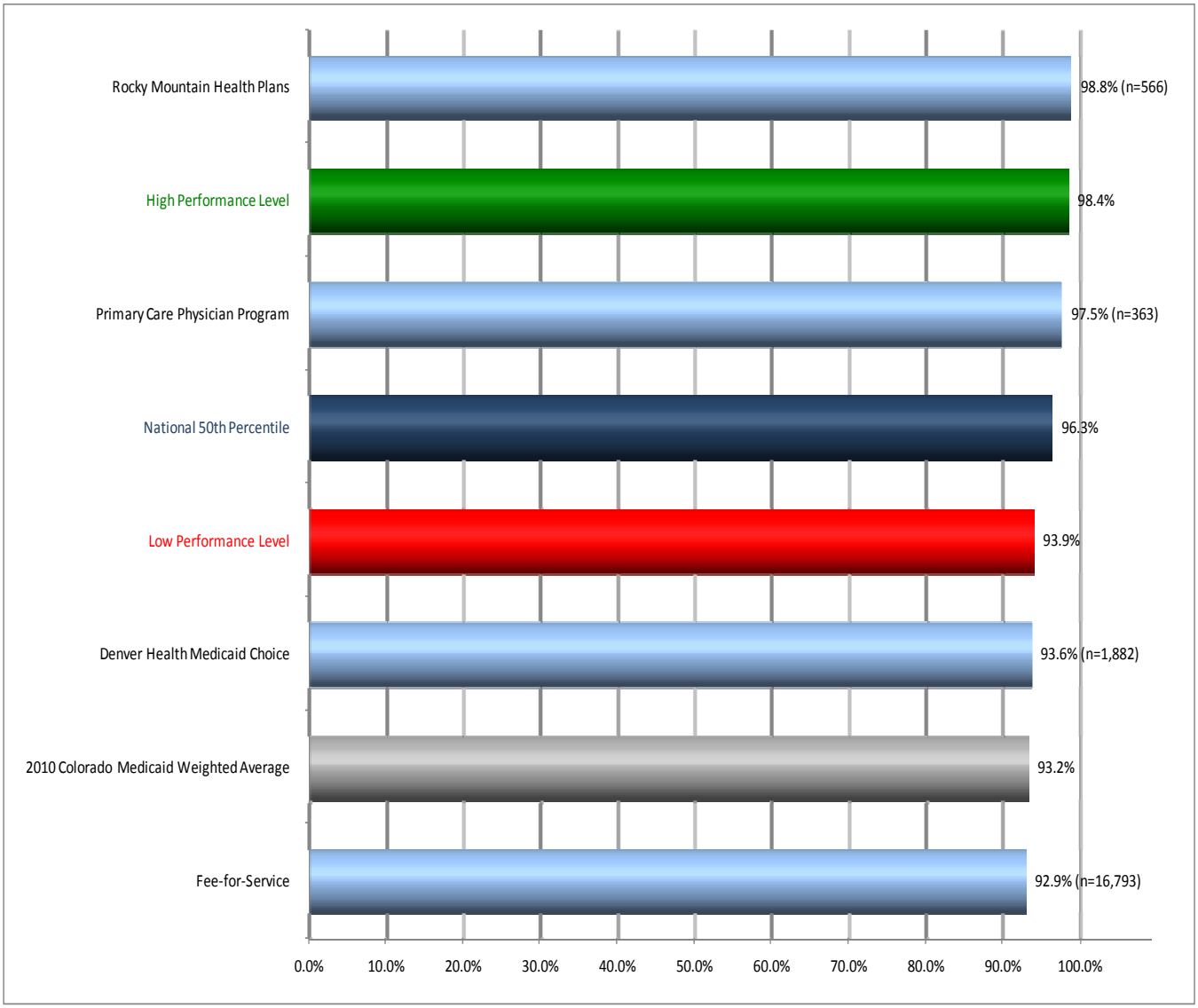
Performance Results

Figure 4-5
Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 24 Months
Colorado Medicaid Weighted Averages



The weighted average for *Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 24 Months* increased between 2009 and 2010 by 37.6 percentage points.

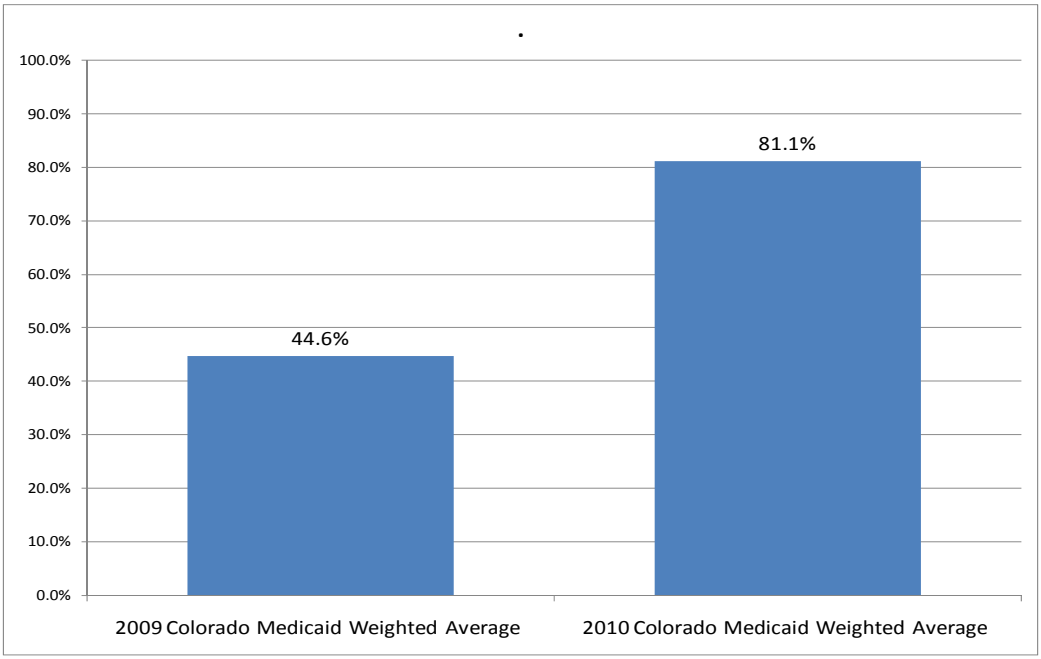
Figure 4-6
Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 24 Months



One health plan exceeded the HPL of 98.4 percent, and two of the health plans were below the LPL of 93.9 percent. Two health plans, including the one above the HPL, reported rates above the national HEDIS 2009 Medicaid 50th percentile.

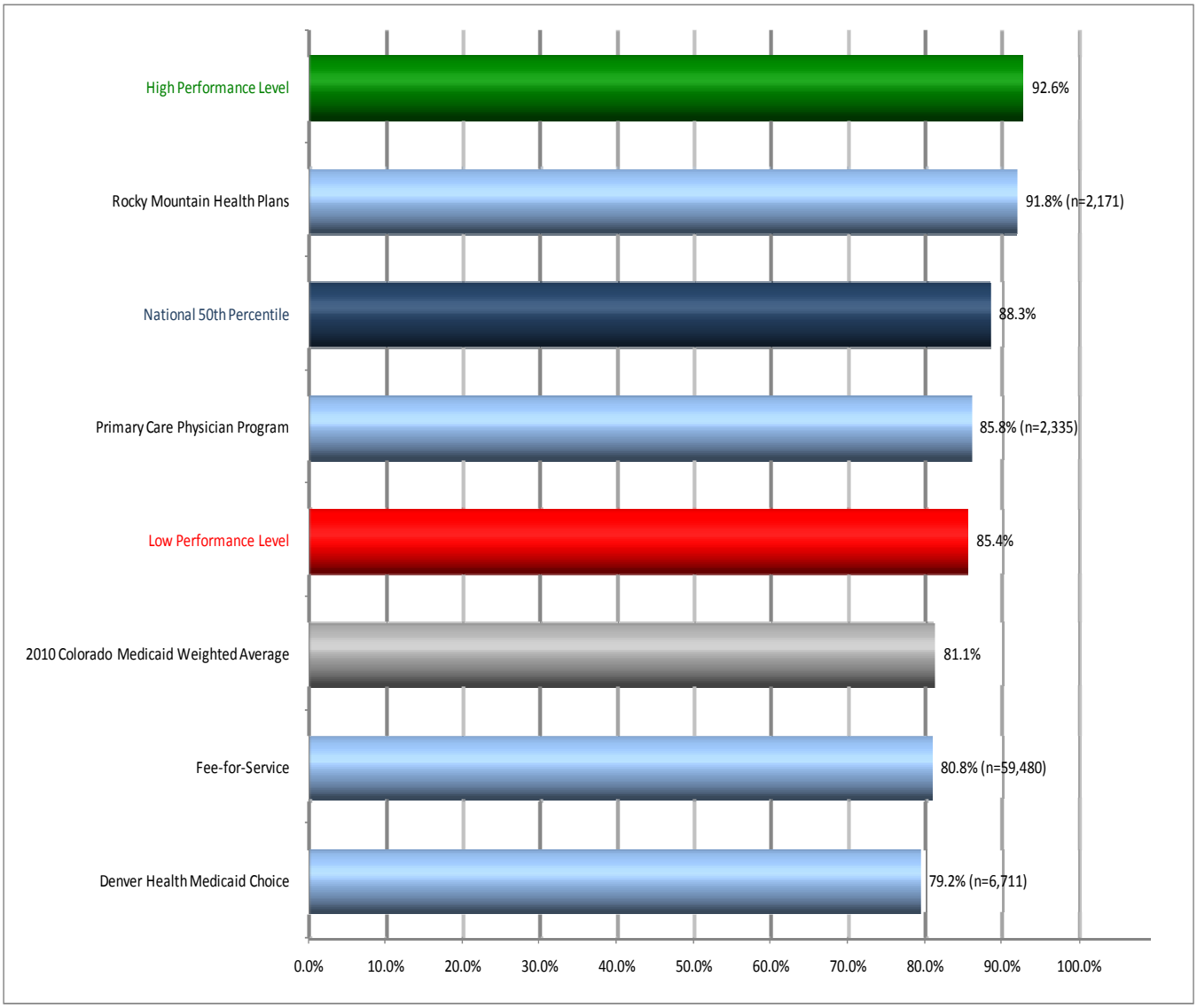
The 2010 Colorado Medicaid weighted average of 93.2 percent was below the national HEDIS 2009 Medicaid 50th percentile by 3.1 percentage points. In fact, the 2010 Colorado Medicaid weighted average was 0.7 percentage points below the LPL.

Figure 4-7
Children's and Adolescents' Access to Primary Care Practitioners—Ages 25 Months to 6 Years
Colorado Medicaid Weighted Averages



The weighted average for *Children's and Adolescents' Access to Primary Care Practitioners—Ages 25 Months to 6 Years* increased between 2009 and 2010 by 36.5 percentage points.

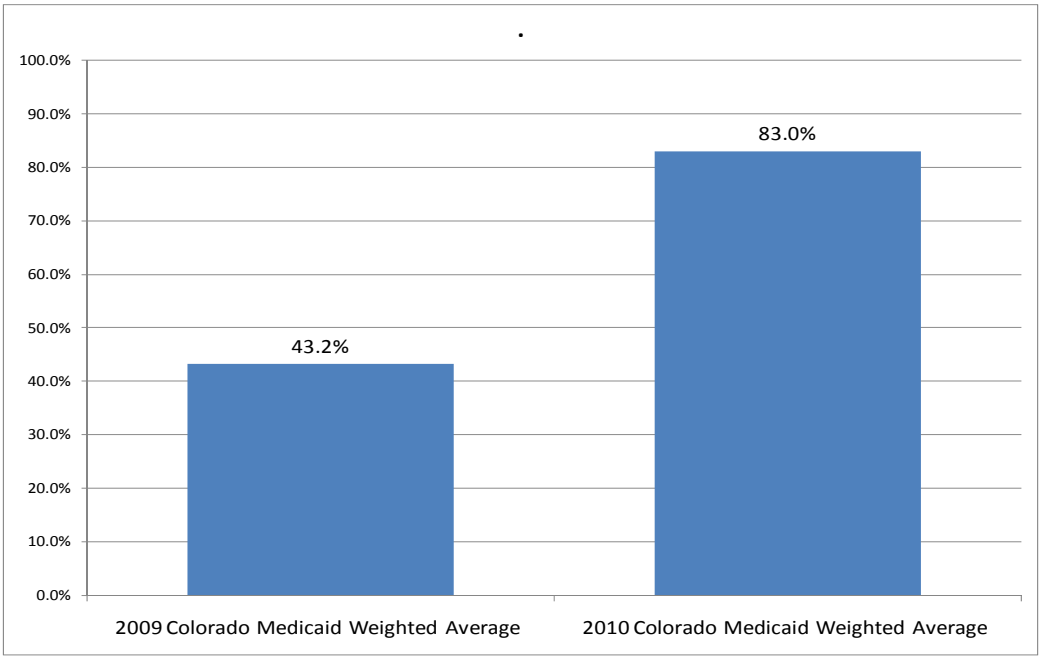
Figure 4-8
Children's and Adolescents' Access to Primary Care Practitioners—Ages 25 Months to 6 Years



None of the health plans exceeded the HPL of 92.6 percent, and two of the health plans were below the LPL of 85.4 percent. One health plan reported a rate above the national HEDIS 2009 Medicaid 50th percentile.

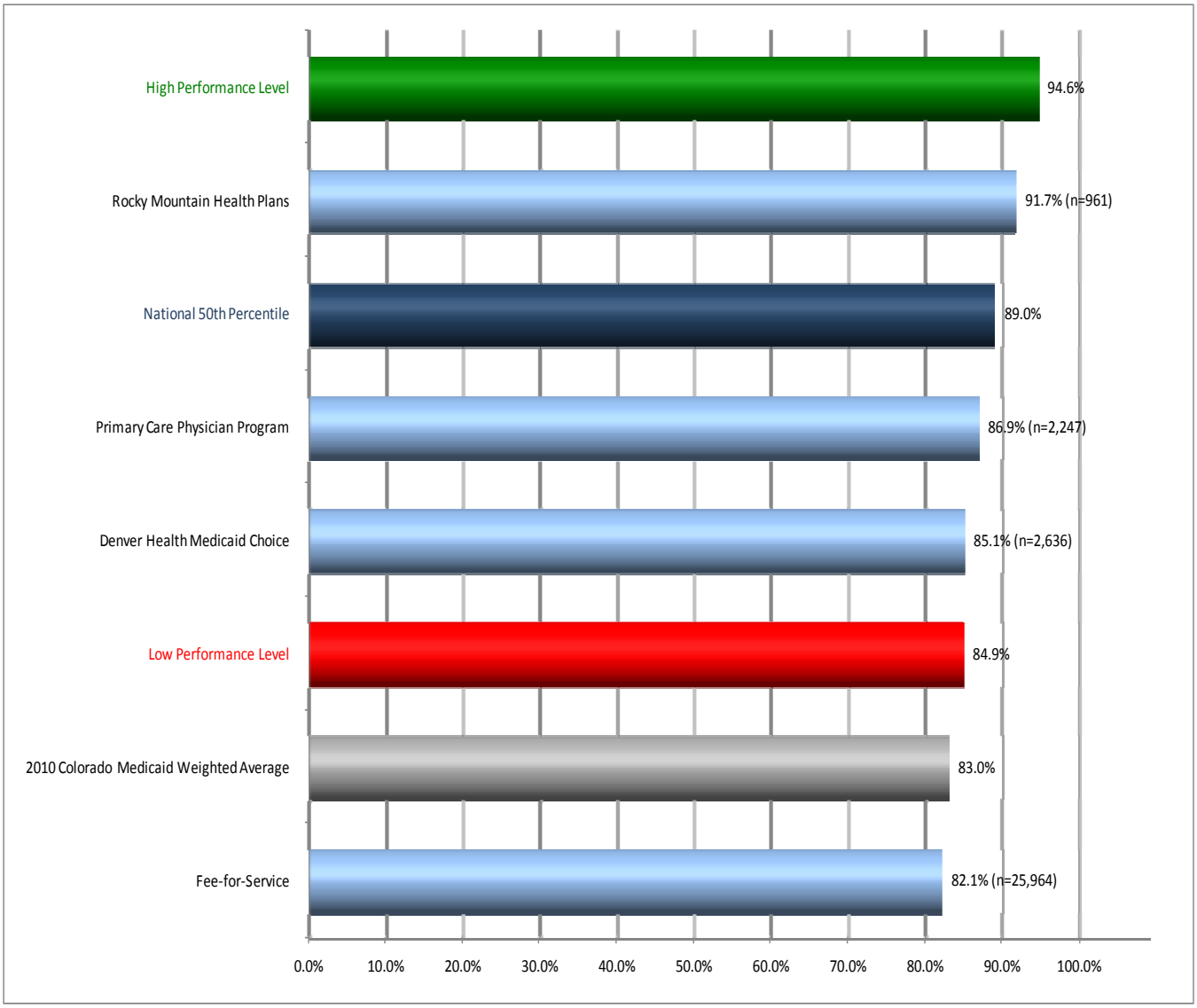
The 2010 Colorado Medicaid weighted average of 81.1 percent was below the national HEDIS 2009 Medicaid 50th percentile by 7.2 percentage points. In fact, the 2010 Colorado Medicaid weighted average was 4.3 percentage points below the LPL.

Figure 4-9
Children's and Adolescents' Access to Primary Care Practitioners—Ages 7 to 11 Years
Colorado Medicaid Weighted Averages



The weighted average for the *Children's and Adolescents' Access to Primary Care Practitioners—Ages 7 to 11 Years* increased between 2009 and 2010 by 39.8 percentage points.

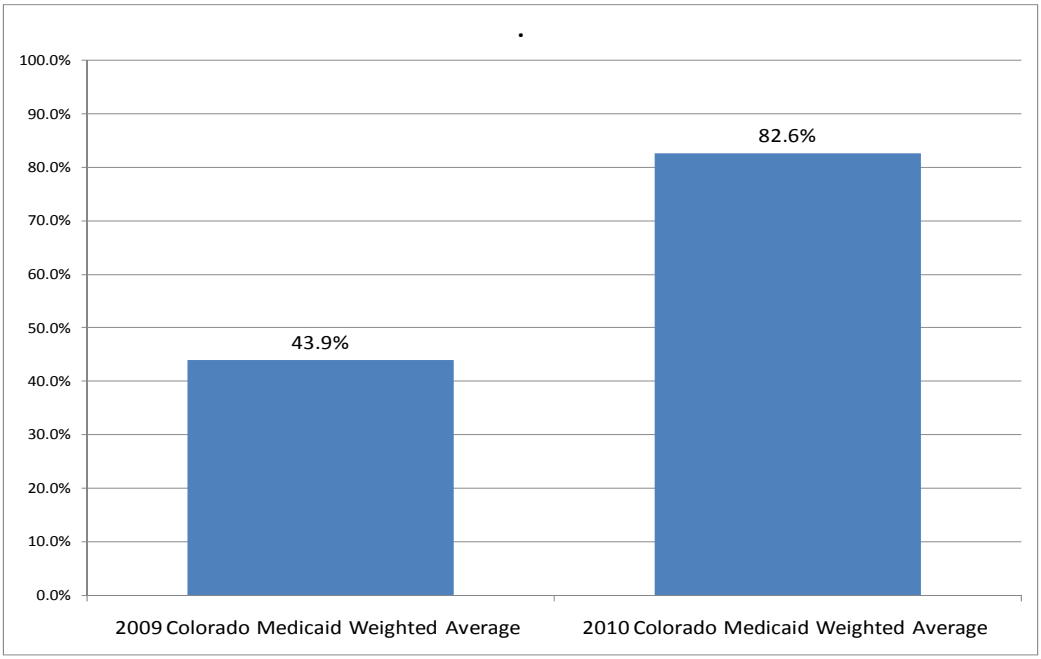
Figure 4-10
Children's and Adolescents' Access to Primary Care Practitioners—Ages 7 to 11 Years



None of the health plans exceeded the HPL of 94.6 percent, and one of the health plans was below the LPL of 84.9 percent. One health plan reported a rate above the national HEDIS 2009 Medicaid 50th percentile.

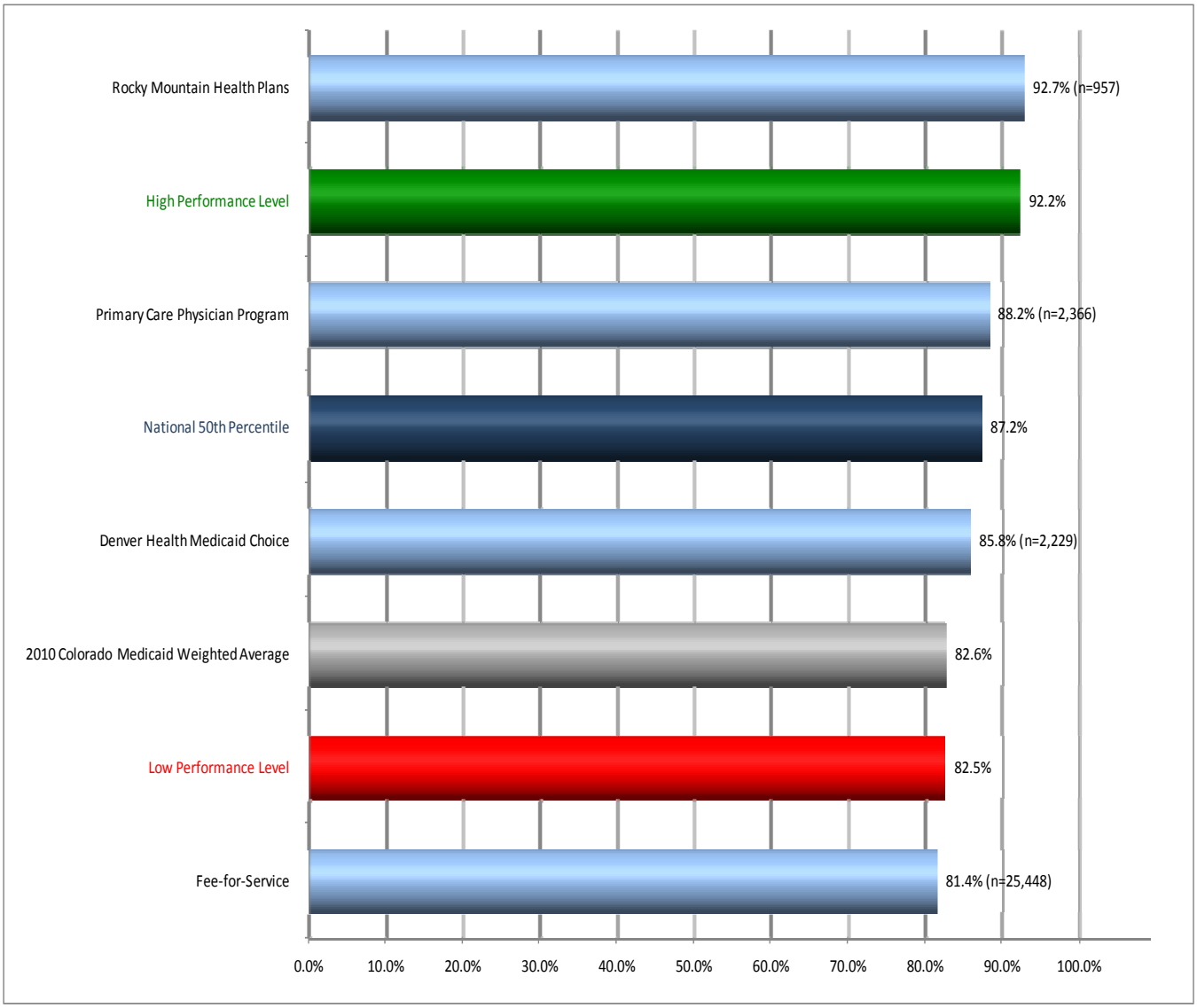
The 2010 Colorado Medicaid weighted average of 83.0 percent was below the national HEDIS 2009 Medicaid 50th percentile by 6.0 percentage points. In fact, the 2010 Colorado Medicaid weighted average was 1.9 percentage points below the LPL.

Figure 4-11
Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 19 Years
Colorado Medicaid Weighted Averages



The weighted average for *Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 19 Years* increased between 2009 and 2010 by 38.7 percentage points.

Figure 4-12
Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 19 Years



One health plan exceeded the HPL of 92.2 percent, and one of the health plans was below the LPL of 82.5 percent. Two health plans, including the one above the HPL, reported rates above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 82.6 percent was below the national HEDIS 2009 Medicaid 50th percentile by 4.6 percentage points.

Adults' Access to Preventive/Ambulatory Health Services

Measure Definition

The *Adults' Access to Preventive/Ambulatory Health Services* measure calculates the percentage of adults 20 years and older who were continuously enrolled during the measurement year and who had an ambulatory or preventive care visit during the measurement year. For this report, three rates are reported for this measure: 20 to 44 years, 45 to 64 years, and 65 years and older.

Importance

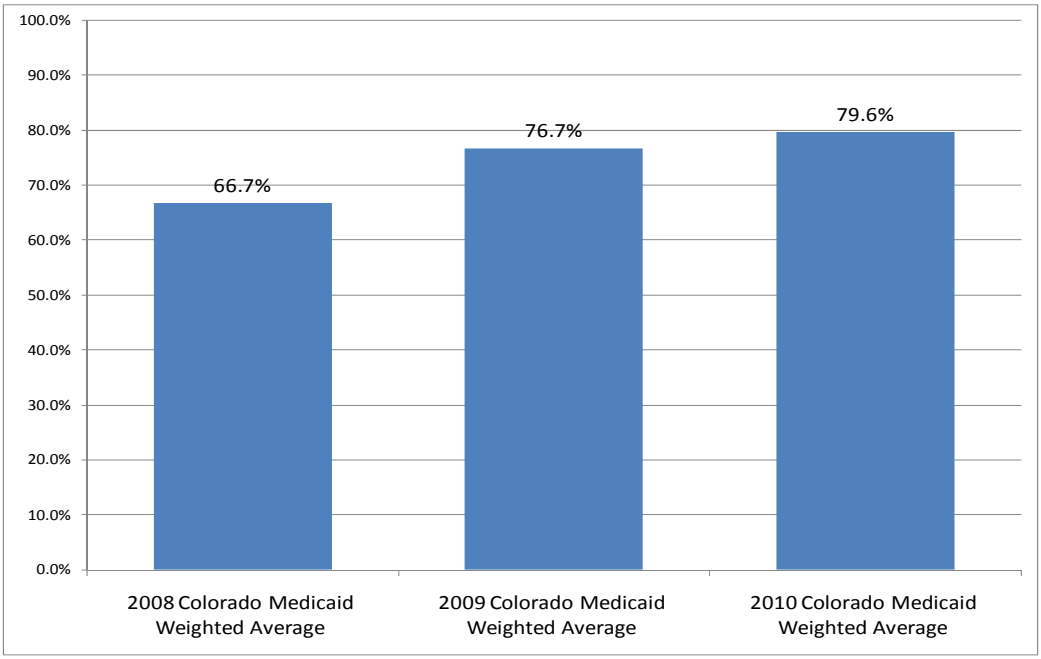
Preventive care can significantly and positively affect many causes of disease and death. A five-year study of adults in a national survey showed that those who had a primary care physician as their regular source of care had one-third lower costs and were 19 percent less likely to die.[4-20] However, to realize these benefits, people must have access to effective services. A shortage of health care providers or facilities is a basic limitation that may impact access, but other factors such as lack of adequate health insurance, cultural and language differences, and lack of knowledge or education can also limit access. Lack of a usual source of medical care can also be a barrier to accessing health care. In 2006-2007, about 18 percent of U.S. adults 18 to 64 years of age did not have a usual source of health care.[4-21]

[4-20] Starfield B, Shi L. The Medical Home, Access to Care, and Insurance: A Review of Evidence. *Pediatrics*. 2004; 113(5): 1493-1498. Available at: http://pediatrics.aappublications.org/cgi/content/full/113/5/S1/1493. Accessed on: June 23, 2010.

[4-21] U.S. Department of Health and Human Services. Centers for Disease Control and Prevention. *Health, United States, 2009*. Atlanta, GA: DHHS; 2010.

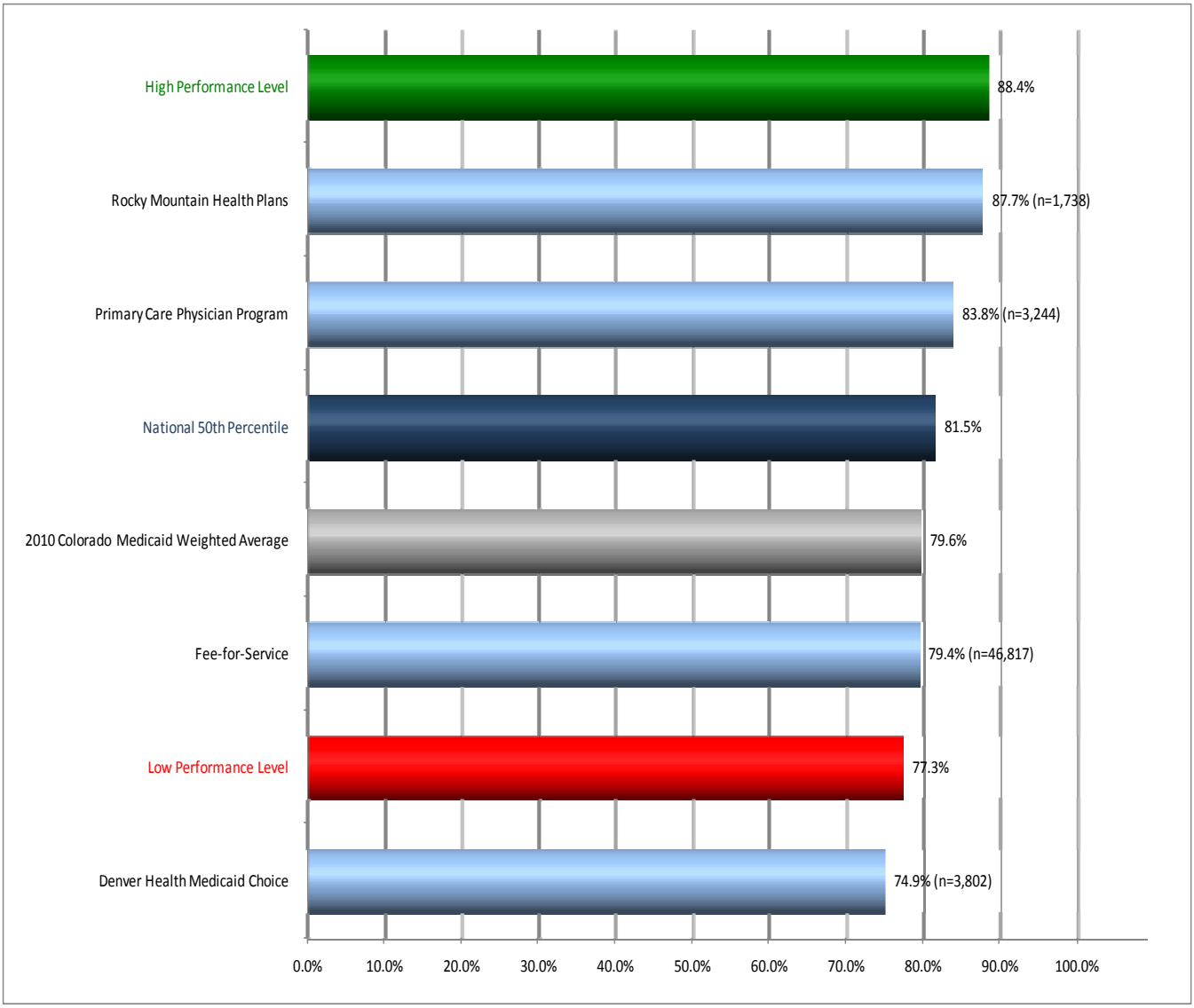
Performance Results

Figure 4-13
Adults' Access to Preventive/Ambulatory Health Services—Ages 20 to 44 Years
Colorado Medicaid Weighted Averages



The weighted averages for *Adults' Access to Preventive/Ambulatory Health Services—Ages 20 to 44 Years* have increased each year from 2008 to 2010. The 2010 weighted average increased 12.9 and 2.9 percentage points from the 2008 and 2009 weighted averages, respectively.

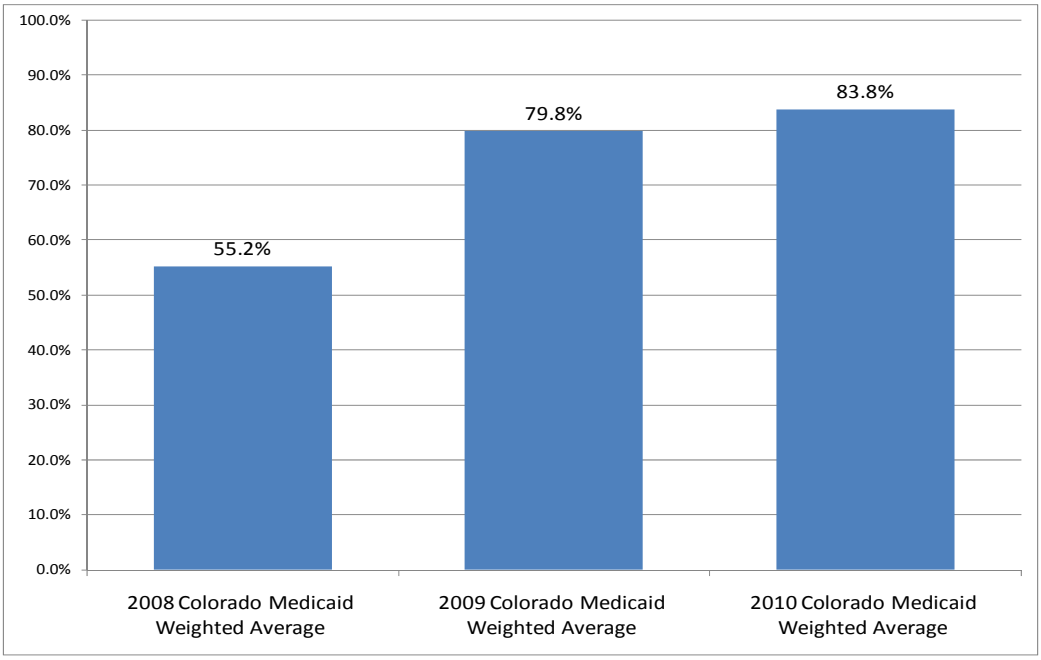
Figure 4-14
Adults' Access to Preventive/Ambulatory Health Services—Ages 20 to 44 Years



None of the health plans exceeded the HPL of 88.4 percent, and one of the health plans was below the LPL of 77.3 percent. Two health plans reported rates above the national HEDIS 2009 Medicaid 50th percentile.

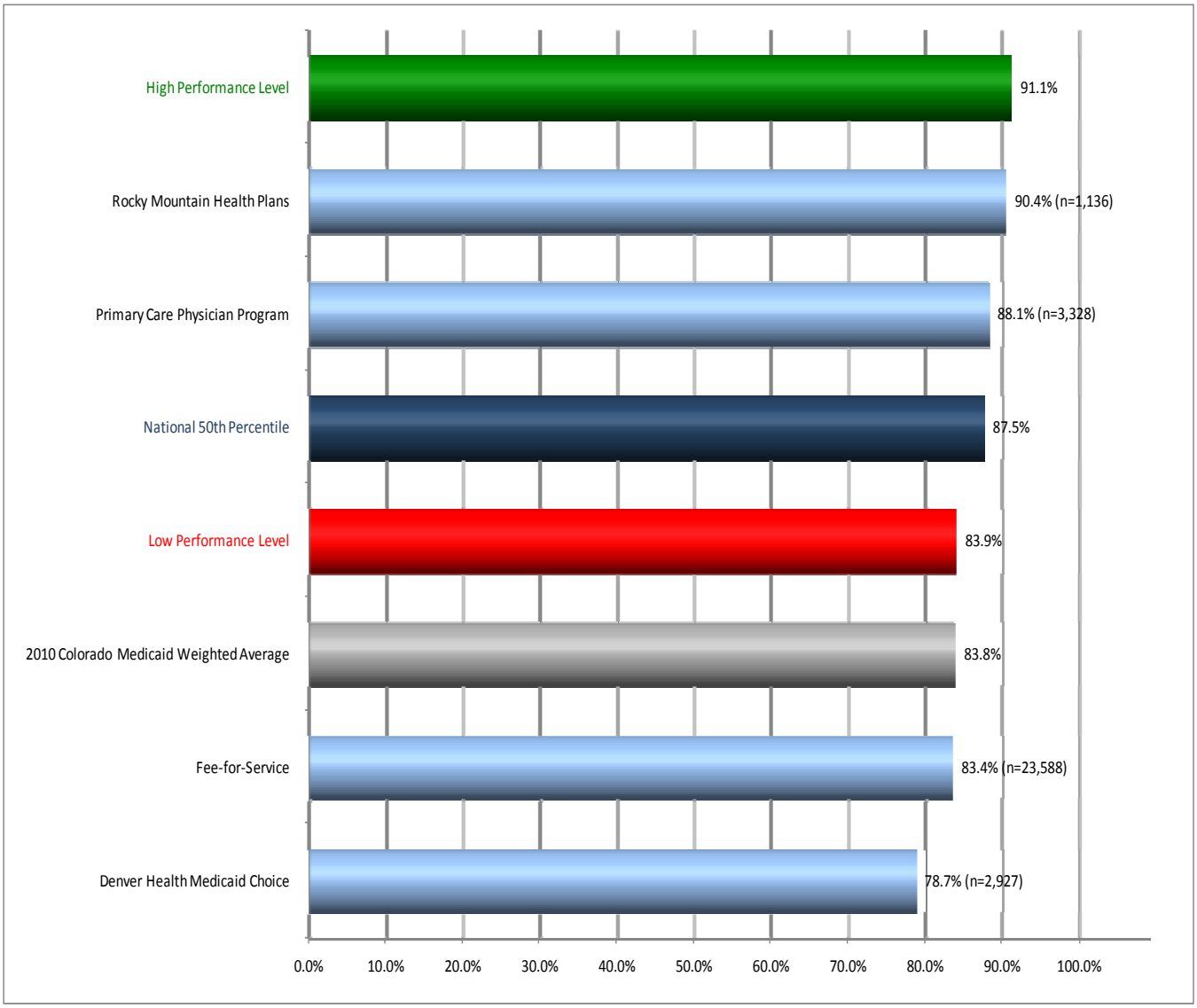
The 2010 Colorado Medicaid weighted average of 79.6 percent was below the national HEDIS 2009 Medicaid 50th percentile by 1.9 percentage points.

Figure 4-15
Adults' Access to Preventive/Ambulatory Health Services—Ages 45 to 64 Years
Colorado Medicaid Weighted Averages



The weighted averages for *Adults' Access to Preventive/Ambulatory Health Services—Ages 45 to 64 Years* have increased each year from 2008 to 2010. The 2010 weighted average increased 28.6 and 4.0 percentage points from the 2008 and 2009 weighted averages, respectively.

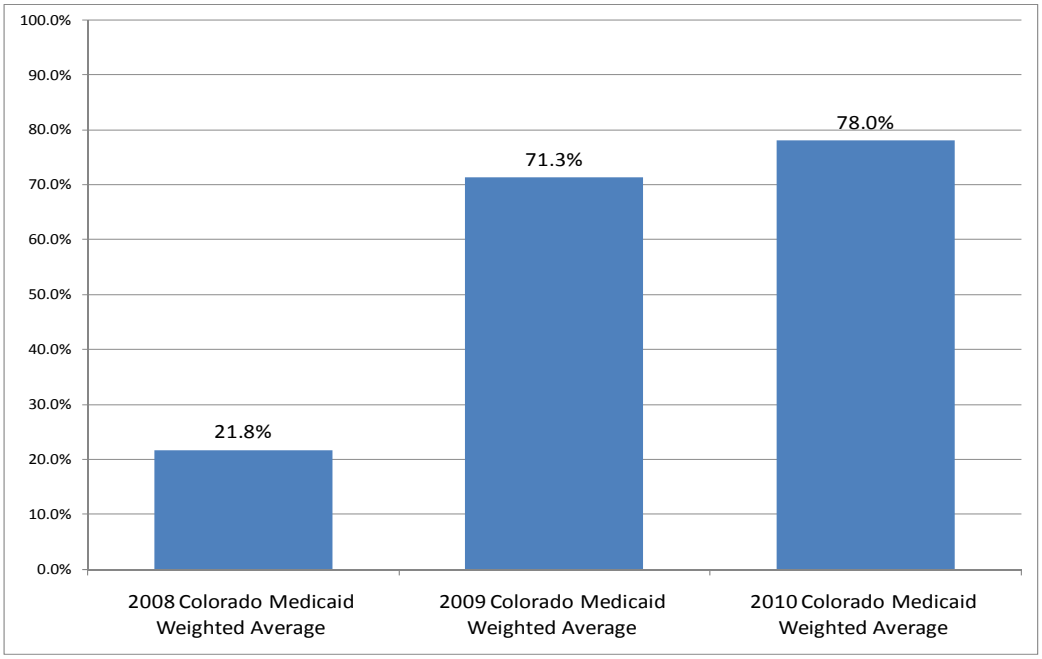
Figure 4-16
Adults' Access to Preventive/Ambulatory Health Services—Ages 45 to 64 Years



None of the health plans exceeded the HPL of 91.1 percent, and two of the health plans were below the LPL of 83.9 percent. Two health plans reported rates above the national HEDIS 2009 Medicaid 50th percentile.

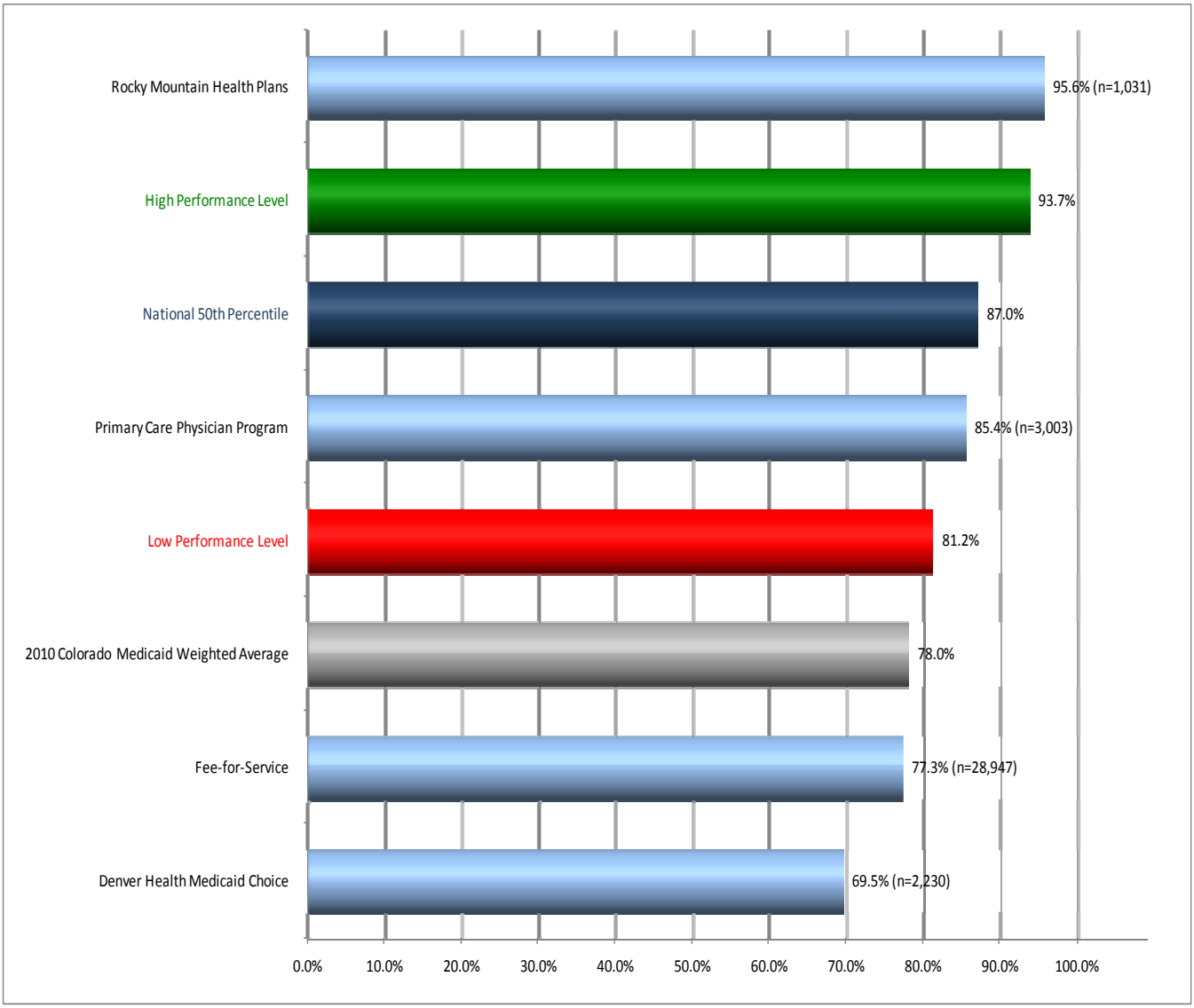
The 2010 Colorado Medicaid weighted average of 83.8 percent was below the national HEDIS 2009 Medicaid 50th percentile by 3.7 percentage points. In fact, the 2010 Colorado Medicaid weighted average was 0.1 percentage points below the LPL.

Figure 4-17
Adults' Access to Preventive/Ambulatory Health Services—Ages 65 Years and Older
Colorado Medicaid Weighted Averages



The weighted averages for *Adults' Access to Preventive/Ambulatory Health Services—Ages 65 Years and Older* have increased each year from 2008 to 2010. The 2010 weighted average increased 56.2 and 6.7 percentage points from the 2008 and 2009 weighted averages, respectively.

Figure 4-18
Adults' Access to Preventive/Ambulatory Health Services—Ages 65 Years and Older



One health plan exceeded the HPL of 93.7 percent, and two of the health plans were below the LPL of 81.2 percent. No other health plans reported a rate above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 78.0 percent was below the national HEDIS 2009 Medicaid 50th percentile by 9.0 percentage points. In fact, the 2010 Colorado Medicaid weighted average was 3.2 percentage points below the LPL.

Access to Care Findings and Recommendations

Summary of Findings

Table 4-1 presents a summary of the health plans' overall performance (in rank order from highest-to-lowest performing health plan) on the Access to Care dimension.

Table 4-1
Overall Access to Care Performance Summary

Health Plan Name	Access to Care
RMHP	★★★★
PCPP	★★
DHMC	★
FFS	★

The highest performing health plan in the Access to Care dimension was RMHP. DHMC and FFS, however, were the lowest performing health plans in the dimension.

Table 4-2 presents a summary of the health plans' performance for each of the measures in the Access to Care dimension.

Table 4-2
Access to Care Performance Summary

Measure	FFS	PCPP	DHMC	RMHP
Prenatal and Postpartum Care—Timeliness of Prenatal Care	0	0	★★	★★★★★
Prenatal and Postpartum Care—Postpartum Care	★★	★	★★	★★★★★
Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 24 Months	★	★★★	★	★★★★★
Children's and Adolescents' Access to Primary Care Practitioners—Ages 25 Months to 6 Years	★	★★	★	★★★★
Children's and Adolescents' Access to Primary Care Practitioners—Ages 7 to 11 Years	★	★★	★★	★★★
Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 19 Years	★	★★★	★★	★★★★★
Adults' Access to Preventive/Ambulatory Health Services—Ages 20 to 44 Years	★★	★★★	★	★★★★
Adults' Access to Preventive/Ambulatory Health Services—Ages 45 to 64 Years	★	★★★	★	★★★★
Adults' Access to Preventive/Ambulatory Health Services—Ages 65 Years and Older	★	★★	0	★★★★★

Table 4-3 presents a summary of the number of measures that fell into each star category for the Access to Care dimension.

Table 4-3
Access to Care Star Ratings Summary

Health Plan Name	5 Stars	4 Stars	3 Stars	2 Stars	1 Star	0 Stars	NA/NR
FFS	0	0	0	2	6	1	0
PCPP	0	0	4	3	1	1	0
DHMC	0	0	0	4	4	1	0
RMHP	5	3	1	0	0	0	0

RMHP scored at or above the national HEDIS 2009 Medicaid 90th percentile (i.e., five stars) on five of the Access to Care measures. FFS, PCPP, and DHMC, on the other hand, each scored below the national HEDIS 2009 Medicaid 10th percentile (i.e., zero stars) on one measure.

Best Practices

Prenatal and Postpartum Care

Education on Proper Coding

Health plans should educate and ensure that providers are accurately capturing prenatal and postpartum care visits through the use of CPT and CPT Category II codes. The use of these codes will help to facilitate the administrative capture of prenatal and postpartum visits and subsequently increase rates. One study revealed that 94 percent of members received prenatal care in the first trimester based on medical record review; however, HEDIS rates based on administrative data reflected that 75 percent of women received a timely prenatal care visit for the same time period evaluated. This difference in the rates suggests a lack of accurate and complete administrative data.[4-22] Working with providers to ensure that accurate data are captured may help to increase rates.

For the FQHCs and RHCs, HCPF should explore options to revise the contract language and/or reimbursement rules to support the submission of complete claims data.

Coordination of Care

Plans that coordinate care and validate practice guidelines between internists, family practitioners, and OB/GYNs can positively affect maternal health. Incorporating alternative types of providers into the care delivery process, such as nurses and midwives, has been associated with increased member satisfaction. Interventions that incorporate member tools prenatal visits have been shown to improve rates.[4-23]

Educational Outreach Programs

Educational outreach programs aimed at educating women who are pregnant or recently had a baby about the importance of timely prenatal care and postpartum care could be developed and implemented. Educational programs can be administered throughout the community in various settings. Media campaigns can also be employed to further publicize the importance of receiving adequate care. Health plans should ensure that educational materials meet the language, literacy levels, and cultural needs of its Medicaid members.[4-24]

Informational mailings can also be sent to members identified through administrative data who are of childbearing age. These mailings can include information on women's health, including prenatal and postpartum health care visits.

DHCPF has implemented educational programs in the past, with little to no improvement noted in the performance measure results; however there may be other barriers that hinder improvement.

4-22 Green D, Koplan J, Cutler C. Prenatal Care In the First Trimester: Misleading Findings from HEDIS. *International Journal for Quality in Health Care*. 1999; 11(6): 465-473.

4-23 Center for Health Improvement. *Improving Access to and Use of Prenatal Care in San Joaquin County*. January 2004. Available at: http://www.co.san-joaquin.ca.us/FirstFive/base/documents/prenatalReport.pdf. Accessed on: May 5, 2010.

4-24 Ibid.

Before implementing educations interventions, HSAG recommends conducting a complete barrier analysis to determine what other factors contribute to lower performance.

Resource Lists

A barrier to care can be that women simply do not know where to receive health care. A solution to overcome this barrier is to ensure that a resource list that includes provider contact information is readily available to women. For example, a list of resources could be made available to women at the time and place where pregnancy tests are performed, as well as, through health plan mailings and the health plans' Web sites. In addition, resource lists could be disseminated to providers to ensure that their patients are receiving necessary care.[4-25]

Provide Transportation

One potential barrier to care is the member's inability to obtain access to consistent transportation. Plans can work with stakeholder and policy makers to increase funding for transportation programs.[4-26] This best practice would likely result in an increase in prenatal and postpartum visit rates, particularly in rural areas with less public transportation. Another option is to provide bus tokens or taxi vouchers for transportation.

Children's and Adolescents' Access to Primary Care Practitioners and Adults' Access to Preventive/Ambulatory Health Services

GIS Evaluation

Geographic availability is an important determinant that affects access to care. Members living in counties with fewer PCPs are more likely to use EDs as their usual source of acute care. Many rural and inner-city urban areas still have fewer PCPs than demand would necessitate. Improving access to PCPs will be successful if there are adequate physician levels to meet demand.

Administrators can use GIS applications to manage the geographic distribution of doctors and nurses based on maps of members' residences. Types of visits can be mapped in relation to patient distributions in order to determine if certain regions have proportionately higher ED utilization for non-emergent conditions, for instance, than other regions. Correlations between regions, inappropriate utilization, and the availability of PCPs can indicate where lower access rates are unduly influenced by physical barriers to care.[4-27]

4-25 Tough S, S, Siever J, Johnson D. Retaining Women in a Prenatal care Randomized Controlled Trial in Canada: Implications for Program Planning. *BMC Public Health.* 2007; 7: 148.

4-26 Ibid.

4-27 Centers for Disease Control and Prevention. GIS: Linking Public Health Data and Geography. 2007. Available at: http://www.cdc.gov/Features/GIS/. Accessed on: September 20, 2010.

Open Access Scheduling

When scheduling systems lead to poor access at the practice level, they affect the appropriate utilization of primary care services.[4-28] The most common reason that patients report seeking care in urgent care centers is the failure to obtain a timely appointment with a PCP. High no-show rates are also associated with longer delays for appointments. Open access scheduling is designed to address several flaws in existing scheduling systems through the implementation of three key changes:

- Patients are offered same-day access to an appointment regardless of the nature of their problem (routine, preventive, or acute).
- Patients' appointments are scheduled with their PCP as often as possible (versus being seen by the first available doctor).
- Practices attempt to minimize waiting time within the office.

Improving Physician-Patient Relationships

The physician-patient relationship is integral to the successful delivery of primary health care. Studies have shown that continuity of care between patients and physicians is associated with improved use of health services, preventive care, and satisfaction with care.[4-29] Positive physician-patient relationships also result in better compliance and improved self-care. As often as possible, care should be given by the provider that has an established relationship with the enrollee.

[4-28] The Randolph GD, Murray M, Swanson JA, et al. Behind Schedule: Improving Access to Care for Children One Practice at a Time. *Pediatrics*. 2004; 113(3): e320-e327. Available at: http://pediatrics.aappublications.org/cgi/content/full/113/3/e230. Accessed on: May 24, 2010.

[4-29] The Kerse N, Buetow S, Mainous AG, et al. Physician-Patient Relationship and Medication Compliance: A Primary Care Investigation. *Annals of Family Medicine*. 2004; 2(5): 455-460.

5. Living With Illness

Introduction

Chronic illness afflicts 133 million people in the United States—nearly half of all Americans—and accounts for the vast majority of health care spending. By 2020, the aging U.S. population will increase this population to an estimated 157 million people.[5-1] Chronic diseases are responsible for seven out of every 10 deaths (for a total of 1.7 million people) in the United States each year. Chronic conditions also contribute to disability and decreased quality of life for many Americans. Additionally, more than 25 million people experience limitations in activity due to these conditions.[5-2]

The following section provides a detailed analysis of the Colorado Medicaid health plans' performance for the Living With Illness dimension. The Living With Illness dimension encompasses the following measures:

- *Annual Monitoring for Patients on Persistent Medications—ACE Inhibitors or ARBs*
- *Annual Monitoring for Patients on Persistent Medications—Anticonvulsants*
- *Annual Monitoring for Patients on Persistent Medications—Digoxin*
- *Annual Monitoring for Patients on Persistent Medications—Diuretics*
- *Annual Monitoring for Patients on Persistent Medications—Total*
- *Use of Imaging Studies for Low Back Pain*
- *Controlling High Blood Pressure*
- *Pharmacotherapy Management of COPD Exacerbation*
- *Antidepressant Medication Management—Effective Acute Phase Treatment*
- *Antidepressant Medication Management—Effective Continuation Phase Treatment*
- *Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis*

5-1 Partnership for Solutions. Chronic Conditions: Making the Case for Ongoing Care. Available at: http://www.partnershipforsolutions.org/DMS/files/chronicbook2004.pdf. Accessed on: August 26, 2010.

5-2 Centers for Disease Control and Prevention. Chronic Disease Overview. Available at: http://www.cdc.gov/nccdphp/overview.htm. Accessed on: August 26, 2010.

Annual Monitoring for Patients on Persistent Medications

Measure Definition

The *Annual Monitoring for Patients on Persistent Medications* measure assesses the percentage of members 18 years of age and older who received at least a 180-day supply of ambulatory medication therapy for a select therapeutic agent during the measurement year and at least one therapeutic monitoring event for the therapeutic agent in the measurement year. The selected therapeutic agents measured were:

- *Ace Inhibitors or ARBs*
- *Anticonvulsants*
- *Digoxin*
- *Diuretics*
- *Total*

Importance

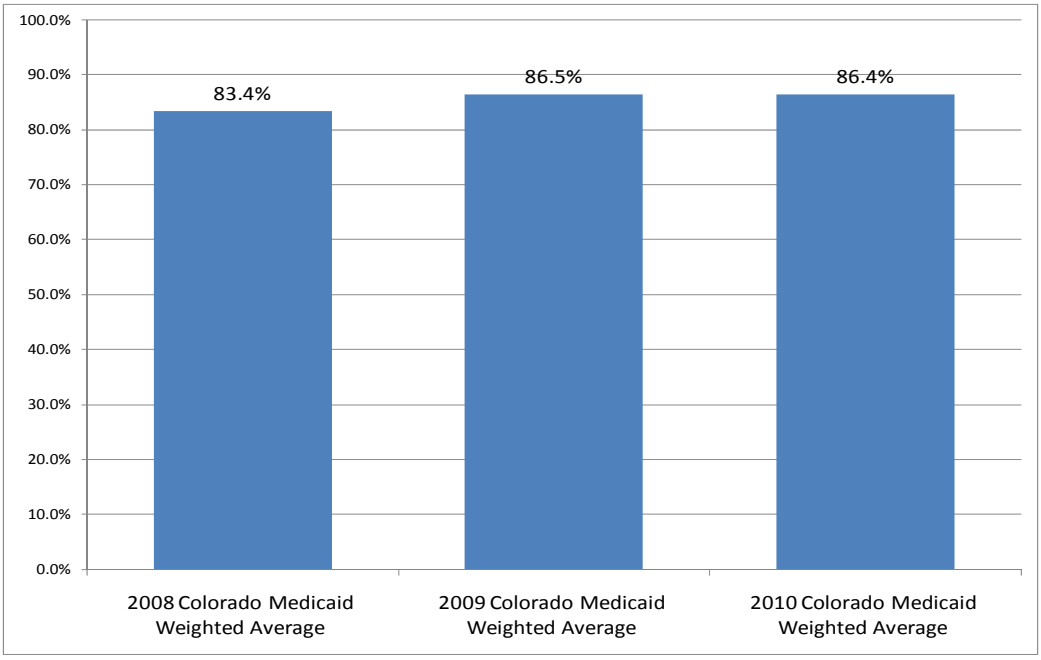
Management and monitoring by prescribing physicians of patients with long-term medication use is important in order to assess medication side effects and adjust drug dosage decisions accordingly. However, as many as half of all patients on persistent medications that carry a high risk of toxicity receive no drug monitoring. In the United States, the cost of treating problems caused by the misuse of medications in ambulatory settings is more than $85 billion per year.[5-3]

One in 400 Americans visit an ED due to an adverse drug event, and approximately one in six of those people are hospitalized. Half of all unintentional overdoses that result in an ED visit originate from medications that commonly require monitoring.[5-4] Through medication monitoring, clinicians can adjust a patient's dosage to prevent avoidable adverse events. Monitoring can also prevent liver and kidney damage, thyroid problems, heart attack, and death. One study found that approximately 106,000 deaths occurred annually due to drug-related problems.[5-5] Another study showed that one-third of patients do not take the medications prescribed by their physicians. Appropriate monitoring of drug therapy remains a significant issue to guide therapeutic decision making and provides an unmet opportunity to improve care for patients on persistent medications. A missed or cancelled appointment and the failure to follow up with or contact a patient may result in a serious delay in diagnosis or treatment, and a subsequent risk of liability for the provider.[5-6]

5-3 National Committee for Quality Assurance. *The State of Health Care Quality 2009*. Washington, D.C.: NCQA; 2009.
5-4 Ibid.
5-5 Ibid.
5-6 Medical Liability Mutual Insurance Company. Risk Management Tips. Available at: http://www.mlmic.com/portal/Files/Dateline/DatelineSpring09_09.pdf. Accessed on: June 22, 2010.

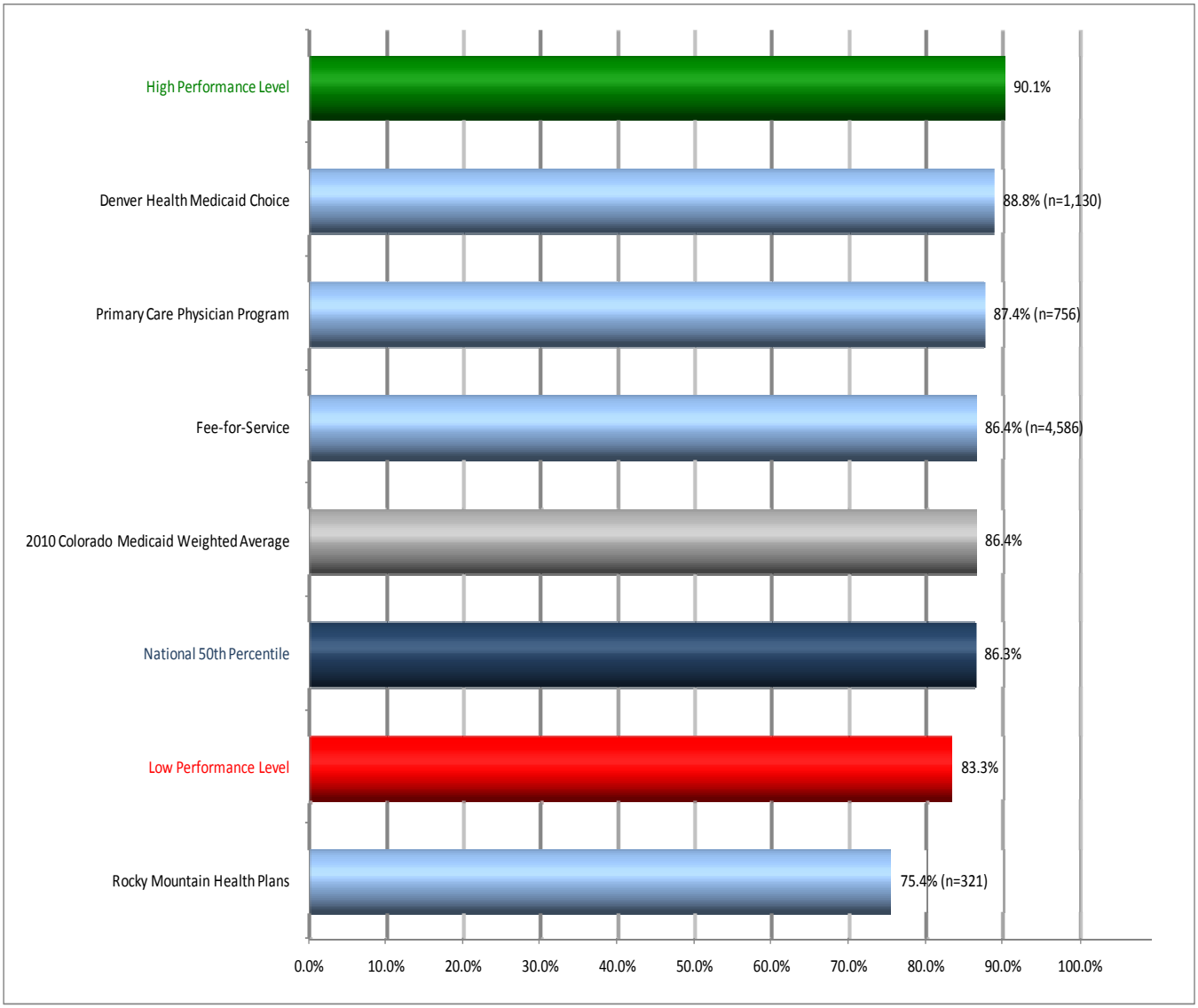
Performance Results

Figure 5-1
Annual Monitoring for Patients on Persistent Medications—ACE Inhibitors or ARBs
Colorado Medicaid Weighted Averages



The weighted averages for *Annual Monitoring for Patients on Persistent Medications—ACE Inhibitors or ARBs* increased between 2008 and 2009, but decreased between 2009 and 2010. The 2010 weighted average increased by 3.0 percentage points from the 2008 weighted average, but decreased 0.1 percentage points from the 2009 weighted average.

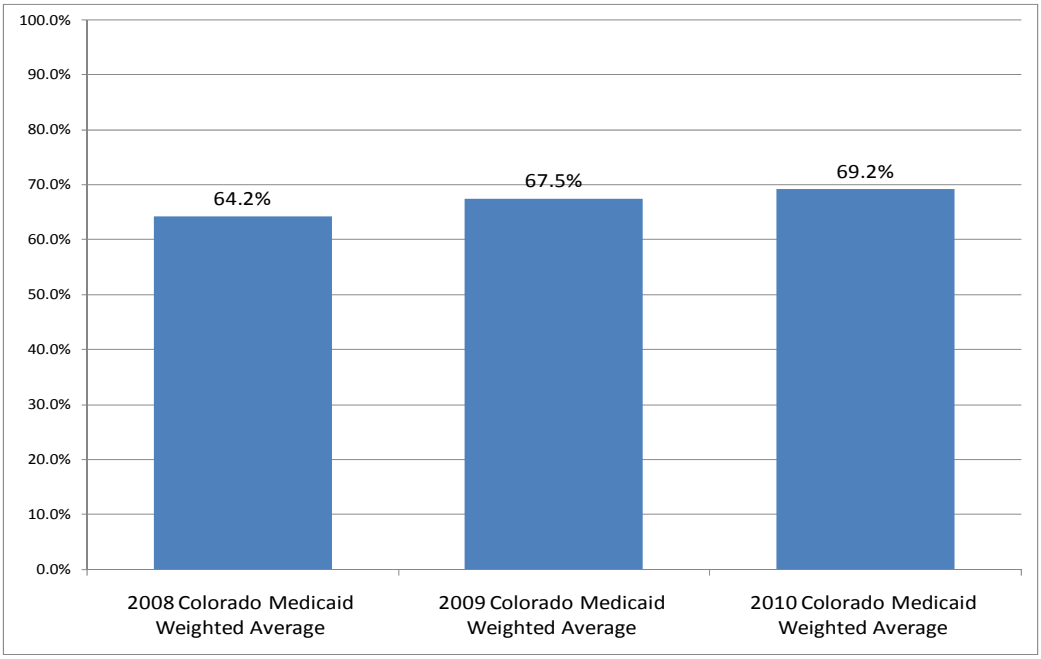
Figure 5-2
Annual Monitoring for Patients on Persistent Medications—ACE Inhibitors or ARBs



None of the health plans exceeded the HPL of 90.1 percent, and one of the health plans was below the LPL of 83.3 percent. A total of three health plans reported rates above the national HEDIS 2009 Medicaid 50th percentile.

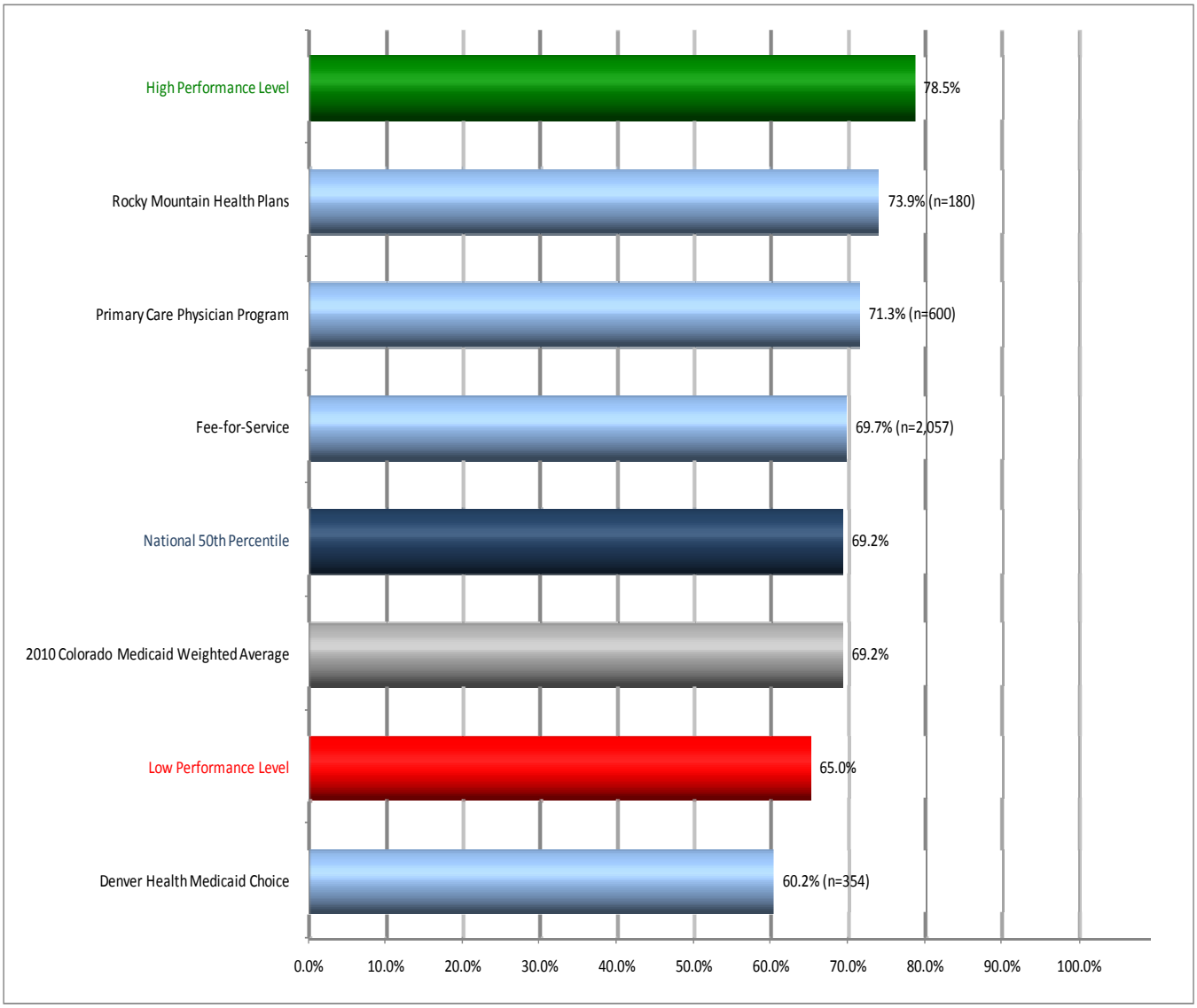
The 2010 Colorado Medicaid weighted average of 86.4 percent exceeded the national HEDIS 2009 Medicaid 50th percentile by 0.1 percentage points.

Figure 5-3
Annual Monitoring for Patients on Persistent Medications—Anticonvulsants
Colorado Medicaid Weighted Averages



The weighted averages for *Annual Monitoring for Patients on Persistent Medications—Anticonvulsants* have increased each year from 2008 to 2010. The 2010 weighted average increased 5.0 and 1.7 percentage points from the 2008 and 2009 weighted averages, respectively.

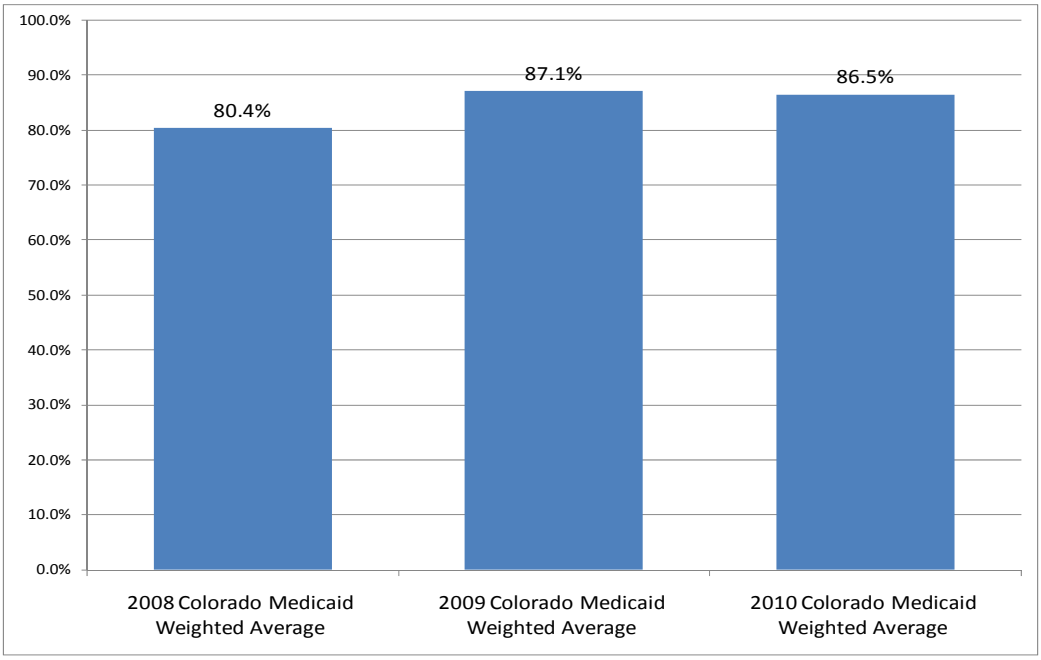
Figure 5-4
Annual Monitoring for Patients on Persistent Medications—Anticonvulsants



None of the health plans exceeded the HPL of 78.5 percent, and one of the health plans was below the LPL of 65.0 percent. A total of three health plans reported rates above the national HEDIS 2009 Medicaid 50th percentile.

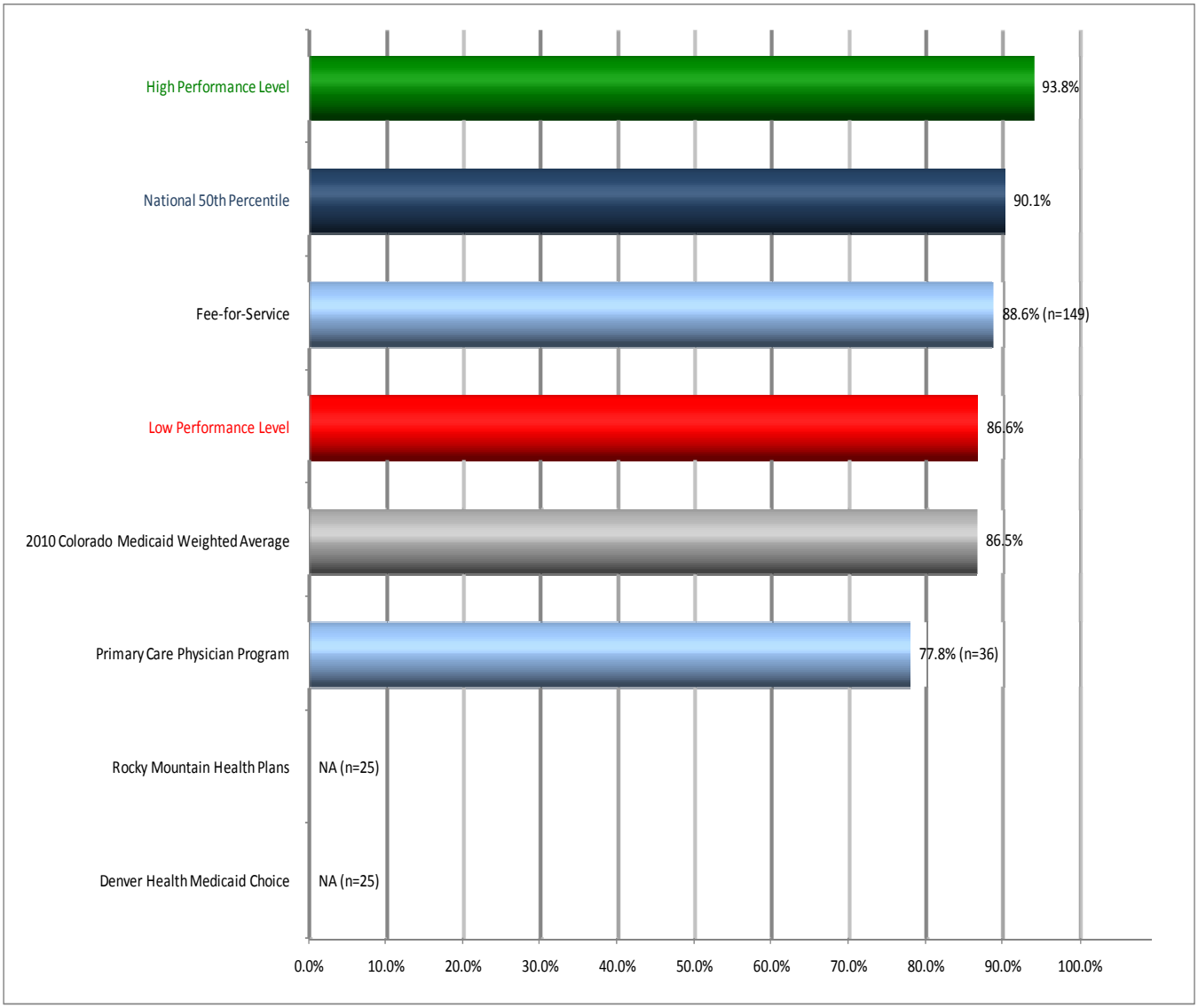
The 2010 Colorado Medicaid weighted average of 69.2 percent was equivalent to the national HEDIS 2009 Medicaid 50th percentile.

Figure 5-5
Annual Monitoring for Patients on Persistent Medications—Digoxin
Colorado Medicaid Weighted Averages



The weighted averages for *Annual Monitoring for Patients on Persistent Medications—Digoxin* increased between 2008 and 2009, but decreased between 2009 and 2010. The 2010 weighted average increased by 6.1 percentage points from the 2008 weighted average, but decreased 0.6 percentage points from the 2009 weighted average.

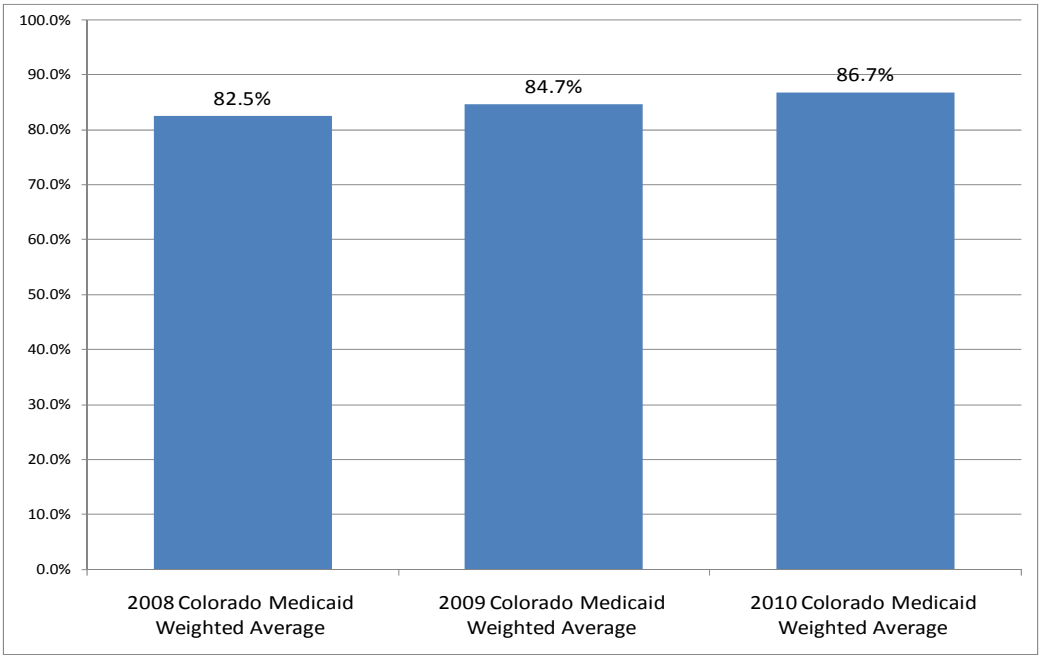
Figure 5-6
Annual Monitoring for Patients on Persistent Medications—Digoxin



None of the health plans exceeded the HPL of 93.8 percent, and none of the health plans reported rates above the national HEDIS 2009 Medicaid 50th percentile. One health plan was below the LPL of 86.6 percent. Two health plans were unable to report a rate for this measure since the denominator was too small to report a valid rate (a denominator of less than 30).

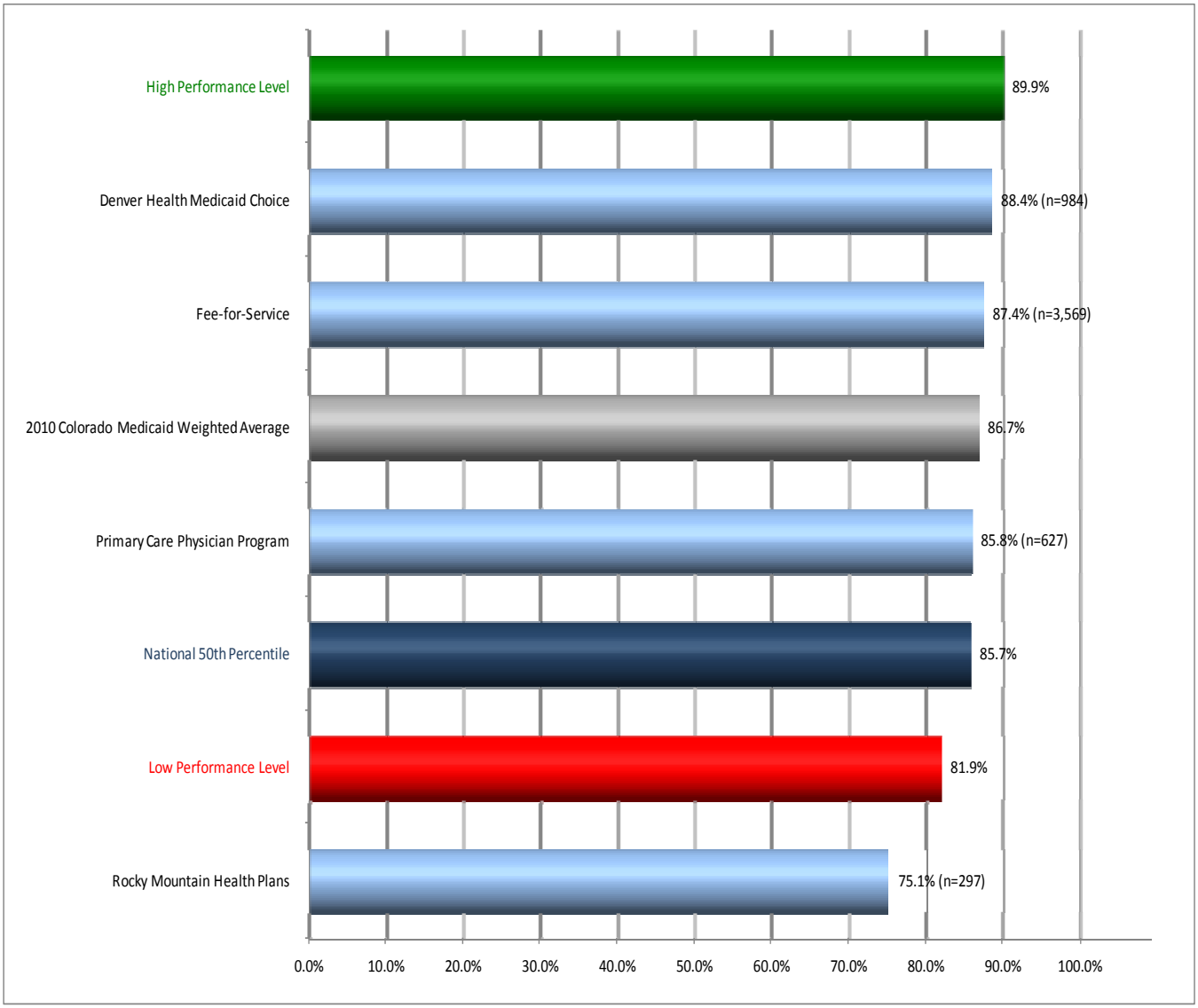
The 2010 Colorado Medicaid weighted average of 86.5 percent was below the national HEDIS 2009 Medicaid 50th percentile by 3.6 percentage points. In fact, the 2010 Colorado Medicaid weighted average was 0.1 percentage points below the LPL.

Figure 5-7
Annual Monitoring for Patients on Persistent Medications—Diuretics
Colorado Medicaid Weighted Averages



The weighted averages for *Annual Monitoring for Patients on Persistent Medications—Diuretics* have increased each year from 2008 to 2010. The 2010 weighted average increased 4.2 and 2.0 percentage points from the 2008 and 2009 weighted averages, respectively.

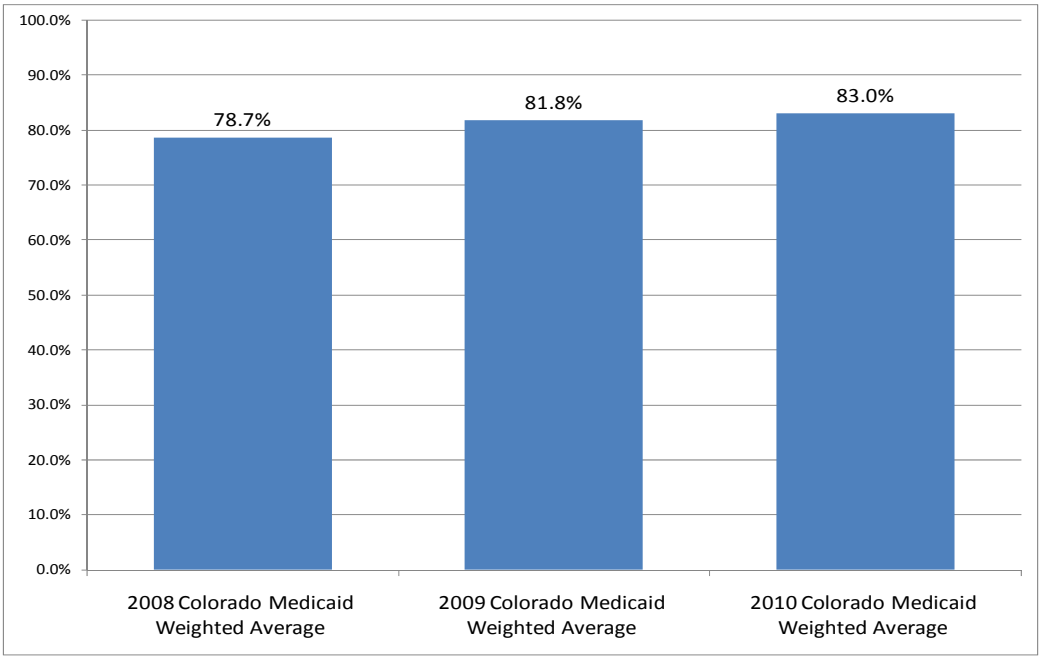
Figure 5-8
Annual Monitoring for Patients on Persistent Medications—Diuretics



None of the health plans exceeded the HPL of 89.9 percent, and one of the health plans was below the LPL of 81.9 percent. A total of three health plans reported rates above the national HEDIS 2009 Medicaid 50th percentile.

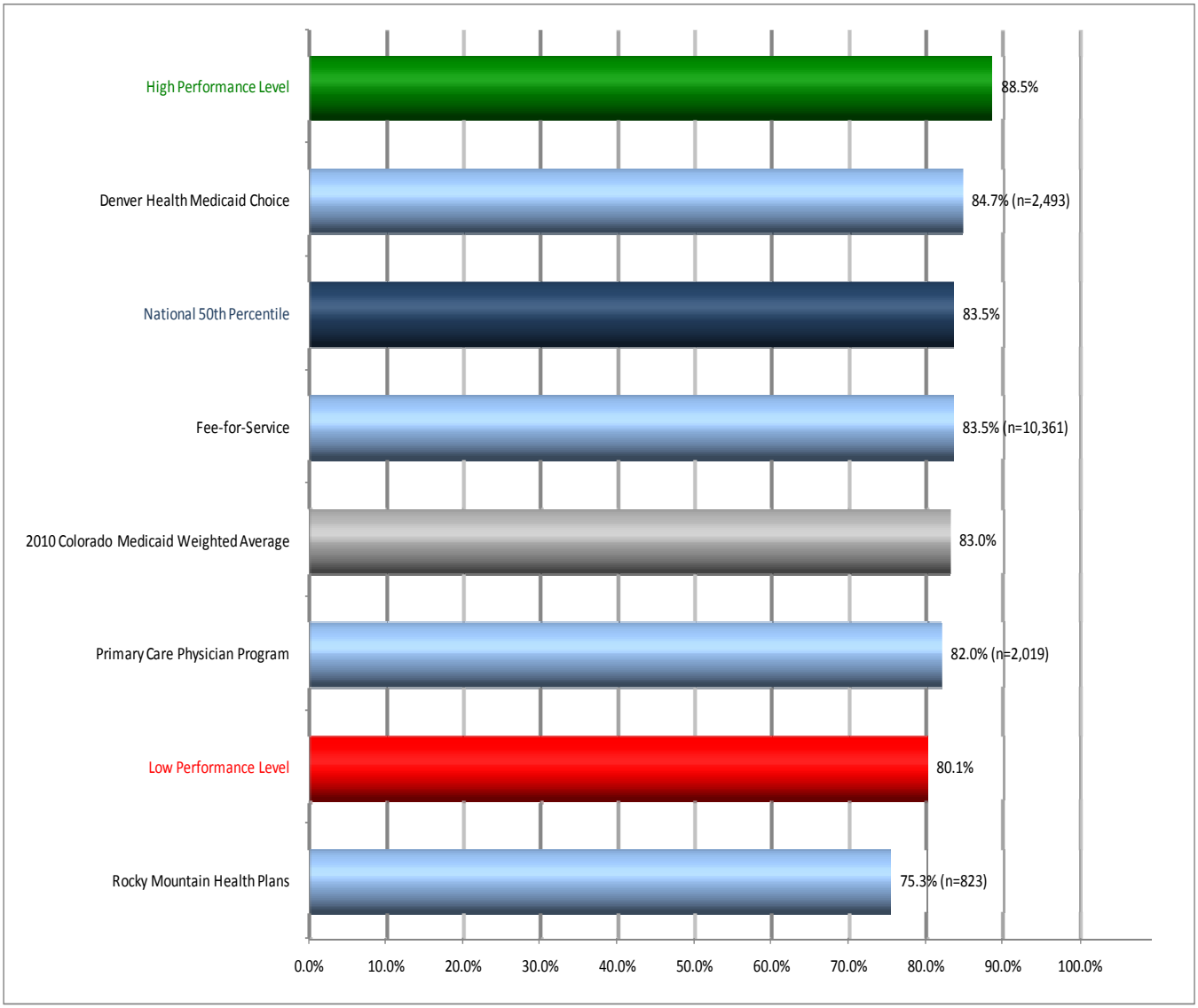
The 2010 Colorado Medicaid weighted average of 86.7 percent exceeded the national HEDIS 2009 Medicaid 50th percentile by 1.0 percentage point.

Figure 5-9
Annual Monitoring for Patients on Persistent Medications—Total
Colorado Medicaid Weighted Averages



The weighted averages for *Annual Monitoring for Patients on Persistent Medications—Total* have increased each year from 2008 to 2010. The 2010 weighted average increased 4.3 and 1.2 percentage points from the 2008 and 2009 weighted averages, respectively.

Figure 5-10
Annual Monitoring for Patients on Persistent Medications—Total



None of the health plans exceeded the HPL of 88.5 percent, and one of the health plans was below the LPL of 80.1 percent. One health plan reported a rate above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 83.0 percent was below the national HEDIS 2009 Medicaid 50th percentile by 0.5 percentage points.

Use of Imaging Studies for Low Back Pain

Measure Definition

The *Use of Imaging Studies for Low Back Pain* measure assesses the percentage of members between 18 and 50 years of age, enrolled 180 days prior to the index episode start date (IESD) through 28 days after the IESD, who had a primary diagnosis of low back pain and who did not have an imaging study (X-ray, magnetic resonance imaging [MRI], computed topography [CT] scan) within 28 days of diagnosis.

Importance

Low back pain is a common and expensive cause of lost productivity and work days in the United States. Each year, approximately half of American adults will experience low back pain.[5-7] For most patients, acute low back pain is non-specific. Only a small portion of patients with persistent pain will need to be evaluated further to investigate more serious health problems. A history and physical examination can provide clues to the rare but potentially serious causes of low back pain. While imaging may be appropriate for patients at risk for more serious conditions, the majority of patients experience low back pain that is non-specific and with no identifiable cause. According to the American College of Radiology, acute low back pain without complications is usually benign and self-limiting and does not necessitate early imaging studies, (e.g., X-ray, MRI, or CT scan).

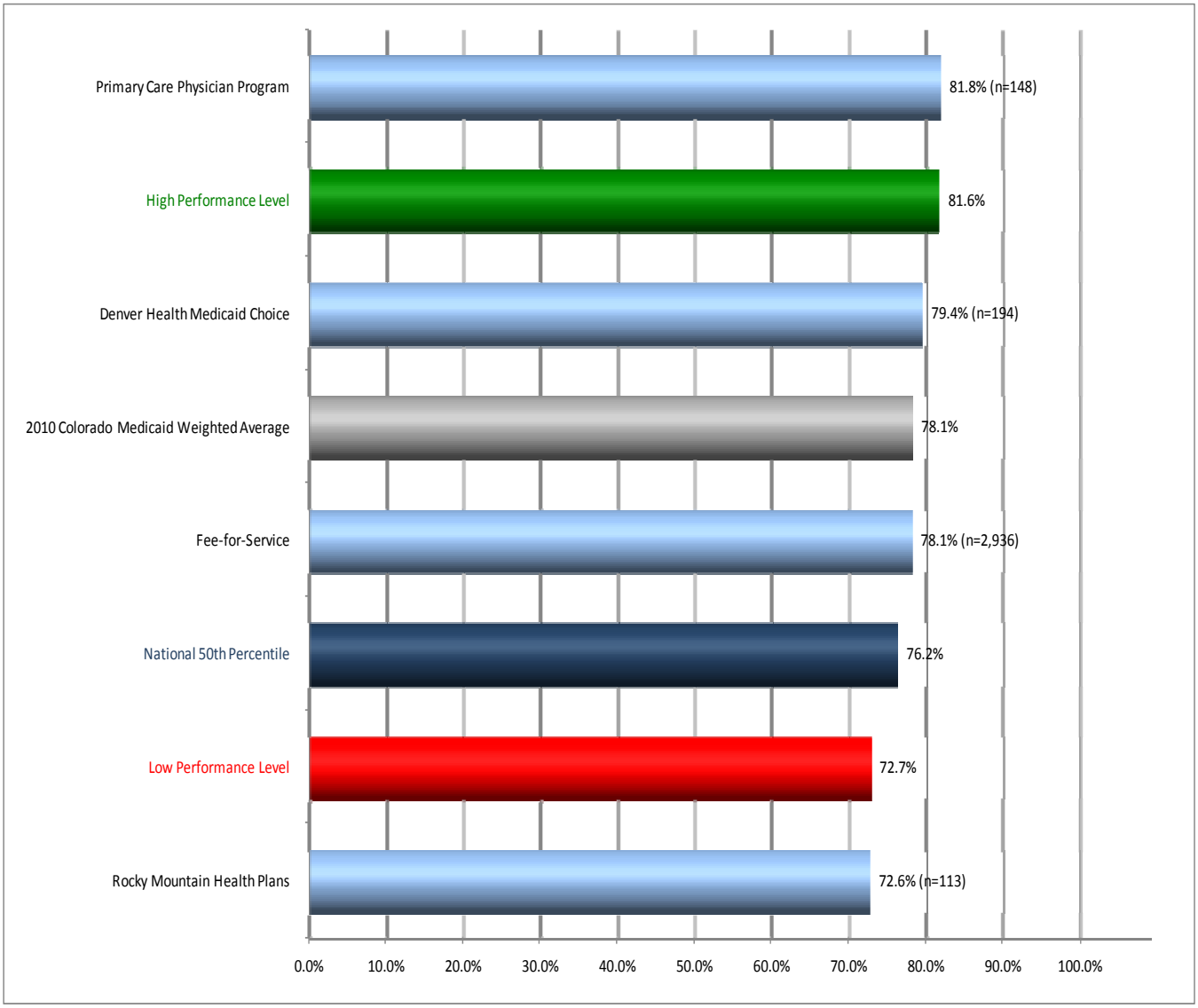
However, despite this evidence, imaging studies are commonly overused in the evaluation of patients with acute low back pain. Less than 1 percent of radiographs find the cause of low back pain.[5-8] Abnormalities found when imaging those with and without back pain had similar prevalence. Other than patient satisfaction, most patients given standard care for their low back pain did not experience any differences in health outcomes compared to those given lower back radiographs.

5-7 Koes BW, van Tulder MW, Thomas S. Diagnosis and Treatment of Low Back Pain. *British Medical Journal*. 2006; 332: 1430-1434.

5-8 Manek NJ, MacGregor AJ. Epidemiology of Back Disorders: Prevalence, Risk Factors, and Prognosis. *Current Opinion in Rheumatology*. 2005; 17:134-140.

Performance Results

Figure 5-11
Use of Imaging Studies for Low Back Pain



One health plan exceeded the HPL of 81.6 percent, and one was below the LPL of 72.7 percent. Three health plans, including the one above the HPL, reported rates above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 78.1 percent was above the national HEDIS 2009 Medicaid 50th percentile by 1.9 percentage points.

Controlling High Blood Pressure

Measure Definition

The *Controlling High Blood Pressure* measure assesses if blood pressure was controlled for adults with diagnosed hypertension. This measure calculates the percentage of members 18 through 85 years of age who were continuously enrolled for the measurement year, who had an ambulatory claim or encounter with a diagnosis of hypertension that was confirmed within the medical record, and whose blood pressure was controlled below 140/90 mm Hg.

Importance

Approximately 74.5 million people over the age of 20 have high blood pressure (i.e., hypertension) in the United States, which equates to about one of every three residents. Hypertension was the cause of 56,561 deaths in the United States in 2006. Hypertension is a major risk factor for cardiovascular disease. Hypertension is considered to be a "silent" condition and it is estimated that only 77.6 percent of people with hypertension are aware they have the condition.[5-9]

Antihypertensive therapy can reduce the incidence of strokes by 35 to 40 percent, heart attacks by 20 to 25 percent, and heart failure by 50 percent.[5-10] In 2007, 16.2 percent of Colorado adults were reported as having high blood pressure. Colorado ranked third in the country in terms of high blood pressure prevalence in 2007.[5-11]

Fortunately, high blood pressure is easily detected and usually controllable. While 67.9 percent of people with high blood pressure are on a current treatment, 55.9 percent of these individuals still do not have their blood pressure under control.[5-12]

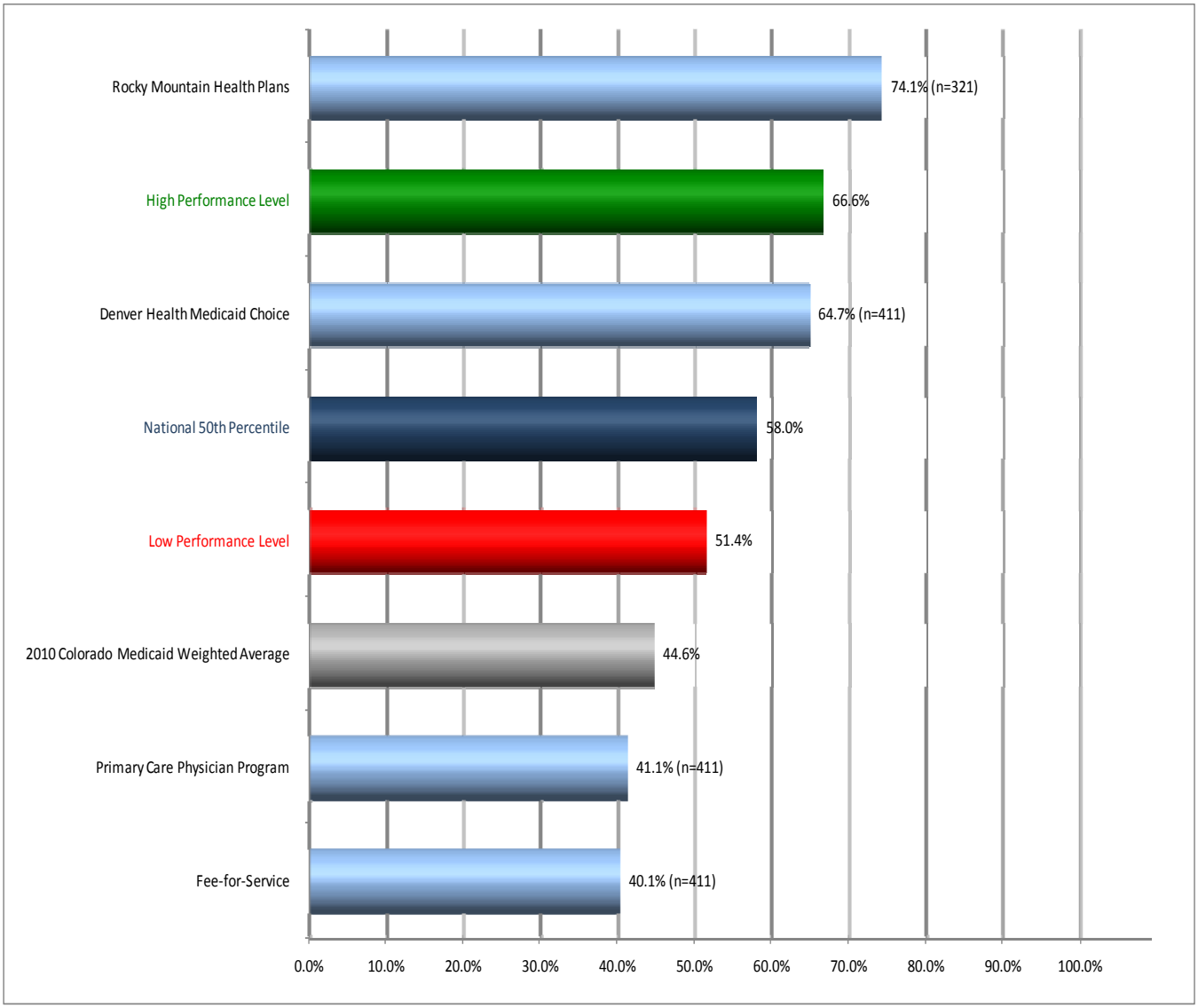
Uncontrolled high blood pressure can lead to many further complications, including:

- Enlargement of the heart which may lead to heart failure.
- Formation of aneurysms in blood vessels throughout the body (e.g., heart, brain, legs, intestines, and spleen).
- Narrowing of the blood vessels in the kidney which may lead to kidney failure.
- Hardening of the arteries throughout the body (e.g., heart, brain, kidneys, and legs) which may lead to heart attack, stroke, kidney failure, or amputation.
- Bursting or bleeding of blood vessels in the eyes, which may cause vision changes and can ultimately result in blindness.

5-9 American Heart Association. High Blood Pressure Statistics. Available at: http://www.americanheart.org/presenter.jhtml?identifier=4621. Accessed on: April 16, 2010.
5-10 National Committee for Quality Assurance. *The State of Health Care Quality 2009*. Washington, D.C.: NCQA; 2009.
5-11 The Colorado Health Foundation. The Colorado Health Report Card, 2009. Available at: http://www.coloradohealth.org/ReportCard/2009/subdefault.aspx?id=4112. Accessed on: September 1, 2010.
5-12 Ibid.

Performance Results

Figure 5-12
Controlling High Blood Pressure



One health plan exceeded the HPL of 66.6 percent, and two of the health plans were below the LPL of 51.4 percent. Two health plans, including the one above the HPL, reported rates above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 44.6 percent was below the national HEDIS 2009 Medicaid 50th percentile by 13.4 percentage points. In fact, the 2010 Colorado Medicaid weighted average was 6.8 percentage points below the LPL.

Pharmacotherapy Management of COPD Exacerbation

Measure Definition

The *Pharmacotherapy Management of COPD Exacerbation* measure assesses the percentage of members 40 years of age and older who had an acute inpatient discharge or ED encounter between January 1 to November 30 of the measurement year and who were dispensed appropriate medications. The two rates reported include:

- Members who were dispensed a bronchodilator within 30 days of the event.
- Members who were dispensed a systemic corticosteroid within 14 days of the event.

Importance

COPD is the fourth leading cause of death and disability in the United States. It is predicted that this disease will be the third leading cause of death in the United States by 2020.[5-13,5-14] COPD exacerbations are the leading cause of death among people with COPD.[5-15] Approximately 77 percent of COPD patients experience exacerbations annually.[5-16]

The care and treatment of COPD is costly. COPD accounted for approximately $42.6 billion in health care costs in 2007, which included $26.7 billion in direct health care costs and $16 billion in indirect costs, such as morbidity and mortality expenses.[5-17] In 2005, there were 721,000 COPD-related hospital discharges. COPD exacerbations account for 58 percent of the hospitalization costs associated with COPD. An estimated one-third of patients discharged from the hospital will have recurrent symptoms within 14 days. Approximately 17 percent of patients discharged from the ED will be readmitted within 14 days, and 23 percent of patients will be readmitted within 30 days.[5-18,5-19]

Appropriate treatment and management of COPD exacerbation is important due to the increase in the chronic symptoms associated with acute exacerbation. Acute COPD exacerbations cause a decrease in quality of life and are also associated with an increased risk of mortality. In addition, individuals with COPD exacerbations are at an increased risk for respiratory failure.[5-20]

5-13 National Committee for Quality Assurance. *The State of Health Care Quality 2009*. Washington, D.C: NCQA; 2009.
5-14 COPD International. COPD Statistical Information. Available at: http://www.copd-international.com/library/statistics.htm. Accessed on: June 21, 2010.
5-15 Cassola M, MacNee W, Martinez FJ, et al. Outcomes for COPD pharmacological trials: from lung function to biomarkers. European Respiratory Journal. 2008; 31: 46-468.
5-16 GlaxoSmithKline. RIGHT Intervention-right patients, right medications: A COPD initiative. Available at: http://www.vivaprovider.com/Download.aspx?ID=592&Type=doc. Accessed on: June 22, 2010.
5-17 Ibid.
5-18 California Department of Health Care Services. DUR: Pharmacotherapy Management of COPD Exacerbation. Available at: http://files.medi-cal.ca.gov/pubsdoco/dur/articles/dured_9294.asp. Accessed on: June 21, 2010.
5-19 GlaxoSmithKline. RIGHT Intervention-right patients, right medications: A COPD initiative. Available at: http://www.vivaprovider.com/Download.aspx?ID=592&Type=doc. Accessed on: June 22, 2010.
5-20 Pulmonology Channel. Acute Exacerbations. Available at: http://www.pulmonologychannel.com/copd/acuteexacerbation.shtml. Accessed on: June 21, 2010.

The use of short-term corticosteroids can result in physiologic improvement during the first 72 hours. It can also decrease the number of hospitalizations and the likelihood of future exacerbations. This regimen also increases the likelihood of treatment success for the 30 days following the episode.[5-21] The long-term use of inhaled corticosteroids can reduce the frequency of exacerbations by 25 percent.[5-22] Bronchodilators are also another important treatment for COPD exacerbation. One study found that tiotropium (a bronchodilator) reduced the frequency of exacerbations by nearly 6 percent. In addition, patients who used this bronchodilator exhibited a 3 percent decrease of COPD exacerbation-related ED visits.[5-23] Further, combining an inhaled corticosteroid with a long-acting bronchodilator reduces the frequency of COPD exacerbations by an estimated 35 percent.[5-24]

[5-21] California Department of Health Care Services. DUR: Pharmacotherapy Management of COPD Exacerbation. Available at: http://files.medi-cal.ca.gov/pubsdoco/dur/articles/dured_9294.asp. Accessed on: June 21, 2010.

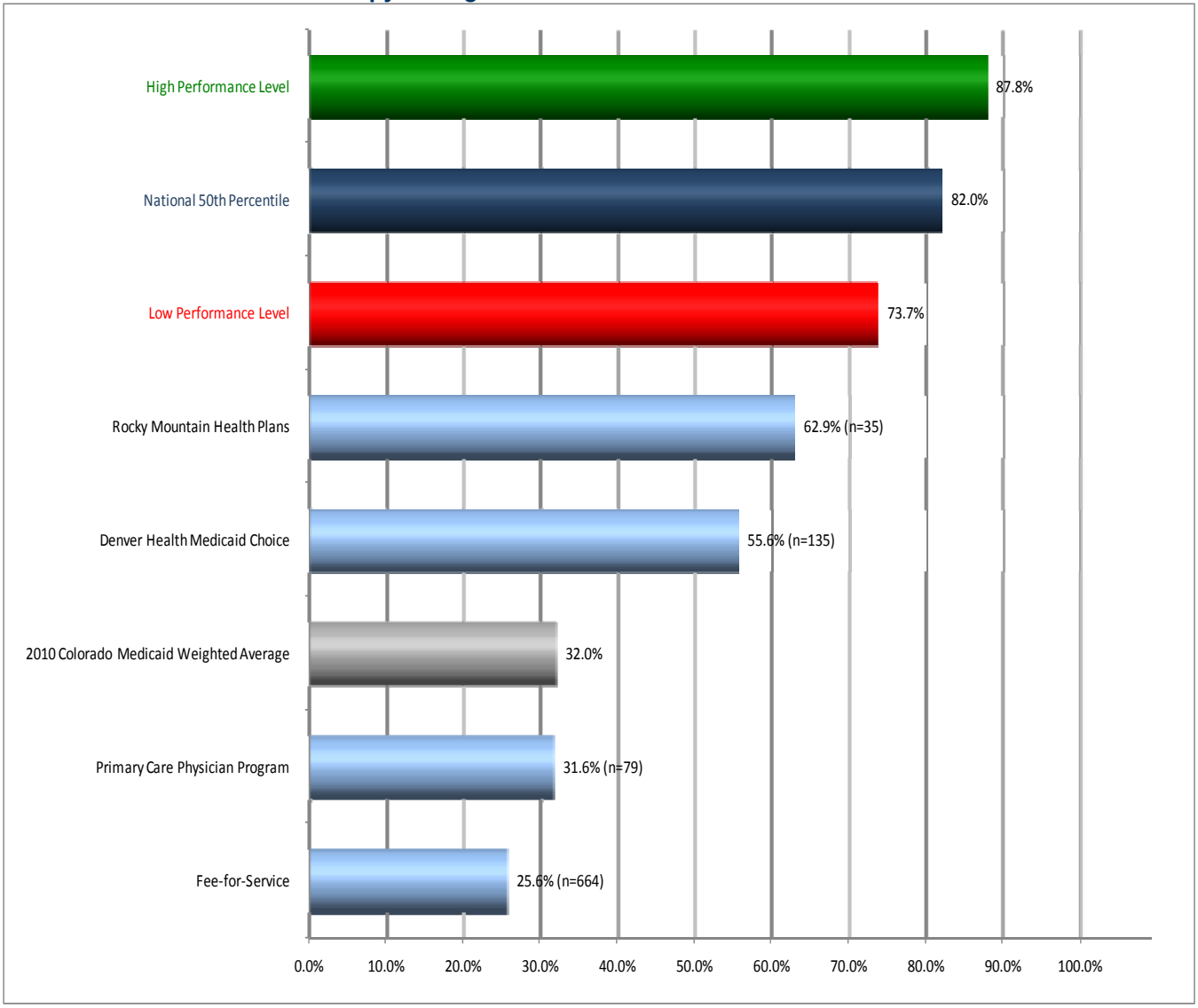
[5-22] Lee M. Inhaled Corticosteroids Reduce Exacerbations in Patients with Stable COPD. 2005. Available at: http://sfghdean.ucsf.edu/barnett/EBM/CATs/0501LeeCOPD.pdf. Accessed on: June 21, 2010.

[5-23] Niewoehner DE, Rice K, Cote C, et al. Prevention of Exacerbations of Chronic Obstructive Pulmonary Disease with Tiotropium, a One-Daily Inhaled Anticholinergic Bronchodilator. *Annals of Internal Medicine*. 2005; 143(5): 317-326.

[5-24] American Thoracic Society. Combination Therapy Reduces Exacerbations in Severe COPD. *ScienceDaily*. 2007. Available at: http://www.sciencedaily.com/releases/2007/01/070115081335.htm. Accessed on: June 21, 2010.

Performance Results

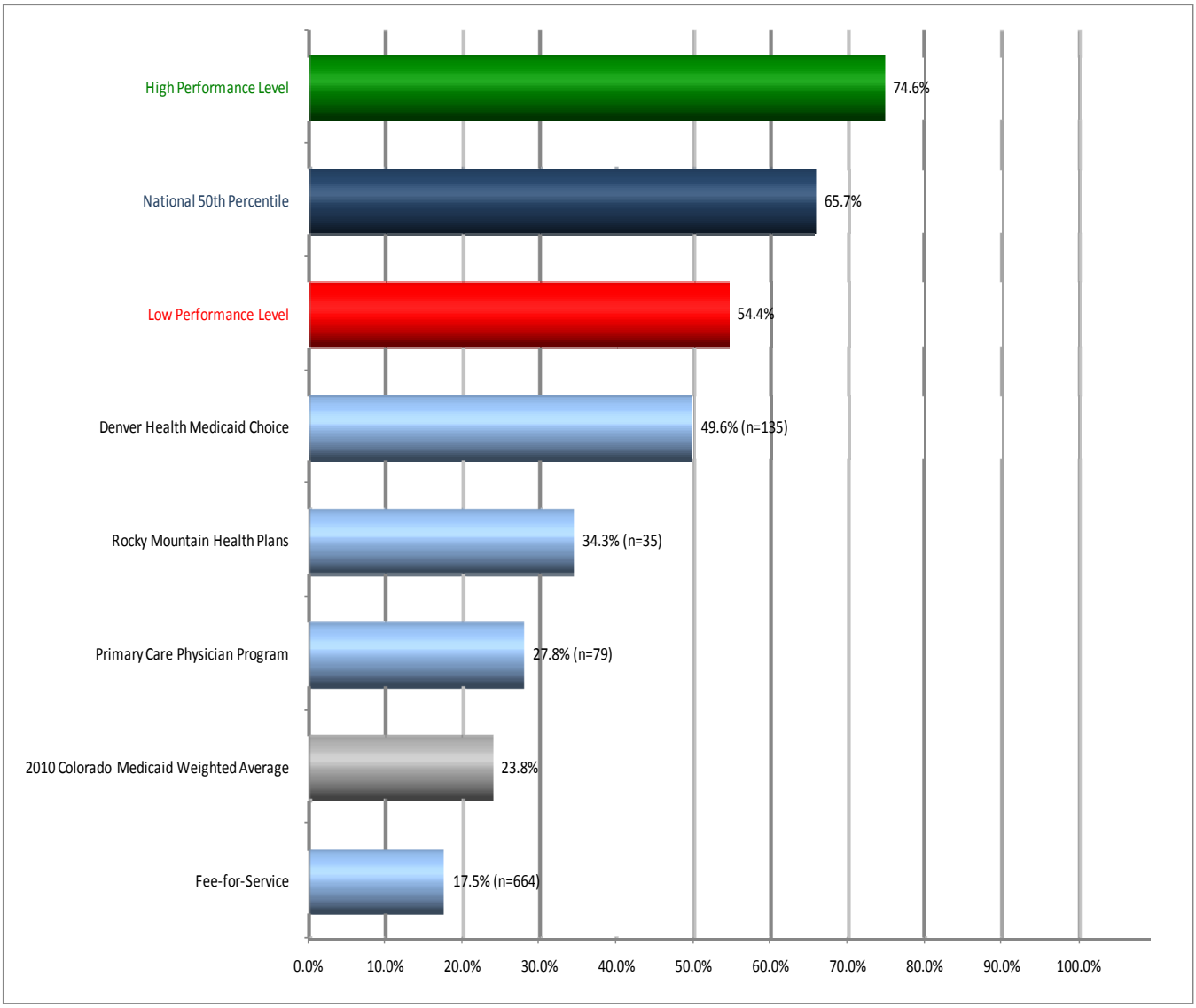
Figure 5-13
Pharmacotherapy Management of COPD Exacerbation—Bronchodilator



None of the health plans exceeded the HPL of 87.8 percent, and all four of the plans were below the LPL of 73.7 percent.

The 2010 Colorado Medicaid weighted average of 32.0 percent was below the national HEDIS 2009 Medicaid 50th percentile by 50.0 percentage points. In fact, the 2010 Colorado Medicaid weighted average was 41.7 percentage points below the LPL.

Figure 5-14
Pharmacotherapy Management of COPD Exacerbation—Systemic Corticosteroid



None of the health plans exceeded the HPL of 74.6 percent, and all four of the plans were below the LPL of 54.4 percent.

The 2010 Colorado Medicaid weighted average of 23.8 percent was below the national HEDIS 2009 Medicaid 50th percentile by 41.9 percentage points. In fact, the 2010 Colorado Medicaid weighted average was 30.6 percentage points below the LPL.

Antidepressant Medication Management

Measure Definition

The *Antidepressant Medication Management* measure assesses the percentage of members 18 years of age and older who were diagnosed with a new episode of major depression, treated with antidepressant medication, and who remained on an antidepressant medication treatment. Two rates are reported for this measure:

- *Effective Acute Phase Treatment*: The percentage of newly diagnosed and treated members who remained on an antidepressant for at least 84 days (i.e., 12 weeks).
- *Effective Continuation Phase Treatment*: The percentage of newly diagnosed and treated members who remained on an antidepressant medication for at least 180 days (i.e., 6 months).

Importance

Depression is one of the most common behavioral health conditions. Antidepressant medication management is vital to improving symptoms of depression since antidepressants take several weeks of consistent use to be effective. One of the major problems in treating depression is that patients do not follow through with treatment recommendations made by their physicians. Persons with depression tend to have lower rates of medication adherence, which can lead to relapse.[5-25] Furthermore, patients are tempted to stop taking their medication(s) when they think their symptoms have improved, they no longer need the medication, and/or the medication is not helping. Only 50 to 60 percent of patients continuously refill their antidepressant prescription for 12 weeks.[5-26]

Individuals should continue medication for four to nine months after symptoms have improved in order to prevent recurrence of depression.[5-27] Major depression is treated most effectively with medications and it is recommended that medication is taken for the entire acute phase (84 days) and for the entire continuation phase (180 days). However, studies have found medication adherence is poor among persons with major depression. By six months, many studies found that 40 percent of patients discontinue antidepressant treatment, but others were as low 25 percent.[5-28]

[5-25] Shelton RC, Hahn SR, Katon WJ. Expert Panel Supplement - Strategies for Improving Adherence in the Treatment of Major Depressive Disorder. *CNS Spectrums.* 2009; 14(12 - supplement 14).

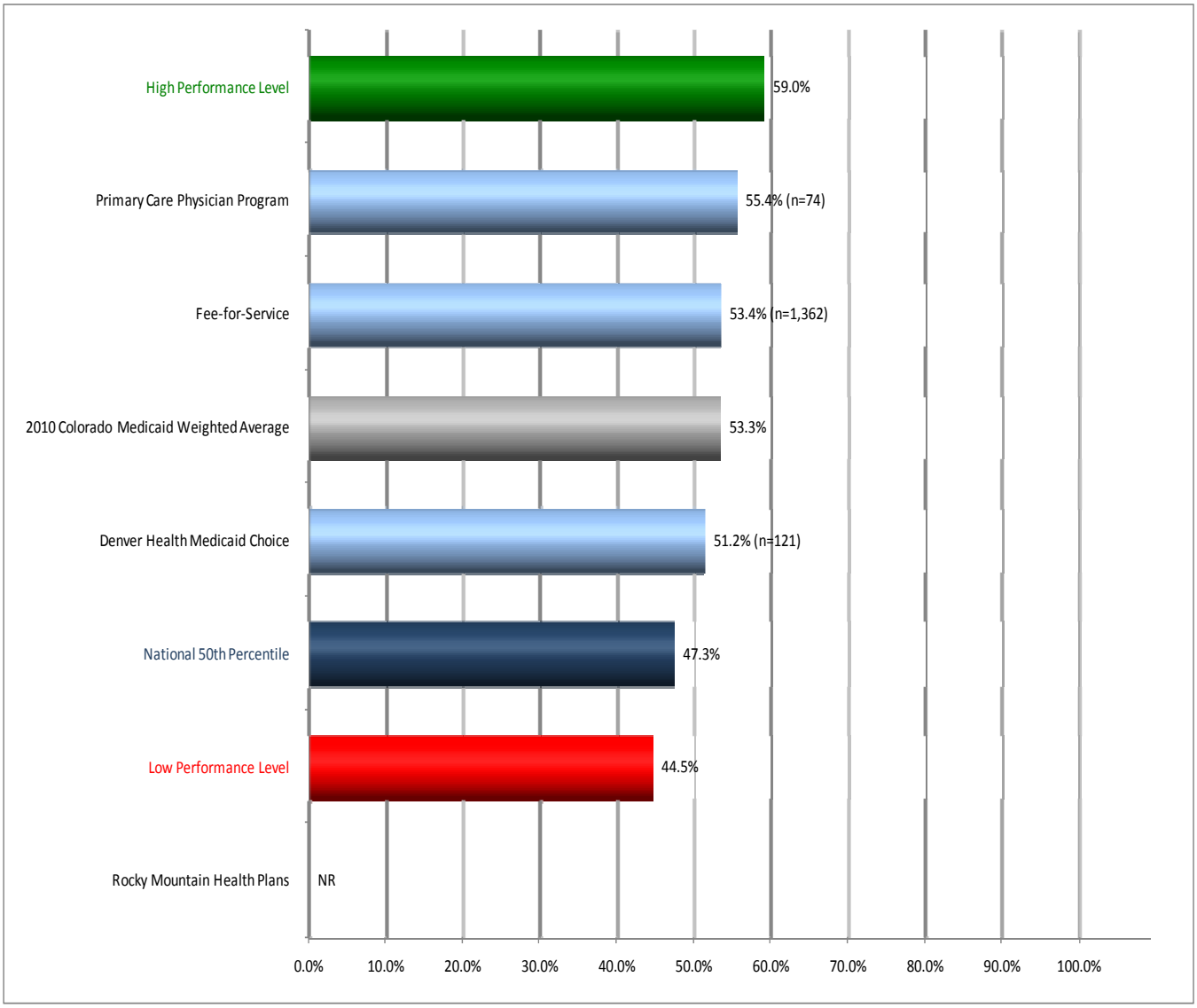
[5-26] AARP Healthcare Web site. The Importance of Compliance in the Treatment of Depression. Available at: http://www.aarphealthandwellness.com/health/lww/the-importance-of-compliance-in-the-treatment-of-depression. Accessed on: June 15, 2010.

[5-27] All About Depression: Antidepressant Medications. Available at: http://www.allaboutdepression.com/med_01.html. Accessed on: June 15, 2010.

[5-28] Hoffman L, Enders J, Luo J, et al. Impact of an Antidepressant Management Program on Medication Adherence. *American Journal of Managed Care.* 2003; 9(1): 70-80.

Performance Results

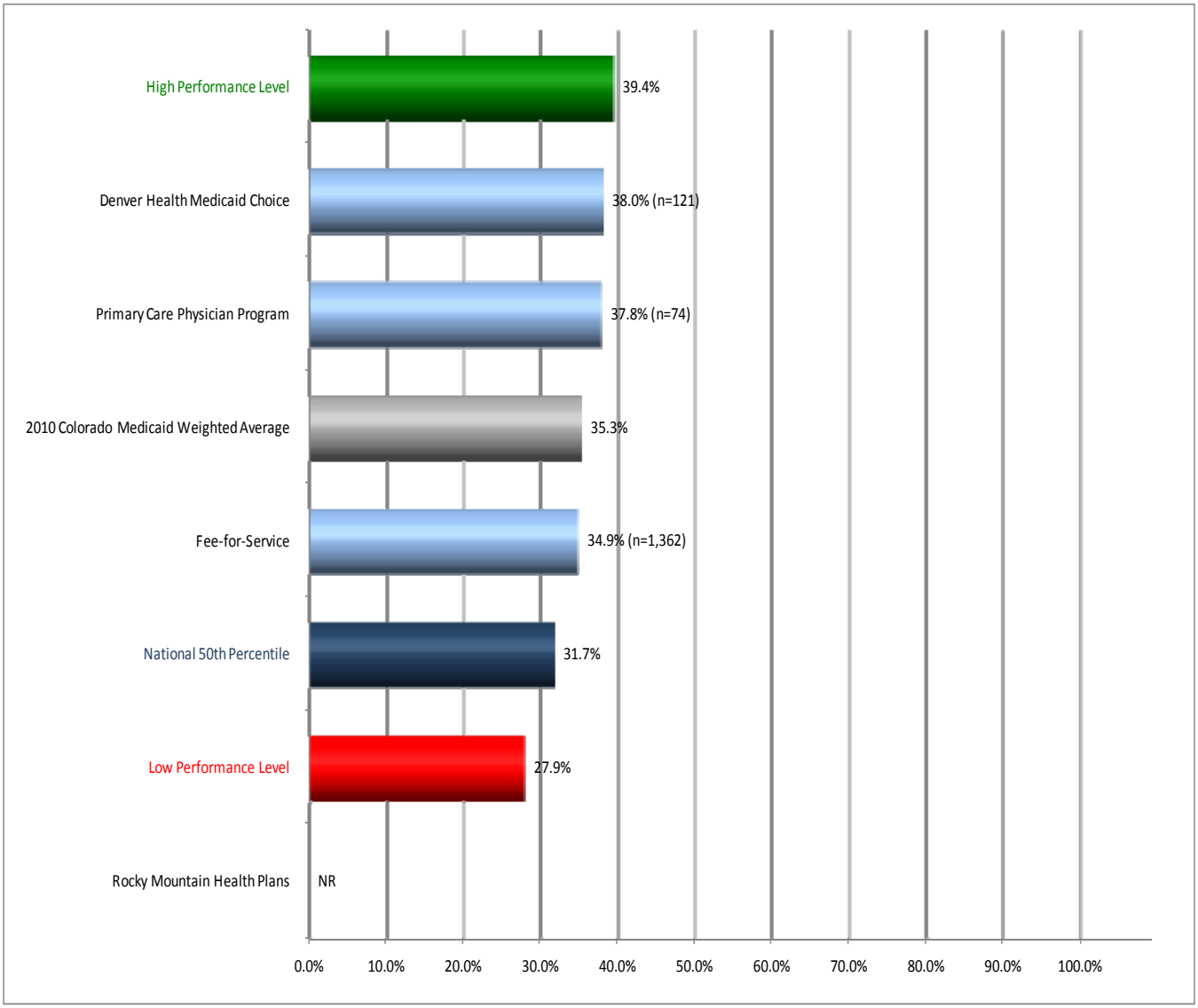
Figure 5-15
Antidepressant Medication Management—Effective Acute Phase Treatment



None of the health plans exceeded the HPL of 59.0 percent, and none of the health plans were below the LPL of 44.5 percent. Three health plans reported rates above the national HEDIS 2009 Medicaid 50th percentile. One health plan does not offer a mental health benefit; therefore, the health plan received a rate of NB.

The 2010 Colorado Medicaid weighted average of 53.3 percent exceeded the national HEDIS 2009 Medicaid 50th percentile by 6.0 percentage points.

Figure 5-16
Antidepressant Medication Management—Effective Continuation Phase Treatment



None of the health plans exceeded the HPL of 39.4 percent, and none of the health plans were below the LPL of 27.9 percent. Three health plans reported rates above the national HEDIS 2009 Medicaid 50th percentile. One health plan does not offer a mental health benefit; therefore, the health plan received a rate of NB.

The 2010 Colorado Medicaid weighted average of 35.3 percent exceeded the national HEDIS 2009 Medicaid 50th percentile by 3.6 percentage points.

Avoidance of Antibiotic Treatment in Adults With Acute Bronchitis

Measure Definition

The *Avoidance of Antibiotic Treatment in Adults With Acute Bronchitis* measure assesses the percentage of members 18 to 64 years of age with a primary diagnosis of acute bronchitis and who were not dispensed an antibiotic prescription.

Importance

While only about 5 percent of adults report an episode of acute bronchitis each year, 90 percent seek treatment.[5-29] Acute bronchitis consistently ranks among the top 10 conditions that account for the most ambulatory office visits to U.S. physicians. The majority of acute bronchitis cases (more than 90 percent) have a nonbacterial cause (i.e., are viral in origin) making the prescribing of antibiotics for the treatment of acute bronchitis inappropriate. However, antibiotics are prescribed for the treatment of acute bronchitis 65 percent to 80 percent of the time.[5-30] Furthermore, over 90 percent of smokers with acute bronchitis receive antibiotics; however, there is no evidence that smokers are in greater need of antibiotics than nonsmokers.[5-31]

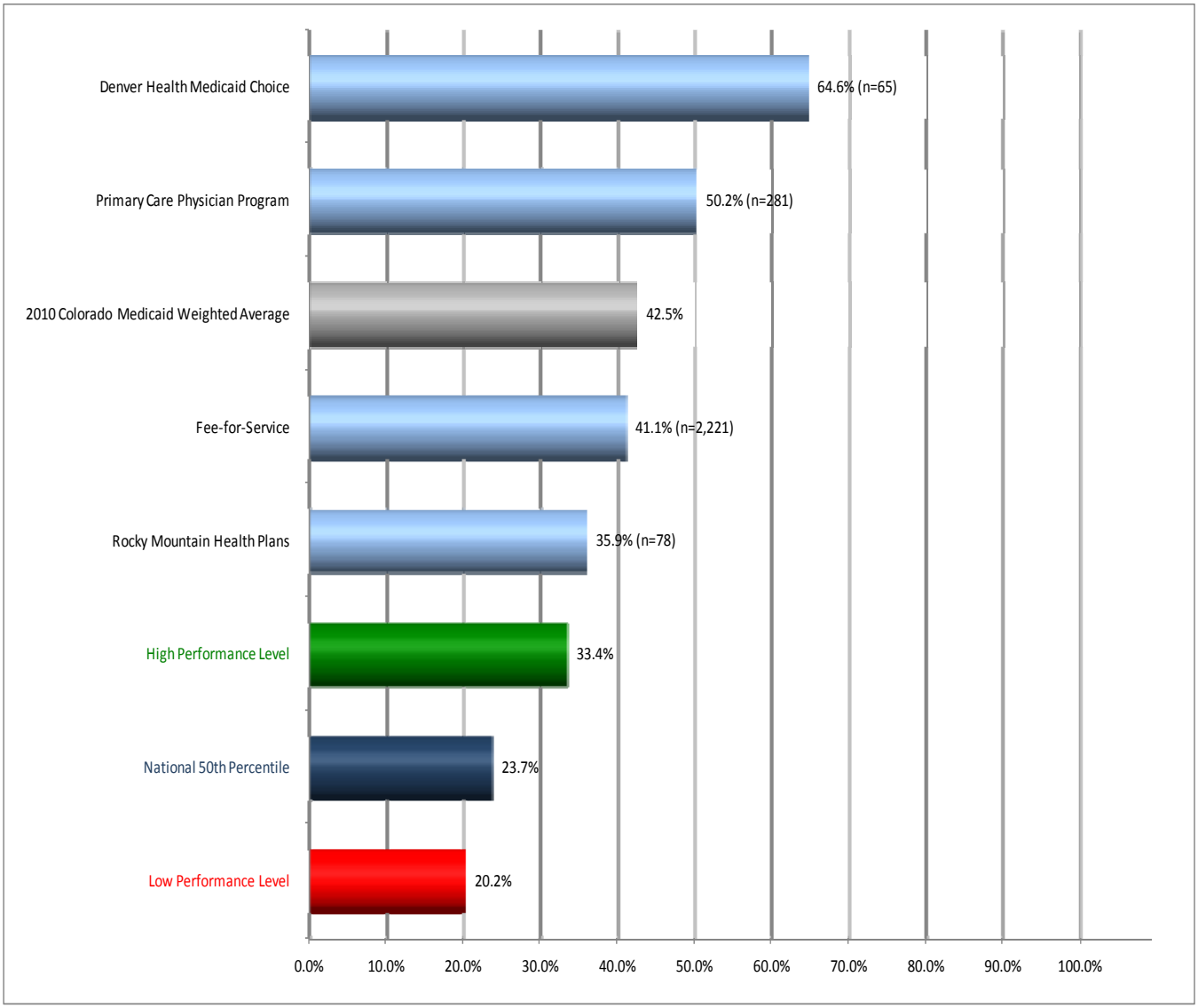
When the treatment of acute bronchitis was compared between patients who received an antibiotic and patients who received a placebo, it was found that there were few benefits in terms of reducing impairments such as coughing, sore throat, sputum build up, and fever. Antibiotic use did, however, show a significantly higher level of adverse medication side effects such as nausea, vomiting, headaches, and rash.[5-32] A review of the literature suggests that many patients with a diagnosis of acute bronchitis have not received a correct diagnosis and that their acute cough is more likely due to acute asthma, an acute exacerbation of chronic bronchitis, or even the common cold.[5-33] Routine antibiotic treatment of acute bronchitis does not have a consistent impact on duration, severity of illness, or potential complications.[5-34]

Recent studies suggest that the reasons for unnecessary antibiotic prescribing are more complex, having as much or more to do with patient and physician expectations than with physicians' diagnostic skills. Patient satisfaction with care for acute bronchitis depends more on physician-patient communication than on antibiotic treatment.[5-35]

5-29 National Committee for Quality Assurance. *The State of Health Care Quality 2009*. Washington, D.C: NCQA; 2009.
5-30 Agency for Healthcare Research and Quality. "Avoidance of antibiotic treatment in adults with acute bronchitis." *National Quality Measures Clearinghouse*. Available at: http://www.qualitymeasures.ahrq.gov/content.aspx?id=14939. Accessed on: May 21, 2010.
5-31 Braman SS. Chronic Cough Due to Acute Bronchitis: ACCP Evidence-Based Clinical Practice Guidelines. *Chest*. 2006; 129: 95S-103S.
5-32 Chandran R. Should We Prescribe Antibiotics for Acute Bronchitis? *American Family Physician.* 2001.
5-33 Scott JG, Cohen D, DiCicco-Bloom B, et al. Antibiotic Use in Acute Respiratory Infections and the Ways Patients Pressure Physicians for a Prescription. *The Journal of Family Practice.* 2001; 50(10): 853-858.
5-34 Gonzales R, Bartlett JG, Besser RE, et al. Principles of Appropriate Use for Treatment of Uncomplicated Acute Bronchitis: Background. *Annals of Internal Medicine.* 2001; 134: 521-529.
5-35 Scott JG, Cohen D, DiCicco-Bloom B, et al. Antibiotic Use in Acute Respiratory Infections and the Ways Patients Pressure Physicians for a Prescription. *The Journal of Family Practice.* 2001; 50(10): 853-858.

Performance Results

Figure 5-17
Avoidance of Antibiotic Treatment in Adults With Acute Bronchitis



All four health plans exceeded the HPL of 33.4 percent.

The 2010 Colorado Medicaid weighted average of 42.5 percent exceeded the national HEDIS 2009 Medicaid 50th by 18.8 percentage points. In fact, the 2010 Colorado Medicaid weighted average was 9.1 percentage points above the HPL.

Living With Illness Findings and Recommendations

Summary of Findings

Table 5-1 presents a summary of the health plans' overall performance (in rank order from highest-to-lowest performing health plan) on the Living With Illness dimension.

Table 5-1
Overall Living With Illness Performance Summary

Health Plan Name	Living With Illness
DHMC	★★★
PCPP	★★★
FFS	★★
RMHP	★★

The highest performing health plans in the Living With Illness dimension were DHMC and PCPP.

Table 5-2 presents a summary of the health plans' performance for each of the measures in the Living With Illness dimension.

Table 5-2
Living With Illness Performance Summary

Measure	FFS	PCPP	DHMC	RMHP
Annual Monitoring for Patients on Persistent Medications—ACE or ARBs	★★★	★★★	★★★★	0
Annual Monitoring for Patients on Persistent Medications—Anticonvulsants	★★★	★★★	★	★★★★
Annual Monitoring for Patients on Persistent Medications—Digoxin	★★	0	NA	NA
Annual Monitoring for Patients on Persistent Medications—Diuretics	★★★	★★★	★★★★	0
Annual Monitoring for Patients on Persistent Medications—Total	★★★	★★	★★★	0
Use of Imaging Studies for Low Back Pain	★★★	★★★★★	★★★	★
Controlling High Blood Pressure	0	★	★★★★	★★★★★
Pharmacotherapy Management of COPD Exacerbation—Bronchodilator	0	0	0	0
Pharmacotherapy Management of COPD Exacerbation—Systemic Corticosteroid	0	0	★	0
Antidepressant Medication Management—Effective Acute Phase Treatment	★★★★	★★★★	★★★	NB
Antidepressant Medication Management—Effective Continuation Phase Treatment	★★★	★★★★	★★★★	NB
Avoidance of Antibiotic Treatment in Adults With Acute Bronchitis	★★★★★	★★★★★	★★★★★	★★★★★

Table 5-3 presents a summary of the number of measures that fell into each star rating category for the Living With Illness dimension.

Table 5-3
Living With Illness Star Ratings Summary

Health Plan Name	5 Stars	4 Stars	3 Stars	2 Stars	1 Star	0 Stars	NA/NB
FFS	1	1	6	1	0	3	0
PCPP	2	2	3	1	1	3	0
DHMC	1	4	3	0	2	1	1
RMHP	2	1	0	0	1	5	3

PCPP and RMHP both scored at or above the national HEDIS 2009 Medicaid 90th percentile (i.e., five stars) on two of the Living With Illness measures. However, RMHP also scored below the national HEDIS 2009 Medicaid 10th percentile (i.e., zero stars) on five measures in this domain.

Best Practices

Annual Monitoring for Patients on Persistent Medications

Mail Reminders

Mail reminders can be sent to members about their annual blood tests to ensure patient safety and appropriate medication dosage. Medications that require annual blood tests are ACE inhibitors, ARBs, digoxin, diuretics, and anticonvulsants.[5-36]

Medication Management

Health plans can provide health care providers with medication management tips to monitor patients on long-term medications. Providers should talk with patients about medications, which includes the name of each medication, why it is needed, and how to take it (i.e., dose, time, and frequency). Studies show that patients who know about their medications are more likely to take them correctly.

Health Management and Wellness Programs

Health plans can develop a program that provides a case manager to work with members' providers and families, and coordinates care with specialists, pharmacists, and hospitals. Members are able to receive the help and guidance they need and regular customized health information.

Develop a System for Missed or Cancelled Appointments

A proactive system to follow up with patients who have missed or cancelled appointments allows providers to quickly assess and respond to clinical situations. Systems that could be implemented include:

- Developing policies and procedures for following up with patients who have missed or cancelled appointments.
- Assessing the clinical importance of the appointment, the severity of the patient's medical condition, and the risk(s) associated with the missed or cancelled appointment.
- Calling members to remind them of their appointments and to emphasize the importance of follow-up care and the possible risks for not obtaining it.
- Mailing a reminder to advise patients of the risk of non-compliance.
- Educating staff about patient follow-up policies and procedures. Periodic record reviews should be conducted to evaluate staff compliance and the effectiveness of the process implemented.[5-37]

[5-36] Anthem. Network Rapid Update: Persistent Medication Monitoring Update. Available at: http://www.anthem.com/provider/noapplication/f1/s0/t0/pw_ad093796.pdf?refer=ahpprovider&state=in. Accessed on: June 22, 2010.

[5-37] Medical Liability Mutual Insurance Company. Risk Management Tips. Available at: http://www.mlmic.com/portal/Files/Dateline/DatelineSpring09_09.pdf. Accessed on: June 22, 2010.

Use of Imaging Studies for Low Back Pain

Focus on Identifying Red Flag Indicators

About 90 percent of all patients with low back pain will have non-specific low back pain. In clinical practice as well as in the literature, non-specific low back pain is usually classified by the duration of the pain.[5-38] During the initial assessment of patients with low back pain, clinical guidelines recommend focusing on obtaining a complete medical history and physical examination. The history and physical examination will generally provide "red flag" indicators to rare but potentially serious causes of low back pain and identify if a patient is at risk for chronic disabling back pain. Examples of red flag indicators are age of onset, back pain unrelated to time or activity, thoracic pain, previous history of carcinoma, steroids, or human immunodeficiency virus (HIV), weight loss, widespread neurological symptoms, and structural spinal deformity.[5-39] When these red flag indicators are not present, the patient is considered as having non-specific low back pain. In clinical guidelines these findings have led to the recommendation to be restrictive in referral for imaging in patients with non-specific low back pain. Only in cases with red flag conditions should imaging be indicated.[5-40]

Meet Patient Expectations through Education

Information about why an imaging test is not the appropriate means of care for back pain is generally sufficient for most patients. Providing patients with evidence-based information on low back pain with regard to the natural history of low back pain (i.e., its expected course), advising them to remain active, and providing them with information about effective self-care options and how to prevent future episodes, can help ensure that patients' expectations are met.[5-41]

Provide Alternative Therapy

For those patients who do not improve with self-care options, clinicians should consider recommending nonpharmacologic therapy with proven benefits. For example, for patients with chronic or subacute low back pain, clinicians could suggest one of the following alternative therapies: intensive interdisciplinary rehabilitation, exercise therapy, acupuncture, massage therapy, spinal manipulation, yoga, cognitive-behavioral therapy, or progressive relaxation.

5-38 Agency for Healthcare Quality and Research. *Clinical Practice Guideline, Acute Low Back Pain Problems in Adults: Assessment and Treatment*. 1994. Available at: http://chirobase.org/07Strategy/AHCPR/ahcprclinician.html. Accessed on: June 18, 2010.

5-39 Koes BW, van Tulder MW, Thomas S. Diagnosis and Treatment of Low Back Pain. *British Medical Journal*. 2006; 332: 1430-1434.

5-40 Agency for Healthcare Quality and Research. *Clinical Practice Guideline, Acute Low Back Pain Problems in Adults: Assessment and Treatment*. 1994. Available at: http://chirobase.org/07Strategy/AHCPR/ahcprclinician.html. Accessed on: June 18, 2010.

5-41 Atlas SJ, Deyo RA. Evaluating and Managing Acute Low Back Pain in the Primary Care Setting. *Journal of General Internal Medicine*. 2001; 16: 120-131.

Controlling High Blood Pressure

Health Eating and Weight-Loss Programs

Healthy eating programs teach clients how to efficiently adjust and monitor their own diet. Research has shown healthy eating programs are effective in reducing the risk of developing high blood pressure and lowering blood pressure in those patients who currently already have high blood pressure.[5-42,5-43] Furthermore, healthy eating reduces the risks of heart disease, high cholesterol, and stroke.[5-44]

Weight loss programs offer a structured program in which clients can work together to lose weight and provide solutions for lifestyle changes (i.e., increased physical activity) that will result in weight loss. Many times weight loss programs are performed in collaboration with a healthy eating program. Research has shown that by losing weight, health can be improved in many ways including, but not limited to:[5-45,5-46]

- Lowered cholesterol.
- Reduced blood pressure.
- Prevention of angina and chest pain.
- Decreased risk of heart disease and stroke.
- Prevention of acquiring Type 2 diabetes.
- Improved blood sugar levels.

Provider Education

Interventions related to education are more successful if they are repeated numerous times and are distributed using varied modalities. Effective methods for provider education include:

- Informing providers of member incentives.
- Sending report cards to providers that document their care of members and include a list of members, summary of services that they received, and a chart tool.
- Recognizing top performing practitioners.
- Mailing clinical care guidelines to practitioners that include an assessment tool.
- Posting clinical care guidelines to practitioners via a Web site.
- Distributing monthly newsletters to practitioners.[5-47]

5-42 Pederson K. Healthy Eating and Good Nutrition. *Home Remedies* Available at: http://www.home-remedies-for-you.com/articles/318/nutrition/healthy-eating-and-good-nutrition.html. Accessed on: April 14, 2010.

5-43 National Diabetes Information Clearinghouse. What I Need to Know About Eating and Diabetes. Available at: http://diabetes.niddk.nih.gov/dm/pubs/eating_ez/index.htm. Accessed on: April 14, 2010.

5-44 American Diabetes Association. High Blood Pressure (Hypertension). Available at: http://www.diabetes.org/living-with-diabetes/complications/high-blood-pressure-hypertension.html. Accessed on: April 15, 2010.

5-45 National Diabetes Information Clearinghouse. What I Need to Know About Eating and Diabetes. Available at: http://diabetes.niddk.nih.gov/dm/pubs/eating_ez/index.htm. Accessed on: April 14, 2010.

5-46 About.com. The Health Benefits of Losing Weight. Available at: http://weightloss.about.com/library/blhealthbenefits.htm. Accessed on: April 14, 2010.

5-47 Nilasena DS, Lincoln MJ. A Computer-Generated Reminder System Improves Physician Compliance with Diabetes Preventive Care Guidelines. *Proceedings of the Annual Symposium on Computer Application in Medical Care.* 1995. Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2579172/. Accessed on: April 14, 2010.

Patient Outreach

Interventions related to education are more successful if they are repeated numerous times and are distributed using varied modalities. Effective methods for patient education include:

- Distributing health report cards to members with testing and result history.
- Providing incentives to members if they are compliant with all screening and testing requirements.
- Distributing quarterly newsletters with articles and updates.[5-48]

Pharmacotherapy Management of COPD Exacerbation

Provider Education

Health plans can educate providers on the most up-to-date recommended clinical guidelines for the pharmacotherapy management of COPD exacerbations. These guidelines can also include recommendations for the adjustment of medications and properly distinguishing asthma from COPD.[5-49] For example, health plans can sponsor a presentation that reviews the clinical guidelines for COPD and discusses the COPD-related HEDIS measures.[5-50]

Clinical Case Management Services

A case management program can be established that assigns case managers to patients with COPD. These managers should have a comprehensive understanding of the disease and ensure that patients are following medication instructions. Case managers can educate patients on mechanisms by which the disease progression can be prevented and the types of exercises to perform. In addition, the case manager should set short-term goals with the patient and review the patient's health benefits to implement an effective strategy for managing the disease.[5-51]

[5-48] Ibid.

[5-49] Valley Medical Group. Spirometry Clinic Project Summary. Available at: https://www.harvardpilgrim.org/pls/portal/docs/PAGE/PROVIDERS/MEDMGMT/QUALITYAWARD/2008_PROJECT_SUMMARIES/VMG_08_PROJECT_SUMMARY.PDF. Accessed on: July 21, 2010.

[5-50] Cooper C. Achieving Optimal Management of Chronic Obstructive Pulmonary Disease for Performance Improvement. Prime, Inc. Available at: http://primeinc.org/inc/pdf/course81%5Bwww.primeinc.org%5D.pdf. Accessed on: June 21, 2010.

[5-51] Moreo K. Managing the COPD Patient. Prime, Inc. Available at: http://primeinc.org/casestudies/casemanager/study/526/Case_Managing_the_COPD_Patient. Accessed on: June 22, 2010.

Patient Education and Pulmonary Rehabilitation

The health plan can educate members about COPD and encourage patients to manage this condition. Patient self-management can include medication training, bronchial hygiene, breathing retraining, oxygen therapy, ensuring proper nutrition, and family training. Additional educational topics can address safe and appropriate forms of exercise.

Patients with COPD should also have a proper exacerbation protocol established, which includes proper self-assessment, self-intervention, and access to appropriate physicians, if needed. Heath plans should educate members on signs of exacerbation and immediate medication treatments than can be initiated. In some instances, it may be appropriate to involve family members in the exacerbation protocol since some medical interventions may require their assistance.[5-52]

Patient Intervention Mailings

Health plans can identify members who had a COPD exacerbation and mail personalized letters. The mailings can include a list of the patients' COPD medications. The letters should also encourage members to contact their health professionals to discuss medication management and exacerbations. Supplemental materials can be mailed including patient educational materials and self-management resources.[5-53]

Provider Intervention Mailings

Health plans can mail providers information related specifically to their patients with COPD and patients who had a recent COPD exacerbation. Health plans can submit patient medication profiles and encourage the provider to prescribe inhaled corticosteroid therapy or long-acting bronchodilator in an effort to prevent or manage COPD exacerbations. Educational materials discussing up-to-date clinical COPD treatment recommendations can also be included in the intervention mailings.[5-54]

[5-52] Moreo K. Managing the COPD Patient. Prime, Inc. Available at: http://primeinc.org/casestudies/casemanager/study/526/Case_Managing_the_COPD_Patient. Accessed on: June 22, 2010.

[5-53] GlaxoSmithKline. RIGHT Intervention-right patients, right medications: A COPD initiative. Available at: http://www.vivaprovider.com/Download.aspx?ID=592&Type=doc. Accessed on: June 22, 2010.

[5-54] Ibid.

Antidepressant Medication Management

Early recognition and treatment of depression can prevent recurrent episodes and reduce hospitalization. Barriers related to adherence to antidepressant medication can include:

- Non-adherence to antidepressant medication treatment due to side effects, the stigma of the diagnosis, and the perception that continued therapy is not needed as symptoms begin to decrease.
- Clinical practice guidelines for the management of depression are not available to PCPs.
- Initial diagnosis not always accurate.
- Practitioners do not adhere to guidelines when prescribing medications.
- Lack of member understanding of the proper use of antidepressant medications and the importance of staying on therapy.[5-55]

Improve Patient Education

One way to increase patient compliance is with education at the beginning of the treatment episode. Patients should receive information related to the following areas: 1) how antidepressants work, 2) the benefits of antidepressant treatment and the expectation of remission of symptoms, 3) how long the medications should be used, and 4) coping with side effects of these medications.[5-56]

Health plans can increase patient education through newsletters discussing the signs of depression and the importance of treatment with antidepressant medication. Furthermore, member educational materials distributed by practitioners at primary care and specialty clinics can improve antidepressant medication management. These materials should also be available at educational centers and on the health plans' Web sites. Studies have shown that antidepressant self-care tip sheets for patients with depression promotes treatment adherence. The tip sheet should contain information on the use of antidepressant medication, possible side effects and how to handle them, and common myths and facts about the medications.[5-57]

Practitioner Education

To help improve practitioners' knowledge and expertise regarding the recognition of depression and appropriate treatment for depression, a tool kit for practitioners that contain guidelines for screening and treatment of depression could be a useful tool that health plans can distribute. Practitioners should keep up-to-date on clinical practice guidelines for the treatment of major depressive disorders. One way this information can be distributed to all physicians is via newsletters. Furthermore, health plans

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[5-55] NCQA Quality Profiles. Focus on Depression: Improving Depression Management. Available at: http://www.qualityprofiles.org/leadership_series/depression/depression_improvemanagement.asp. Accessed on: June 9, 2010.

[5-56] Antidepressant Medication Management: Monitoring and Improving Treatment Compliance. *Network Notes*. Spring 2006.

[5-57] NCQA Quality Profiles. Focus on Depression: Increasing Antidepressant Medication Adherence in Adults. http://www.qualityprofiles.org/leadership_series/depression/depression_medsadherence.asp. Accessed on June 10, 2010.

can provide practitioners with a list of potentially non-compliant members with depression by tracking prescription refills.[5-58]

Easy Prescription Refills

Easy access to prescription refills is important in terms of member satisfaction and medication adherence. Health plans have facilitated quick access to medications by allowing members to request refills online through a Web-based electronic refill authorization request system. Inefficiencies associated with the paper-based system can be greatly reduced. Furthermore, using an electronic refill system can improve member compliance by making it easier and more efficient to refill prescriptions and continue taking medications.[5-59]

Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis

Patient Education

There is a need to increase patient awareness about not only the dangers of antibiotic use for treating acute bronchitis but also the lack of effectiveness. Patient education should emphasize that the condition does not require antibiotic treatment and that antibiotic treatment is not recommended. Furthermore, the use of the term "chest cold" has been associated with a decrease in a patient's belief that they need an antibiotic. In one study, 44 percent of patients thought that antibiotics were more important for acute bronchitis compared to 11 percent for chest colds. For those patients whose acute bronchitis may be associated with smoking, smoking cessation advice/tools can help to reduce the symptoms of acute bronchitis caused by smoking.[5-60]

Provider Education

Educational interventions for providers should focus on describing the appropriate diagnosis and treatment of acute bronchitis. Methods that can be used to target providers include educational newsletters, seminars, workshops, and written materials. Mass media campaigns that target all clinicians, such as e-cards and billboards, have also been found to be effective. Another method of ensuring appropriate prescribing practices would be to conduct a medical audit on antibiotic prescribing and provide feedback to the provider.[5-61]

Physicians should be educated about the subtle approaches patients use to pressure them for antibiotic treatment and should be shown techniques for responding to these pressures without prescribing antibiotics unnecessarily. In one study of physician prescribing practices, physicians prescribed antibiotics inappropriately in 80 percent of encounters with patient pressures.[5-62] Physicians should be

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[5-58] NCQA Quality Profiles. Focus on Depression: Increasing Antidepressant Medication Adherence in Adults. http://www.qualityprofiles.org/leadership_series/depression/depression_medsadherence.asp. Accessed on June 10, 2010.

[5-59] Ibid.

[5-60] Braman SS. Chornic Cough Due to Acute Bronchitis: ACCP Evidence-Based Clinical Practice Guidelines. *Chest*. 2006; 129: 95S-103S.

[5-61] Razon Y, Ashkenazi S, Cohen A, et al. Effect of educational intervention on antibiotic prescription practices for upper respiratory infections in children: a multicentre study. *Journal of Antimicrobial Chemotherapy.* 2005; 56: 937-940.

[5-62] Scott JG, Cohen D, DiCicco-Bloom B, et al. Antibiotic Use in Acute Respiratory Infections and the Ways Patients Pressure Physicians for a Prescription. *The Journal of Family Practice.* 2001; 50(10): 853-858.

educated on these patient pressures and provided techniques on how to respond to these pressures without prescribing a prescription.

Decision Support Systems

The use of decision support systems based on evidence-based guidelines can improve the effectiveness and efficiency of prescribing decisions. Decision support systems are used to help providers make clinical decisions (e.g., an algorithm for antibiotic prescribing).[5-63] Many prescribing applications include information on pathogens, diagnosis, medication, and treatment; therefore, adherence to clinical guidelines is improved.[5-64,5-65]

Delayed Prescribing Practices

Delayed prescribing practices are used to delay the prescribing of antibiotics unless a patient has continuing, severe symptoms for a specified time after an initial visit with a provider. Delayed prescribing practices result in a reduction of overall use of antibiotics. Studies recommend delaying prescribing antibiotics from 48 to 72 hours. In one study, delaying the prescribing of antibiotics for 48 hours resulted in 62 percent of patients not requiring antibiotics.[5-66]

[5-63] Ranji SR, Steinman MA, Shojania, KG, et al. Interventions to Reduce Unnecessary Antibiotic Prescribing: A Systematic Review and Quantitative Analysis. *Medical Care.* 2008; 46: 847-862.

[5-64] Sintchenko V, Coiera E, Gilbert GL. Decision support systems for antibiotic prescribing. *Current Opinion in Infectious Disease.* 2008; 21:573-579.

[5-65] Agency for Healthcare Research and Quality. Real-Time Decision and Documentation Support Increases Adherence to Recommended Care for Respiratory Infections, Diabetes, and Heart Disease. *AHRQ Health Care Innovations Exchange.* Accessed on June 1, 2010. Available at: http://www.innovations.ahrq.gov/content.aspx?id=2431.

[5-66] Little P. Delayed Prescribing—A Sensible Approach to the Management of Acute Otitis Media. *The Journal of American Medical Association.* 2006; 296(10): 1290-1291.

6. Preventive Screening

Introduction

Preventive screenings are one of the most important methods to improve an individual's health, as well as lower health care costs.[6-1] Typically, if an individual begins treatment early, there is a greater chance of a positive outcome. Many illnesses and conditions are "silent" and do not show symptoms; therefore, preventive screenings are crucial to maintaining health. By receiving preventive screenings and care, hundreds of thousands of lives could be saved.[6-2]

The Preventive Screening dimension encompasses the following measures:

- *Chlamydia Screening in Women—Ages 16 to 20 Years*
- *Chlamydia Screening in Women—Ages 21 to 24 Years*
- *Chlamydia Screening in Women—Combined Rate*
- *Adult BMI Assessment*

6-1 BlueCross BlueShield of Alabama. Preventive Screening Tool Kit. Available at: https://www.bcbsal.org/employers/pdfs/preventionKit.pdf. Accessed on: September 2, 2010.

6-2 InsWeb. The Importance of Preventive Health Care. Available at: http://www.insweb.com/health-insurance/preventive-care-health-insurance.html. Accessed on: September 2, 2010.

Chlamydia Screening in Women

Measure Definition

The *Chlamydia Screening in Women* measure is reported using the administrative method only. This measure reports the percentage of women 16 through 24 years of age who were identified as sexually active, who were continuously enrolled during the measurement year, and who had at least one test for Chlamydia during the measurement year. The measure is reported using three separate rates: *Chlamydia Screening in Women—Ages 16 to 20 Years; Chlamydia Screening in Women—Ages 21 to 24 Years;* and *Chlamydia Screening in Women—Combined Rate* (the total of both age groups, 16 to 24 years).

Importance

Chlamydia is the most commonly reported STD in the United States, infecting approximately 2.3 million people between 14 and 39 years of age.[6-3] Colorado reported a rate of 394.5 cases per 100,000 population in 2008.[6-4] Chlamydia is most prevalent in teenagers. Forty-six percent of new cases in women are those between 15 and 19 years of age. Chlamydia is sometimes referred to as a "silent" disease, since approximately 75 percent of women with Chlamydia have no symptoms; therefore, regular screening is important.[6-5]

If left untreated, Chlamydia can spread into the uterus or fallopian tubes of women and cause pelvic inflammatory disease (PID). Damage resulting from PID can cause chronic pelvic pain, infertility, and potentially fatal ectopic pregnancies. Additionally, PID may cause permanent damage to the fallopian tubes, uterus, and surrounding tissue and be transmitted from an infected mother to her newborn child.[6-6] Women with Chlamydia are also up to five times more likely to become infected with HIV in the event of an exposure. Every $1 spent on testing and treating Chlamydia saves $12 annually in complications that arise from Chlamydia if left untreated.[6-7] However, Chlamydia screening rates are typically low for the Medicaid population, with only about half of Medicaid females (15 to 24 years of age) receiving screenings nationally.[6-8]

6-3 Centers for Disease Control and Prevention. Chlamydia—CDC Fact Sheet. Available at: http://www.cdc.gov/std/Chlamydia/STDFact-Chlamydia.htm#Common. Accessed on: July 10, 2010.

6-4 Kaiser Health Facts. Available at: http://www.statehealthfacts.org/profileind.jsp?rgn=7&ind=100&cat=2. Accessed September 1, 2010.

6-5 National Committee for Quality Assurance. *The State of Health Care Quality 2009*. Washington, D.C.: NCQA; 2009.

6-6 Centers for Disease Prevention and Control. Take Action on HEDIS: Chlamydia Screening: A New HEDIS Measure Important to Your Members. Available at: http://www.cdc.gov/std/chlamydia/hmoletter.pdf. Accessed on: May 28, 2010.

6-7 National Committee for Quality Assurance. *The State of Health Care Quality 2009*. Washington, D.C.: NCQA; 2009.

6-8 Centers for Disease Prevention and Control. Take Action on HEDIS: Chlamydia Screening: A New HEDIS Measure Important to Your Members. Available at: http://www.cdc.gov/std/chlamydia/hmoletter.pdf. Accessed on: May 28, 2010.

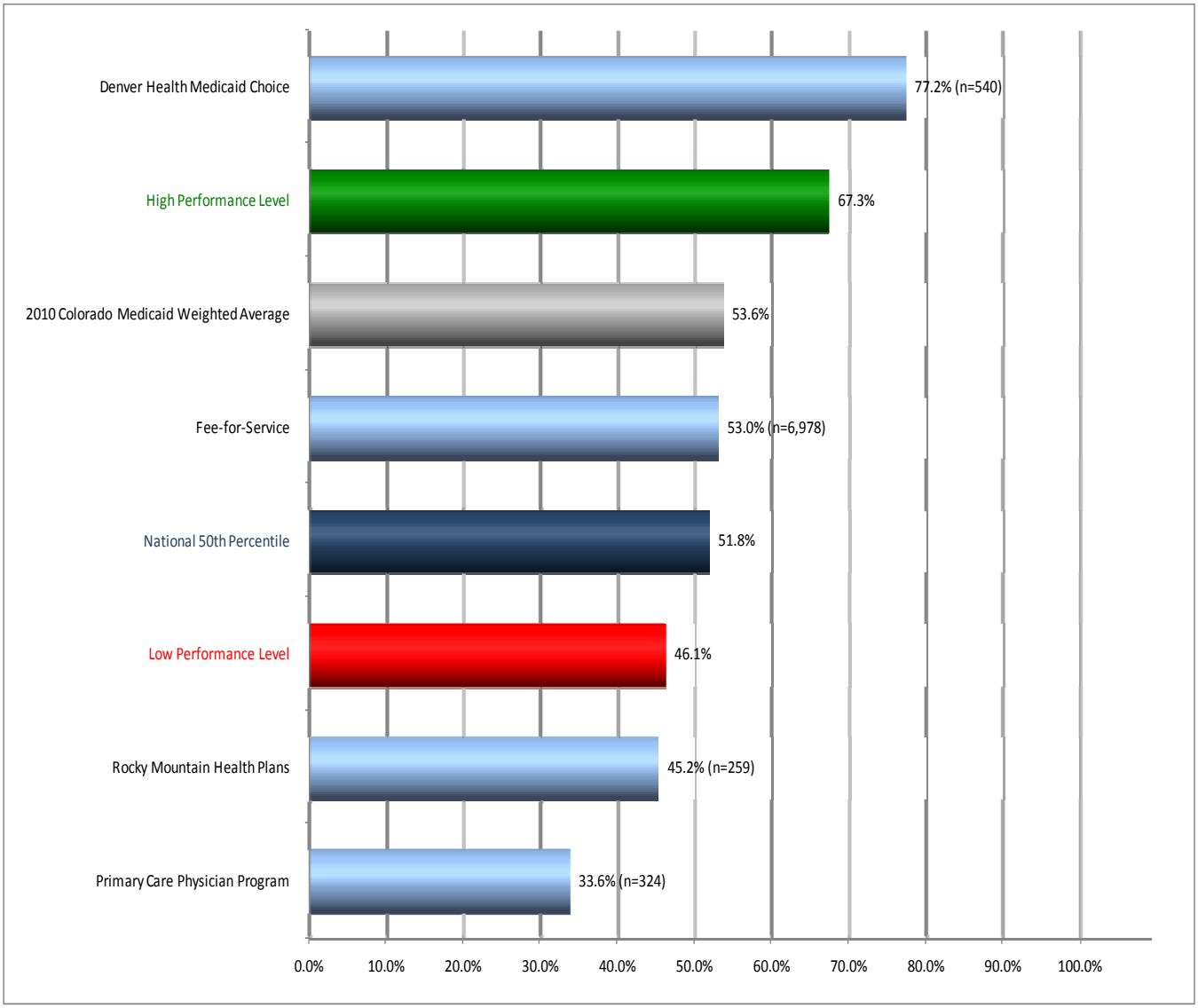
The number needed to screen (NNS) for Chlamydia screening varies among different populations. For a low at-risk population, the NNS to prevent a case of PID is 3,846; however, in a high-risk population, the NNS to prevent a case of PID is 38.3.[6-9, 6-10]

[6-9] Meyers DS, Halvorson H, Luckhaupt S. Screening for Chlamydia Infection: A Focused Evidence Update for the United States Preventive Services Task Force. *Evidence Synthesis.* 2007. Available at: http://www.ahrq.gov/clinic/uspstf07/chlamydia/chlamydiasyn.pdf. Accessed on: September 9, 2010.

[6-10] The NNS is used to determine how many screenings are necessary in order to prevent one bad outcome (or one case of PID, in this example).

Performance Results

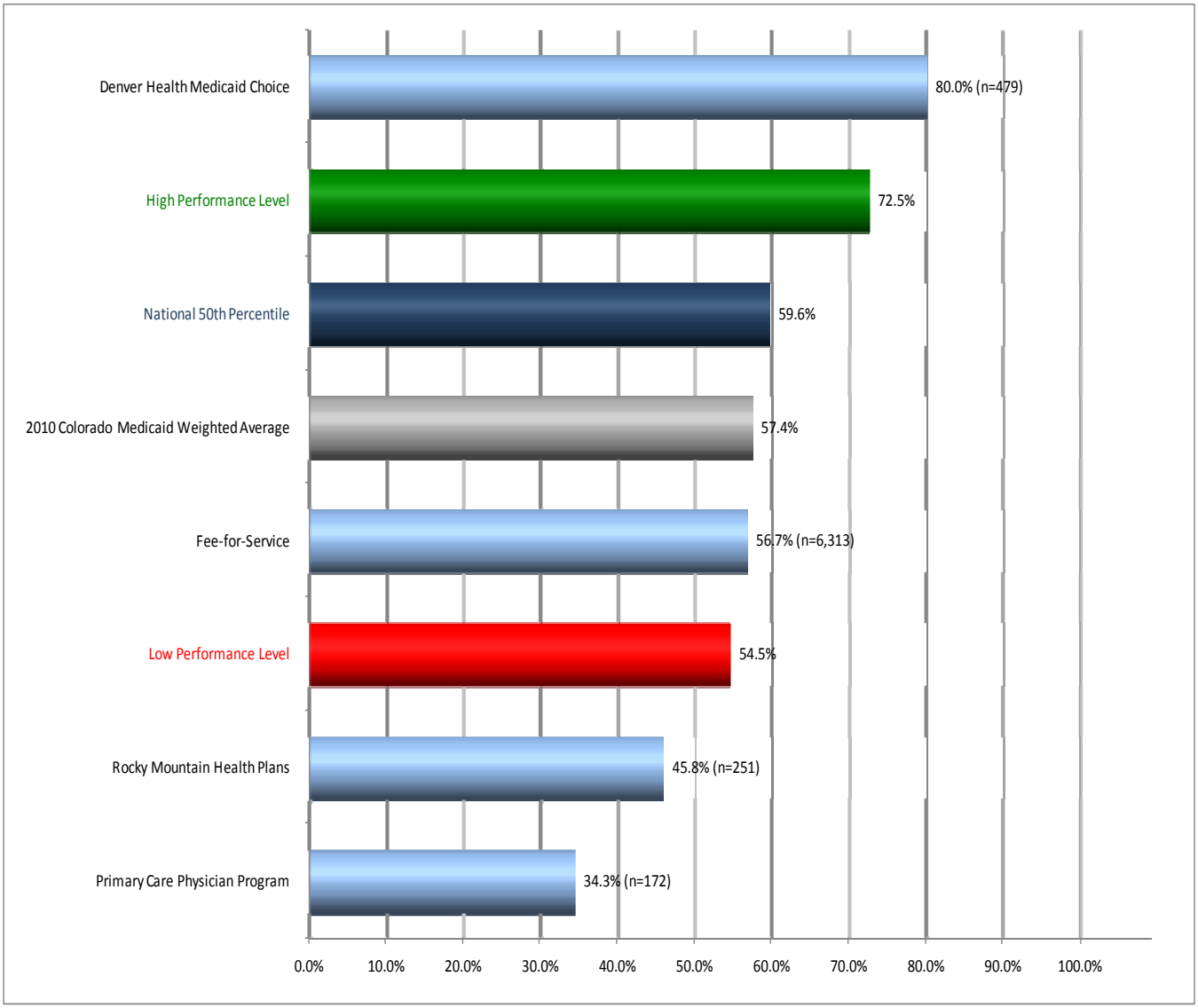
Figure 6-1
Chlamydia Screening in Women—Ages 16 to 20 Years



One health plan exceeded the HPL of 67.3 percent, and two health plans were below the LPL of 46.1 percent. Two health plans, including the one above the HPL, reported rates above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 53.6 percent exceeded the national HEDIS 2009 Medicaid 50th percentile by 1.8 percentage points.

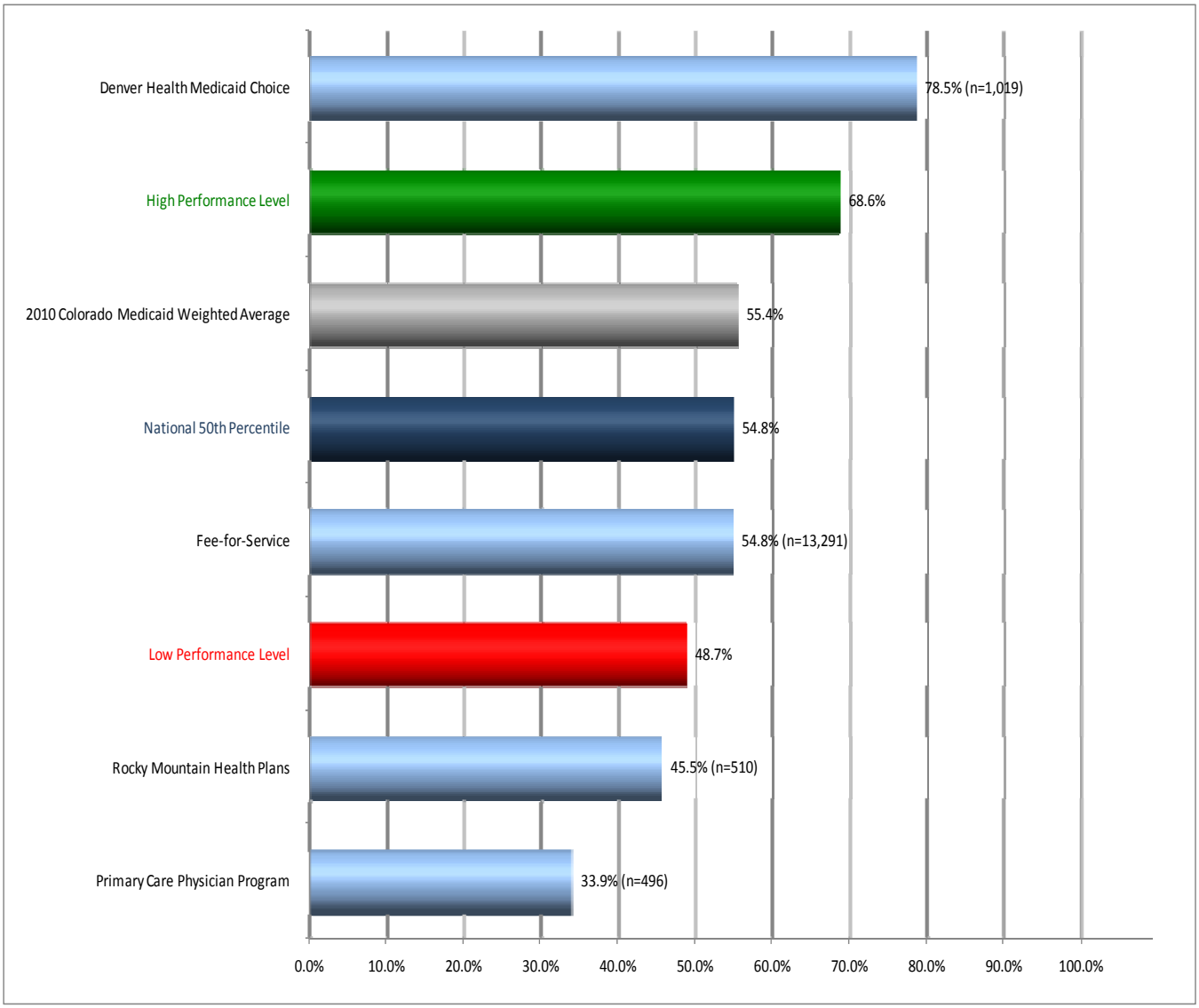
Figure 6-2
Chlamydia Screening in Women—Ages 21 to 24 Years



One health plan exceeded the HPL of 72.5 percent, and two health plans were below the LPL of 54.5 percent. One health plan, the one above the HPL, reported a rate above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 57.4 percent was below the national HEDIS 2009 Medicaid 50th percentile by 2.2 percentage points.

Figure 6-3
Chlamydia Screening in Women—Combined Rate



One health plan exceeded the HPL of 68.6 percent, and two health plans were below the LPL of 48.7 percent. One health plan, the one above the HPL, reported a rate above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 55.4 percent exceeded the national HEDIS 2009 Medicaid 50th percentile by 0.6 percentage points.

Adult BMI Assessment

Measure Definition

The *Adult BMI Assessment* measure assesses the percentage of members 18 to 74 years of age, who were continuously enrolled in the measurement year and the year prior to the measurement year, who had an outpatient visit, and who had their BMI documented during the measurement year or the year prior the measurement year.

Importance

The current epidemic of obesity in the United States continues to pose a major public health challenge. The prevalence of obesity among American adults has more than doubled in recent decades. From 1980 to 2008, the prevalence of obese adults rose from 13.4 percent to 34.3 percent, respectively.[6-11] Today it is estimated that nearly 127 million adults in the United States are overweight; 60 million are obese; and 9 million are severely obese.[6-12] This growing epidemic stretches across every gender, ethnicity, socioeconomic class, and geographic region in the United States.

With the continued growth of obesity in the United States, the impact on individual overall health has also increased. Evidence has shown that overweight, obese, and severely obese adults are at increased risk for various diseases, such as hypertension, coronary heart disease, stroke, gallbladder disease, osteoarthritis, sleep apnea and respiratory problems, high blood cholesterol, some types of cancer (e.g., endometrial, colon, kidney, and breast), and Type 2 diabetes. Obesity is the most important risk factor for Type 2 diabetes. Reflective of this is the tripling of diabetes among adults in the United States since 1980. Today, approximately 10 percent of American adults have diabetes.[6-13] Obesity is also associated with increased morbidity and mortality rates. According to the Office of the Surgeon General, obesity contributes to an estimated 300,000 deaths in the United States each year.[6-14] Obesity also has a negative effect on life expectancy. Studies have shown that individuals who are obese have a 50 to 100 percent increased risk of premature death from all causes compared to individuals who maintained a normal, healthy weight.[6-15]

In addition, obesity and its related health problems have substantial economic consequences for the U.S. health care system. According to one study, medical spending across all payers (i.e., Medicare, Medicaid, and private insurers) for someone who is obese was $1,429 greater per year, or

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6-11 U.S. Department of Health and Human Services (HHS). *The Surgeon General's Vision for a Healthy and Fit Nation*. Rockville, MD: HHS, Office of the Surgeon General; 2010.

6-12 Agency for Healthcare Research and Quality. "Adult body mass index (BMI) assessment." *National Quality Measures Clearinghouse*. Available at: http://www.qualitymeasures.ahrq.gov/summary/summary.aspx?doc_id=14918&string=ABA. Accessed on: May 20, 2010.

6-13 U.S. Department of Health and Human Services. Centers for Disease Control and Prevention. *Health, United States, 2009*. Atlanta, GA: DHHS; 2010.

6-14 U.S. Department of Health and Human Services. *The Surgeon General's call to action to prevent and decrease overweight and obesity*. Rockville, MD: HHS, Office of the Surgeon General; 2001.

6-15 National Institutes of Health. *Clinical guidelines on the identification, evaluation, and treatment of overweight and obesity in adults*. HHS; 1998.

approximately 42 percent higher, than for someone of normal weight.[6-16] Based on data from the 2006 National Health Expenditure Accounts (NHEA), the aggregate cost of obesity rose from 6.5 percent (in 1998) to 9.1 percent of annual medical spending in the United States. This correlates to annual medical expenditures of almost $147 billion.[6-17]

Based on the National Institutes of Health *Clinical Guidelines*, the first step in weight management and treatment is assessment of a patient's BMI. While there are a number of methods to assess body fat in a clinical setting, the most practical approach is measurement of BMI. In addition, studies have shown that for the majority of patients, BMI provides an acceptable approximation of total body fat. In epidemiological studies, BMI is also the favored measure of excess body weight to estimate relative risk of disease.[6-18]

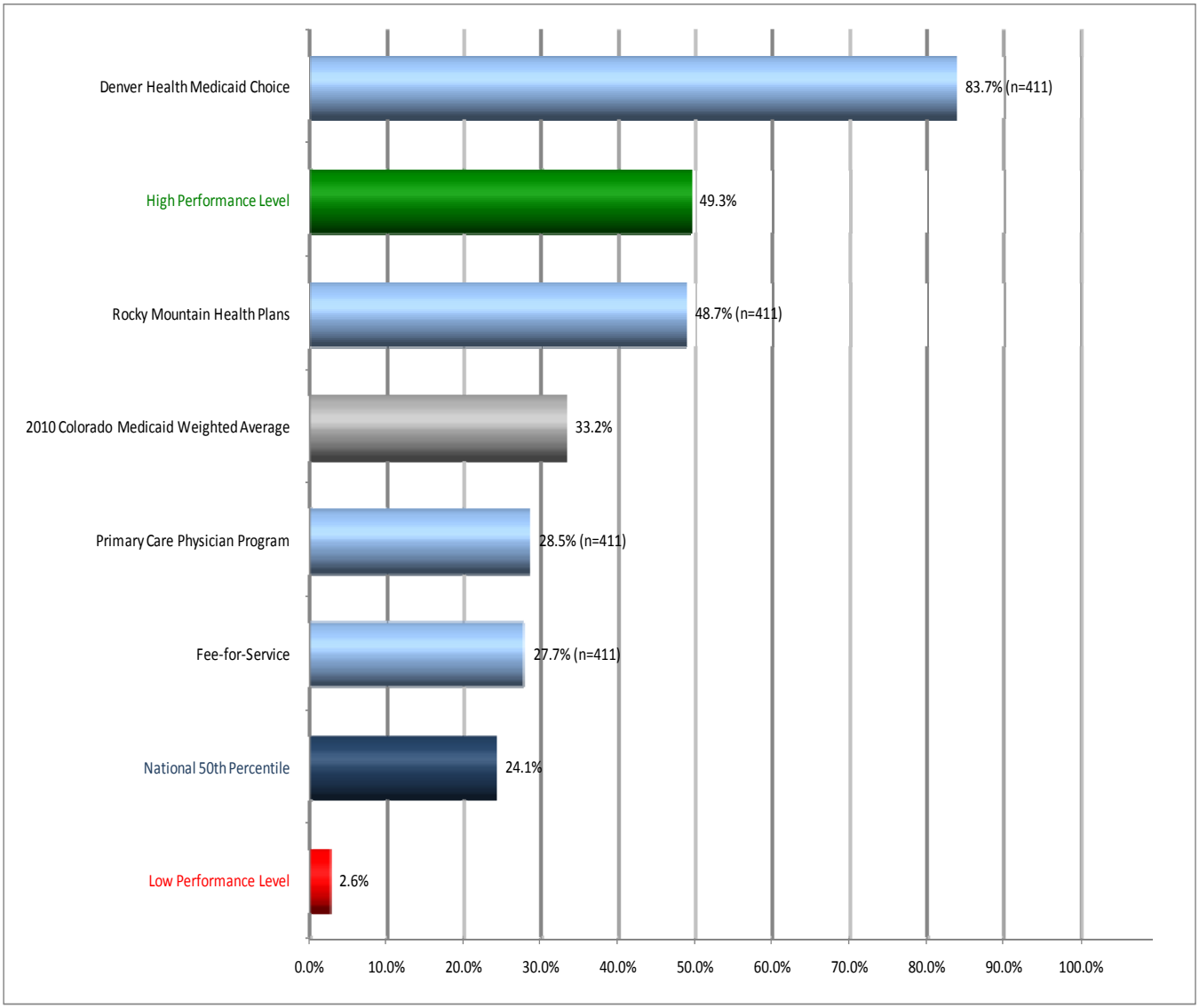
6-16 Finkelstein EA, Trogdon JG, Cohen JW, et al. Annual Medical Spending Attributable to Obesity: Payer-and Service-Specific Estimates. *Health Affairs*. 2009; 28: w822-w831. Available at http://www.npr.org/blogs/thetwo-way/obesity%20costs%20study.pdf. Accessed on: May 21, 2010.

6-17 Ibid.

6-18 National Institutes of Health. *Clinical guidelines on the identification, evaluation, and treatment of overweight and obesity in adults*. HHS; 1998.

Performance Results

Figure 6-4
Adult BMI Assessment



One health plan exceeded the HPL of 49.3 percent, and none of the health plans were below the LPL of 2.6 percent. All four of the health plans, including the one above the HPL, reported a rate above the national HEDIS 2009 Medicaid 50th percentile.

The 2010 Colorado Medicaid weighted average of 33.2 percent exceeded the national HEDIS 2009 Medicaid 50th percentile by 9.1 percentage points.

Preventive Screenings Findings and Recommendations

Summary of Findings

Table 6-1 presents a summary of the health plans' overall performance (in rank order from highest-to-lowest performing health plan) on the Preventive Screening dimension.

Table 6-1
Overall Preventive Screening Performance Summary

Health Plan Name	Preventive Screening
DHMC	★★★★★
FFS	★★★
RMHP	★★
PCPP	★

The highest performing health plan in the Preventive Screening dimension was DHMC. PCPP, on the other hand, was the lowest performing health plan in this domain.

Table 6-2 presents a summary of the health plans' performance for each of the measures in the Preventive Screening dimension.

Table 6-2
Preventive Screening Performance Summary

Measure	FFS	PCPP	DHMC	RMHP
Chlamydia Screening in Women—Ages 16 to 20 Years	★★★	0	★★★★★	★
Chlamydia Screening in Women—Ages 21 to 24 Years	★★	0	★★★★★	0
Chlamydia Screening in Women—Combined	★★★	0	★★★★★	★
Adult BMI Assessment	★★★	★★★	★★★★★	★★★★

Table 6-3 presents a summary of the number of measures that fell into each star rating category for the Preventive Screening dimension.

Table 6-3
Preventive Screening Star Ratings Summary

Health Plan Name	5 Stars	4 Stars	3 Stars	2 Stars	1 Star	0 Stars	NA
FFS	0	0	3	1	0	0	0
PCPP	0	0	1	0	0	3	0
DHMC	4	0	0	0	0	0	0
RMHP	0	1	0	0	2	1	0

DHMC scored at or above the national HEDIS 2009 Medicaid 90th percentile (i.e., five stars) on all four of the measures for the Preventive Screening dimension. PCPP, on the other hand, scored below the national HEDIS 2009 Medicaid 10th percentile (i.e., zero stars) on three of the measures in this domain.

Best Practices

Chlamydia Screening in Women

Physician Reminders

Providing PCPs and OB/GYNs with a list of missed screening opportunities is an effective practice that has shown to increase screening rates. By providing providers with a list of patients who were identified as not having received a screening within the specified time frame, providers can contact members and encourage them to come in for important screenings. Sending the lists to both PCPs and OB/GYNs makes it harder for women to evade or ignore promptings from their physicians.[6-19]

Patient Reminders

Members are more responsive to reminders when a clinician calls (i.e., physicians or their support staff).[6-20] However, other reminder methods, such as direct mailings (e.g., postcards and letters) and small media (e.g., brochures, pamphlets, flyers, and newsletters) have also shown to be effective. Important factors for reminders include that they are eye-catching, timely, and personalized. One method that can be used to accomplish this is to send colorful birthday cards with enclosed reminders. Reminders can also be used to provide additional information on locations of screening facilities with business hours.

Improving Access and Awareness

It is important for a plan to determine if proper resources are in place to allow members to obtain screenings. Plans may contract with more OB/GYNs and/or increase the number of sites that perform screenings. At each stage, plans must keep members informed of the changes in procedures and additional resources.[6-21] Other methods to improve awareness include articles in a member newsletter, educational materials for members, and information on locations and business hours of screening facilities.

6-19 National Committee for Quality Assurance. Breast Cancer Screening: Raising Member and Physician Awareness. *Quality Profiles*. 2008. Available at: http://www.qualityprofiles.org/quality_profiles/case_studies/Womens_Health/1_14.asp. Accessed on: May 6, 2010.

6-20 Task Force on Community Preventive Services. Recommendations for Client- and Provider-Directed Interventions to Increase Breast, Cervical, and Colorectal Cancer Screening. *American Journal of Preventive Medicine.* 2008; 35(1 Supplement): S21-S25.

6-21 National Committee for Quality Assurance. Breast Cancer Screening – Hitting the Road with Screening Programs. *Quality Profiles*. 2010. Available at: http://www.qualityprofiles.org/quality_profiles/case_studies/Womens_Health/1_15.asp. Accessed on: May 27, 2010.

Physician Communication

If a physician is able to properly communicate with their patient about various topics such as birth control, STDs, pregnancy, underage sex, and the importance of getting routine Pap Smears, there is a higher chance the patient will be compliant with regular screenings.

Many health plans and medical groups are now giving formal training to practitioners in communication skills. This training can be completed by either in-house programs or through communications programs offered by outside organizations. Most of the time this type of training is optional; however, some organizations have made the classes a requirement. In other organizations, the training is only required for doctors who consistently receive low scores in the area of communication.

The purpose of the training programs is to improve providers' effectiveness as both managers of health and as educators of patients. It is also thought that trained physicians will allocate a greater percent of the clinic-visit time to patient education which leads to greater patient knowledge, better compliance with treatment, and improved health outcomes.

The most effective and efficient way of offering physician-patient communication training is in the form of a workshop or seminar. With this method, many strategies can be covered for improved communication in a short period of time. Workshops also have the advantage of using case studies to illustrate importance of communication and suggest approaches to improving the relationship between the physician and patient.[6-22]

Physician Tools and Resources

Providers often need reminders about screening guidelines. Three methods to improve HEDIS screening rates by reaching out to providers are to clarify and reinforce guidelines, reinforce the importance of screening, and create tools to facilitate screening.

NCQA further recommends the following tools to help facilitate screening:

- Patient registry of females who had screenings.
- Copies of reminder letters sent to patients who are due for screenings.
- List of patients, with contact information, who have not received screenings.[6-23]

[6-22] Agency for Healthcare Research and Quality. The CAHPS Improvement Guide. Available at: http://www.chaps.ahrq.gov/qiguide/. Accessed on April 26, 2010.

[6-23] National Committee for Quality Assurance. Improving Chlamydia Screening: Strategies From Top Performing Health plans. 2007. Available at: http://www.ncqa.org/Portals/0/Publications/Resource%20Library/Improving_Chlamydia_Screening_08.pdf. Accessed on: May 28, 2010.

Adult BMI Assessment

Educate Health Care Professionals

Educating health care professionals and providing them with the tools necessary to manage obesity in a primary care setting are crucial. A physician who is familiar with the basic elements of how to assess and manage obesity in adult patients can identify the problem more successfully, offer the patient guidance in effective methods of treatment, and coordinate other resources to assist patients to improve health.[6-24] Examples of this include providing physicians training on how to accurately calculate patients' BMI, the classification of overweight and obese patients based on BMI, potential risk factors associated with increased BMI, and assessing patients' level of risk for developing obesity-associated diseases.

Additionally, establishing a system for continuing education on evidence-based obesity management for providers, nurses, and other clinical staff can be helpful.

Provider/Physician

A system for clinical staff to efficiently calculate BMI can be established. For example, the calculation of a patient's BMI can be built into the rooming protocol. In addition, BMI charts could be placed by each scale in the clinic as a reminder to staff to assess and document a patient's BMI during annual office visits. Physicians can use tools such as posters and brochures throughout their facility to promote a healthy lifestyle around nutrition and activity, while encouraging patient knowledge of their BMI.

[6-24] National Institutes of Health. *The Practical Guide: Identification, Evaluation, and Treatment of Overweight and Obesity in Adults*. NIH: 2000.

7. Utilization of Services

Introduction

A CDC survey revealed that during 2008, 19 percent of U.S. adults did not have an office visit to a doctor or other health professional in the previous 12 months. Of those who had an office visit, 17 percent reported one office visit; 27 percent reported two to three visits; 24 percent reported four to nine visits; and 14 percent reported 10 or more visits.[7-1] The survey also showed that women were more likely than men to have had a recent office visit with a doctor or other health professional (within the past 12 months) and that office visits to a doctor or other health professional in the past 12 months were inversely related to patients' level of education.

Americans made approximately 102.2 million visits to hospital outpatient departments (OPDs) in 2006. Based on demographics, OPD visit rates were higher for females than males and were higher for African Americans than whites. About 51 percent of all OPD visits were made by patients with one or more comorbid chronic conditions, and diabetes was the leading primary diagnosis.[7-2]

For all measures in this dimension, HEDIS methodology requires that the rates be derived using only the administrative method. While the national HEDIS 50th percentiles are provided for reference, it is important to assess utilization based on the characteristics of each health plan's population.

The Utilization of Services dimension encompasses the following measures:

- *Inpatient Utilization: General Hospital/Acute Care—Total Inpatient*
- *Inpatient Utilization: General Hospital/Acute Care—Medicine*
- *Inpatient Utilization: General Hospital/Acute Care—Surgery*
- *Inpatient Utilization: General Hospital/Acute Care—Maternity*
- *Ambulatory Care—Outpatient Visits*
- *Ambulatory Care—ED Visits*
- *Ambulatory Care—Ambulatory Surgery/Procedures*
- *Ambulatory Care—Observation Room Stays*
- *Frequency of Selected Procedures—Myringotomy*
- *Frequency of Selected Procedures—Tonsillectomy*
- *Frequency of Selected Procedures—Dilation & Curettage*
- *Frequency of Selected Procedures— Abdominal Hysterectomy*

7-1 Centers for Disease Control and Prevention. Summary Health Statistics for United States Adults: National Health Interview Survey, 2008 (Provisional Report). National Center for Health Statistics. Available at: http://www.cdc.gov/nchs/data/series/sr_10/sr10_242.pdf. Accessed on: September 22, 2010.

7-2 Centers for Disease Control and Prevention. National Hospital Ambulatory Medical Care Survey: 2006 Outpatient Department Summary. Available at: http://www.ncbi.nlm.nih.gov/pubmed/18958995. Accessed on: September 22, 2010.

- *Frequency of Selected Procedures— Vaginal Hysterectomy*
- *Frequency of Selected Procedures— Open Cholecystectomy*
- *Frequency of Selected Procedures— Closed Cholecystectomy*
- *Frequency of Selected Procedures—Back Surgery*
- *Frequency of Selected Procedures—Mastectomy*
- *Frequency of Selected Procedures—Lumpectomy*
- *Antibiotic Utilization—Average Number of Prescriptions PMPY for Antibiotics*
- *Antibiotic Utilization—Average Days Supplied per Antibiotic Prescription*
- *Antibiotic Utilization—Average Prescriptions PMPY for Antibiotics of Concern*
- *Antibiotic Utilization—Percentage of Antibiotics of Concern of All Antibiotic Prescriptions*

Inpatient Utilization: General Hospital/Acute Care

Measure Definitions

The *General Hospital/Acute Care—Total Inpatient* measure summarizes the utilization of acute inpatient services for total inpatient stays for discharges per 1,000 member months (MM), days per 1,000 MM, and average length of stay.

The *General Hospital/Acute Care—Medicine* measure summarizes the utilization of acute inpatient services for medicine.

The *General Hospital/Acute Care—Surgery* measure summarizes the utilization of acute inpatient services for surgery.

The *General Hospital/Acute Care—Maternity* measure summarizes the utilization of acute inpatient services for maternity.

Importance

Over the past decade, the number of inpatient discharges has increased. In 1997, there were 34.7 million discharges, compared to 39.5 million discharges in 2007. This represents an increase of 14 percent over the past decade, or a 1.3 percent average annual increase.[7-3,7-4,7-5] Females have more hospitalizations (18.2 million) compared to males (1.2 million), even after pregnancy and child-birth stays are excluded.[7-6]

In 2007, circulatory conditions were the most frequent cause of hospital stays and accounted for 16 percent of all discharges. Hypertension was a comorbidity in 35 percent of hospitalizations. Other common diagnoses that resulted in hospitalizations were diabetes (17 percent), depression (7 percent), and substance abuse and/or psychoses (3 percent). Furthermore, chronic conditions were a principal or secondary diagnosis in 74 percent of discharged patients.[7-7]

After adjusting for inflation, the aggregate hospital stay cost has increased over the past decade from $222.4 billion to $343.9 billion, an increase of 55 percent increase. Increases in costs are due to a greater concentration of services provided during inpatient stays. The top two costly conditions were circulatory conditions ($74.6 billion) and poisonings and injury ($37.2 billion). Additionally,

7-3 HCUP Facts and Figures 2007. Statistics on Hospital-Based Care in the United States, 2007. Available at: http://www.hcup-us.ahrq.gov/reports/factsandfigures/2007/highlightsV2.jsp. Accessed on: June 22, 2010.
7-4 Centers for Disease Control and Prevention. Hospital Utilization in Non-Federal Short-Stay Hospitals. Available at: http://www.cdc.gov/nchs/fastats/hospital.htm. Accessed on: June 22, 2010.
7-5 WD. Medicare Inpatient Statistics. Available at: http://www.wrongdiagnosis.com/hospitals/medicare-inpatient-statistics.htm. Accessed on: June 22, 2010.
7-6 HCUP Facts and Figures 2007. Statistics on Hospital-Based Care in the United States, 2007. Available at: http://www.hcup-us.ahrq.gov/reports/factsandfigures/2007/highlightsV2.jsp. Accessed on: June 22, 2010.
7-7 Ibid.

infectious and parasitic disease costs have more than doubled in the last decade ($6.6 billion to $15.3 billion).[7-8]

Over half of inpatient hospital discharges were funded by Medicare and Medicaid (56 percent), followed by private insurance (35 percent), uninsured (6 percent), and all others (3 percent). Medicaid paid nearly 44 percent of all stays for patients 0 to 17 years of age and 23 percent of patients 18 to 64 years of age.[7-9]

Performance Results

Table 7-1 shows the total inpatient discharges per 1,000 MM for each age group and the total for all age groups.

Table 7-1
Inpatient Utilization: General Hospital/Acute Care-Total Inpatient Discharges Per 1,000 MM

Health Plan Name	Age <1 Year	Ages 1-9 Years	Ages 10-19 Years	Ages 20-44 Years	Ages 45-64 Years	Ages 65-74 Years	Ages 75-84 Years	Ages 85+ Years	Total
Fee-for-Service	11.9	2.7	7.2	29.9	26.0	20.4	22.3	22.1	13.3
Primary Care Physician Program	5.2	2.1	5.0	15.7	21.8	22.9	23.6	26.7	11.5
Denver Health Medicaid Choice	16.0	2.8	5.2	23.8	37.6	32.5	37.7	35.1	12.8
Rocky Mountain Health Plans	7.6	2.0	7.3	29.5	20.7	21.0	22.4	19.8	12.1
2010 Colorado Medicaid Weighted Average	12.0	2.6	6.9	28.8	26.5	21.6	23.4	22.6	13.1
2009 Colorado Medicaid Weighted Average	6.0	1.1	7.0	28.9	19.9	14.1	15.9	17.7	11.3
2008 Colorado Medicaid Weighted Average	11.4	2.4	7.6	29.7	18.3	7.0	7.1	4.8	11.5
HEDIS 2009 Medicaid 50th Percentile	10.0	2.0	3.8	17.7	18.4	17.8	16.2	22.2	8.2

The health plans' overall (i.e., total) inpatient discharges per 1,000 MM ranged from 11.5 to 13.3. The 2010 Colorado Medicaid weighted average was 13.1 inpatient discharges per 1,000 MM. The age group with the lowest inpatient discharges per 1,000 MM was 1 to 9 years of age, while the age group with the highest inpatient discharges per 1,000 MM was 20 to 44 years of age.

7-8 HCUP Facts and Figures 2007. Statistics on Hospital-Based Care in the United States, 2007. Available at: http://www.hcup-us.ahrq.gov/reports/factsandfigures/2007/highlightsV2.jsp. Accessed on: June 22, 2010.
7-9 Ibid.

Table 7-2 displays the total inpatient days per 1,000 MM for each age group and the total for all age groups.

Table 7-2
Inpatient Utilization: General Hospital/Acute Care-Total Inpatient
Days Per 1,000 MM

Health Plan Name	Age <1 Year	Ages 1-9 Years	Ages 10-19 Years	Ages 20-44 Years	Ages 45-64 Years	Ages 65-74 Years	Ages 75-84 Years	Ages 85+ Years	Total
Fee-for-Service	53.6	8.8	22.9	94.4	152.8	111.8	112.9	99.1	52.2
Primary Care Physician Program	14.2	6.8	21.9	65.3	126.3	121.3	124.4	133.5	56.6
Denver Health Medicaid Choice	72.5	13.0	14.9	92.3	284.2	240.7	267.6	167.9	69.4
Rocky Mountain Health Plans	26.0	6.1	16.6	62.8	74.5	88.2	79.6	98.9	33.5
2010 Colorado Medicaid Weighted Average	53.9	9.0	22.0	92.0	160.0	122.1	122.7	102.7	53.4
2009 Colorado Medicaid Weighted Average	27.2	4.3	20.9	89.0	121.5	76.3	79.2	82.2	43.8
2008 Colorado Medicaid Weighted Average	64.4	8.5	23.5	91.6	124.0	37.4	42.3	27.7	45.7
HEDIS 2009 Medicaid 50th Percentile	43.8	5.5	11.2	57.1	92.6	98.9	85.2	95.8	29.4

The health plans' overall (i.e., total) inpatient days per 1,000 MM ranged from 33.5 to 69.4. The 2010 Colorado Medicaid weighted average was 53.4 inpatient days per 1,000 MM. The age group with the lowest inpatient days per 1,000 MM was 1 to 9 years of age, while the age group with the highest inpatient days per 1,000 MM was 45 to 64 years of age.

Table 7-3 shows the total inpatient average length of stay for each age group and the total for all age groups.

Table 7-3
Inpatient Utilization: General Hospital/Acute Care-Total Inpatient
Average Length of Stay

Health Plan Name	Age <1 Year	Ages 1-9 Years	Ages 10-19 Years	Ages 20-44 Years	Ages 45-64 Years	Ages 65-74 Years	Ages 75-84 Years	Ages 85+ Years	Total
Fee-for-Service	4.5	3.3	3.2	3.2	5.9	5.5	5.1	4.5	3.9
Primary Care Physician Program	2.7	3.2	4.4	4.2	5.8	5.3	5.3	5.0	4.9
Denver Health Medicaid Choice	4.5	4.6	2.8	3.9	7.6	7.4	7.1	4.8	5.4
Rocky Mountain Health Plans	3.4	3.1	2.3	2.1	3.6	4.2	3.6	5.0	2.8
2010 Colorado Medicaid Weighted Average	4.5	3.4	3.2	3.2	6.0	5.7	5.2	4.5	4.1
2009 Colorado Medicaid Weighted Average	4.5	3.8	3.0	3.1	6.1	5.4	5.0	4.6	3.9
2008 Colorado Medicaid Weighted Average	5.7	3.6	3.1	3.1	6.8	5.3	6.0	5.7	4.0
HEDIS 2009 Medicaid 50th Percentile	4.2	2.9	3.0	3.1	4.9	5.5	5.3	5.3	3.6

The health plans' overall (i.e., total) inpatient average length of stay ranged from 2.8 to 5.4. The 2010 Colorado Medicaid weighted average was 4.1. The age groups with the lowest inpatient average length of stay were 10 to 19 years of age and 20 to 44 years of age, while the age group with the highest inpatient average length of stay was 45 to 64 years of age.

Table 7-4 shows the discharges per 1,000 MM for medicine services for each age group and the total for all age groups.

Table 7-4
Inpatient Utilization: General Hospital/Acute Care-Medicine
Discharges Per 1,000 MM

Health Plan Name	Age <1 Year	Ages 1-9 Years	Ages 10-19 Years	Ages 20-44 Years	Ages 45-64 Years	Ages 65-74 Years	Ages 75-84 Years	Ages 85+ Years	Total
Fee-for-Service	10.2	2.1	1.4	4.8	17.0	13.8	16.1	17.9	5.4
Primary Care Physician Program	4.3	1.7	2.2	6.7	14.5	15.5	17.3	21.9	7.0
Denver Health Medicaid Choice	15.4	2.5	1.4	8.7	32.5	26.8	31.6	30.8	8.6
Rocky Mountain Health Plans	5.2	1.4	1.2	3.1	12.0	13.9	15.7	15.3	4.0
2010 Colorado Medicaid Weighted Average	10.4	2.1	1.4	5.1	18.1	15.0	17.2	18.4	5.7
2009 Colorado Medicaid Weighted Average	5.3	0.8	0.9	4.3	13.9	9.6	11.8	14.4	4.0
2008 Colorado Medicaid Weighted Average	10.1	1.9	1.3	4.3	13.2	5.0	5.2	3.8	4.2
HEDIS 2009 Medicaid 50th Percentile	8.4	1.6	1.0	4.0	12.7	12.0	11.8	17.3	3.4

The health plans' overall (i.e., total) discharges per 1,000 MM for medicine services ranged from 4.0 to 8.6. The 2010 Colorado Medicaid weighted average was 5.7 discharges per 1,000 MM for medicine services. The age group with the lowest discharges per 1,000 MM for medicine services was 10 to 19 years of age, while the age group with the highest discharges per 1,000 MM for medicine services was 85 years and older.

Table 7-5 shows the days per 1,000 MM for medicine services for each age group and the total for all age groups.

Table 7-5
Inpatient Utilization: General Hospital/Acute Care-Medicine
Days Per 1,000 MM

Health Plan Name	Age <1 Year	Ages 1-9 Years	Ages 10-19 Years	Ages 20-44 Years	Ages 45-64 Years	Ages 65-74 Years	Ages 75-84 Years	Ages 85+ Years	Total
Fee-for-Service	35.6	5.8	5.0	17.7	71.9	61.2	67.7	72.5	20.4
Primary Care Physician Program	10.8	4.8	9.9	23.8	64.7	63.4	79.1	96.2	28.7
Denver Health Medicaid Choice	67.2	8.9	4.8	36.9	176.4	168.5	188.4	103.8	41.7
Rocky Mountain Health Plans	14.7	3.2	3.1	7.4	35.3	51.0	48.6	70.3	11.8
2010 Colorado Medicaid Weighted Average	37.5	6.0	5.2	19.0	79.9	69.5	75.8	74.4	22.4
2009 Colorado Medicaid Weighted Average	21.4	2.4	4.0	17.0	65.9	43.5	51.6	60.4	17.2
2008 Colorado Medicaid Weighted Average	42.0	5.6	5.0	17.8	69.1	22.8	25.2	19.7	18.0
HEDIS 2009 Medicaid 50th Percentile	31.3	4.0	3.1	15.2	55.6	53.1	59.6	79.0	13.1

The health plans' overall (i.e., total) days per 1,000 MM for medicine services ranged from 11.8 to 41.7. The 2010 Colorado Medicaid weighted average was 22.4 days per 1,000 MM for medicine services. The age group with the lowest days per 1,000 MM for medicine services was 10 to 19 years of age, while the age group with the highest days per 1,000 MM for medicine services was 45 to 64 years of age.

Table 7-6 shows the average length of stay for medicine services for each age group and the total for all age groups.

Table 7-6
Inpatient Utilization: General Hospital/Acute Care-Medicine
Average Length of Stay

Health Plan Name	Age <1 Year	Ages 1-9 Years	Ages 10-19 Years	Ages 20-44 Years	Ages 45-64 Years	Ages 65-74 Years	Ages 75-84 Years	Ages 85+ Years	Total
Fee-for-Service	3.5	2.7	3.7	3.7	4.2	4.4	4.2	4.0	3.8
Primary Care Physician Program	2.5	2.9	4.5	3.6	4.5	4.1	4.6	4.4	4.1
Denver Health Medicaid Choice	4.4	3.5	3.4	4.2	5.4	6.3	6.0	3.4	4.9
Rocky Mountain Health Plans	2.8	2.4	2.7	2.4	2.9	3.7	3.1	4.6	3.0
2010 Colorado Medicaid Weighted Average	3.6	2.8	3.7	3.7	4.4	4.6	4.4	4.0	3.9
2009 Colorado Medicaid Weighted Average	4.1	3.0	4.3	3.9	4.7	4.5	4.4	4.2	4.3
2008 Colorado Medicaid Weighted Average	4.2	2.9	3.8	4.1	5.3	4.5	4.8	5.2	4.3
HEDIS 2009 Medicaid 50th Percentile	3.6	2.6	3.0	3.6	4.2	4.6	4.9	5.0	3.7

The health plans' overall (i.e., total) average length of stay for medicine services ranged from 3.0 to 4.9 days. The 2010 Colorado Medicaid weighted average was 3.9 days. The age group with the lowest average length of stay for medicine services was 1 to 9 years of age, while the age group with the highest average length of stay for medicine services was 65 to 74 years of age.

Table 7-7 shows the discharges per 1,000 MM for surgery services for each age group and the total for all age groups.

Table 7-7
Inpatient Utilization: General Hospital/Acute Care-Surgery
Discharges Per 1,000 MM

Health Plan Name	Age <1 Year	Ages 1-9 Years	Ages 10-19 Years	Ages 20-44 Years	Ages 45-64 Years	Ages 65-74 Years	Ages 75-84 Years	Ages 85+ Years	Total
Fee-for-Service	1.6	0.5	0.8	2.8	8.8	6.5	6.1	4.2	2.2
Primary Care Physician Program	0.9	0.5	1.2	3.5	7.2	7.4	6.2	4.8	3.2
Denver Health Medicaid Choice	0.6	0.3	0.4	1.4	5.1	5.6	6.0	4.3	1.3
Rocky Mountain Health Plans	2.4	0.6	0.8	3.1	8.7	7.1	6.6	4.5	2.4
2010 Colorado Medicaid Weighted Average	1.5	0.5	0.8	2.7	8.3	6.5	6.2	4.2	2.2
2009 Colorado Medicaid Weighted Average	0.7	0.3	0.5	2.2	5.9	4.5	4.1	3.3	1.6
2008 Colorado Medicaid Weighted Average	1.3	0.4	0.7	2.2	5.0	2.0	1.9	1.0	1.4
HEDIS 2009 Medicaid 50th Percentile	1.2	0.3	0.5	2.1	5.5	5.1	3.5	2.6	1.3

The health plans' overall (i.e., total) discharges per 1,000 MM for surgery services ranged from 1.3 to 3.2. The 2010 Colorado Medicaid average was 2.2 discharges per 1,000 MM for surgery services. The age group with the lowest discharges per 1,000 MM for surgery services was 1 to 9 years of age, while the age group with the highest discharges per 1,000 MM for surgery services was 45 to 64 years of age.

Table 7-8 shows the days per 1,000 MM for surgery services for each age group and the total for all age groups.

Table 7-8
Inpatient Utilization: General Hospital/Acute Care-Surgery
Days Per 1,000 MM

Health Plan Name	Age <1 Year	Ages 1-9 Years	Ages 10-19 Years	Ages 20-44 Years	Ages 45-64 Years	Ages 65-74 Years	Ages 75-84 Years	Ages 85+ Years	Total
Fee-for-Service	17.5	2.9	4.8	22.0	80.4	50.4	45.1	26.6	17.7
Primary Care Physician Program	3.5	2.1	8.1	27.0	61.5	57.9	45.1	37.3	24.4
Denver Health Medicaid Choice	5.4	4.1	3.3	14.7	107.6	72.2	79.1	64.1	19.4
Rocky Mountain Health Plans	11.3	2.9	3.2	13.3	39.2	37.2	31.0	28.6	11.3
2010 Colorado Medicaid Weighted Average	15.9	3.0	4.8	21.4	79.8	52.5	46.9	28.3	18.0
2009 Colorado Medicaid Weighted Average	5.8	1.9	3.0	15.3	55.4	32.7	27.6	21.8	12.4
2008 Colorado Medicaid Weighted Average	22.4	3.0	4.4	17.7	54.4	14.5	16.9	7.9	13.4
HEDIS 2009 Medicaid 50th Percentile	10.6	1.5	2.1	9.2	34.6	32.2	21.0	12.9	6.8

The health plans' overall (i.e., total) days per 1,000 MM for surgery services ranged from 11.3 to 24.4. The 2010 Colorado Medicaid weighted average was 18.0 days per 1,000 MM for surgery services. The age group with the lowest days per 1,000 MM for surgery services was 1 to 9 years of age, while the age group with the highest days per 1,000 MM for surgery services was 45 to 64 years of age.

Table 7-9 shows the average length of stay for surgery services for each age group and the total for all age groups.

Table 7-9
Inpatient Utilization: General Hospital/Acute Care-Surgery
Average Length of Stay

Health Plan Name	Age <1 Year	Ages 1-9 Years	Ages 10-19 Years	Ages 20-44 Years	Ages 45-64 Years	Ages 65-74 Years	Ages 75-84 Years	Ages 85+ Years	Total
Fee-for-Service	10.9	5.7	6.2	7.9	9.1	7.8	7.3	6.4	8.0
Primary Care Physician Program	4.0	4.2	6.6	7.7	8.5	7.8	7.3	7.7	7.7
Denver Health Medicaid Choice	9.6	13.7	8.9	10.9	21.2	12.8	13.2	15.0	15.3
Rocky Mountain Health Plans	4.6	4.6	4.2	4.3	4.5	5.2	4.7	6.3	4.6
2010 Colorado Medicaid Weighted Average	10.4	6.1	6.3	7.8	9.6	8.0	7.6	6.7	8.2
2009 Colorado Medicaid Weighted Average	7.7	5.9	5.4	6.9	9.4	7.3	6.7	6.7	7.6
2008 Colorado Medicaid Weighted Average	17.8	6.8	6.6	8.1	10.9	7.4	9.1	7.7	9.3
HEDIS 2009 Medicaid 50th Percentile	7.3	4.4	4.3	4.7	6.2	7.0	6.6	5.9	5.5

The health plans' overall (i.e., total) average length of stay for surgery services ranged from 4.6 to 15.3 days. The 2010 Colorado Medicaid weighted average was 8.2 days. The age group with the lowest average length of stay for surgery services was 1 to 9 years of age, while the age group with the highest average length of stay for surgery services was less than 1 year of age.

Table 7-10 shows the discharges per 1,000 MM for maternity services for each age group and the total for all age groups.

Table 7-10
Inpatient Utilization: General Hospital/Acute Care-Maternity
Discharges Per 1,000 MM

Health Plan Name	Ages 10-19 Years	Ages 20-44 Years	Ages 45-64 Years	Total
Fee-for-Service	5.0	22.3	0.1	11.6
Primary Care Physician Program	1.5	5.5	0.0	2.4
Denver Health Medicaid Choice	3.5	13.7	0.1	6.6
Rocky Mountain Health Plans	5.3	23.3	0.0	11.6
2010 Colorado Medicaid Weighted Average	4.7	20.9	0.1	10.7
2009 Colorado Medicaid Weighted Average	5.5	22.4	0.0	11.6
2008 Colorado Medicaid Weighted Average	5.6	23.2	0.1	11.9
HEDIS 2009 Medicaid 50th Percentile	2.3	11.3	0.1	5.5

The health plans' overall (i.e., total) discharges per 1,000 MM for maternity services ranged from 2.4 to 11.6. The 2010 Colorado Medicaid average was 10.7 discharges per 1,000 MM for maternity services. The age group with the lowest discharges per 1,000 MM for maternity services was 45 to 64 years of age, while the age group with the highest discharges per 1,000 MM for maternity services was 20 to 44 years of age.

Table 7-11 shows the days per 1,000 MM for maternity services for each age group and the total for all age groups.

Table 7-11
Inpatient Utilization: General Hospital/Acute Care-Maternity
Days Per 1,000 MM

Health Plan Name	Ages 10-19 Years	Ages 20-44 Years	Ages 45-64 Years	Total
Fee-for-Service	13.0	54.7	0.4	28.9
Primary Care Physician Program	3.8	14.5	0.0	6.2
Denver Health Medicaid Choice	6.9	40.7	0.2	18.1
Rocky Mountain Health Plans	10.4	42.1	0.0	21.3
2010 Colorado Medicaid Weighted Average	11.9	51.5	0.3	26.5
2009 Colorado Medicaid Weighted Average	13.9	56.7	0.2	29.3
2008 Colorado Medicaid Weighted Average	14.2	56.2	0.6	29.2
HEDIS 2009 Medicaid 50th Percentile	6.2	29.8	0.2	14.7

The health plans' overall (i.e., total) days per 1,000 MM for maternity services ranged from 6.2 to 28.9. The 2010 Colorado Medicaid weighted average was 26.5 days per 1,000 MM for maternity services. The age group with the lowest days per 1,000 MM for maternity services was 45 to 64 years of age, while the age group with the highest days per 1,000 MM for maternity services was 20 to 44 years of age.

Table 7-12 shows the average length of stay for maternity services for each age group and the total for all age groups.

Table 7-12
Inpatient Utilization: General Hospital/Acute Care-Maternity
Average Length of Stay

Health Plan Name	Ages 10-19 Years	Ages 20-44 Years	Ages 45-64 Years	Total
Fee-for-Service	2.6	2.5	3.2	2.5
Primary Care Physician Program	2.6	2.6	2.0	2.6
Denver Health Medicaid Choice	2.0	3.0	2.0	2.7
Rocky Mountain Health Plans	1.9	1.8	NA	1.8
2010 Colorado Medicaid Weighted Average	2.5	2.5	3.0	2.5
2009 Colorado Medicaid Weighted Average	2.5	2.5	3.7	2.5
2008 Colorado Medicaid Weighted Average	2.5	2.4	4.6	2.4
HEDIS 2009 Medicaid 50th Percentile	2.7	2.6	3.1	2.6

The health plans' overall (i.e., total) average length of stay for maternity services ranged from 1.8 to 2.7 days. The 2010 Colorado Medicaid weighted average was 2.5 days. The age groups of members 10 to 19 years of age and 20 to 44 years of age had average length of stays for maternity services that were equivalent. The age group with the highest average length of stay for maternity services was 45 to 64 years of age.

Ambulatory Care

Measure Definitions

The *Ambulatory Care—Outpatient Visits* measure summarizes utilization of ambulatory care for outpatient visits.

The *Ambulatory Care—ED Visits* measure summarizes utilization of ambulatory care for ED visits.

The *Ambulatory Care—Ambulatory Surgery/Procedures* measure summarizes utilization of ambulatory care for ambulatory surgery/procedures.

The *Ambulatory Care—Observation Room Stays* measure summarizes utilization of ambulatory care for observation room stays.

Importance

Ambulatory care is the largest, as well as the most widely used, portion of the U.S. health care system. Approximately 27 percent of health care spending is on ambulatory care. Physician offices deliver approximately 80 percent of all ambulatory care. In 2005, it was estimated that 963.5 million visits were made to physicians, which is an average of about 3.31 visits per person.[7-10]

ED visits have been rising over the last decade. From 1995 to 2005, the number of visits increased from 96.5 million to 115.3 million per year, an increase of 20 percent. This is equivalent to 219 visits to the ED every minute in the United States. Overall, ED utilization increased 7 percent from 1995 to 2005 from 36.9 to 39.6 visits per 100 people. Effectively promoting ambulatory treatment should result in the ability to reduce unnecessary ED visits.[7-11] According to a July 2009 report on ED utilization and capacity, the growth in ED visits over the last decade along with the decline in the number of hospitals operating an ED have led experts to believe that emergency care in the United States has reached a breaking point. Additionally, much of ED utilization is for non-emergent care.[7-12]

Ambulatory surgery has been increasing in the United States since the early 1980's due to advances in medical technology and changes in payment arrangements. There were an estimated 53.3 million surgical and nonsurgical procedures performed during 34.7 million ambulatory surgery visits in 2006.

7-10 Cherry DK, Woodwell DA, Rechtsteiner EA, Division of Health Care Statistics. National Ambulatory Medical Care Survey: 2005 Summary. *Advance Data from Vital and Health Statistics.* 2007; 387. Available at: http://www.cdc.gov/nchs/data/ad/ad387.pdf. Accessed on: June 3, 2010.

7-11 National Quality Measures Clearinghouse. Ambulatory Care: Summary of Utilization of Ambulatory Care in the Following Categories: Outpatient Visits, Emergency Department Visits, Ambulatory Surgery/Procedures, and Observation Room Stays. Available at: http://www.qualitymeasures.ahrq.gov/summary/summary.aspx?doc_id=10132. Accessed on: June 3, 2010.

7-12 Goodell S, DeLia D, Cantor, J. Emergency Department Utilization and Capacity. *The Synthesis Project.* 2009. Available at: http://www.rwjf.org/files/research/072109policysynthesis17brief.emergencyutilization.pdf. Accessed on: June 3, 2010.

This value accounts for 61.6 percent of the combined total of ambulatory surgery visits and inpatient discharges with surgical and nonsurgical procedures.[7-13]

The evaluation of observation status utilization rates is studied for payment incentives. Many payers have different policies relating to observation status, which can be difficult to understand for many institutions. Payment for observation services has been evolving quickly. Over the last decade there have been many changes to payment policies. Observation allows for time and flexibility for clinicians. It allows clinicians to observe patients in order to determine a diagnosis without the process and cost that is involved with admitting a patient.[7-14]

[7-13] Cullen KA, Hall MJ, Golosinskiy A. Division of Health Care Statistics. Ambulatory Surgery in the United States. *National Health Statistics Report.* 2009. Available at: http://www.cdc.gov/nchs/data/nhsr/nhsr011.pdf. Accessed on: June 3, 2010.

[7-14] HCUP Methods Series. Observation Status Related to United States Hospital Records. Available at: http://www.hcup-us.ahrq.gov/reports/FinalReportonObservationStatus_v2Final.pdf. Accessed on: June 3, 2010.

Performance Results

Table 7-13 shows outpatient visits per 1,000 MM for ambulatory care for each age group and the total for all age groups.

Table 7-13
Ambulatory Care
Outpatient Visits Per 1,000 MM

Health Plan Name	Age <1 Year	Ages 1-9 Years	Ages 10-19 Years	Ages 20-44 Years	Ages 45-64 Years	Ages 65-74 Years	Ages 75-84 Years	Ages 85+ Years	Total
Fee-for-Service	766.2	290.6	265.1	391.7	612.0	565.5	557.5	531.2	385.0
Primary Care Physician Program	672.6	317.1	312.0	462.2	698.4	687.1	662.4	660.5	461.6
Denver Health Medicaid Choice	175.5	190.5	186.3	383.2	574.1	865.8	904.4	625.6	296.8
Rocky Mountain Health Plans	776.6	340.8	297.3	470.2	844.3	824.5	864.8	766.2	470.5
2010 Colorado Medicaid Weighted Average	708.4	283.1	261.7	396.5	624.4	606.3	597.5	547.1	383.6
2009 Colorado Medicaid Weighted Average	694.4	262.7	248.6	369.1	561.1	498.5	477.6	401.8	358.1
2008 Colorado Medicaid Weighted Average	699.2	266.3	237.5	306.0	353.6	124.6	82.1	35.0	290.6
HEDIS 2009 Medicaid 50th Percentile	702.8	286.9	223.3	412.8	597.5	512.2	471.7	389.0	351.6

The health plans' overall (i.e., total) outpatient visits per 1,000 MM for ambulatory care ranged from 296.8 to 470.5. The 2010 Colorado Medicaid weighted average was 383.6 outpatient visits per 1,000 MM for ambulatory care. The age group with the lowest outpatient visits per 1,000 MM for ambulatory care was 10 to 19 years of age, while the age group with the highest outpatient visits per 1,000 MM for ambulatory care was less than 1 year of age.

Table 7-14 shows ED visits per 1,000 MM for ambulatory care for each age group and the total for all age groups.

Table 7-14
Ambulatory Care
Emergency Department Visits Per 1,000 MM

Health Plan Name	Age <1 Year	Ages 1-9 Years	Ages 10-19 Years	Ages 20-44 Years	Ages 45-64 Years	Ages 65-74 Years	Ages 75-84 Years	Ages 85+ Years	Total
Fee-for-Service	111.3	56.3	51.0	104.2	90.2	52.7	51.7	49.3	71.0
Primary Care Physician Program	110.2	53.6	50.7	91.4	83.9	57.9	55.9	52.9	66.4
Denver Health Medicaid Choice	43.1	69.9	49.4	73.9	68.1	51.2	41.2	34.2	63.1
Rocky Mountain Health Plans	65.4	43.0	44.3	104.6	100.6	65.1	47.4	54.7	63.3
2010 Colorado Medicaid Weighted Average	103.3	57.1	50.6	101.4	87.9	53.3	51.3	49.1	69.8
2009 Colorado Medicaid Weighted Average	90.5	43.5	41.8	87.6	79.3	45.3	45.8	44.1	58.8
2008 Colorado Medicaid Weighted Average	95.6	46.1	41.9	78.5	54.0	9.6	6.6	4.5	52.4
HEDIS 2009 Medicaid 50th Percentile	91.9	48.4	39.6	99.9	78.8	31.1	25.2	25.5	61.3

The health plans' overall (i.e., total) ED visits per 1,000 MM for ambulatory care ranged from 63.1 to 71.0. The 2010 Colorado Medicaid weighted average was 69.8 ED visits per 1,000 MM for ambulatory care. The age group with the lowest ED visits per 1,000 MM for ambulatory care was 85 years and older, while the age group with the highest ED visits per 1,000 MM for ambulatory care was less than 1 year of age.

Table 7-15 shows ambulatory surgery/procedures per 1,000 MM for ambulatory care for each age group and the total for all age groups.

Table 7-15
Ambulatory Care
Ambulatory Surgery/Procedures Per 1,000 MM

Health Plan Name	Age <1 Year	Ages 1-9 Years	Ages 10-19 Years	Ages 20-44 Years	Ages 45-64 Years	Ages 65-74 Years	Ages 75-84 Years	Ages 85+ Years	Total
Fee-for-Service	5.3	4.9	5.4	18.4	32.1	28.0	21.1	10.5	11.4
Primary Care Physician Program	5.6	5.1	5.5	16.9	34.4	30.7	28.0	18.0	15.3
Denver Health Medicaid Choice	2.8	5.5	7.5	35.6	67.8	115.7	95.2	76.9	22.5
Rocky Mountain Health Plans	6.2	5.9	7.4	25.0	37.8	28.3	28.0	16.2	14.5
2010 Colorado Medicaid Weighted Average	5.1	5.0	5.6	19.8	35.9	35.1	26.6	13.1	12.7
2009 Colorado Medicaid Weighted Average	5.9	6.2	5.5	17.2	29.2	27.1	20.8	9.4	11.7
2008 Colorado Medicaid Weighted Average	3.1	3.9	2.6	7.8	15.2	5.3	3.1	1.0	5.4
HEDIS 2009 Medicaid 50th Percentile	4.2	3.8	4.1	18.3	27.1	22.7	18.8	10.5	8.8

The health plans' overall (i.e., total) ambulatory surgery/procedures per 1,000 MM for ambulatory care ranged from 11.4 to 22.5. The 2010 Colorado Medicaid weighted average was 12.7 ambulatory surgery/procedures per 1,000 MM for ambulatory care. The age group with the lowest ambulatory surgery/procedures per 1,000 MM for ambulatory care was 1 to 9 years of age, while the age group with the highest ambulatory surgery/procedures per 1,000 MM for ambulatory care was 45 to 64 years of age.

Table 7-16 shows observation room stays per 1,000 MM for ambulatory care for each age group and the total for all age groups.

Table 7-16
Ambulatory Care
Observation Room Stays Per 1,000 MM

Health Plan Name	Age <1 Year	Ages 1-9 Years	Ages 10-19 Years	Ages 20-44 Years	Ages 45-64 Years	Ages 65-74 Years	Ages 75-84 Years	Ages 85+ Years	Total
Fee-for-Service	1.6	0.3	1.2	3.7	1.9	1.7	1.6	1.4	1.5
Primary Care Physician Program	0.7	0.2	0.5	1.7	1.6	2.5	2.4	1.8	1.1
Denver Health Medicaid Choice	0.3	0.2	0.4	1.6	3.1	3.6	5.0	2.7	1.0
Rocky Mountain Health Plans	1.5	0.8	1.3	3.5	3.3	1.7	3.6	1.8	1.8
2010 Colorado Medicaid Weighted Average	1.5	0.3	1.1	3.4	2.0	1.9	1.9	1.5	1.4
2009 Colorado Medicaid Weighted Average	2.2	0.5	2.1	6.1	2.1	1.8	1.8	1.8	2.3
2008 Colorado Medicaid Weighted Average	2.3	0.6	2.2	7.0	1.7	0.7	0.4	0.3	2.4
HEDIS 2009 Medicaid 50th Percentile	1.3	0.3	0.9	3.8	2.2	0.4	0.0	0.0	1.5

The health plans' overall (i.e., total) observation room stays per 1,000 MM for ambulatory care ranged from 1.0 to 1.8. The 2010 Colorado Medicaid weighted average was 1.4 observation room stays per 1,000 MM for ambulatory care. The age group with the lowest observation room stays per 1,000 MM for ambulatory care was 1 to 9 years of age, while the age group with the highest observation room stays per 1,000 MM for ambulatory care was 20 to 44 years of age.

Frequency of Selected Procedures

The following measures have shown wide regional variation and have generated concern regarding potential inappropriate utilization.

Measure Definitions

The *Frequency of Selected Procedures—Myringotomy* measure summarizes myringotomy utilization of myringotomy for children between the ages of 0 and 4, and 5 and 19.

The *Frequency of Selected Procedures—Tonsillectomy* measure summarizes tonsillectomy utilization for children between the ages of 0 and 9, and 10 and 19.

The *Frequency of Selected Procedures—Dilation & Curettage* measure summarizes dilation and curettage utilization for females between the ages of 15 and 44, and 45 and 64.

The *Frequency of Selected Procedures—Abdominal Hysterectomy* measure summarizes abdominal hysterectomy utilization for females between the ages of 15 and 44, and 45 and 64.

The *Frequency of Selected Procedures—Vaginal Hysterectomy* measure summarizes vaginal hysterectomy utilization for females between the ages of 15 and 44, and 45 and 64.

The *Frequency of Selected Procedures—Open Cholecystectomy* measure summarizes open cholecystectomy utilization for females between the ages of 15 and 44, and 45 and 64, and for males between the ages of 30 and 64.

The *Frequency of Selected Procedures—Closed Cholecystectomy* measure summarizes closed cholecystectomy utilization for females between the ages of 15 and 44, and 45 and 64, and for males between the ages of 30 and 64.

The *Frequency of Selected Procedures—Back Surgery* measure summarizes back surgery utilization for males and females between the ages of 20 and 44, and 45 and 64.

The *Frequency of Selected Procedures—Mastectomy* measure summarizes mastectomy utilization for females between the ages of 15 and 44, and 45 and 64.

The *Frequency of Selected Procedures—Lumpectomy* measure summarizes lumpectomy utilization for females between the ages of 15 and 44, and 45 and 64.

Performance Results

Table 7-17 shows the frequency of myringotomy procedures per 1,000 MM for children between 0 and 4 years of age, and between 5 and 19 years of age.

Table 7-17
Frequency of Selected Procedures
Myringotomy Procedures Per 1,000 MM

Health Plan Name	Ages 0-4 Years	Ages 5-19 Years
Fee-for-Service	2.3	0.4
Primary Care Physician Program	3.0	0.7
Denver Health Medicaid Choice	0.5	0.2
Rocky Mountain Health Plans	3.5	0.7
2010 Colorado Medicaid Weighted Average	2.2	0.4
2009 Colorado Medicaid Weighted Average	2.3	0.4
2008 Colorado Medicaid Weighted Average	—	—
HEDIS 2009 Medicaid 50th Percentile	2.6	0.4

The health plans' frequency of myringotomy procedures per 1,000 MM for children 0 to 4 years of age ranged from 0.5 to 3.5, while the frequency of myringotomy procedures per 1,000 MM for children 5 to 19 years of age ranged from 0.2 to 0.7. The 2010 Colorado Medicaid weighted average frequency of myringotomy procedures per 1,000 MM was lowest for children between 5 and 19 years of age.

Table 7-18 shows the frequency of tonsillectomy procedures per 1,000 MM for children between 0 and 9 years of age, and between 10 and 19 years of age.

Table 7-18
Frequency of Selected Procedures
Tonsillectomy Procedures Per 1,000 MM

Health Plan Name	Ages 0-9 Years	Ages 10-19 Years
Fee-for-Service	0.8	0.5
Primary Care Physician Program	1.1	0.6
Denver Health Medicaid Choice	0.3	0.3
Rocky Mountain Health Plans	1.2	1.5
2010 Colorado Medicaid Weighted Average	0.8	0.6
2009 Colorado Medicaid Weighted Average	0.7	0.4
2008 Colorado Medicaid Weighted Average	—	—
HEDIS 2009 Medicaid 50th Percentile	0.7	0.4

The health plans' frequency of tonsillectomy procedures per 1,000 MM for children 0 to 9 years of age ranged from 0.3 to 1.2, while the frequency of tonsillectomy procedures per 1,000 MM for children 10 to 19 years of age ranged from 0.3 to 1.5. The 2010 Colorado Medicaid weighted average frequency of tonsillectomy procedures per 1,000 MM was lowest for children between 10 and 19 years of age.

Table 7-19 shows the frequency of dilation and curettage procedures per 1,000 MM for females between 15 and 44 years of age, and between 45 and 64 years of age.

Table 7-19
Frequency of Selected Procedures
Dilation & Curettage Procedures Per 1,000 MM

Health Plan Name	Ages 15-44 Years	Ages 45-64 Years
Fee-for-Service	0.2	0.1
Primary Care Physician Program	0.2	0.1
Denver Health Medicaid Choice	0.0	0.0
Rocky Mountain Health Plans	0.3	0.0
2010 Colorado Medicaid Weighted Average	0.2	0.1
2009 Colorado Medicaid Weighted Average	0.2	0.2
2008 Colorado Medicaid Weighted Average	—	—
HEDIS 2009 Medicaid 50th Percentile	0.2	0.2

The health plans' frequency of dilation and curettage procedures per 1,000 MM for females 15 to 44 years of age ranged from 0.0 to 0.3, while the frequency of dilation and curettage procedures per 1,000 MM for females 45 to 64 years of age ranged from 0.0 to 0.1. The 2010 Colorado Medicaid weighted average frequency of dilation and curettage procedures per 1,000 MM was lowest for females between 45 and 64 years of age.

Table 7-20 shows the frequency of abdominal hysterectomy procedures per 1,000 MM for females between 15 and 44 years of age, and between 45 and 64 years of age.

Table 7-20
Frequency of Selected Procedures
Abdominal Hysterectomy Procedures Per 1,000 MM

Health Plan Name	Ages 15-44 Years	Ages 45-64 Years
Fee-for-Service	0.4	0.6
Primary Care Physician Program	0.4	0.4
Denver Health Medicaid Choice	0.1	0.2
Rocky Mountain Health Plans	0.3	0.3
2010 Colorado Medicaid Weighted Average	0.4	0.5
2009 Colorado Medicaid Weighted Average	0.3	0.4
2008 Colorado Medicaid Weighted Average	—	—
HEDIS 2009 Medicaid 50th Percentile	0.2	0.5

The health plans' frequency of abdominal hysterectomy procedures per 1,000 MM for females 15 to 44 years of age ranged from 0.1 to 0.4, while the frequency of abdominal hysterectomy procedures per 1,000 MM for females 45 to 64 years of age ranged from 0.2 to 0.6. The 2010 Colorado Medicaid weighted average frequency of abdominal hysterectomy procedures per 1,000 MM was lowest for females between 15 and 44 years of age.

Table 7-21 shows the frequency of vaginal hysterectomy procedures per 1,000 MM for females between 15 and 44 years of age, and between 45 and 64 years of age.

Table 7-21
Frequency of Selected Procedures
Vaginal Hysterectomy Procedures Per 1,000 MM

Health Plan Name	Ages 15-44 Years	Ages 45-64 Years
Fee-for-Service	0.4	0.4
Primary Care Physician Program	0.2	0.1
Denver Health Medicaid Choice	0.0	0.2
Rocky Mountain Health Plans	1.1	0.5
2010 Colorado Medicaid Weighted Average	0.4	0.3
2009 Colorado Medicaid Weighted Average	0.4	0.4
2008 Colorado Medicaid Weighted Average	—	—
HEDIS 2009 Medicaid 50th Percentile	0.1	0.2

The health plans' frequency of vaginal hysterectomy procedures per 1,000 MM for females 15 to 44 years of age ranged from 0.0 to 1.1, while the frequency of vaginal hysterectomy procedures per 1,000 MM for females 45 to 64 years of age ranged from 0.1 to 0.5. The 2010 Colorado Medicaid weighted average frequency of vaginal hysterectomy procedures per 1,000 MM was lowest for females between 45 and 64 years of age.

Table 7-22 shows the frequency of open cholecystectomy procedures per 1,000 MM for females between the ages of 15 and 44, and 45 and 64, and for males between the ages of 30 and 64.

Table 7-22
Frequency of Selected Procedures
Open Cholecystectomy Procedures Per 1,000 MM

Health Plan Name	Females-Ages 15-44 Years	Females-Ages 45-64 Years	Males-Ages 30-64 Years
Fee-for-Service	0.0	0.1	0.1
Primary Care Physician Program	0.1	0.0	0.1
Denver Health Medicaid Choice	0.0	0.0	0.1
Rocky Mountain Health Plans	0.0	0.0	0.0
2010 Colorado Medicaid Weighted Average	0.0	0.1	0.1
2009 Colorado Medicaid Weighted Average	0.0	0.1	0.2
2008 Colorado Medicaid Weighted Average	—	—	—
HEDIS 2009 Medicaid 50th Percentile	0.0	0.1	0.0

The 2010 Colorado Medicaid weighted average of open cholecystectomy procedures per 1,000 MM was lowest for females between 15 and 44 years of age, and highest for females between 45 and 64 years of age and males between 30 and 64 years of age.

Table 7-23 shows the frequency of closed cholecystectomy procedures per 1,000 MM for females between the ages of 15 and 44, and 45 and 64, and for males between the ages of 30 and 64.

Table 7-23
Frequency of Selected Procedures
Closed Cholecystectomy Procedures Per 1,000 MM

Health Plan Name	Females-Ages 15-44 Years	Females-Ages 45-64 Years	Males-Ages 30-64 Years
Fee-for-Service	1.2	1.0	0.4
Primary Care Physician Program	0.8	0.6	0.5
Denver Health Medicaid Choice	0.6	0.3	0.1
Rocky Mountain Health Plans	1.5	1.5	0.5
2010 Colorado Medicaid Weighted Average	1.2	0.9	0.4
2009 Colorado Medicaid Weighted Average	1.2	1.0	0.5
2008 Colorado Medicaid Weighted Average	—	—	—
HEDIS 2009 Medicaid 50th Percentile	0.7	0.6	0.3

The 2010 Colorado Medicaid weighted average of closed cholecystectomy procedures per 1,000 MM was lowest for males between 30 and 64 years of age, and highest for females between 15 and 44 years of age.

Table 7-24 shows the frequency of back surgery procedures per 1,000 MM for females and males between the ages of 20 and 44, and 45 and 64.

Table 7-24
Frequency of Selected Procedures
Back Surgery Procedures Per 1,000 MM

Health Plan Name	Females-Ages 20-44 Years	Females-Ages 45-64 Years	Males-Ages 20-44 Years	Males-Ages 45-64 Years
Fee-for-Service	0.4	1.1	0.7	1.3
Primary Care Physician Program	0.4	1.0	0.3	0.9
Denver Health Medicaid Choice	0.1	0.2	0.1	0.1
Rocky Mountain Health Plans	0.4	1.3	0.7	1.5
2010 Colorado Medicaid Weighted Average	0.4	1.0	0.6	1.1
2009 Colorado Medicaid Weighted Average	0.3	0.9	0.6	0.9
2008 Colorado Medicaid Weighted Average	—	—	—	—
HEDIS 2009 Medicaid 50th Percentile	0.2	0.5	0.4	0.5

The 2010 Colorado Medicaid weighted average of back surgery procedures per 1,000 MM was lowest for females between 20 and 44 years of age, and highest for males between 45 and 64 years of age.

Table 7-25 shows the frequency of mastectomy procedures per 1,000 MM for females between the ages of 15 and 44, and 45 and 64.

Table 7-25
Frequency of Selected Procedures
Mastectomy Procedures Per 1,000 MM

Health Plan Name	Ages 15-44 Years	Ages 45-64 Years
Fee-for-Service	0.0	0.7
Primary Care Physician Program	0.1	0.3
Denver Health Medicaid Choice	0.0	0.0
Rocky Mountain Health Plans	0.0	0.4
2010 Colorado Medicaid Weighted Average	0.0	0.6
2009 Colorado Medicaid Weighted Average	0.1	0.3
2008 Colorado Medicaid Weighted Average	—	—
HEDIS 2009 Medicaid 50th Percentile	0.0	0.1

The health plans' frequency of mastectomy procedures per 1,000 MM for females 15 to 44 years of age ranged from 0.0 to 0.1, while the frequency of mastectomy procedures per 1,000 MM for females 45 to 64 years of age ranged from 0.0 to 0.7. The 2010 Colorado Medicaid weighted average frequency of mastectomy procedures per 1,000 MM was lowest for females between 15 and 44 years of age.

Table 7-26 shows the frequency of lumpectomy procedures per 1,000 MM for females between the ages of 15 and 44, and 45 and 64.

Table 7-26
Frequency of Selected Procedures
Lumpectomy Procedures Per 1,000 MM

Health Plan Name	Ages 15-44 Years	Ages 45-64 Years
Fee-for-Service	0.2	0.9
Primary Care Physician Program	0.2	0.5
Denver Health Medicaid Choice	0.0	0.4
Rocky Mountain Health Plans	0.4	1.1
2010 Colorado Medicaid Weighted Average	0.2	0.8
2009 Colorado Medicaid Weighted Average	0.1	0.6
2008 Colorado Medicaid Weighted Average	—	—
HEDIS 2009 Medicaid 50th Percentile	0.2	0.5

The health plans' frequency of lumpectomy procedures per 1,000 MM for females 15 to 44 years of age ranged from 0.0 to 0.4, while the frequency of lumpectomy procedures per 1,000 MM for females 45 to 64 years of age ranged from 0.4 to 1.1. The 2010 Colorado Medicaid weighted average frequency of lumpectomy procedures per 1,000 MM was lowest for females between 15 and 44 years of age.

Antibiotic Utilization

Measure Definitions

The *Antibiotic Utilization—Average Prescriptions PMPY for Antibiotics* measure summarizes outpatient utilization of antibiotic prescriptions during the measurement year for the average number of antibiotic prescriptions PMPY.

The *Antibiotic Utilization—Average Days Supplied per Antibiotic Prescription* measure summarizes outpatient utilization of antibiotic prescriptions during the measurement year for the average days supplied per antibiotic prescription.

The *Antibiotic Utilization—Average Prescriptions PMPY for Antibiotics of Concern* measure summarizes outpatient utilization of antibiotic prescriptions during the measurement year for the average prescriptions PMPY for antibiotics of concern.

The *Antibiotic Utilization—Percentage of Antibiotics of Concern of All Antibiotic Prescriptions* measure summarizes outpatient utilization of antibiotic prescriptions during the measurement year for the percentage of antibiotics of concern of all antibiotic prescriptions.

Importance

The Institute of Medicine (IOM) has cited antibiotic resistance as one of the key microbial threats to health in the United States. The IOM is focused on promoting appropriate use of antimicrobials as a primary means to address this threat. The CDC has also cited antimicrobial resistance as a major concern, and the Get Smart: Know When Antibiotics Work campaign seeks to reduce the rising rate of antibiotic resistance. This campaign specifically targets the five respiratory conditions that in 1992 accounted for more than 75 percent of all office-based prescribing for all ages combined: otitis media, sinusitis, pharyngitis, bronchitis, and the common cold.[7-15] Although antibiotic prescribing rates have decreased, patients of all ages are prescribed more than 10 million courses of antibiotics annually for viral conditions that do not benefit from antibiotics.[7-16]

[7-15] Centers for Disease Control and Prevention. Get Smart: Know When Antibiotics Work. Available at: http://www.cdc.gov/getsmart/campaign-materials/about-campaign.html. Accessed on: September 2, 2010.

[7-16] Centers for Disease Control and Prevention. How to Plan a Successful Get Smart About Antibiotics Week. 2009. Available at: http://www.cdc.gov/getsmart/campaign-materials/week/gsw-doc/gsw-entire-doc.pdf. Accessed on: September 2, 2010.

Performance Results

Table 7-27 shows the average number of prescriptions PMPY for antibiotics for each age group, the total of all age groups, and unknown.

Table 7-27
Antibiotic Utilization
Average Number of Prescriptions PMPY for Antibiotics

Health Plan Name	Ages 0-9 Years	Ages 10-17 Years	Ages 18-34 Years	Ages 35-49 Years	Ages 50-64 Years	Ages 65-74 Years	Ages 75-84 Years	Ages 85+ Years	Total	Unknown
Fee-for-Service	1.0	0.7	1.3	1.0	0.9	0.2	0.1	0.0	0.9	NA
Primary Care Physician Program	1.2	1.1	1.9	1.4	1.7	0.3	0.2	0.1	1.2	NA
Denver Health Medicaid Choice	0.3	0.2	0.7	0.7	0.7	0.4	0.3	0.1	0.4	0.0
Rocky Mountain Health Plans	1.0	0.8	1.5	1.4	1.4	0.6	0.7	0.6	1.1	NA
2010 Colorado Medicaid Weighted Average	0.9	0.7	1.3	1.0	1.0	0.2	0.1	0.1	0.9	0.0
2009 Colorado Medicaid Weighted Average	0.9	0.7	1.1	1.0	1.0	0.2	0.1	0.1	0.8	0.0
2008 Colorado Medicaid Weighted Average	—	—	—	—	—	—	—	—	—	—
HEDIS 2009 Medicaid 50th Percentile	—	—	—	—	—	—	—	—	1.1	—

The health plans' overall (i.e., total) average number of prescriptions PMPY for antibiotics ranged from 0.4 to 1.2. The 2010 Colorado Medicaid weighted average was 0.9 prescriptions PMPY for antibiotics. The age groups with the lowest average number of antibiotic prescriptions PMPY were 75 to 84 years of age and 85 years and older, while the age group with the highest average number of antibiotic prescriptions PMPY was 18 to 34 years of age.

Table 7-28 shows the average days supplied per antibiotic prescription for each age group, the total of all age groups, and unknown.

Table 7-28
Antibiotic Utilization
Average Days Supplied per Antibiotic Prescription

Health Plan Name	Ages 0-9 Years	Ages 10-17 Years	Ages 18-34 Years	Ages 35-49 Years	Ages 50-64 Years	Ages 65-74 Years	Ages 75-84 Years	Ages 85+ Years	Total	Unknown
Fee-for-Service	9.5	10.8	9.0	9.4	10.0	10.0	8.8	9.2	9.6	NA
Primary Care Physician Program	9.7	11.5	11.4	10.6	10.4	9.0	9.3	7.0	10.6	NA
Denver Health Medicaid Choice	9.5	9.8	8.4	11.1	10.8	11.1	10.8	7.9	9.7	NA
Rocky Mountain Health Plans	9.4	10.2	9.5	9.9	10.6	13.7	15.1	12.2	9.9	NA
2010 Colorado Medicaid Weighted Average	9.5	10.8	9.1	9.6	10.1	10.3	10.1	9.9	9.7	—
2009 Colorado Medicaid Weighted Average	9.6	10.9	9.3	9.9	10.4	10.3	10.1	9.5	9.8	—
2008 Colorado Medicaid Weighted Average	—	—	—	—	—	—	—	—	—	—
HEDIS 2009 Medicaid 50th Percentile	—	—	—	—	—	—	—	—	9.2	—

The health plans' overall (i.e., total) average days supplied per antibiotic prescription ranged from 9.6 to 10.6. The 2010 Colorado Medicaid weighted average was 9.7 average days supplied per antibiotic prescription. The age group with the lowest average days supplied per antibiotic prescription was 18 to 34 years of age, while the age group with the highest average days supplied per antibiotic prescription was 10 to 17 years of age.

Table 7-29 shows the average number of prescriptions PMPY for antibiotics of concern for each age group, the total of all age groups, and unknown.

Table 7-29
Antibiotic Utilization
Average Number of Prescriptions PMPY for Antibiotics of Concern

Health Plan Name	Ages 0-9 Years	Ages 10-17 Years	Ages 18-34 Years	Ages 35-49 Years	Ages 50-64 Years	Ages 65-74 Years	Ages 75-84 Years	Ages 85+ Years	Total	Unknown
Fee-for-Service	0.4	0.3	0.4	0.5	0.4	0.1	0.1	0.0	0.3	NA
Primary Care Physician Program	0.5	0.4	0.7	0.6	0.8	0.1	0.1	0.1	0.5	NA
Denver Health Medicaid Choice	0.1	0.1	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.0
Rocky Mountain Health Plans	0.4	0.3	0.5	0.6	0.6	0.2	0.3	0.2	0.4	NA
2010 Colorado Medicaid Weighted Average	0.3	0.2	0.4	0.4	0.5	0.1	0.1	0.0	0.3	0.0
2009 Colorado Medicaid Weighted Average	0.3	0.2	0.4	0.5	0.5	0.1	0.1	0.0	0.3	0.0
2008 Colorado Medicaid Weighted Average	—	—	—	—	—	—	—	—	—	—
HEDIS 2009 Medicaid 50th Percentile	—	—	—	—	—	—	—	—	0.5	—

The health plans' overall (i.e., total) average number of prescriptions PMPY for antibiotics of concern ranged from 0.1 to 0.5. The 2010 Colorado Medicaid weighted average was 0.3 prescriptions PMPY for antibiotics of concern. The age group with the lowest average number of antibiotic prescriptions of concern PMPY was 85 years and older, while the age group with the highest average number of antibiotic prescriptions of concern PMPY was 50 to 64 years of age.

Table 7-30 shows the percentage of antibiotics of concern of all antibiotic prescriptions for each age group, the total of all age groups, and unknown.

Table 7-30
Antibiotic Utilization
Percentage of Antibiotics of Concern of All Antibiotic Prescriptions

Health Plan Name	Ages 0-9 Years	Ages 10-17 Years	Ages 18-34 Years	Ages 35-49 Years	Ages 50-64 Years	Ages 65-74 Years	Ages 75-84 Years	Ages 85+ Years	Total	Unknown
Fee-for-Service	37.5%	36.0%	34.0%	43.9%	48.5%	50.0%	53.5%	54.5%	37.8%	NA
Primary Care Physician Program	38.3%	40.4%	34.8%	43.3%	48.9%	50.3%	47.1%	69.0%	40.7%	NA
Denver Health Medicaid Choice	19.2%	22.3%	26.1%	29.7%	42.0%	46.7%	50.0%	41.0%	26.3%	NA
Rocky Mountain Health Plans	35.6%	34.5%	35.3%	44.9%	44.6%	37.5%	40.4%	28.2%	37.1%	NA
2010 Colorado Medicaid Weighted Average	36.8%	35.9%	33.8%	43.1%	47.9%	48.6%	50.4%	46.5%	37.5%	—
2009 Colorado Medicaid Weighted Average	37.3%	35.4%	34.5%	44.7%	49.1%	50.8%	53.9%	50.2%	38.3%	—
2008 Colorado Medicaid Weighted Average	—	—	—	—	—	—	—	—	—	—
HEDIS 2009 Medicaid 50th Percentile	—	—	—	—	—	—	—	—	43.4%	—

The health plans' overall (i.e., total) percentage of antibiotics of concern of all antibiotic prescriptions ranged from 26.3 percent to 40.7 percent. The 2010 Colorado Medicaid weighted average was 37.5 percent. The age group with the lowest percentage of antibiotics of concern of all antibiotic prescriptions was 18 to 34 years of age, while the age group with the highest percentage of antibiotics of concern of all antibiotic prescriptions was 75 to 84 years of age.

Utilization of Services Recommendations

Best Practices

The report presents rates for measures in the Utilization of Services section for informational purposes only. The rates do not indicate the quality and timeliness of, and access to, care and services. The reader should exercise caution in connecting these data to the efficacy of the program because many factors influence these data.

National benchmarks for the Utilization of Services measures rank health plans for their utilization of services. If a health plan's ED visits rate (for the *Ambulatory Care* measure) ranks lower than the 50th percentile, its members are accessing the ED less than other health plans nationwide. If the health plan ranks above the 50th percentile, ED utilization is higher than other health plans nationwide. Therefore, if the goal is to keep members out of the ED for unnecessary services, health plans should research the reasons for ED visits to identify ways to cut down on unnecessary use. For some health plans, however, high ED utilization may not indicate that members are accessing unnecessary services. In these cases, high rates of ED use may not indicate a problem with utilization of services. Each health plan has to make this determination based upon its population.

HSAG recommends that health plans review their results for Utilization of Services and identify whether a rate is higher or lower than expected. Focused analysis related to Utilization of Services could help identify the key drivers associated with the rates.

Measuring High- and Low-Utilization Patterns

There has been a great deal of research in methods to measure patterns of high- and low-utilization in health care. Utilization measures are difficult to interpret for a number of reasons as utilization can vary greatly depending on the population. Methods used to measure utilization include analyzing the costs associated with the population being studied. A popular method of analyzing utilization is by using an ordinary least squares (OLS) regression analysis. These analyses have found that, typically, young children have high utilization, and males and females have similar utilization until puberty. After puberty, however, women tend to have higher utilization rates during childbearing age, while men typically have lower utilization until around age 40.

Another method that has been proposed is using the Cox proportional hazards model for cost analysis. This method has been shown to be beneficial for identifying costs if the data are not censored. Censoring in health care data occurs when there are issues in estimating the average lifetime cost for treating a particular disease, cost until cure, or cost in a specific time frame. There are times in which complete costs for some patients cannot be completely captured due to patients being lost to follow-up.[7-17]

[7-17] Diehr P, Yanez D, Ash A, et al. Methods for Analyzing Health Care Utilization and Costs. *Annual Reviews.* 1999; 20:125-144. Available at: http://works.bepress.com/cgi/viewcontent.cgi?article=1019&context=paula_diehr. Accessed on: June 3, 2010.

Ambulatory Care Case-Mix Methodology

The Ambulatory Care Group (ACG) system can track a person based on demographics and pattern of disease over a specific time frame. Additionally, the scheme does not depend on the presence of specific diagnoses that can change over time, but rather on broad clusters of diagnoses and conditions. Members are classified into one of 51 ACG categories. The ACG system has been shown to be able to explain over 50 percent of variance in ambulatory resource use if it is used retrospectively, and over 20 percent of variance in ambulatory resource use if used prospectively. This is compared with 6 percent when age and gender are used standalone. The ACG system has been used for various activities including quality assurance, utilization review, and provider payments.[7-18]

[7-18] Weiner JP, Starfield BH, Steinwachs DM, et al. Development and Application of a Population-Oriented Measure of Ambulatory Care Case-Mix. *Medical Care.* 1991; 29(5): 452-472. Available at: http://www.ncbi.nlm.nih.gov/pubmed/1902278. Accessed on: June 3, 2010.

8. HEDIS Reporting Capabilities

Key Information Systems Findings

NCQA's IS standards are the guidelines used by certified-HEDIS compliance auditors to assess a health plan's HEDIS reporting capabilities. HSAG evaluated each health plan on seven IS standards. To assess a health plan's adherence to standards, HSAG reviewed several documents for FFS, PCPP, DHMC, and RMHP, which included the final audit reports (generated by an NCQA-licensed audit organization [LO]), IDSS files, and audit review tables. The findings indicated that, overall, the health plans were compliant with most of NCQA's IS standards. None of the issues resulted in a bias to any HEDIS results. All health plans were able to accurately report all of the Department-required HEDIS performance measures. RMHP does not offer a mental health benefit; therefore, this health plan did not report on the *Antidepressant Medication Management* measures).

All health plans used NCQA-certified software to produce the HEDIS measures. NCQA certification helps to ensure the validity of the results that are produced. Through certification, NCQA tests that software produces valid results and the calculations meet NCQA standards.

Each Colorado Medicaid health plan contracted with an LO to perform the NCQA HEDIS Compliance Audit™. HSAG audited the FFS and PCPP programs, while the other health plans contracted with different LOs to perform their audits. The following lists the IS standards' findings.

IS 1.0 – Medical Service Data—Sound Coding Methods and Data Capture

This standard assesses whether:

- Industry standard codes are required and captured.
- Primary and secondary diagnosis codes are identified.
- Nonstandard codes (if used) are mapped to industry standard codes.
- Standard submission forms are used.
- Timely and accurate data entry processes and sufficient edit checks are used.
- Data completeness is continually assessed and all contracted vendors involved in medical claims processing are monitored.

HSAG found that DHMC was fully compliant with all IS 1.0 standards. RMHP was fully compliant with all IS 1.0 standards except one related to primary and secondary diagnosis codes. RMHP was unable to capture more than eight diagnosis codes per claim; however, the auditor determined the impact on HEDIS reporting was minimal. HSAG found that the FFS and PCPP were not fully compliant with the standards related to data completeness and data entry. Contractual payment arrangements for FQHCs and RHCs reimburse for only one specific revenue code per claim submission. Any remaining procedures codes are denied. Due to issues with processing denied line items, some FQHCs or RHCs only submit one procedure code per visit. Other services provided during a given outpatient visit therefore are not consistently submitted. This may result in under-

reporting of services provided by these entities. Also, several multi-specialty clinics submit claims with the billing provider and not the individual rendering provider. For some measures, the rendering provider type (specialty) needs to be identified. HSAG was not able to quantify the impact on the HEDIS results. HSAG recommends that the Department evaluate FQHC and RHC data submission requirements for the FFS and PCPP populations and work with multi-specialty providers on identifying the rendering provider specialty.

IS 2.0 – Enrollment Data—Data Capture, Transfer, and Entry

This standard assesses whether:

- All HEDIS-relevant information for data entry or electronic transmissions of enrollment data were accurate and complete.
- Manual entry of enrollment data is timely and accurate and sufficient edit checks are in place.
- The health plans continually assess data completeness and take steps to improve performance.
- The health plans effectively monitor the quality and accuracy of electronic submissions.
- The health plans have effective control processes for the transmission of enrollment data.

The Colorado Medicaid health plans were fully compliant with IS 2.0. The health plans received enrollment and eligibility files from the state. Therefore, minimal manual entry of enrollment data was required.

IS 3.0 – Practitioner Data—Data Capture, Transfer, and Entry

This standard assesses whether:

- Provider specialties are fully documented and mapped to HEDIS provider specialties.
- Effective procedures for submitting HEDIS-relevant information are in place.
- Electronic transmissions of practitioner data are checked to ensure accuracy.
- Processes and edit checks ensure accurate and timely entry of data into the transaction files.
- Data completeness is assessed and steps are taken to improve performance.
- Vendors are regularly monitored against expected performance standards.

DHMC and RMHP were compliant with all IS 3.0 standards that cover the measures required by the Department.[8-1,8-2] FFS and PCPP were substantially compliant with IS 3.0. There were challenges identifying PCPs that provided services to clients at multi-specialty clinics. Specialty codes for these PCPs were not always available. On behalf of FFS and PCPP, the Department staff worked to identify PCP provider types more completely in their provider system. This process may have led to improved rates for the Well-Child and Access to Care measures this year for the FFS and PCPP rates.[8-3]

8-1 HEDIS 2010 Compliance Audit, Final Audit Report, Denver Health Medicaid Choice, Inc., July 2010.
8-2 HEDIS 2010 Compliance Audit, Final Audit Report, Rocky Mountain Health Plans, June 2010.
8-3 HEDIS 2010 Compliance Audit, Final Audit Report, Department of Health Care Policy & Financing, July 2010.

IS 4.0 – Medical Record Review Processes—Training, Sampling, Abstraction, and Oversight

This standard assesses whether:

- Forms or tools used for medical record review captured all fields relevant to HEDIS reporting.
- Checking procedures are in place to ensure data integrity for electronic transmission of information.
- Retrieval and abstraction of data from medical records are accurately performed.
- Data entry processes including edit checks are timely and accurate.
- Data completeness is assessed including steps to improve performance.
- Vendor performance is monitored against expected performance standards.

All of the health plans were fully compliant with IS 4.0 standards. The final audit reports showed that all of the health plans used a medical record vendor for various tasks, including tool development, medical record procurement, data abstraction, and final data file development. Each audit firm conducted medical record validation for two selected measures. All health plans passed medical record validation with 100 percent accuracy.

IS 5.0 – Supplemental Data—Capture, Transfer, and Entry

This standard assesses whether:

- Nonstandard coding schemes are fully documented and mapped to industry standard codes.
- Effective procedures for submitting HEDIS-relevant information are in place.
- Electronic transmissions of supplemental data are checked to ensure accuracy.
- Data entry processes including edit checks are timely and accurate.
- Data completeness is assessed including steps to improve performance.
- Vendor performance is monitored against expected performance standards.

Supplemental data are all non-claims data available to the health plans, such as lab results, state immunization registry information, disease management records, electronic medical records, or other internal databases. These require a more detailed review by the auditor to ensure that the data are valid. All of the health plans were fully compliant with IS 5.0 standards and followed all NCQA requirements. FFS and PCPP used one external standard immunization database. DHMC's and RMHP's final audit reports did not provide details on the supplemental databases used; however, as mentioned above, the plans were fully compliant with this standard.

IS 6.0 – Member Call Center Data—Capture, Transfer, and Entry

This standard assesses whether member call center data are reliably and accurately captured. However, since the health plans were not required to report member call center measures, this standard is not applicable.

IS 7.0 – Data Integration—Accurate HEDIS Reporting, Control Procedures that Support HEDIS Reporting Integrity

This standard assesses whether:

- Nonstandard coding schemes are fully documented and mapped to industry standard codes.
- Data transfers to HEDIS repository from transaction files are accurate.
- File consolidations, extracts, and derivations are accurate.
- Repository structure and formatting are suitable for HEDIS measures and enable required programming efforts.
- Report production is managed effectively and operators perform appropriately.
- HEDIS reporting software is managed properly.
- Physical control procedures ensure HEDIS data integrity.

All of the health plans were fully compliant with IS 7.0. Each health plan contracted with a certified software vendor for the calculation of the HEDIS measures. HSAG found no issues related to data integration, and all health plans were fully capable of reporting the required Medicaid measures for HEDIS 2010.

Appendix A. Tabular Results for Measures by Health Plan

Appendix A presents tables showing results for the measures by health plan. Where applicable, the results provided for each measure include the eligible population and rate for each health plan; the 2008, 2009, and 2010 Colorado Medicaid weighted averages; and the national HEDIS 2009 Medicaid 50th percentile. The following is a list of the tables and the measures presented in each.

- Table A-1—*Childhood Immunization Status*
- Table A-2—*Childhood Immunization Status*
- Table A-3—*Well-Child Visits in the First 15 Months of Life*
- Table A-4—*Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life*
- Table A-5—*Adolescent Well-Care Visits*
- Table A-6—*Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents*
- Table A-7—*Prenatal and Postpartum Care*
- Table A-8—*Children's and Adolescents' Access to Primary Care Practitioners*
- Table A-9—*Adults' Access to Preventive/Ambulatory Health Services*
- Table A-10—*Annual Monitoring for Patients on Persistent Medications*
- Table A-11—*Use of Imaging Studies for Low Back Pain*
- Table A-12—*Controlling High Blood Pressure*
- Table A-13—*Pharmacotherapy Management of COPD Exacerbation*
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- Table A-15—*Avoidance of Antibiotic Treatment in Adults With Acute Bronchitis*
- Table A-16—*Chlamydia Screening in Women*
- Table A-17—*Adult BMI Assessment*
- Table A-18—*Inpatient Utilization: General Hospital/Acute Care—Total Inpatient Discharges Per 1,000 MM*
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- Table A-20—*Inpatient Utilization: General Hospital/Acute Care—Total Inpatient Average Length of Stay*
- Table A-21—*Inpatient Utilization: General Hospital/Acute Care—Medicine Discharges Per 1,000 MM*
- Table A-22—*Inpatient Utilization: General Hospital/Acute Care—Medicine Days Per 1,000 MM*
- Table A-23—*Inpatient Utilization: General Hospital/Acute Care—Medicine Average Length of Stay*
- Table A-24—*Inpatient Utilization: General Hospital/Acute Care—Surgery Discharges Per 1,000 MM*
- Table A-25—*Inpatient Utilization: General Hospital/Acute Care—Surgery Days Per 1,000 MM*
- Table A-26—*Inpatient Utilization: General Hospital/Acute Care—Surgery Average Length of Stay*
- Table A-27— *Inpatient Utilization: General Hospital/Acute Care—Maternity Discharges Per 1,000 MM*

- Table A-28— *Inpatient Utilization: General Hospital/Acute Care—Maternity Days Per 1,000 MM*
- Table A-29—*Inpatient Utilization: General Hospital/Acute Care—Maternity Average Length of Stay*
- Table A-30—*Ambulatory Care: Outpatient Visits Per 1,000 MM*
- Table A-31—*Ambulatory Care: Emergency Department Visits Per 1,000 MM*
- Table A-32—*Ambulatory Care: Ambulatory Surgery/Procedures Per 1,000 MM*
- Table A-33—*Ambulatory Care: Observation Room Stays Per 1,000 MM*
- Table A-34—*Frequency of Selected Procedures: Myringotomy Procedures Per 1,000 MM*
- Table A-35—*Frequency of Selected Procedures: Tonsillectomy Procedures Per 1,000 MM*
- Table A-36—*Frequency of Selected Procedures: Dilation & Curettage Procedures Per 1,000 MM*
- Table A-37—*Frequency of Selected Procedures: Abdominal Hysterectomy Procedures Per 1,000 MM*
- Table A-38—*Frequency of Selected Procedures: Vaginal Hysterectomy Procedures Per 1,000 MM*
- Table A-39—*Frequency of Selected Procedures: Open Cholecystectomy Procedures Per 1,000 MM*
- Table A-40—*Frequency of Selected Procedures: Closed Cholecystectomy Procedures Per 1,000 MM*
- Table A-41—*Frequency of Selected Procedures: Back Surgery Procedures Per 1,000 MM*
- Table A-42—*Frequency of Selected Procedures: Mastectomy Procedures Per 1,000 MM*
- Table A-43—*Frequency of Selected Procedures: Lumpectomy Procedures Per 1,000 MM*
- Table A-44—*Antibiotic Utilization: Average Number of Prescriptions PMPY for Antibiotics*
- Table A-45—*Antibiotic Utilization: Average Days Supplied per Antibiotic Prescription*
- Table A-46—*Antibiotic Utilization: Average Number of Prescriptions PMPY for Antibiotics of Concern*
- Table A-47—*Antibiotic Utilization: Percentage of Antibiotics of Concern of All Antibiotic Prescriptions*

Table A-1
Childhood Immunization Status

Health Plan Name	Eligible Population	DTaP	IPV	MMR	HiB	Hepatitis B	VZV	Pneumococcal Conjugate	Hepatitis A	Rotavirus	Influenza
Fee-for-Service	12,433	82.0%	91.7%	91.5%	91.7%	92.7%	90.8%	80.0%	30.9%	38.4%	39.4%
Primary Care Physician Program	356	84.8%	91.5%	94.9%	96.9%	93.8%	94.1%	87.3%	38.6%	59.7%	52.4%
Denver Health Medicaid Choice	1,315	86.6%	95.6%	93.9%	96.6%	95.4%	93.7%	88.6%	59.9%	80.0%	68.9%
Rocky Mountain Health Plans	474	91.0%	97.6%	94.9%	97.8%	96.8%	95.6%	89.8%	28.2%	64.7%	58.4%
2010 Colorado Medicaid Weighted Average	—	82.8%	92.3%	91.9%	92.5%	93.1%	91.3%	81.3%	33.6%	43.6%	43.0%
2009 Colorado Medicaid Weighted Average	—	76.5%	86.7%	87.8%	93.1%	85.6%	87.4%	73.1%	—	—	—
2008 Colorado Medicaid Weighted Average	—	74.4%	87.1%	88.3%	85.4%	86.4%	86.4%	70.8%	—	—	—
HEDIS 2009 Medicaid 50th Percentile	—	82.0%	91.0%	92.7%	95.4%	92.2%	91.5%	79.3%	—	—	—

Table A-2
Childhood Immunization Status

Health Plan Name	Eligible Population	Combo 2	Combo 3	Combo 4	Combo 5	Combo 6	Combo 7	Combo 8	Combo 9	Combo 10
Fee-for-Service	12,433	74.7%	69.8%	27.0%	32.1%	32.4%	14.6%	14.4%	16.3%	7.5%
Primary Care Physician Program	356	81.1%	78.0%	37.5%	53.2%	43.9%	27.9%	21.7%	33.0%	17.2%
Denver Health Medicaid Choice	1,315	86.1%	85.2%	58.6%	75.2%	65.7%	52.6%	50.1%	58.6%	46.0%
Rocky Mountain Health Plans	474	89.3%	85.9%	27.7%	60.6%	54.3%	24.1%	20.7%	40.1%	18.2%
2010 Colorado Medicaid Weighted Average	—	76.4%	71.9%	30.1%	37.4%	36.4%	18.7%	18.0%	21.3%	11.6%
2009 Colorado Medicaid Weighted Average	—	71.9%	65.8%	—	—	—	—	—	—	—
2008 Colorado Medicaid Weighted Average	—	68.2%	59.4%	—	—	—	—	—	—	—
HEDIS 2009 Medicaid 50th Percentile	—	77.9%	71.8%	—	—	—	—	—	—	—

Table A-3 Well-Child Visits in the First 15 Months of Life			
Health Plan Name	**Eligible Population**	**Zero Visits**	**Six or More Visits**
Fee-for-Service	14,612	6.1%	55.0%
Primary Care Physician Program	148	4.1%	62.2%
Denver Health Medicaid Choice	930	0.7%	86.1%
Rocky Mountain Health Plans	285	0.0%	72.6%
2010 Colorado Medicaid Weighted Average	—	5.6%	57.2%
2009 Colorado Medicaid Weighted Average	—	30.1%	31.6%
2008 Colorado Medicaid Weighted Average	—	20.5%	37.7%
HEDIS 2009 Medicaid 50th Percentile	—	1.5%	60.6%

Table A-4 Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life		
Health Plan Name	**Eligible Population**	**Rate**
Fee-for-Service	47,279	59.9%
Primary Care Physician Program	1,960	63.5%
Denver Health Medicaid Choice	5,400	63.3%
Rocky Mountain Health Plans	1,677	70.5%
2010 Colorado Medicaid Weighted Average	—	60.6%
2009 Colorado Medicaid Weighted Average	—	47.7%
2008 Colorado Medicaid Weighted Average	—	48.5%
HEDIS 2009 Medicaid 50th Percentile	—	70.4%

Table A-5 Adolescent Well-Care Visits		
Health Plan Name	**Eligible Population**	**Rate**
Fee-for-Service	43,980	35.0%
Primary Care Physician Program	3,040	50.1%
Denver Health Medicaid Choice	3,989	46.0%
Rocky Mountain Health Plans	1,617	48.2%
2010 Colorado Medicaid Weighted Average	—	37.1%
2009 Colorado Medicaid Weighted Average	—	29.2%
2008 Colorado Medicaid Weighted Average	—	17.4%
HEDIS 2009 Medicaid 50th Percentile	—	45.1%

Table A-6
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents

	Ages 3 to 11 Years				Ages 12 to 17 Years				Total			
Health Plan Name	**Eligible Population**	**BMI**	**Nutrition**	**Physical Activity**	**Eligible Population**	**BMI**	**Nutrition**	**Physical Activity**	**Eligible Population**	**BMI**	**Nutrition**	**Physical Activity**
Fee-for-Service	38,811	22.2%	46.0%	22.2%	13,027	19.3%	39.4%	37.6%	51,838	21.4%	44.3%	26.3%
Primary Care Physician Program	2,113	40.6%	51.4%	41.0%	1,177	27.5%	33.8%	33.1%	3,290	35.5%	44.5%	38.0%
Denver Health Medicaid Choice	7,204	77.6%	73.3%	46.0%	2,361	75.3%	66.3%	56.2%	9,565	77.1%	71.8%	48.2%
Rocky Mountain Health Plans	2,745	58.6%	62.6%	54.9%	1,014	57.0%	53.5%	48.2%	3,759	58.2%	60.1%	53.0%
2010 Colorado Medicaid Weighted Average	—	32.8%	51.0%	28.1%	—	29.5%	43.5%	40.4%	—	31.9%	49.0%	31.4%
2009 Colorado Medicaid Weighted Average	—	—	—	—	—	—	—	—	—	—	—	—
2008 Colorado Medicaid Weighted Average	—	—	—	—	—	—	—	—	—	—	—	—
HEDIS 2009 Medicaid 50th Percentile	—	16.2%	42.9%	28.5%	—	18.5%	36.0%	31.2%	—	16.9%	40.5%	29.8%

Table A-7 Prenatal and Postpartum Care				
	Timeliness of Prenatal Care		Postpartum Care	
Health Plan Name	Eligible Population	Rate	Eligible Population	Rate
Fee-for-Service	16,237	62.5%	16,237	59.6%
Primary Care Physician Program	286	66.9%	286	57.0%
Denver Health Medicaid Choice	955	83.5%	955	58.4%
Rocky Mountain Health Plans	779	95.0%	779	73.7%
2010 Colorado Medicaid Weighted Average	—	65.1%	—	60.1%
2009 Colorado Medicaid Weighted Average	—	67.1%	—	54.2%
2008 Colorado Medicaid Weighted Average	—	55.8%	—	54.4%
HEDIS 2009 Medicaid 50th Percentile	—	85.6%	—	63.9%

Table A-8 Children's and Adolescents' Access to Primary Care Practitioners								
	Ages 12 to 24 Months		Ages 25 Months to 6 Years		Ages 7 to 11 Years		Ages 12 to 19 Years	
Health Plan Name	Eligible Population	Rate	Eligible Population	Rate	Eligible Population	Rate	Eligible Population	Rate
Fee-for-Service	16,793	92.9%	59,480	80.8%	25,964	82.1%	25,448	81.4%
Primary Care Physician Program	363	97.5%	2,335	85.8%	2,247	86.9%	2,366	88.2%
Denver Health Medicaid Choice	1,882	93.6%	6,711	79.2%	2,636	85.1%	2,229	85.8%
Rocky Mountain Health Plans	566	98.8%	2,171	91.8%	961	91.7%	957	92.7%
2010 Colorado Medicaid Weighted Average	—	93.2%	—	81.1%	—	83.0%	—	82.6%
2009 Colorado Medicaid Weighted Average	—	55.6%	—	44.6%	—	43.2%	—	43.9%
2008 Colorado Medicaid Weighted Average	—	—	—	—	—	—	—	—
HEDIS 2009 Medicaid 50th Percentile	—	96.3%	—	88.3%	—	89.0%	—	87.2%

Table A-9
Adults' Access to Preventive/Ambulatory Health Services

	Ages 20 to 44 Years		Ages 45 to 64 Years		Ages 65 Years and Older	
Health Plan Name	Eligible Population	Rate	Eligible Population	Rate	Eligible Population	Rate
Fee-for-Service	46,817	79.4%	23,588	83.4%	28,947	77.3%
Primary Care Physician Program	3,244	83.8%	3,328	88.1%	3,003	85.4%
Denver Health Medicaid Choice	3,802	74.9%	2,927	78.7%	2,230	69.5%
Rocky Mountain Health Plans	1,738	87.7%	1,136	90.4%	1,031	95.6%
2010 Colorado Medicaid Weighted Average	—	79.6%	—	83.8%	—	78.0%
2009 Colorado Medicaid Weighted Average	—	76.7%	—	79.8%	—	71.3%
2008 Colorado Medicaid Weighted Average	—	66.7%	—	55.2%	—	21.8%
HEDIS 2009 Medicaid 50th Percentile	—	81.5%	—	87.5%	—	87.0%

Table A-10
Annual Monitoring for Patients on Persistent Medications

	ACE Inhibitors or ARBs		Anticonvulsants		Digoxin		Diuretics		Total	
Health Plan Name	Eligible Population	Rate	Eligible Population	Rate	Eligible Population	Rate	Eligible Population	Rate	Eligible Population	Rate
Fee-for-Service	4,586	86.4%	2,057	69.7%	149	88.6%	3,569	87.4%	10,361	83.5%
Primary Care Physician Program	756	87.4%	600	71.3%	36	77.8%	627	85.8%	2,019	82.0%
Denver Health Medicaid Choice	1,130	88.8%	354	60.2%	25	NA	984	88.4%	2,493	84.7%
Rocky Mountain Health Plans	321	75.4%	180	73.9%	25	NA	297	75.1%	823	75.3%
2010 Colorado Medicaid Weighted Average	—	86.4%	—	69.2%	—	86.5%	—	86.7%	—	83.0%
2009 Colorado Medicaid Weighted Average	—	86.5%	—	67.5%	—	87.1%	—	84.7%	—	81.8%
2008 Colorado Medicaid Weighted Average	—	83.4%	—	64.2%	—	80.4%	—	82.5%	—	78.7%
HEDIS 2009 Medicaid 50th Percentile	—	86.3%	—	69.2%	—	90.1%	—	85.7%	—	83.5%

Table A-11 Use of Imaging Studies for Low Back Pain		
Health Plan Name	**Eligible Population**	**Rate**
Fee-for-Service	2,936	78.1%
Primary Care Physician Program	148	81.8%
Denver Health Medicaid Choice	194	79.4%
Rocky Mountain Health Plans	113	72.6%
2010 Colorado Medicaid Weighted Average	—	78.1%
2009 Colorado Medicaid Weighted Average	—	—
2008 Colorado Medicaid Weighted Average	—	—
HEDIS 2009 Medicaid 50th Percentile	—	76.2%

Table A-12 Controlling High Blood Pressure		
Health Plan Name	**Eligible Population**	**Rate**
Fee-for-Service	10,433	40.1%
Primary Care Physician Program	1,710	41.1%
Denver Health Medicaid Choice	1,701	64.7%
Rocky Mountain Health Plans	626	74.1%
2010 Colorado Medicaid Weighted Average	—	44.6%
2009 Colorado Medicaid Weighted Average	—	—
2008 Colorado Medicaid Weighted Average	—	—
HEDIS 2009 Medicaid 50th Percentile	—	58.0%

Table A-13 Pharmacotherapy Management of COPD Exacerbation			
Health Plan Name	**Eligible Population**	**Bronchodilator**	**Systemic Corticosteroid**
Fee-for-Service	664	25.6%	17.5%
Primary Care Physician Program	79	31.6%	27.8%
Denver Health Medicaid Choice	135	55.6%	49.6%
Rocky Mountain Health Plans	35	62.9%	34.3%
2010 Colorado Medicaid Weighted Average	—	32.0%	23.8%
2009 Colorado Medicaid Weighted Average	—	—	—
2008 Colorado Medicaid Weighted Average	—	—	—
HEDIS 2009 Medicaid 50th Percentile	—	82.0%	65.7%

Table A-14 Antidepressant Medication Management			
Health Plan Name	**Eligible Population**	**Effective Acute Phase Treatment**	**Effective Continuation Phase Treatment**
Fee-for-Service	1,362	53.4%	34.9%
Primary Care Physician Program	74	55.4%	37.8%
Denver Health Medicaid Choice	121	51.2%	38.0%
Rocky Mountain Health Plans	NB	NB	NB
2010 Colorado Medicaid Weighted Average	—	53.3%	35.3%
2009 Colorado Medicaid Weighted Average	—	—	—
2008 Colorado Medicaid Weighted Average	—	—	—
HEDIS 2009 Medicaid 50th Percentile	—	47.3%	31.7%

Table A-15 Avoidance of Antibiotic Treatment in Adults With Acute Bronchitis		
Health Plan Name	**Eligible Population**	**Rate**
Fee-for-Service	2,221	41.1%
Primary Care Physician Program	281	50.2%
Denver Health Medicaid Choice	65	64.6%
Rocky Mountain Health Plans	78	35.9%
2010 Colorado Medicaid Weighted Average	—	42.5%
2009 Colorado Medicaid Weighted Average	—	—
2008 Colorado Medicaid Weighted Average	—	—
HEDIS 2009 Medicaid 50th Percentile	—	23.7%

Table A-16 Chlamydia Screening in Women						
	Ages 16 to 20 Years		**Ages 21 to 24 Years**		**Combined**	
Health Plan Name	**Eligible Population**	**Rate**	**Eligible Population**	**Rate**	**Eligible Population**	**Rate**
Fee-for-Service	6,978	53.0%	6,313	56.7%	13,291	54.8%
Primary Care Physician Program	324	33.6%	172	34.3%	496	33.9%
Denver Health Medicaid Choice	540	77.2%	479	80.0%	1,019	78.5%
Rocky Mountain Health Plans	259	45.2%	251	45.8%	510	45.5%
2010 Colorado Medicaid Weighted Average	—	53.6%	—	57.4%	—	55.4%
2009 Colorado Medicaid Weighted Average	—	—	—	—	—	—
2008 Colorado Medicaid Weighted Average	—	—	—	—	—	—
HEDIS 2009 Medicaid 50th Percentile	—	51.8%	—	59.6%	—	54.8%

Table A-17 Adult BMI Assessment		
Health Plan Name	**Eligible Population**	**Rate**
Fee-for-Service	44,103	27.7%
Primary Care Physician Program	6,533	28.5%
Denver Health Medicaid Choice	4,670	83.7%
Rocky Mountain Health Plans	2,263	48.7%
2010 Colorado Medicaid Weighted Average	—	33.2%
2009 Colorado Medicaid Weighted Average	—	—
2008 Colorado Medicaid Weighted Average	—	—
HEDIS 2009 Medicaid 50th Percentile	—	24.1%

Table A-18 Inpatient Utilization: General Hospital/Acute Care-Total Inpatient Discharges Per 1,000 MM									
Health Plan Name	**Age <1 Year**	**Ages 1-9 Years**	**Ages 10-19 Years**	**Ages 20-44 Years**	**Ages 45-64 Years**	**Ages 65-74 Years**	**Ages 75-84 Years**	**Ages 85+ Years**	**Total**
Fee-for-Service	11.9	2.7	7.2	29.9	26.0	20.4	22.3	22.1	13.3
Primary Care Physician Program	5.2	2.1	5.0	15.7	21.8	22.9	23.6	26.7	11.5
Denver Health Medicaid Choice	16.0	2.8	5.2	23.8	37.6	32.5	37.7	35.1	12.8
Rocky Mountain Health Plans	7.6	2.0	7.3	29.5	20.7	21.0	22.4	19.8	12.1
2010 Colorado Medicaid Weighted Average	12.0	2.6	6.9	28.8	26.5	21.6	23.4	22.6	13.1
2009 Colorado Medicaid Weighted Average	6.0	1.1	7.0	28.9	19.9	14.1	15.9	17.7	11.3
2008 Colorado Medicaid Weighted Average	11.4	2.4	7.6	29.7	18.3	7.0	7.1	4.8	11.5
HEDIS 2009 Medicaid 50th Percentile	10.0	2.0	3.8	17.7	18.4	17.8	16.2	22.2	8.2

Table A-19 Inpatient Utilization: General Hospital/Acute Care-Total Inpatient Days Per 1,000 MM									
Health Plan Name	**Age <1 Year**	**Ages 1-9 Years**	**Ages 10-19 Years**	**Ages 20-44 Years**	**Ages 45-64 Years**	**Ages 65-74 Years**	**Ages 75-84 Years**	**Ages 85+ Years**	**Total**
Fee-for-Service	53.6	8.8	22.9	94.4	152.8	111.8	112.9	99.1	52.2
Primary Care Physician Program	14.2	6.8	21.9	65.3	126.3	121.3	124.4	133.5	56.6
Denver Health Medicaid Choice	72.5	13.0	14.9	92.3	284.2	240.7	267.6	167.9	69.4
Rocky Mountain Health Plans	26.0	6.1	16.6	62.8	74.5	88.2	79.6	98.9	33.5
2010 Colorado Medicaid Weighted Average	53.9	9.0	22.0	92.0	160.0	122.1	122.7	102.7	53.4
2009 Colorado Medicaid Weighted Average	27.2	4.3	20.9	89.0	121.5	76.3	79.2	82.2	43.8
2008 Colorado Medicaid Weighted Average	64.4	8.5	23.5	91.6	124.0	37.4	42.3	27.7	45.7
HEDIS 2009 Medicaid 50th Percentile	43.8	5.5	11.2	57.1	92.6	98.9	85.2	95.8	29.4

Table A-20 Inpatient Utilization: General Hospital/Acute Care-Total Inpatient Average Length of Stay									
Health Plan Name	**Age <1 Year**	**Ages 1-9 Years**	**Ages 10-19 Years**	**Ages 20-44 Years**	**Ages 45-64 Years**	**Ages 65-74 Years**	**Ages 75-84 Years**	**Ages 85+ Years**	**Total**
Fee-for-Service	4.5	3.3	3.2	3.2	5.9	5.5	5.1	4.5	3.9
Primary Care Physician Program	2.7	3.2	4.4	4.2	5.8	5.3	5.3	5.0	4.9
Denver Health Medicaid Choice	4.5	4.6	2.8	3.9	7.6	7.4	7.1	4.8	5.4
Rocky Mountain Health Plans	3.4	3.1	2.3	2.1	3.6	4.2	3.6	5.0	2.8
2010 Colorado Medicaid Weighted Average	4.5	3.4	3.2	3.2	6.0	5.7	5.2	4.5	4.1
2009 Colorado Medicaid Weighted Average	4.5	3.8	3.0	3.1	6.1	5.4	5.0	4.6	3.9
2008 Colorado Medicaid Weighted Average	5.7	3.6	3.1	3.1	6.8	5.3	6.0	5.7	4.0
HEDIS 2009 Medicaid 50th Percentile	4.2	2.9	3.0	3.1	4.9	5.5	5.3	5.3	3.6

Table A-21 Inpatient Utilization: General Hospital/Acute Care-Medicine Discharges Per 1,000 MM									
Health Plan Name	**Age <1 Year**	**Ages 1-9 Years**	**Ages 10-19 Years**	**Ages 20-44 Years**	**Ages 45-64 Years**	**Ages 65-74 Years**	**Ages 75-84 Years**	**Ages 85+ Years**	**Total**
Fee-for-Service	10.2	2.1	1.4	4.8	17.0	13.8	16.1	17.9	5.4
Primary Care Physician Program	4.3	1.7	2.2	6.7	14.5	15.5	17.3	21.9	7.0
Denver Health Medicaid Choice	15.4	2.5	1.4	8.7	32.5	26.8	31.6	30.8	8.6
Rocky Mountain Health Plans	5.2	1.4	1.2	3.1	12.0	13.9	15.7	15.3	4.0
2010 Colorado Medicaid Weighted Average	10.4	2.1	1.4	5.1	18.1	15.0	17.2	18.4	5.7
2009 Colorado Medicaid Weighted Average	5.3	0.8	0.9	4.3	13.9	9.6	11.8	14.4	4.0
2008 Colorado Medicaid Weighted Average	10.1	1.9	1.3	4.3	13.2	5.0	5.2	3.8	4.2
HEDIS 2009 Medicaid 50th Percentile	8.4	1.6	1.0	4.0	12.7	12.0	11.8	17.3	3.4

Table A-22 Inpatient Utilization: General Hospital/Acute Care-Medicine Days Per 1,000 MM									
Health Plan Name	**Age <1 Year**	**Ages 1-9 Years**	**Ages 10-19 Years**	**Ages 20-44 Years**	**Ages 45-64 Years**	**Ages 65-74 Years**	**Ages 75-84 Years**	**Ages 85+ Years**	**Total**
Fee-for-Service	35.6	5.8	5.0	17.7	71.9	61.2	67.7	72.5	20.4
Primary Care Physician Program	10.8	4.8	9.9	23.8	64.7	63.4	79.1	96.2	28.7
Denver Health Medicaid Choice	67.2	8.9	4.8	36.9	176.4	168.5	188.4	103.8	41.7
Rocky Mountain Health Plans	14.7	3.2	3.1	7.4	35.3	51.0	48.6	70.3	11.8
2010 Colorado Medicaid Weighted Average	37.5	6.0	5.2	19.0	79.9	69.5	75.8	74.4	22.4
2009 Colorado Medicaid Weighted Average	21.4	2.4	4.0	17.0	65.9	43.5	51.6	60.4	17.2
2008 Colorado Medicaid Weighted Average	42.0	5.6	5.0	17.8	69.1	22.8	25.2	19.7	18.0
HEDIS 2009 Medicaid 50th Percentile	31.3	4.0	3.1	15.2	55.6	53.1	59.6	79.0	13.1

Table A-23 Inpatient Utilization: General Hospital/Acute Care-Medicine Average Length of Stay									
Health Plan Name	**Age <1 Year**	**Ages 1-9 Years**	**Ages 10-19 Years**	**Ages 20-44 Years**	**Ages 45-64 Years**	**Ages 65-74 Years**	**Ages 75-84 Years**	**Ages 85+ Years**	**Total**
Fee-for-Service	3.5	2.7	3.7	3.7	4.2	4.4	4.2	4.0	3.8
Primary Care Physician Program	2.5	2.9	4.5	3.6	4.5	4.1	4.6	4.4	4.1
Denver Health Medicaid Choice	4.4	3.5	3.4	4.2	5.4	6.3	6.0	3.4	4.9
Rocky Mountain Health Plans	2.8	2.4	2.7	2.4	2.9	3.7	3.1	4.6	3.0
2010 Colorado Medicaid Weighted Average	3.6	2.8	3.7	3.7	4.4	4.6	4.4	4.0	3.9
2009 Colorado Medicaid Weighted Average	4.1	3.0	4.3	3.9	4.7	4.5	4.4	4.2	4.3
2008 Colorado Medicaid Weighted Average	4.2	2.9	3.8	4.1	5.3	4.5	4.8	5.2	4.3
HEDIS 2009 Medicaid 50th Percentile	3.6	2.6	3.0	3.6	4.2	4.6	4.9	5.0	3.7

Table A-24 Inpatient Utilization: General Hospital/Acute Care-Surgery Discharges Per 1,000 MM									
Health Plan Name	**Age <1 Year**	**Ages 1-9 Years**	**Ages 10-19 Years**	**Ages 20-44 Years**	**Ages 45-64 Years**	**Ages 65-74 Years**	**Ages 75-84 Years**	**Ages 85+ Years**	**Total**
Fee-for-Service	1.6	0.5	0.8	2.8	8.8	6.5	6.1	4.2	2.2
Primary Care Physician Program	0.9	0.5	1.2	3.5	7.2	7.4	6.2	4.8	3.2
Denver Health Medicaid Choice	0.6	0.3	0.4	1.4	5.1	5.6	6.0	4.3	1.3
Rocky Mountain Health Plans	2.4	0.6	0.8	3.1	8.7	7.1	6.6	4.5	2.4
2010 Colorado Medicaid Weighted Average	1.5	0.5	0.8	2.7	8.3	6.5	6.2	4.2	2.2
2009 Colorado Medicaid Weighted Average	0.7	0.3	0.5	2.2	5.9	4.5	4.1	3.3	1.6
2008 Colorado Medicaid Weighted Average	1.3	0.4	0.7	2.2	5.0	2.0	1.9	1.0	1.4
HEDIS 2009 Medicaid 50th Percentile	1.2	0.3	0.5	2.1	5.5	5.1	3.5	2.6	1.3

Table A-25 Inpatient Utilization: General Hospital/Acute Care-Surgery Days Per 1,000 MM									
Health Plan Name	**Age <1 Year**	**Ages 1-9 Years**	**Ages 10-19 Years**	**Ages 20-44 Years**	**Ages 45-64 Years**	**Ages 65-74 Years**	**Ages 75-84 Years**	**Ages 85+ Years**	**Total**
Fee-for-Service	17.5	2.9	4.8	22.0	80.4	50.4	45.1	26.6	17.7
Primary Care Physician Program	3.5	2.1	8.1	27.0	61.5	57.9	45.1	37.3	24.4
Denver Health Medicaid Choice	5.4	4.1	3.3	14.7	107.6	72.2	79.1	64.1	19.4
Rocky Mountain Health Plans	11.3	2.9	3.2	13.3	39.2	37.2	31.0	28.6	11.3
2010 Colorado Medicaid Weighted Average	15.9	3.0	4.8	21.4	79.8	52.5	46.9	28.3	18.0
2009 Colorado Medicaid Weighted Average	5.8	1.9	3.0	15.3	55.4	32.7	27.6	21.8	12.4
2008 Colorado Medicaid Weighted Average	22.4	3.0	4.4	17.7	54.4	14.5	16.9	7.9	13.4
HEDIS 2009 Medicaid 50th Percentile	10.6	1.5	2.1	9.2	34.6	32.2	21.0	12.9	6.8

Table A-26 Inpatient Utilization: General Hospital/Acute Care-Surgery Average Length of Stay									
Health Plan Name	**Age <1 Year**	**Ages 1-9 Years**	**Ages 10-19 Years**	**Ages 20-44 Years**	**Ages 45-64 Years**	**Ages 65-74 Years**	**Ages 75-84 Years**	**Ages 85+ Years**	**Total**
Fee-for-Service	10.9	5.7	6.2	7.9	9.1	7.8	7.3	6.4	8.0
Primary Care Physician Program	4.0	4.2	6.6	7.7	8.5	7.8	7.3	7.7	7.7
Denver Health Medicaid Choice	9.6	13.7	8.9	10.9	21.2	12.8	13.2	15.0	15.3
Rocky Mountain Health Plans	4.6	4.6	4.2	4.3	4.5	5.2	4.7	6.3	4.6
2010 Colorado Medicaid Weighted Average	10.4	6.1	6.3	7.8	9.6	8.0	7.6	6.7	8.2
2009 Colorado Medicaid Weighted Average	7.7	5.9	5.4	6.9	9.4	7.3	6.7	6.7	7.6
2008 Colorado Medicaid Weighted Average	17.8	6.8	6.6	8.1	10.9	7.4	9.1	7.7	9.3
HEDIS 2009 Medicaid 50th Percentile	7.3	4.4	4.3	4.7	6.2	7.0	6.6	5.9	5.5

Table A-27 Inpatient Utilization: General Hospital/Acute Care-Maternity Discharges Per 1,000 MM				
Health Plan Name	**Ages 10-19 Years**	**Ages 20-44 Years**	**Ages 45-64 Years**	**Total**
Fee-for-Service	5.0	22.3	0.1	11.6
Primary Care Physician Program	1.5	5.5	0.0	2.4
Denver Health Medicaid Choice	3.5	13.7	0.1	6.6
Rocky Mountain Health Plans	5.3	23.3	0.0	11.6
2010 Colorado Medicaid Weighted Average	4.7	20.9	0.1	10.7
2009 Colorado Medicaid Weighted Average	5.5	22.4	0.0	11.6
2008 Colorado Medicaid Weighted Average	5.6	23.2	0.1	11.9
HEDIS 2009 Medicaid 50th Percentile	2.3	11.3	0.1	5.5

Table A-28 Inpatient Utilization: General Hospital/Acute Care-Maternity Days Per 1,000 MM				
Health Plan Name	**Ages 10-19 Years**	**Ages 20-44 Years**	**Ages 45-64 Years**	**Total**
Fee-for-Service	13.0	54.7	0.4	28.9
Primary Care Physician Program	3.8	14.5	0.0	6.2
Denver Health Medicaid Choice	6.9	40.7	0.2	18.1
Rocky Mountain Health Plans	10.4	42.1	0.0	21.3
2010 Colorado Medicaid Weighted Average	11.9	51.5	0.3	26.5
2009 Colorado Medicaid Weighted Average	13.9	56.7	0.2	29.3
2008 Colorado Medicaid Weighted Average	14.2	56.2	0.6	29.2
HEDIS 2009 Medicaid 50th Percentile	6.2	29.8	0.2	14.7

Table A-29 Inpatient Utilization: General Hospital/Acute Care-Maternity Average Length of Stay				
Health Plan Name	**Ages 10-19 Years**	**Ages 20-44 Years**	**Ages 45-64 Years**	**Total**
Fee-for-Service	2.6	2.5	3.2	2.5
Primary Care Physician Program	2.6	2.6	2.0	2.6
Denver Health Medicaid Choice	2.0	3.0	2.0	2.7
Rocky Mountain Health Plans	1.9	1.8	NA	1.8
2010 Colorado Medicaid Weighted Average	2.5	2.5	3.0	2.5
2009 Colorado Medicaid Weighted Average	2.5	2.5	3.7	2.5
2008 Colorado Medicaid Weighted Average	2.5	2.4	4.6	2.4
HEDIS 2009 Medicaid 50th Percentile	2.7	2.6	3.1	2.6

Table A-30 Ambulatory Care Outpatient Visits Per 1,000 MM									
Health Plan Name	**Age <1 Year**	**Ages 1-9 Years**	**Ages 10-19 Years**	**Ages 20-44 Years**	**Ages 45-64 Years**	**Ages 65-74 Years**	**Ages 75-84 Years**	**Ages 85+ Years**	**Total**
Fee-for-Service	766.2	290.6	265.1	391.7	612.0	565.5	557.5	531.2	385.0
Primary Care Physician Program	672.6	317.1	312.0	462.2	698.4	687.1	662.4	660.5	461.6
Denver Health Medicaid Choice	175.5	190.5	186.3	383.2	574.1	865.8	904.4	625.6	296.8
Rocky Mountain Health Plans	776.6	340.8	297.3	470.2	844.3	824.5	864.8	766.2	470.5
2010 Colorado Medicaid Weighted Average	708.4	283.1	261.7	396.5	624.4	606.3	597.5	547.1	383.6
2009 Colorado Medicaid Weighted Average	694.4	262.7	248.6	369.1	561.1	498.5	477.6	401.8	358.1
2008 Colorado Medicaid Weighted Average	699.2	266.3	237.5	306.0	353.6	124.6	82.1	35.0	290.6
HEDIS 2009 Medicaid 50th Percentile	702.8	286.9	223.3	412.8	597.5	512.2	471.7	389.0	351.6

Table A-31 Ambulatory Care Emergency Department Visits Per 1,000 MM									
Health Plan Name	**Age <1 Year**	**Ages 1-9 Years**	**Ages 10-19 Years**	**Ages 20-44 Years**	**Ages 45-64 Years**	**Ages 65-74 Years**	**Ages 75-84 Years**	**Ages 85+ Years**	**Total**
Fee-for-Service	111.3	56.3	51.0	104.2	90.2	52.7	51.7	49.3	71.0
Primary Care Physician Program	110.2	53.6	50.7	91.4	83.9	57.9	55.9	52.9	66.4
Denver Health Medicaid Choice	43.1	69.9	49.4	73.9	68.1	51.2	41.2	34.2	63.1
Rocky Mountain Health Plans	65.4	43.0	44.3	104.6	100.6	65.1	47.4	54.7	63.3
2010 Colorado Medicaid Weighted Average	103.3	57.1	50.6	101.4	87.9	53.3	51.3	49.1	69.8
2009 Colorado Medicaid Weighted Average	90.5	43.5	41.8	87.6	79.3	45.3	45.8	44.1	58.8
2008 Colorado Medicaid Weighted Average	95.6	46.1	41.9	78.5	54.0	9.6	6.6	4.5	52.4
HEDIS 2009 Medicaid 50th Percentile	91.9	48.4	39.6	99.9	78.8	31.1	25.2	25.5	61.3

Table A-32 Ambulatory Care Ambulatory Surgery/Procedures Per 1,000 MM									
Health Plan Name	**Age <1 Year**	**Ages 1-9 Years**	**Ages 10-19 Years**	**Ages 20-44 Years**	**Ages 45-64 Years**	**Ages 65-74 Years**	**Ages 75-84 Years**	**Ages 85+ Years**	**Total**
Fee-for-Service	5.3	4.9	5.4	18.4	32.1	28.0	21.1	10.5	11.4
Primary Care Physician Program	5.6	5.1	5.5	16.9	34.4	30.7	28.0	18.0	15.3
Denver Health Medicaid Choice	2.8	5.5	7.5	35.6	67.8	115.7	95.2	76.9	22.5
Rocky Mountain Health Plans	6.2	5.9	7.4	25.0	37.8	28.3	28.0	16.2	14.5
2010 Colorado Medicaid Weighted Average	5.1	5.0	5.6	19.8	35.9	35.1	26.6	13.1	12.7
2009 Colorado Medicaid Weighted Average	5.9	6.2	5.5	17.2	29.2	27.1	20.8	9.4	11.7
2008 Colorado Medicaid Weighted Average	3.1	3.9	2.6	7.8	15.2	5.3	3.1	1.0	5.4
HEDIS 2009 Medicaid 50th Percentile	4.2	3.8	4.1	18.3	27.1	22.7	18.8	10.5	8.8

Table A-33 Ambulatory Care Observation Room Stays Per 1,000 MM									
Health Plan Name	**Age <1 Year**	**Ages 1-9 Years**	**Ages 10-19 Years**	**Ages 20-44 Years**	**Ages 45-64 Years**	**Ages 65-74 Years**	**Ages 75-84 Years**	**Ages 85+ Years**	**Total**
Fee-for-Service	1.6	0.3	1.2	3.7	1.9	1.7	1.6	1.4	1.5
Primary Care Physician Program	0.7	0.2	0.5	1.7	1.6	2.5	2.4	1.8	1.1
Denver Health Medicaid Choice	0.3	0.2	0.4	1.6	3.1	3.6	5.0	2.7	1.0
Rocky Mountain Health Plans	1.5	0.8	1.3	3.5	3.3	1.7	3.6	1.8	1.8
2010 Colorado Medicaid Weighted Average	1.5	0.3	1.1	3.4	2.0	1.9	1.9	1.5	1.4
2009 Colorado Medicaid Weighted Average	2.2	0.5	2.1	6.1	2.1	1.8	1.8	1.8	2.3
2008 Colorado Medicaid Weighted Average	2.3	0.6	2.2	7.0	1.7	0.7	0.4	0.3	2.4
HEDIS 2009 Medicaid 50th Percentile	1.3	0.3	0.9	3.8	2.2	0.4	0.0	0.0	1.5

Table A-34 Frequency of Selected Procedures Myringotomy Procedures Per 1,000 MM		
Health Plan Name	**Ages 0-4 Years**	**Ages 5-19 Years**
Fee-for-Service	2.3	0.4
Primary Care Physician Program	3.0	0.7
Denver Health Medicaid Choice	0.5	0.2
Rocky Mountain Health Plans	3.5	0.7
2010 Colorado Medicaid Weighted Average	2.2	0.4
2009 Colorado Medicaid Weighted Average	2.3	0.4
2008 Colorado Medicaid Weighted Average	—	—
HEDIS 2009 Medicaid 50th Percentile	2.6	0.4

Table A-35 Frequency of Selected Procedures Tonsillectomy Procedures Per 1,000 MM		
Health Plan Name	**Ages 0-9 Years**	**Ages 10-19 Years**
Fee-for-Service	0.8	0.5
Primary Care Physician Program	1.1	0.6
Denver Health Medicaid Choice	0.3	0.3
Rocky Mountain Health Plans	1.2	1.5
2010 Colorado Medicaid Weighted Average	0.8	0.6
2009 Colorado Medicaid Weighted Average	0.7	0.4
2008 Colorado Medicaid Weighted Average	—	—
HEDIS 2009 Medicaid 50th Percentile	0.7	0.4

Table A-36 Frequency of Selected Procedures Dilation & Curettage Procedures Per 1,000 MM		
Health Plan Name	**Ages 15-44 Years**	**Ages 45-64 Years**
Fee-for-Service	0.2	0.1
Primary Care Physician Program	0.2	0.1
Denver Health Medicaid Choice	0.0	0.0
Rocky Mountain Health Plans	0.3	0.0
2010 Colorado Medicaid Weighted Average	0.2	0.1
2009 Colorado Medicaid Weighted Average	0.2	0.2
2008 Colorado Medicaid Weighted Average	—	—
HEDIS 2009 Medicaid 50th Percentile	0.2	0.2

Table A-37 Frequency of Selected Procedures Abdominal Hysterectomy Procedures Per 1,000 MM		
Health Plan Name	**Ages 15-44 Years**	**Ages 45-64 Years**
Fee-for-Service	0.4	0.6
Primary Care Physician Program	0.4	0.4
Denver Health Medicaid Choice	0.1	0.2
Rocky Mountain Health Plans	0.3	0.3
2010 Colorado Medicaid Weighted Average	0.4	0.5
2009 Colorado Medicaid Weighted Average	0.3	0.4
2008 Colorado Medicaid Weighted Average	—	—
HEDIS 2009 Medicaid 50th Percentile	0.2	0.5

Table A-38 Frequency of Selected Procedures Vaginal Hysterectomy Procedures Per 1,000 MM		
Health Plan Name	**Ages 15-44 Years**	**Ages 45-64 Years**
Fee-for-Service	0.4	0.4
Primary Care Physician Program	0.2	0.1
Denver Health Medicaid Choice	0.0	0.2
Rocky Mountain Health Plans	1.1	0.5
2010 Colorado Medicaid Weighted Average	0.4	0.3
2009 Colorado Medicaid Weighted Average	0.4	0.4
2008 Colorado Medicaid Weighted Average	—	—
HEDIS 2009 Medicaid 50th Percentile	0.1	0.2

Table A-39 Frequency of Selected Procedures Open Cholecystectomy Procedures Per 1,000 MM			
Health Plan Name	**Females-Ages 15-44 Years**	**Females-Ages 45-64 Years**	**Males-Ages 30-64 Years**
Fee-for-Service	0.0	0.1	0.1
Primary Care Physician Program	0.1	0.0	0.1
Denver Health Medicaid Choice	0.0	0.0	0.1
Rocky Mountain Health Plans	0.0	0.0	0.0
2010 Colorado Medicaid Weighted Average	0.0	0.1	0.1
2009 Colorado Medicaid Weighted Average	0.0	0.1	0.2
2008 Colorado Medicaid Weighted Average	—	—	—
HEDIS 2009 Medicaid 50th Percentile	0.0	0.1	0.0

Table A-40 Frequency of Selected Procedures Closed Cholecystectomy Procedures Per 1,000 MM			
Health Plan Name	**Females-Ages 15-44 Years**	**Females-Ages 45-64 Years**	**Males-Ages 30-64 Years**
Fee-for-Service	1.2	1.0	0.4
Primary Care Physician Program	0.8	0.6	0.5
Denver Health Medicaid Choice	0.6	0.3	0.1
Rocky Mountain Health Plans	1.5	1.5	0.5
2010 Colorado Medicaid Weighted Average	1.2	0.9	0.4
2009 Colorado Medicaid Weighted Average	1.2	1.0	0.5
2008 Colorado Medicaid Weighted Average	—	—	—
HEDIS 2009 Medicaid 50th Percentile	0.7	0.6	0.3

Table A-41 Frequency of Selected Procedures Back Surgery Procedures Per 1,000 MM				
Health Plan Name	**Females-Ages 20-44 Years**	**Females-Ages 45-64 Years**	**Males-Ages 20-44 Years**	**Males-Ages 45-64 Years**
Fee-for-Service	0.4	1.1	0.7	1.3
Primary Care Physician Program	0.4	1.0	0.3	0.9
Denver Health Medicaid Choice	0.1	0.2	0.1	0.1
Rocky Mountain Health Plans	0.4	1.3	0.7	1.5
2010 Colorado Medicaid Weighted Average	0.4	1.0	0.6	1.1
2009 Colorado Medicaid Weighted Average	0.3	0.9	0.6	0.9
2008 Colorado Medicaid Weighted Average	—	—	—	—
HEDIS 2009 Medicaid 50th Percentile	0.2	0.5	0.4	0.5

Table A-42 Frequency of Selected Procedures Mastectomy Procedures Per 1,000 MM		
Health Plan Name	**Ages 15-44 Years**	**Ages 45-64 Years**
Fee-for-Service	0.0	0.7
Primary Care Physician Program	0.1	0.3
Denver Health Medicaid Choice	0.0	0.0
Rocky Mountain Health Plans	0.0	0.4
2010 Colorado Medicaid Weighted Average	0.0	0.6
2009 Colorado Medicaid Weighted Average	0.1	0.3
2008 Colorado Medicaid Weighted Average	—	—
HEDIS 2009 Medicaid 50th Percentile	0.0	0.1

Table A-43 Frequency of Selected Procedures Lumpectomy Procedures Per 1,000 MM		
Health Plan Name	**Ages 15-44 Years**	**Ages 45-64 Years**
Fee-for-Service	0.2	0.9
Primary Care Physician Program	0.2	0.5
Denver Health Medicaid Choice	0.0	0.4
Rocky Mountain Health Plans	0.4	1.1
2010 Colorado Medicaid Weighted Average	0.2	0.8
2009 Colorado Medicaid Weighted Average	0.1	0.6
2008 Colorado Medicaid Weighted Average	—	—
HEDIS 2009 Medicaid 50th Percentile	0.2	0.5

Table A-44 Antibiotic Utilization Average Number of Prescriptions PMPY for Antibiotics										
Health Plan Name	**Ages 0-9 Years**	**Ages 10-17 Years**	**Ages 18-34 Years**	**Ages 35-49 Years**	**Ages 50-64 Years**	**Ages 65-74 Years**	**Ages 75-84 Years**	**Ages 85+ Years**	**Total**	**Unknown**
Fee-for-Service	1.0	0.7	1.3	1.0	0.9	0.2	0.1	0.0	0.9	NA
Primary Care Physician Program	1.2	1.1	1.9	1.4	1.7	0.3	0.2	0.1	1.2	NA
Denver Health Medicaid Choice	0.3	0.2	0.7	0.7	0.7	0.4	0.3	0.1	0.4	0.0
Rocky Mountain Health Plans	1.0	0.8	1.5	1.4	1.4	0.6	0.7	0.6	1.1	NA
2010 Colorado Medicaid Weighted Average	0.9	0.7	1.3	1.0	1.0	0.2	0.1	0.1	0.9	0.0
2009 Colorado Medicaid Weighted Average	0.9	0.7	1.1	1.0	1.0	0.2	0.1	0.1	0.8	0.0
2008 Colorado Medicaid Weighted Average	—	—	—	—	—	—	—	—	—	—
HEDIS 2009 Medicaid 50th Percentile	—	—	—	—	—	—	—	—	1.1	—

Table A-45 Antibiotic Utilization Average Days Supplied per Antibiotic Prescription										
Health Plan Name	**Ages 0-9 Years**	**Ages 10-17 Years**	**Ages 18-34 Years**	**Ages 35-49 Years**	**Ages 50-64 Years**	**Ages 65-74 Years**	**Ages 75-84 Years**	**Ages 85+ Years**	**Total**	**Unknown**
Fee-for-Service	9.5	10.8	9.0	9.4	10.0	10.0	8.8	9.2	9.6	NA
Primary Care Physician Program	9.7	11.5	11.4	10.6	10.4	9.0	9.3	7.0	10.6	NA
Denver Health Medicaid Choice	9.5	9.8	8.4	11.1	10.8	11.1	10.8	7.9	9.7	NA
Rocky Mountain Health Plans	9.4	10.2	9.5	9.9	10.6	13.7	15.1	12.2	9.9	NA
2010 Colorado Medicaid Weighted Average	9.5	10.8	9.1	9.6	10.1	10.3	10.1	9.9	9.7	—
2009 Colorado Medicaid Weighted Average	9.6	10.9	9.3	9.9	10.4	10.3	10.1	9.5	9.8	—
2008 Colorado Medicaid Weighted Average	—	—	—	—	—	—	—	—	—	—
HEDIS 2009 Medicaid 50th Percentile	—	—	—	—	—	—	—	—	9.2	—

Table A-46 Antibiotic Utilization Average Number of Prescriptions PMPY for Antibiotics of Concern										
Health Plan Name	**Ages 0-9 Years**	**Ages 10-17 Years**	**Ages 18-34 Years**	**Ages 35-49 Years**	**Ages 50-64 Years**	**Ages 65-74 Years**	**Ages 75-84 Years**	**Ages 85+ Years**	**Total**	**Unknown**
Fee-for-Service	0.4	0.3	0.4	0.5	0.4	0.1	0.1	0.0	0.3	NA
Primary Care Physician Program	0.5	0.4	0.7	0.6	0.8	0.1	0.1	0.1	0.5	NA
Denver Health Medicaid Choice	0.1	0.1	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.0
Rocky Mountain Health Plans	0.4	0.3	0.5	0.6	0.6	0.2	0.3	0.2	0.4	NA
2010 Colorado Medicaid Weighted Average	0.3	0.2	0.4	0.4	0.5	0.1	0.1	0.0	0.3	0.0
2009 Colorado Medicaid Weighted Average	0.3	0.2	0.4	0.5	0.5	0.1	0.1	0.0	0.3	0.0
2008 Colorado Medicaid Weighted Average	—	—	—	—	—	—	—	—	—	—
HEDIS 2009 Medicaid 50th Percentile	—	—	—	—	—	—	—	—	0.5	—

Table A-47 Antibiotic Utilization Percentage of Antibiotics of Concern of All Antibiotic Prescriptions										
Health Plan Name	**Ages 0-9 Years**	**Ages 10-17 Years**	**Ages 18-34 Years**	**Ages 35-49 Years**	**Ages 50-64 Years**	**Ages 65-74 Years**	**Ages 75-84 Years**	**Ages 85+ Years**	**Total**	**Unknown**
Fee-for-Service	37.5%	36.0%	34.0%	43.9%	48.5%	50.0%	53.5%	54.5%	37.8%	NA
Primary Care Physician Program	38.3%	40.4%	34.8%	43.3%	48.9%	50.3%	47.1%	69.0%	40.7%	NA
Denver Health Medicaid Choice	19.2%	22.3%	26.1%	29.7%	42.0%	46.7%	50.0%	41.0%	26.3%	NA
Rocky Mountain Health Plans	35.6%	34.5%	35.3%	44.9%	44.6%	37.5%	40.4%	28.2%	37.1%	NA
2010 Colorado Medicaid Weighted Average	36.8%	35.9%	33.8%	43.1%	47.9%	48.6%	50.4%	46.5%	37.5%	—
2009 Colorado Medicaid Weighted Average	37.3%	35.4%	34.5%	44.7%	49.1%	50.8%	53.9%	50.2%	38.3%	—
2008 Colorado Medicaid Weighted Average	—	—	—	—	—	—	—	—	—	—
HEDIS 2009 Medicaid 50th Percentile	—	—	—	—	—	—	—	—	43.4%	—

Appendix B. National HEDIS 2009 Medicaid Percentiles

Appendix B provides the national HEDIS Medicaid percentiles published by NCQA using prior-year rates. This information is helpful to evaluate the current rates of the health plans. The rates are presented for the 10th, 25th, 50th, 75th, and 90th percentiles. The rates are presented in tables by dimension.

- Table B-1—Pediatric Care
- Table B-2—Access to Care
- Table B-3—Living With Illness
- Table B-4—Preventive Screening
- Table B-5—Utilization of Services

Table B-1 National HEDIS 2009 Medicaid Percentiles Pediatric Care					
Measure	**10th Percentile**	**25th Percentile**	**50th Percentile**	**75th Percentile**	**90th Percentile**
Childhood Immunization Status—DTaP	65.3%	75.5%	82.0%	85.6%	87.5%
Childhood Immunization Status—IPV	78.2%	86.6%	91.0%	93.4%	95.7%
Childhood Immunization Status—MMR	84.4%	89.1%	92.7%	94.9%	96.1%
Childhood Immunization Status—HiB	88.2%	91.9%	95.4%	96.9%	98.2%
Childhood Immunization Status—Hepatitis B	77.8%	87.7%	92.2%	94.4%	96.2%
Childhood Immunization Status—VZV	81.3%	87.3%	91.5%	93.8%	95.9%
Childhood Immunization Status—Pneumococcal Conjugate	58.6%	71.5%	79.3%	83.2%	86.9%
Childhood Immunization Status—Combination 2	56.4%	68.5%	77.9%	82.0%	85.4%
Childhood Immunization Status—Combination 3	50.9%	62.4%	71.8%	76.4%	80.6%
Well-Child Visits in the First 15 Months of Life—Zero Visits*	0.3%	1.0%	1.5%	3.0%	5.3%
Well-Child Visits in the First 15 Months of Life—Six or More Visits	40.4%	51.6%	60.6%	67.9%	73.9%
Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life	57.5%	64.0%	70.4%	75.9%	80.3%
Adolescent Well-Care Visits	32.8%	37.9%	45.1%	53.2%	59.4%
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Ages 3 to 11 Years	0.1%	0.6%	16.2%	34.8%	45.4%
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Ages 3 to 11 Years	0.2%	1.4%	42.9%	56.0%	67.0%
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Ages 3 to 11 Years	0.0%	0.0%	28.5%	38.4%	52.0%
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Ages 12 to 17 Years	0.1%	0.6%	18.5%	33.5%	46.7%
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Ages 12 to 17 Years	0.4%	2.4%	36.0%	49.2%	58.0%
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Ages 12 to 17 Years	0.0%	0.2%	31.2%	44.2%	54.7%
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Total	0.1%	2.6%	16.9%	34.1%	47.4%
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Total	0.3%	7.7%	40.5%	53.0%	64.0%
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Total	0.0%	0.1%	29.8%	39.7%	51.6%

* For this measure, a lower rate indicates better performance; therefore, the 10th percentile is a better performing level than the 90th percentile.

Table B-2 National HEDIS 2009 Medicaid Percentiles Access to Care					
Measure	**10th Percentile**	**25th Percentile**	**50th Percentile**	**75th Percentile**	**90th Percentile**
Prenatal and Postpartum Care—Timeliness of Prenatal Care	67.9%	78.5%	85.6%	89.4%	92.2%
Prenatal and Postpartum Care—Postpartum Care	50.3%	57.9%	63.9%	68.4%	72.7%
Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 24 Months	90.2%	93.9%	96.3%	97.8%	98.4%
Children's and Adolescents' Access to Primary Care Practitioners—Ages 25 Months to 6 Years	78.6%	85.4%	88.3%	91.0%	92.6%
Children's and Adolescents' Access to Primary Care Practitioners—Ages 7 to 11 Years	79.9%	84.9%	89.0%	92.5%	94.6%
Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 19 Years	76.1%	82.5%	87.2%	90.5%	92.2%
Adults' Access to Preventive/Ambulatory Health Services—Ages 20 to 44 Years	67.8%	77.3%	81.5%	85.6%	88.4%
Adults' Access to Preventive/Ambulatory Health Services—Ages 45 to 64 Years	78.7%	83.9%	87.5%	89.7%	91.1%
Adults' Access to Preventive/Ambulatory Health Services—Ages 65 Years and Older	70.2%	81.2%	87.0%	89.4%	93.7%

Table B-3 National HEDIS 2009 Medicaid Percentiles Living With Illness					
Measure	**10th Percentile**	**25th Percentile**	**50th Percentile**	**75th Percentile**	**90th Percentile**
Annual Monitoring for Patients on Persistent Medications—ACE Inhibitors or ARBs	78.0%	83.3%	86.3%	88.1%	90.1%
Annual Monitoring for Patients on Persistent Medications—Anticonvulsants	59.2%	65.0%	69.2%	73.5%	78.5%
Annual Monitoring for Patients on Persistent Medications—Digoxin	81.1%	86.6%	90.1%	92.3%	93.8%
Annual Monitoring for Patients on Persistent Medications—Diuretics	77.1%	81.9%	85.7%	87.8%	89.9%
Annual Monitoring for Patients on Persistent Medications—Total	76.2%	80.1%	83.5%	86.0%	88.5%
Use of Imaging Studies for Low Back Pain	69.6%	72.7%	76.2%	79.7%	81.6%
Controlling High Blood Pressure	40.6%	51.4%	58.0%	63.3%	66.6%
Pharmacotherapy Management of COPD Exacerbation—Bronchodilator	63.3%	73.7%	82.0%	85.7%	87.8%
Pharmacotherapy Management of COPD Exacerbation—Systemic Corticosteroid	43.5%	54.4%	65.7%	70.6%	74.6%
Antidepressant Medication Management—Effective Acute Phase Treatment	37.9%	44.5%	47.3%	52.6%	59.0%
Antidepressant Medication Management—Effective Continuation Phase Treatment	23.4%	27.9%	31.7%	35.6%	39.4%
Avoidance of Antibiotic Treatment in Adults With Acute Bronchitis	17.7%	20.2%	23.7%	28.1%	33.4%

Table B-4 National HEDIS 2009 Medicaid Percentiles Preventive Screening					
Measure	**10th Percentile**	**25th Percentile**	**50th Percentile**	**75th Percentile**	**90th Percentile**
Chlamydia Screening in Women—Ages 16 to 20 Years	40.9%	46.1%	51.8%	59.1%	67.3%
Chlamydia Screening in Women—Ages 21 to 24 Years	47.3%	54.5%	59.6%	66.3%	72.5%
Chlamydia Screening in Women—Combined	43.4%	48.7%	54.8%	61.6%	68.6%
Adult BMI Assessment	1.1%	2.6%	24.1%	37.2%	49.3%

Table B-5 National HEDIS 2009 Medicaid Percentiles Utilization of Services					
Measure	**10th Percentile**	**25th Percentile**	**50th Percentile**	**75th Percentile**	**90th Percentile**
Inpatient Utilization: General Hospital/Acute Care-Total Inpatient—Discharges Per 1,000 MM: Total	5.3	6.6	8.2	9.9	11.8
Inpatient Utilization: General Hospital/Acute Care-Total Inpatient—Days Per 1,000 MM: Total	16.8	23.5	29.4	35.7	41.8
Inpatient Utilization: General Hospital/Acute Care-Total Inpatient—Average Length of Stay: Total	2.9	3.1	3.6	3.9	4.3
Inpatient Utilization: General Hospital/Acute Care-Medicine—Discharges Per 1,000 MM: Total	1.6	2.5	3.4	4.5	5.5
Inpatient Utilization: General Hospital/Acute Care-Medicine—Days Per 1,000 MM: Total	4.8	8.7	13.1	17.1	21.4
Inpatient Utilization: General Hospital/Acute Care-Medicine—Average Length of Stay: Total	2.9	3.1	3.7	4.0	4.4
Inpatient Utilization: General Hospital/Acute Care-Surgery—Discharges Per 1,000 MM: Total	0.6	0.8	1.3	1.7	2.0
Inpatient Utilization: General Hospital/Acute Care-Surgery—Days Per 1,000 MM: Total	2.8	4.4	6.8	9.7	14.0
Inpatient Utilization: General Hospital/Acute Care-Surgery—Average Length of Stay: Total	4.0	4.8	5.5	6.4	7.1
Inpatient Utilization: General Hospital/Acute Care-Maternity—Discharges Per 1,000 MM: Total	3.0	4.0	5.5	7.8	10.6
Inpatient Utilization: General Hospital/Acute Care-Maternity—Days Per 1,000 MM: Total	7.6	11.0	14.7	20.1	27.8
Inpatient Utilization: General Hospital/Acute Care-Maternity—Average Length of Stay: Total	2.3	2.5	2.6	2.8	3.0
Ambulatory Care—Outpatient Visits Per 1,000 MM: Total	233.5	301.2	351.6	387.4	443.7
Ambulatory Care—Emergency Department Visits Per 1,000 MM: Total	39.3	48.4	61.3	70.3	79.8
Ambulatory Care—Ambulatory Surgery/Procedures Per 1,000 MM: Total	3.8	6.4	8.8	11.8	14.1
Ambulatory Care—Observation Room Stays Per 1,000 MM: Total	0.2	0.9	1.5	2.4	3.7
Frequency of Selected Procedures—Myringotomy Procedures Per 1,000 MM: Ages 0-4 Years	0.5	1.7	2.6	3.7	4.5
Frequency of Selected Procedures—Myringotomy Procedures Per 1,000 MM: Ages 5-19 Years	0.1	0.3	0.4	0.6	0.8
Frequency of Selected Procedures—Tonsillectomy Procedures Per 1,000 MM: Ages 0-9 Years	0.3	0.5	0.7	0.9	1.0

Table B-5 National HEDIS 2009 Medicaid Percentiles Utilization of Services					
Frequency of Selected Procedures—Tonsillectomy Procedures Per 1,000 MM: Ages 10-19 Years	0.1	0.2	0.4	0.5	0.6
Frequency of Selected Procedures—Dilation & Curettage Procedures Per 1,000 MM: Ages 15-44 Years	0.1	0.1	0.2	0.3	0.3
Frequency of Selected Procedures—Dilation & Curettage Procedures Per 1,000 MM: Ages 45-64 Years	0.0	0.1	0.2	0.4	0.5
Frequency of Selected Procedures—Abdominal Hysterectomy Procedures Per 1,000 MM: Ages 15-44 Years	0.1	0.2	0.2	0.3	0.4
Frequency of Selected Procedures—Abdominal Hysterectomy Procedures Per 1,000 MM: Ages 45-64 Years	0.1	0.3	0.5	0.6	0.8
Frequency of Selected Procedures—Vaginal Hysterectomy Procedures Per 1,000 MM: Ages 15-44 Years	0.0	0.0	0.1	0.2	0.3
Frequency of Selected Procedures—Vaginal Hysterectomy Procedures Per 1,000 MM: Ages 45-64 Years	0.0	0.1	0.2	0.3	0.4
Frequency of Selected Procedures—Open Cholecystectomy Procedures Per 1,000 MM: Females-Ages 15-44 Years	0.0	0.0	0.0	0.0	0.0
Frequency of Selected Procedures—Open Cholecystectomy Procedures Per 1,000 MM: Females-Ages 45-64 Years	0.0	0.0	0.1	0.1	0.1
Frequency of Selected Procedures—Open Cholecystectomy Procedures Per 1,000 MM: Males-Ages 30-64 Years	0.0	0.0	0.0	0.1	0.1
Frequency of Selected Procedures—Closed Cholecystectomy Procedures Per 1,000 MM: Females-Ages 15-44 Years	0.3	0.5	0.7	0.9	1.2
Frequency of Selected Procedures—Closed Cholecystectomy Procedures Per 1,000 MM: Females-Ages 45-64 Years	0.3	0.4	0.6	0.8	1.1
Frequency of Selected Procedures—Closed Cholecystectomy Procedures Per 1,000 MM: Males-Ages 30-64 Years	0.1	0.2	0.3	0.4	0.5
Frequency of Selected Procedures—Back Surgery Procedures Per 1,000 MM: Females-Ages 20-44 Years	0.0	0.1	0.2	0.3	0.4
Frequency of Selected Procedures—Back Surgery Procedures Per 1,000 MM: Females-Ages 45-64 Years	0.1	0.3	0.5	0.7	0.9
Frequency of Selected Procedures—Back Surgery Procedures Per 1,000 MM: Males-Ages 20-44 Years	0.0	0.1	0.4	0.5	0.6
Frequency of Selected Procedures—Back Surgery Procedures Per 1,000 MM: Males-Ages 45-64 Years	0.0	0.2	0.5	0.8	1.1
Frequency of Selected Procedures—Mastectomy Procedures Per 1,000 MM: Ages 15-44 Years	0.0	0.0	0.0	0.0	0.0
Frequency of Selected Procedures—Mastectomy Procedures Per 1,000 MM: Ages 45-64 Years	0.0	0.1	0.1	0.2	0.4
Frequency of Selected Procedures—Lumpectomy Procedures Per 1,000 MM: Ages 15-44 Years	0.1	0.1	0.2	0.2	0.3
Frequency of Selected Procedures—Lumpectomy Procedures Per 1,000 MM: Ages 45-64 Years	0.2	0.4	0.5	0.7	0.9
Antibiotic Utilization—Average Number of Prescriptions PMPY for Antibiotics: Total	0.7	1.0	1.1	1.3	1.3
Antibiotic Utilization—Average Days Supplied per Antibiotic Prescription: Total	8.8	9.0	9.2	9.5	9.8
Antibiotic Utilization—Average Number of Prescriptions PMPY for Antibiotics of Concern: Total	0.2	0.4	0.5	0.6	0.6
Antibiotic Utilization—Percentage of Antibiotics of Concern of All Antibiotic Prescriptions: Total	28.0%	38.4%	43.4%	46.9%	49.0%

Appendix C. Trend Tables

Appendix C includes trend tables for each of the Colorado Medicaid health plans. Where applicable, each measure's rate for 2008, 2009, and 2010 is presented along with a trend analysis results. For purposes of the trend analysis, the 2010 rates were compared to the 2009 rates to determine if there were any statistically significant differences

Rates that were significantly higher in 2010 than in 2009 are noted with upward arrows (↑). Rates that were significantly lower in 2010 than in 2009 are noted with downward arrows (↓). Rates in 2010 that were not significantly different than rates in 2009 are noted with parallel arrows (↔). For *Well-Child Visits in the First 15 Months of Life—Zero Visits*, for which a lower rate indicates better performance, an upward triangle (▲) indicates a significant improvement in performance (i.e., the 2010 rate was significantly lower than the 2009 rate) and a downward triangle (▼) indicates a significant decline in performance (i.e., the 2010 rate was significantly higher than the 2009 rate).

The health plan trend tables are presented as follows:

- Table C-1—Fee-for-Service
- Table C-2—Primary Care Physician Program
- Table C-3—Denver Health Medicaid Choice
- Table C-4—Rocky Mountain Health Plans

Table C-1 Fee-for-Service Trend Table				
Measure	**2008**	**2009**	**2010**	**2009-2010 Health Plan Trend**
Pediatric Care				
Childhood Immunization Status—DTaP	73.0%	74.9%	82.0%	↔
Childhood Immunization Status—IPV	86.1%	85.4%	91.7%	↑
Childhood Immunization Status—MMR	87.6%	86.6%	91.5%	↔
Childhood Immunization Status—HiB	84.4%	92.2%	91.7%	↔
Childhood Immunization Status—Hepatitis B	85.4%	84.2%	92.7%	↑
Childhood Immunization Status—VZV	85.6%	86.1%	90.8%	↔
Childhood Immunization Status—Pneumococcal Conjugate	69.1%	70.6%	80.0%	↑
Childhood Immunization Status—Combination 2	66.4%	70.1%	74.7%	↔
Childhood Immunization Status—Combination 3	57.2%	63.3%	69.8%	↔
Well-Child Visits in the First 15 Months of Life—Zero Visits	21.2%	31.6%	6.1%	▲
Well-Child Visits in the First 15 Months of Life—Six or More Visits	37.5%	29.7%	55.0%	↑
Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life	47.7%	45.5%	59.9%	↑
Adolescent Well-Care Visits	15.6%	27.5%	35.0%	↔
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Ages 3 to 11 Years	—	—	22.2%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Ages 3 to 11 Years	—	—	46.0%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Ages 3 to 11 Years	—	—	22.2%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Ages 12 to 17 Years	—	—	19.3%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Ages 12 to 17 Years	—	—	39.4%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Ages 12 to 17 Years	—	—	37.6%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Total	—	—	21.4%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Total	—	—	44.3%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Total	—	—	26.3%	—
Access to Care				
Prenatal and Postpartum Care—Timeliness of Prenatal Care	52.6%	64.7%	62.5%	↔
Prenatal and Postpartum Care—Postpartum Care	53.3%	53.0%	59.6%	↔
Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 24 Months	—	51.5%	92.9%	↑
Children's and Adolescents' Access to Primary Care Practitioners—Ages 25 Months to 6 Years	—	40.4%	80.8%	↑
Children's and Adolescents' Access to Primary Care Practitioners—Ages 7 to 11 Years	—	39.3%	82.1%	↑
Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 19 Years	—	39.7%	81.4%	↑
Adults' Access to Preventive/Ambulatory Health Services—Ages 20 to 44 Years	66.4%	76.6%	79.4%	↑
Adults' Access to Preventive/Ambulatory Health Services—Ages 45 to 64 Years	49.9%	79.5%	83.4%	↑
Adults' Access to Preventive/Ambulatory Health Services—Ages 65 Years and Older	16.5%	70.1%	77.3%	↑

Table C-1 Fee-for-Service Trend Table				
Living With Illness				
Annual Monitoring for Patients on Persistent Medications—ACE or ARBs	84.2%	87.2%	86.4%	↔
Annual Monitoring for Patients on Persistent Medications—Anticonvulsants	64.3%	67.3%	69.7%	↔
Annual Monitoring for Patients on Persistent Medications—Digoxin	81.9%	88.4%	88.6%	↔
Annual Monitoring for Patients on Persistent Medications—Diuretics	83.7%	86.0%	87.4%	↔
Annual Monitoring for Patients on Persistent Medications—Total	79.9%	82.8%	83.5%	↔
Use of Imaging Studies for Low Back Pain	—	—	78.1%	—
Controlling High Blood Pressure	—	—	40.1%	—
Pharmacotherapy Management of COPD Exacerbation—Bronchodilator	—	—	25.6%	—
Pharmacotherapy Management of COPD Exacerbation—Systemic Corticosteroid	—	—	17.5%	—
Antidepressant Medication Management—Effective Acute Phase Treatment	—	—	53.4%	—
Antidepressant Medication Management—Effective Continuation Phase Treatment	—	—	34.9%	—
Avoidance of Antibiotic Treatment in Adults With Acute Bronchitis	—	—	41.1%	—
Preventive Screening				
Chlamydia Screening in Women—Ages 16 to 20 Years	—	—	53.0%	—
Chlamydia Screening in Women—Ages 21 to 24 Years	—	—	56.7%	—
Chlamydia Screening in Women—Combined	—	—	54.8%	—
Adult BMI Assessment	—	—	27.7%	—
Utilization of Services				
Inpatient Utilization: General Hospital/Acute Care-Total Inpatient—Discharges Per 1,000 MM: Total	11.8	12.0	13.3	↑
Inpatient Utilization: General Hospital/Acute Care-Total Inpatient—Days Per 1,000 MM: Total	46.7	45.8	52.2	↑
Inpatient Utilization: General Hospital/Acute Care-Total Inpatient—Average Length of Stay: Total	3.9	3.8	3.9	↑
Inpatient Utilization: General Hospital/Acute Care-Medicine—Discharges Per 1,000 MM: Total	3.9	4.1	5.4	↑
Inpatient Utilization: General Hospital/Acute Care-Medicine—Days Per 1,000 MM: Total	16.9	17.3	20.4	↑
Inpatient Utilization: General Hospital/Acute Care-Medicine—Average Length of Stay: Total	4.4	4.3	3.8	↓
Inpatient Utilization: General Hospital/Acute Care-Surgery—Discharges Per 1,000 MM: Total	1.4	1.6	2.2	↑
Inpatient Utilization: General Hospital/Acute Care-Surgery—Days Per 1,000 MM: Total	13.6	12.4	17.7	↑
Inpatient Utilization: General Hospital/Acute Care-Surgery—Average Length of Stay: Total	10.0	7.7	8.0	↑
Inpatient Utilization: General Hospital/Acute Care-Maternity—Discharges Per 1,000 MM: Total	13.5	13.0	11.6	↓
Inpatient Utilization: General Hospital/Acute Care-Maternity—Days Per 1,000 MM: Total	33.3	33.2	28.9	↓
Inpatient Utilization: General Hospital/Acute Care-Maternity—Average Length of Stay: Total	2.5	2.6	2.5	↓
Ambulatory Care—Outpatient Visits Per 1,000 MM: Total	289.3	364.2	385.0	↑
Ambulatory Care—Emergency Department Visits Per 1,000 MM: Total	54.3	63.9	71.0	↑
Ambulatory Care—Ambulatory Surgery/Procedures Per 1,000 MM: Total	5.2	11.0	11.4	↑
Ambulatory Care—Observation Room Stays Per 1,000 MM: Total	2.7	2.6	1.5	↓
Frequency of Selected Procedures—Myringotomy Procedures Per 1,000 MM: Ages 0-4 Years	—	2.5	2.3	↔
Frequency of Selected Procedures—Myringotomy Procedures Per 1,000 MM: Ages 5-19 Years	—	0.4	0.4	↔
Frequency of Selected Procedures—Tonsillectomy Procedures Per 1,000 MM: Ages 0-9 Years	—	0.8	0.8	↔
Frequency of Selected Procedures—Tonsillectomy Procedures Per 1,000 MM: Ages 10-19 Years	—	0.5	0.5	↔
Frequency of Selected Procedures—Dilation & Curettage Procedures Per 1,000 MM: Ages 15-44 Years	—	0.2	0.2	↔
Frequency of Selected Procedures—Dilation & Curettage Procedures Per 1,000 MM: Ages 45-64 Years	—	0.2	0.1	↔
Frequency of Selected Procedures—Abdominal Hysterectomy Procedures Per 1,000 MM: Ages 15-44 Years	—	0.3	0.4	↔
Frequency of Selected Procedures—Abdominal Hysterectomy Procedures Per 1,000 MM: Ages 45-64 Years	—	0.4	0.6	↔

Table C-1 Fee-for-Service Trend Table				
Frequency of Selected Procedures—Vaginal Hysterectomy Procedures Per 1,000 MM: Ages 15-44 Years	—	0.4	0.4	↔
Frequency of Selected Procedures—Vaginal Hysterectomy Procedures Per 1,000 MM: Ages 45-64 Years	—	0.4	0.4	↔
Frequency of Selected Procedures—Open Cholecystectomy Procedures Per 1,000 MM: Females-Ages 15-44 Years	—	0.0	0.0	↔
Frequency of Selected Procedures—Open Cholecystectomy Procedures Per 1,000 MM: Females-Ages 45-64 Years	—	0.1	0.1	↔
Frequency of Selected Procedures—Open Cholecystectomy Procedures Per 1,000 MM: Males-Ages 30-64 Years	—	0.2	0.1	↔
Frequency of Selected Procedures—Closed Cholecystectomy Procedures Per 1,000 MM: Females-Ages 15-44 Years	—	1.3	1.2	↔
Frequency of Selected Procedures—Closed Cholecystectomy Procedures Per 1,000 MM: Females-Ages 45-64 Years	—	1.0	1.0	↔
Frequency of Selected Procedures—Closed Cholecystectomy Procedures Per 1,000 MM: Males-Ages 30-64 Years	—	0.5	0.4	↔
Frequency of Selected Procedures—Back Surgery Procedures Per 1,000 MM: Females-Ages 20-44 Years	—	0.3	0.4	↔
Frequency of Selected Procedures—Back Surgery Procedures Per 1,000 MM: Females-Ages 45-64 Years	—	1.0	1.1	↔
Frequency of Selected Procedures—Back Surgery Procedures Per 1,000 MM: Males-Ages 20-44 Years	—	0.6	0.7	↔
Frequency of Selected Procedures—Back Surgery Procedures Per 1,000 MM: Males-Ages 45-64 Years	—	1.1	1.3	↔
Frequency of Selected Procedures—Mastectomy Procedures Per 1,000 MM: Ages 15-44 Years	—	0.1	0.0	↔
Frequency of Selected Procedures—Mastectomy Procedures Per 1,000 MM: Ages 45-64 Years	—	0.4	0.7	↑
Frequency of Selected Procedures—Lumpectomy Procedures Per 1,000 MM: Ages 15-44 Years	—	0.1	0.2	↔
Frequency of Selected Procedures—Lumpectomy Procedures Per 1,000 MM: Ages 45-64 Years	—	0.7	0.9	↔
Antibiotic Utilization—Average Number of Prescriptions PMPY for Antibiotics: Total	—	0.9	0.9	↔
Antibiotic Utilization—Average Days Supplied per Antibiotic Prescription: Total	—	9.7	9.6	↓
Antibiotic Utilization—Average Number of Prescriptions PMPY for Antibiotics of Concern: Total	—	0.3	0.3	↔
Antibiotic Utilization—Percentage of Antibiotics of Concern of All Antibiotic Prescriptions: Total	—	38.6%	37.8%	↔
Please note: For the Well-Child Visits in the First 15 Months of Life—Zero Visits measure, a lower rate indicates better performance.				

Table C-2
Primary Care Physician Program Trend Table

Measure	2008	2009	2010	2009-2010 Health Plan Trend
Pediatric Care				
Childhood Immunization Status—DTaP	83.2%	78.8%	84.8%	↔
Childhood Immunization Status—IPV	93.7%	89.3%	91.5%	↔
Childhood Immunization Status—MMR	95.1%	92.2%	94.9%	↔
Childhood Immunization Status—HiB	91.9%	97.1%	96.9%	↔
Childhood Immunization Status—Hepatitis B	91.9%	84.4%	93.8%	↑
Childhood Immunization Status—VZV	93.3%	92.2%	94.1%	↔
Childhood Immunization Status—Pneumococcal Conjugate	77.9%	80.3%	87.3%	↔
Childhood Immunization Status—Combination 2	78.6%	70.1%	81.1%	↑
Childhood Immunization Status—Combination 3	69.8%	65.5%	78.0%	↑
Well-Child Visits in the First 15 Months of Life—Zero Visits	18.5%	63.8%	4.1%	▲
Well-Child Visits in the First 15 Months of Life—Six or More Visits	56.5%	15.9%	62.2%	↑
Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life	42.6%	46.2%	63.5%	↑
Adolescent Well-Care Visits	15.2%	28.0%	50.1%	↑
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Ages 3 to 11 Years	—	—	40.6%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Ages 3 to 11 Years	—	—	51.4%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Ages 3 to 11 Years	—	—	41.0%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Ages 12 to 17 Years	—	—	27.5%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Ages 12 to 17 Years	—	—	33.8%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Ages 12 to 17 Years	—	—	33.1%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Total	—	—	35.5%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Total	—	—	44.5%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Total	—	—	38.0%	—
Access to Care				
Prenatal and Postpartum Care—Timeliness of Prenatal Care	63.4%	70.2%	66.9%	↔
Prenatal and Postpartum Care—Postpartum Care	65.3%	58.2%	57.0%	↔
Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 24 Months	—	14.9%	97.5%	↑
Children's and Adolescents' Access to Primary Care Practitioners—Ages 25 Months to 6 Years	—	22.8%	85.8%	↑
Children's and Adolescents' Access to Primary Care Practitioners—Ages 7 to 11 Years	—	33.7%	86.9%	↑
Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 19 Years	—	38.7%	88.2%	↑
Adults' Access to Preventive/Ambulatory Health Services—Ages 20 to 44 Years	64.6%	81.8%	83.8%	↔
Adults' Access to Preventive/Ambulatory Health Services—Ages 45 to 64 Years	63.7%	86.7%	88.1%	↔
Adults' Access to Preventive/Ambulatory Health Services—Ages 65 Years and Older	15.1%	81.9%	85.4%	↑

Table C-2 Primary Care Physician Program Trend Table				
Living With Illness				
Annual Monitoring for Patients on Persistent Medications—ACE or ARBs	85.4%	89.1%	87.4%	↔
Annual Monitoring for Patients on Persistent Medications—Anticonvulsants	68.1%	70.0%	71.3%	↔
Annual Monitoring for Patients on Persistent Medications—Digoxin	91.1%	90.9%	77.8%	↔
Annual Monitoring for Patients on Persistent Medications—Diuretics	84.7%	86.2%	85.8%	↔
Annual Monitoring for Patients on Persistent Medications—Total	80.0%	82.2%	82.0%	↔
Use of Imaging Studies for Low Back Pain	—	—	81.8%	—
Controlling High Blood Pressure	—	—	41.1%	—
Pharmacotherapy Management of COPD Exacerbation—Bronchodilator	—	—	31.6%	—
Pharmacotherapy Management of COPD Exacerbation—Systemic Corticosteroid	—	—	27.8%	—
Antidepressant Medication Management—Effective Acute Phase Treatment	—	—	55.4%	—
Antidepressant Medication Management—Effective Continuation Phase Treatment	—	—	37.8%	—
Avoidance of Antibiotic Treatment in Adults With Acute Bronchitis	—	—	50.2%	—
Preventive Screening				
Chlamydia Screening in Women—Ages 16 to 20 Years	—	—	33.6%	—
Chlamydia Screening in Women—Ages 21 to 24 Years	—	—	34.3%	—
Chlamydia Screening in Women—Combined	—	—	33.9%	—
Adult BMI Assessment	—	—	28.5%	—
Utilization of Services				
Inpatient Utilization: General Hospital/Acute Care-Total Inpatient—Discharges Per 1,000 MM: Total	8.3	9.0	11.5	↑
Inpatient Utilization: General Hospital/Acute Care-Total Inpatient—Days Per 1,000 MM: Total	40.9	48.6	56.6	↑
Inpatient Utilization: General Hospital/Acute Care-Total Inpatient—Average Length of Stay: Total	4.9	5.4	4.9	↓
Inpatient Utilization: General Hospital/Acute Care-Medicine—Discharges Per 1,000 MM: Total	5.0	5.4	7.0	↑
Inpatient Utilization: General Hospital/Acute Care-Medicine—Days Per 1,000 MM: Total	22.7	26.1	28.7	↑
Inpatient Utilization: General Hospital/Acute Care-Medicine—Average Length of Stay: Total	4.6	4.8	4.1	↓
Inpatient Utilization: General Hospital/Acute Care-Surgery—Discharges Per 1,000 MM: Total	1.9	2.4	3.2	↑
Inpatient Utilization: General Hospital/Acute Care-Surgery—Days Per 1,000 MM: Total	14.4	19.2	24.4	↑
Inpatient Utilization: General Hospital/Acute Care-Surgery—Average Length of Stay: Total	7.7	8.1	7.7	↔
Inpatient Utilization: General Hospital/Acute Care-Maternity—Discharges Per 1,000 MM: Total	2.5	2.2	2.4	↔
Inpatient Utilization: General Hospital/Acute Care-Maternity—Days Per 1,000 MM: Total	6.7	6.0	6.2	↔
Inpatient Utilization: General Hospital/Acute Care-Maternity—Average Length of Stay: Total	2.7	2.7	2.6	↔
Ambulatory Care—Outpatient Visits Per 1,000 MM: Total	298.7	434.2	461.6	↑
Ambulatory Care—Emergency Department Visits Per 1,000 MM: Total	50.2	63.8	66.4	↑
Ambulatory Care—Ambulatory Surgery/Procedures Per 1,000 MM: Total	7.1	14.5	15.3	↔
Ambulatory Care—Observation Room Stays Per 1,000 MM: Total	1.4	1.6	1.1	↓
Frequency of Selected Procedures—Myringotomy Procedures Per 1,000 MM: Ages 0-4 Years	—	3.0	3.0	↔
Frequency of Selected Procedures—Myringotomy Procedures Per 1,000 MM: Ages 5-19 Years	—	0.7	0.7	↔
Frequency of Selected Procedures—Tonsillectomy Procedures Per 1,000 MM: Ages 0-9 Years	—	0.9	1.1	↔
Frequency of Selected Procedures—Tonsillectomy Procedures Per 1,000 MM: Ages 10-19 Years	—	0.6	0.6	↔
Frequency of Selected Procedures—Dilation & Curettage Procedures Per 1,000 MM: Ages 15-44 Years	—	0.2	0.2	↔
Frequency of Selected Procedures—Dilation & Curettage Procedures Per 1,000 MM: Ages 45-64 Years	—	0.2	0.1	↔
Frequency of Selected Procedures—Abdominal Hysterectomy Procedures Per 1,000 MM: Ages 15-44 Years	—	0.3	0.4	↔
Frequency of Selected Procedures—Abdominal Hysterectomy Procedures Per 1,000 MM: Ages 45-64 Years	—	0.4	0.4	↔

Table C-2 Primary Care Physician Program Trend Table				
Frequency of Selected Procedures—Vaginal Hysterectomy Procedures Per 1,000 MM: Ages 15-44 Years	—	0.4	0.2	↔
Frequency of Selected Procedures—Vaginal Hysterectomy Procedures Per 1,000 MM: Ages 45-64 Years	—	0.2	0.1	↔
Frequency of Selected Procedures—Open Cholecystectomy Procedures Per 1,000 MM: Females-Ages 15-44 Years	—	0.0	0.1	↔
Frequency of Selected Procedures—Open Cholecystectomy Procedures Per 1,000 MM: Females-Ages 45-64 Years	—	0.2	0.0	↔
Frequency of Selected Procedures—Open Cholecystectomy Procedures Per 1,000 MM: Males-Ages 30-64 Years	—	0.0	0.1	↔
Frequency of Selected Procedures—Closed Cholecystectomy Procedures Per 1,000 MM: Females-Ages 15-44 Years	—	1.0	0.8	↔
Frequency of Selected Procedures—Closed Cholecystectomy Procedures Per 1,000 MM: Females-Ages 45-64 Years	—	1.0	0.6	↔
Frequency of Selected Procedures—Closed Cholecystectomy Procedures Per 1,000 MM: Males-Ages 30-64 Years	—	0.6	0.5	↔
Frequency of Selected Procedures—Back Surgery Procedures Per 1,000 MM: Females-Ages 20-44 Years	—	0.3	0.4	↔
Frequency of Selected Procedures—Back Surgery Procedures Per 1,000 MM: Females-Ages 45-64 Years	—	1.1	1.0	↔
Frequency of Selected Procedures—Back Surgery Procedures Per 1,000 MM: Males-Ages 20-44 Years	—	0.4	0.3	↔
Frequency of Selected Procedures—Back Surgery Procedures Per 1,000 MM: Males-Ages 45-64 Years	—	0.6	0.9	↔
Frequency of Selected Procedures—Mastectomy Procedures Per 1,000 MM: Ages 15-44 Years	—	0.0	0.1	↔
Frequency of Selected Procedures—Mastectomy Procedures Per 1,000 MM: Ages 45-64 Years	—	0.0	0.3	↔
Frequency of Selected Procedures—Lumpectomy Procedures Per 1,000 MM: Ages 15-44 Years	—	0.1	0.2	↔
Frequency of Selected Procedures—Lumpectomy Procedures Per 1,000 MM: Ages 45-64 Years	—	0.4	0.5	↔
Antibiotic Utilization—Average Number of Prescriptions PMPY for Antibiotics: Total	—	1.1	1.2	↑
Antibiotic Utilization—Average Days Supplied per Antibiotic Prescription: Total	—	10.7	10.6	↓
Antibiotic Utilization—Average Number of Prescriptions PMPY for Antibiotics of Concern: Total	—	0.5	0.5	↔
Antibiotic Utilization—Percentage of Antibiotics of Concern of All Antibiotic Prescriptions: Total	—	41.3%	40.7%	↔
Please note: For the Well-Child Visits in the First 15 Months of Life—Zero Visits measure, a lower rate indicates better performance.				

Table C-3 Denver Health Medicaid Choice Trend Table				
Measure	**2008**	**2009**	**2010**	**2009-2010 Health Plan Trend**
Pediatric Care				
Childhood Immunization Status—DTaP	85.6%	88.1%	86.6%	↔
Childhood Immunization Status—IPV	94.9%	94.9%	95.6%	↔
Childhood Immunization Status—MMR	93.2%	96.1%	93.9%	↔
Childhood Immunization Status—HiB	94.4%	98.5%	96.6%	↔
Childhood Immunization Status—Hepatitis B	95.4%	96.4%	95.4%	↔
Childhood Immunization Status—VZV	93.2%	96.1%	93.7%	↔
Childhood Immunization Status—Pneumococcal Conjugate	88.1%	90.8%	88.6%	↔
Childhood Immunization Status—Combination 2	85.2%	87.6%	86.1%	↔
Childhood Immunization Status—Combination 3	84.2%	87.1%	85.2%	↔
Well-Child Visits in the First 15 Months of Life—Zero Visits	1.9%	1.9%	0.7%	↔
Well-Child Visits in the First 15 Months of Life—Six or More Visits	63.1%	56.2%	86.1%	↑
Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life	56.9%	63.0%	63.3%	↔
Adolescent Well-Care Visits	31.9%	41.8%	46.0%	↔
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Ages 3 to 11 Years	—	—	77.6%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Ages 3 to 11 Years	—	—	73.3%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Ages 3 to 11 Years	—	—	46.0%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Ages 12 to 17 Years	—	—	75.3%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Ages 12 to 17 Years	—	—	66.3%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Ages 12 to 17 Years	—	—	56.2%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Total	—	—	77.1%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Total	—	—	71.8%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Total	—	—	48.2%	—
Access to Care				
Prenatal and Postpartum Care—Timeliness of Prenatal Care	82.7%	86.1%	83.5%	↔
Prenatal and Postpartum Care—Postpartum Care	55.2%	59.1%	58.4%	↔
Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 24 Months	—	90.6%	93.6%	↑
Children's and Adolescents' Access to Primary Care Practitioners—Ages 25 Months to 6 Years	—	77.6%	79.2%	↔
Children's and Adolescents' Access to Primary Care Practitioners—Ages 7 to 11 Years	—	81.9%	85.1%	↔
Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 19 Years	—	83.6%	85.8%	↔
Adults' Access to Preventive/Ambulatory Health Services—Ages 20 to 44 Years	66.1%	68.9%	74.9%	↑
Adults' Access to Preventive/Ambulatory Health Services—Ages 45 to 64 Years	68.7%	70.7%	78.7%	↑
Adults' Access to Preventive/Ambulatory Health Services—Ages 65 Years and Older	56.4%	59.9%	69.5%	↑

Table C-3 Denver Health Medicaid Choice Trend Table				
Living With Illness				
Annual Monitoring for Patients on Persistent Medications—ACE or ARBs	87.4%	86.6%	88.8%	↔
Annual Monitoring for Patients on Persistent Medications—Anticonvulsants	50.3%	62.2%	60.2%	↔
Annual Monitoring for Patients on Persistent Medications—Digoxin	NA	NA	NA	—
Annual Monitoring for Patients on Persistent Medications—Diuretics	84.9%	83.1%	88.4%	↑
Annual Monitoring for Patients on Persistent Medications—Total	77.3%	80.8%	84.7%	↑
Use of Imaging Studies for Low Back Pain	—	—	79.4%	—
Controlling High Blood Pressure	—	—	64.7%	—
Pharmacotherapy Management of COPD Exacerbation—Bronchodilator	—	—	55.6%	—
Pharmacotherapy Management of COPD Exacerbation—Systemic Corticosteroid	—	—	49.6%	—
Antidepressant Medication Management—Effective Acute Phase Treatment	—	—	51.2%	—
Antidepressant Medication Management—Effective Continuation Phase Treatment	—	—	38.0%	—
Avoidance of Antibiotic Treatment in Adults With Acute Bronchitis	—	—	64.6%	—
Preventive Screening				
Chlamydia Screening in Women—Ages 16 to 20 Years	—	—	77.2%	—
Chlamydia Screening in Women—Ages 21 to 24 Years	—	—	80.0%	—
Chlamydia Screening in Women—Combined	—	—	78.5%	—
Adult BMI Assessment	—	—	83.7%	—
Utilization of Services				
Inpatient Utilization: General Hospital/Acute Care-Total Inpatient—Discharges Per 1,000 MM: Total	9.7	5.7	12.8	↑
Inpatient Utilization: General Hospital/Acute Care-Total Inpatient—Days Per 1,000 MM: Total	39.7	21.7	69.4	↑
Inpatient Utilization: General Hospital/Acute Care-Total Inpatient—Average Length of Stay: Total	4.1	3.8	5.4	↑
Inpatient Utilization: General Hospital/Acute Care-Medicine—Discharges Per 1,000 MM: Total	5.6	2.5	8.6	↑
Inpatient Utilization: General Hospital/Acute Care-Medicine—Days Per 1,000 MM: Total	23.1	9.4	41.7	↑
Inpatient Utilization: General Hospital/Acute Care-Medicine—Average Length of Stay: Total	4.1	3.8	4.9	↑
Inpatient Utilization: General Hospital/Acute Care-Surgery—Discharges Per 1,000 MM: Total	1.4	0.9	1.3	↑
Inpatient Utilization: General Hospital/Acute Care-Surgery—Days Per 1,000 MM: Total	9.4	6.3	19.4	↑
Inpatient Utilization: General Hospital/Acute Care-Surgery—Average Length of Stay: Total	6.7	6.8	15.3	↑
Inpatient Utilization: General Hospital/Acute Care-Maternity—Discharges Per 1,000 MM: Total	5.8	5.0	6.6	↑
Inpatient Utilization: General Hospital/Acute Care-Maternity—Days Per 1,000 MM: Total	15.2	13.0	18.1	↑
Inpatient Utilization: General Hospital/Acute Care-Maternity—Average Length of Stay: Total	2.6	2.6	2.7	↔
Ambulatory Care—Outpatient Visits Per 1,000 MM: Total	246.6	219.9	296.8	↑
Ambulatory Care—Emergency Department Visits Per 1,000 MM: Total	36.3	9.4	63.1	↑
Ambulatory Care—Ambulatory Surgery/Procedures Per 1,000 MM: Total	3.4	16.5	22.5	↑
Ambulatory Care—Observation Room Stays Per 1,000 MM: Total	1.6	0.8	1.0	↔
Frequency of Selected Procedures—Myringotomy Procedures Per 1,000 MM: Ages 0-4 Years	—	0.0	0.5	↑
Frequency of Selected Procedures—Myringotomy Procedures Per 1,000 MM: Ages 5-19 Years	—	0.0	0.2	↑
Frequency of Selected Procedures—Tonsillectomy Procedures Per 1,000 MM: Ages 0-9 Years	—	0.0	0.3	↑
Frequency of Selected Procedures—Tonsillectomy Procedures Per 1,000 MM: Ages 10-19 Years	—	0.0	0.3	↑
Frequency of Selected Procedures—Dilation & Curettage Procedures Per 1,000 MM: Ages 15-44 Years	—	0.0	0.0	↔
Frequency of Selected Procedures—Dilation & Curettage Procedures Per 1,000 MM: Ages 45-64 Years	—	0.0	0.0	↔
Frequency of Selected Procedures—Abdominal Hysterectomy Procedures Per 1,000 MM: Ages 15-44 Years	—	0.1	0.1	↔
Frequency of Selected Procedures—Abdominal Hysterectomy Procedures Per 1,000 MM: Ages 45-64 Years	—	0.2	0.2	↔
Frequency of Selected Procedures—Vaginal Hysterectomy Procedures Per 1,000 MM: Ages 15-44 Years	—	0.1	0.0	↔

Table C-3 Denver Health Medicaid Choice Trend Table				
Frequency of Selected Procedures—Vaginal Hysterectomy Procedures Per 1,000 MM: Ages 45-64 Years	—	0.1	0.2	↔
Frequency of Selected Procedures—Open Cholecystectomy Procedures Per 1,000 MM: Females-Ages 15-44 Years	—	0.0	0.0	↔
Frequency of Selected Procedures—Open Cholecystectomy Procedures Per 1,000 MM: Females-Ages 45-64 Years	—	0.0	0.0	↔
Frequency of Selected Procedures—Open Cholecystectomy Procedures Per 1,000 MM: Males-Ages 30-64 Years	—	0.0	0.1	↔
Frequency of Selected Procedures—Closed Cholecystectomy Procedures Per 1,000 MM: Females-Ages 15-44 Years	—	0.3	0.6	↔
Frequency of Selected Procedures—Closed Cholecystectomy Procedures Per 1,000 MM: Females-Ages 45-64 Years	—	0.1	0.3	↔
Frequency of Selected Procedures—Closed Cholecystectomy Procedures Per 1,000 MM: Males-Ages 30-64 Years	—	0.1	0.1	↔
Frequency of Selected Procedures—Back Surgery Procedures Per 1,000 MM: Females-Ages 20-44 Years	—	0.1	0.1	↔
Frequency of Selected Procedures—Back Surgery Procedures Per 1,000 MM: Females-Ages 45-64 Years	—	0.3	0.2	↔
Frequency of Selected Procedures—Back Surgery Procedures Per 1,000 MM: Males-Ages 20-44 Years	—	0.2	0.1	↔
Frequency of Selected Procedures—Back Surgery Procedures Per 1,000 MM: Males-Ages 45-64 Years	—	0.2	0.1	↔
Frequency of Selected Procedures—Mastectomy Procedures Per 1,000 MM: Ages 15-44 Years	—	0.0	0.0	↔
Frequency of Selected Procedures—Mastectomy Procedures Per 1,000 MM: Ages 45-64 Years	—	0.1	0.0	↔
Frequency of Selected Procedures—Lumpectomy Procedures Per 1,000 MM: Ages 15-44 Years	—	0.0	0.0	↔
Frequency of Selected Procedures—Lumpectomy Procedures Per 1,000 MM: Ages 45-64 Years	—	0.0	0.4	↔
Antibiotic Utilization—Average Number of Prescriptions PMPY for Antibiotics: Total	—	0.4	0.4	↔
Antibiotic Utilization—Average Days Supplied per Antibiotic Prescription: Total	—	10.0	9.7	↓
Antibiotic Utilization—Average Number of Prescriptions PMPY for Antibiotics of Concern: Total	—	0.1	0.1	↔
Antibiotic Utilization—Percentage of Antibiotics of Concern of All Antibiotic Prescriptions: Total	—	25.6%	26.3%	↔
Please note: For the Well-Child Visits in the First 15 Months of Life—Zero Visits measure, a lower rate indicates better performance.				

Table C-4 Rocky Mountain Health Plans Trend Table				
Measure	**2008**	**2009**	**2010**	**2009-2010 Health Plan Trend**
Pediatric Care				
Childhood Immunization Status—DTaP	88.1%	82.9%	91.0%	↑
Childhood Immunization Status—IPV	95.0%	94.0%	97.6%	↔
Childhood Immunization Status—MMR	94.7%	91.9%	94.9%	↔
Childhood Immunization Status—HiB	93.7%	96.2%	97.8%	↔
Childhood Immunization Status—Hepatitis B	94.4%	93.8%	96.8%	↔
Childhood Immunization Status—VZV	91.5%	91.1%	95.6%	↔
Childhood Immunization Status—Pneumococcal Conjugate	85.0%	82.1%	89.8%	↑
Childhood Immunization Status—Combination 2	81.5%	78.3%	89.3%	↑
Childhood Immunization Status—Combination 3	75.9%	73.7%	85.9%	↑
Well-Child Visits in the First 15 Months of Life—Zero Visits	1.4%	0.0%	0.0%	↔
Well-Child Visits in the First 15 Months of Life—Six or More Visits	30.6%	77.3%	72.6%	↔
Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life	59.5%	63.5%	70.5%	↔
Adolescent Well-Care Visits	40.8%	45.5%	48.2%	↔
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Ages 3 to 11 Years	—	—	58.6%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Ages 3 to 11 Years	—	—	62.6%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Ages 3 to 11 Years	—	—	54.9%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Ages 12 to 17 Years	—	—	57.0%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Ages 12 to 17 Years	—	—	53.5%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Ages 12 to 17 Years	—	—	48.2%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—BMI Assessment: Total	—	—	58.2%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Nutrition Counseling: Total	—	—	60.1%	—
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents—Physical Activity Counseling: Total	—	—	53.0%	—
Access to Care				
Prenatal and Postpartum Care—Timeliness of Prenatal Care	97.1%	95.2%	95.0%	↔
Prenatal and Postpartum Care—Postpartum Care	72.8%	71.9%	73.7%	↔
Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 24 Months	—	98.3%	98.8%	↔
Children's and Adolescents' Access to Primary Care Practitioners—Ages 25 Months to 6 Years	—	89.1%	91.8%	↑
Children's and Adolescents' Access to Primary Care Practitioners—Ages 7 to 11 Years	—	92.3%	91.7%	↔
Children's and Adolescents' Access to Primary Care Practitioners—Ages 12 to 19 Years	—	91.9%	92.7%	↔
Adults' Access to Preventive/Ambulatory Health Services—Ages 20 to 44 Years	83.7%	86.1%	87.7%	↔
Adults' Access to Preventive/Ambulatory Health Services—Ages 45 to 64 Years	88.0%	87.6%	90.4%	↔
Adults' Access to Preventive/Ambulatory Health Services—Ages 65 Years and Older	95.0%	95.2%	95.6%	↔

Table C-4 Rocky Mountain Health Plans Trend Table				
Living With Illness				
Annual Monitoring for Patients on Persistent Medications—ACE Inhibitors or ARBs	65.5%	71.3%	75.4%	↔
Annual Monitoring for Patients on Persistent Medications—Anticonvulsants	67.9%	69.6%	73.9%	↔
Annual Monitoring for Patients on Persistent Medications—Digoxin	62.5%	76.7%	NA	—
Annual Monitoring for Patients on Persistent Medications—Diuretics	63.8%	71.9%	75.1%	↔
Annual Monitoring for Patients on Persistent Medications—Total	65.2%	71.4%	75.3%	↔
Use of Imaging Studies for Low Back Pain	—	—	72.6%	—
Controlling High Blood Pressure	—	—	74.1%	—
Pharmacotherapy Management of COPD Exacerbation—Bronchodilator	—	—	62.9%	—
Pharmacotherapy Management of COPD Exacerbation—Systemic Corticosteroid	—	—	34.3%	—
Antidepressant Medication Management—Effective Acute Phase Treatment	—	—	NB	—
Antidepressant Medication Management—Effective Continuation Phase Treatment	—	—	NB	—
Avoidance of Antibiotic Treatment in Adults With Acute Bronchitis	—	—	35.9%	—
Preventive Screening				
Adult BMI Assessment	—	—	48.7%	—
Chlamydia Screening in Women—Ages 16 to 20 Years	—	—	45.2%	—
Chlamydia Screening in Women—Ages 21 to 24 Years	—	—	45.8%	—
Chlamydia Screening in Women—Combined	—	—	45.5%	—
Utilization of Services				
Inpatient Utilization: General Hospital/Acute Care-Total Inpatient—Discharges Per 1,000 MM: Total	14.8	13.9	12.1	↓
Inpatient Utilization: General Hospital/Acute Care-Total Inpatient—Days Per 1,000 MM: Total	48.5	46.5	33.5	↓
Inpatient Utilization: General Hospital/Acute Care-Total Inpatient—Average Length of Stay: Total	3.3	3.3	2.8	↓
Inpatient Utilization: General Hospital/Acute Care-Medicine—Discharges Per 1,000 MM: Total	6.0	5.1	4.0	↓
Inpatient Utilization: General Hospital/Acute Care-Medicine—Days Per 1,000 MM: Total	21.4	18.6	11.8	↓
Inpatient Utilization: General Hospital/Acute Care-Medicine—Average Length of Stay: Total	3.6	3.7	3.0	↓
Inpatient Utilization: General Hospital/Acute Care-Surgery—Discharges Per 1,000 MM: Total	2.5	2.9	2.4	↔
Inpatient Utilization: General Hospital/Acute Care-Surgery—Days Per 1,000 MM: Total	15.7	16.3	11.3	↓
Inpatient Utilization: General Hospital/Acute Care-Surgery—Average Length of Stay: Total	6.2	5.6	4.6	↓
Inpatient Utilization: General Hospital/Acute Care-Maternity—Discharges Per 1,000 MM: Total	13.0	12.2	11.6	↔
Inpatient Utilization: General Hospital/Acute Care-Maternity—Days Per 1,000 MM: Total	23.4	23.8	21.3	↔
Inpatient Utilization: General Hospital/Acute Care-Maternity—Average Length of Stay: Total	1.8	1.9	1.8	↔
Ambulatory Care—Outpatient Visits Per 1,000 MM: Total	440.6	461.3	470.5	↑
Ambulatory Care—Emergency Department Visits Per 1,000 MM: Total	54.1	59.2	63.3	↑
Ambulatory Care—Ambulatory Surgery/Procedures Per 1,000 MM: Total	12.2	13.6	14.5	↔
Ambulatory Care—Observation Room Stays Per 1,000 MM: Total	1.2	1.2	1.8	↑
Frequency of Selected Procedures—Myringotomy Procedures Per 1,000 MM: Ages 0-4 Years	—	3.9	3.5	↔
Frequency of Selected Procedures—Myringotomy Procedures Per 1,000 MM: Ages 5-19 Years	—	0.5	0.7	↔
Frequency of Selected Procedures—Tonsillectomy Procedures Per 1,000 MM: Ages 0-9 Years	—	1.0	1.2	↔
Frequency of Selected Procedures—Tonsillectomy Procedures Per 1,000 MM: Ages 10-19 Years	—	0.9	1.5	↔
Frequency of Selected Procedures—Dilation & Curettage Procedures Per 1,000 MM: Ages 15-44 Years	—	0.2	0.3	↔
Frequency of Selected Procedures—Dilation & Curettage Procedures Per 1,000 MM: Ages 45-64 Years	—	0.4	0.0	↔
Frequency of Selected Procedures—Abdominal Hysterectomy Procedures Per 1,000 MM: Ages 15-44 Years	—	0.3	0.3	↔
Frequency of Selected Procedures—Abdominal Hysterectomy Procedures Per 1,000 MM: Ages 45-64 Years	—	0.4	0.3	↔

Table C-4 Rocky Mountain Health Plans Trend Table				
Frequency of Selected Procedures—Vaginal Hysterectomy Procedures Per 1,000 MM: Ages 15-44 Years	—	0.9	1.1	↔
Frequency of Selected Procedures—Vaginal Hysterectomy Procedures Per 1,000 MM: Ages 45-64 Years	—	0.4	0.5	↔
Frequency of Selected Procedures—Open Cholecystectomy Procedures Per 1,000 MM: Females-Ages 15-44 Years	—	0.0	0.0	↔
Frequency of Selected Procedures—Open Cholecystectomy Procedures Per 1,000 MM: Females-Ages 45-64 Years	—	0.2	0.0	↔
Frequency of Selected Procedures—Open Cholecystectomy Procedures Per 1,000 MM: Males-Ages 30-64 Years	—	0.0	0.0	↔
Frequency of Selected Procedures—Closed Cholecystectomy Procedures Per 1,000 MM: Females-Ages 15-44 Years	—	1.5	1.5	↔
Frequency of Selected Procedures—Closed Cholecystectomy Procedures Per 1,000 MM: Females-Ages 45-64 Years	—	1.3	1.5	↔
Frequency of Selected Procedures—Closed Cholecystectomy Procedures Per 1,000 MM: Males-Ages 30-64 Years	—	0.3	0.5	↔
Frequency of Selected Procedures—Back Surgery Procedures Per 1,000 MM: Females-Ages 20-44 Years	—	0.6	0.4	↔
Frequency of Selected Procedures—Back Surgery Procedures Per 1,000 MM: Females-Ages 45-64 Years	—	1.4	1.3	↔
Frequency of Selected Procedures—Back Surgery Procedures Per 1,000 MM: Males-Ages 20-44 Years	—	1.3	0.7	↔
Frequency of Selected Procedures—Back Surgery Procedures Per 1,000 MM: Males-Ages 45-64 Years	—	0.4	1.5	↔
Frequency of Selected Procedures—Mastectomy Procedures Per 1,000 MM: Ages 15-44 Years	—	0.1	0.0	↔
Frequency of Selected Procedures—Mastectomy Procedures Per 1,000 MM: Ages 45-64 Years	—	0.2	0.4	↔
Frequency of Selected Procedures—Lumpectomy Procedures Per 1,000 MM: Ages 15-44 Years	—	0.3	0.4	↔
Frequency of Selected Procedures—Lumpectomy Procedures Per 1,000 MM: Ages 45-64 Years	—	0.7	1.1	↔
Antibiotic Utilization—Average Number of Prescriptions PMPY for Antibiotics: Total	—	1.1	1.1	↔
Antibiotic Utilization—Average Days Supplied per Antibiotic Prescription: Total	—	10.3	9.9	↓
Antibiotic Utilization—Average Number of Prescriptions PMPY for Antibiotics of Concern: Total	—	0.4	0.4	↔
Antibiotic Utilization—Percentage of Antibiotics of Concern of All Antibiotic Prescriptions: Total	—	38.8%	37.1%	↔
Please note: For the Well-Child Visits in the First 15 Months of Life—Zero Visits measure, a lower rate indicates better performance.				

Appendix D. Glossary

Appendix D includes terms, acronyms, and abbreviations that are commonly used in HEDIS and NCQA literature and text. This glossary can be used as a reference and guide to identify common HEDIS language used throughout the report.

Terms, Acronyms, and Abbreviations

ACE Inhibitors

Angiotensin converting enzyme inhibitors.

Administrative Data

Any automated data within a health plan (e.g., claims/encounter data, member data, provider data, hospital billing data, pharmacy data, and laboratory data).

Administrative Method

The administrative method requires health plans to identify the eligible population (i.e., the denominator) using administrative data. In addition, the numerator(s), or services provided to the members who are in the eligible population, are solely derived from administrative data. Medical records cannot be used to retrieve information. When using the administrative method, the entire eligible population becomes the denominator, and sampling is not allowed.

The administrative method is cost efficient but can produce lower rates due to incomplete data submission by capitated providers. For example, a health plan has 10,000 members who qualify for the *Prenatal and Postpartum Care* measure. The health plan chooses to perform the administrative method and finds that 4,000 members out of the 10,000 have evidence of a postpartum visit using administrative data. The final rate for this measure, using the administrative method, would therefore be 4,000/10,000, or 40 percent.

ARBs

Angiotensin receptor blockers.

Audit Result

The auditor's final determination, based on audit findings, of the appropriateness of the health plan publicly reporting its HEDIS measure rates. Each measure included in the HEDIS audit receives either a *Report*, *Not Applicable*, *No Benefit*, or *Not Report* audit finding.

CAHPS®[D-1]

Consumer Assessment of Healthcare Providers and Systems is a set of standardized surveys that assess patient satisfaction with the experience of care.

Capitation

A method of payment for providers. Under a capitated payment arrangement, providers are reimbursed on a per-member/per-month basis. The provider receives payment each month, regardless of whether the member needs services or not. Therefore, there is little incentive for providers to submit individual encounters because payment is not dependent upon such submission.

[D-1] CAHPS® is a registered trademark of the Agency for Healthcare Research and Quality.

Certified HEDIS Software Vendor

A third party, with source code certified by NCQA, that contracts with a health plan to write source code for HEDIS measures. For a vendor's software to be certified by NCQA, all of the vendor's programmed HEDIS measures must be submitted to NCQA for automated testing of program logic, and a minimum percentage of the measures must receive a "Pass" or "Pass With Qualifications" designation.

CIIS

The Colorado Immunization Information System (CIIS) is a computerized information system that collects and disseminates consolidated immunization information for Coloradoans. The system is operated by the Colorado Department of Public Health and Environment.[D-2]

Claims-Based Denominator

When the eligible population for a measure is obtained from claims data. For claims-based denominator hybrid measures, health plans must identify their eligible population and draw their sample no earlier than January of the year following the measurement year to ensure that all claims incurred through December 31 of the measurement year are captured in their systems.

CMS

The Centers for Medicare & Medicaid Services (CMS) is a federal agency within the Department of Health and Human Services (DHHS) that regulates requirements and procedures for external quality review of managed care organizations. CMS provides health insurance to individuals through Medicare, Medicaid, and the State Children's Health Insurance Program (SCHIP). In addition, CMS regulates laboratory testing through Clinical Laboratory Improvement Amendments (CLIA), develops coverage policies, and initiates quality-of-care improvement activities. CMS also maintains oversight of nursing homes and continuing care providers. This includes home health agencies, intermediate care facilities for the mentally retarded, and hospitals.

CMS 1500

A type of health insurance claim form used to bill professional services (formerly HCFA 1500).

Cohorts

Population components of a measure based on the age of the member at a particular point in time. A separate HEDIS rate is calculated for each cohort in a measure. For example, the *Children's and Adolescents' Access to Primary Care Practitioners* measure has four cohorts: Cohort 1, children 12 to 24 months of age as of December 31 of the measurement year; Cohort 2, children 25 months to 6 years of age as of December 31 of the measurement year; Cohort 3, children 7 to 11 years of age as of December 31 of the measurement year; and Cohort 4, adolescents 12 to 19 years of age as of December 31 of the measurement year.

[D-2] Colorado Department of Public Health and Environment. *Colorado Immunization Information System*. Available at: http://www.cdphe.state.co.us/dc/immunization/ciis/. Accessed on: September 13, 2010.

Computer Logic

A programmed, step-by-step sequence of instructions to perform a given task.

Continuous Enrollment Requirement

The minimum amount of time that a member must be enrolled in a health plan to be eligible for inclusion in a measure to ensure that the health plan has a sufficient amount of time to be held accountable for providing services to that member.

COPD

Chronic obstructive pulmonary disease.

CPT®

Current Procedural Terminology (CPT®) is a listing of billing codes generated by the American Medical Association to report the provision of medical services and procedures.[D-3]

CVO

Credentialing verification organization.

Data Completeness

The degree to which occurring services/diagnoses appear in the health plan's administrative data systems.

Data Completeness Study

An internal assessment developed and performed by a health plan using a statistically sound methodology to quantify the degree to which occurring services/diagnoses appear or do not appear in the health plan's administrative data systems.

Denominator

The number of members who meet all criteria specified in a measure for inclusion in the eligible population. When using the administrative method, the entire eligible population becomes the denominator. When using the hybrid method, a sample of the eligible population becomes the denominator.

DHMC

Denver Health Medicaid Choice.

DRG Coding

Diagnostic-related group coding sorts diagnoses and procedures for inpatient encounters by groups under major diagnostic categories with defined reimbursement limits.

[D-3] American Medical Association. *CPT-Current Procedural Terminology*. Available at: http://www.ama-assn.org/ama/pub/physician-resources/solutions-managing-your-practice/coding-billing-insurance/cpt.shtml. Accessed on: September 13, 2010.

DTaP

Diphtheria, tetanus toxoids, and acellular pertussis vaccine.

ED

Emergency department.

EDI

Electronic data interchange is the direct computer-to-computer transfer of data.

Electronic Data

Data that are maintained in a computer environment versus a paper environment.

Encounter Data

Billing data received from a capitated provider. Although the health plan does not reimburse the provider for each encounter, submission of encounter data allows a health plan to collect the data for future HEDIS reporting.

Exclusions

Conditions outlined in HEDIS measure specifications that describe when a member should not be included in the denominator.

FFS

Fee-for-service: A reimbursement mechanism that pays the provider for services billed.

Final Audit Report

Following a health plan's completion of any corrective actions, an auditor completes the final audit report, documenting all final findings and results of the HEDIS audit. The final report includes a summary report, IS capabilities assessment, medical record review validation findings, measure results, and audit opinion (the final audit statement).

Global Billing Practices

The practice of billing multiple services provided over a period of time in one inclusive bill, commonly used by obstetrics (OB) providers to bill prenatal and postpartum care.

HCPCS

Healthcare Common Procedure Coding System: A standardized alphanumeric coding system that maps to certain CPT® codes (see also CPT®).

HEDIS

The Healthcare Effectiveness Data and Information Set (HEDIS), developed and maintained by NCQA, is a set of performance measures used to assess the quality of care provided by managed health care organizations.

Formerly the Health Plan Employer Data and Information Set.

HEDIS Measure Determination Standards (HD)

The standards that auditors use during the audit process to assess a health plan's adherence to HEDIS measure specifications.

HEDIS Repository

The data warehouse where all data used for HEDIS reporting are stored.

HEDIS Warehouse

See HEDIS repository.

HiB Vaccine

Haemophilus influenzae type b vaccine.

HPL

High performance level. For most key measures, the Department has defined the HPL as the most recent national HEDIS Medicaid 90th percentile, except for one measure (*Well-Child Visits in the First 15 Months of Life—Zero Visits*), for which a lower rate indicates better performance. For this measure, the 10th percentile (rather than the 90th) shows excellent performance.

HSAG

Health Services Advisory Group, Inc.

Hybrid Measures

Measures that can be reported using the hybrid method.

Hybrid Method

The hybrid method requires health plans to identify the eligible population using administrative data, then extract a systematic sample of 411 members from the eligible population, which becomes the denominator. Administrative data are then used to identify services provided to those 411 members. Medical records must then be reviewed for those members who do not have evidence of a service being provided using administrative data.

The hybrid method generally produces better results but is considerably more labor intensive. For example, a health plan has 10,000 members who qualify for the *Prenatal and Postpartum Care* measure. The health plan chooses to perform the hybrid method. After randomly selecting 411 eligible members, the health plan finds that 161 members have evidence of a postpartum visit using administrative data. The health plan then obtains and reviews medical records for the 250 members who do not have evidence of a postpartum visit using administrative data. Of those 250 members,

54 are found to have a postpartum visit recorded in the medical record. The final rate for this measure, using the hybrid method, would therefore be (161 + 54) /411, or 52 percent.

ICD-9-CM

ICD-9-CM, the acronym for the International Classification of Diseases, Ninth Revision, Clinical Modification, is the classification of diseases and injuries into groups according to established criteria used for reporting morbidity, mortality, and utilization rates, as well as for billing purposes.

IDSS

The Interactive Data Submission System is a tool used to submit data to NCQA.

Inpatient Data

Data derived from an inpatient hospital stay.

IPV

Inactivated poliovirus vaccine.

IRR

Interrater reliability: The degree of agreement exhibited when a measurement is repeated under the same conditions by different raters.

IS

Information System: An automated system for collecting, processing, and transmitting data.

IS Standards

Information system (IS) standards: An NCQA-defined set of standards that measure how an organization collects, stores, analyzes, and reports medical, customer service, member, practitioner, and vendor data.[D-4]

IT

Information technology: The technology used to create, store, exchange, and use information in its various forms.

Key Data Elements

The data elements that must be captured to be able to report HEDIS measures.

Key Measures

The HEDIS measures selected by the Department that health plans are required to report for HEDIS.

Logic Checks

Evaluations of programming logic to determine its accuracy.

[D-4] National Committee for Quality Assurance. HEDIS Compliance Audit Standards, Policies and Procedures, Volume 5. Washington D.C.

LPL

Low performance level. For most key measures, the Department has defined the LPL as the most recent national HEDIS Medicaid 25th percentile. For one measure (*Well-Child Visits in the First 15 Months of Life—Zero Visits*), a lower rate indicates better performance. The LPL for this measure is the 75th percentile rather than the 25th percentile.

Manual Data Collection

Collection of data through a paper versus an automated process.

Mapping Codes

The process of translating a health plan's proprietary or nonstandard billing codes to industry standard codes specified in HEDIS measures. Mapping documentation should include a crosswalk of relevant codes, descriptions, and clinical information, as well as the policies and procedures for implementing the codes.

Material Bias

For most measures reported as a rate, any error that causes a ± 5 percent difference in the reported rate is considered materially biased. For non-rate measures, any error that causes a ± 10 percent difference in the reported rate or calculation is considered materially biased.

MCO

Managed care organization.

Medical Record Validation

The process that auditors follow to verify that a health plan's medical record abstraction meets industry standards and abstracted data are accurate.

Medicaid Percentiles

The NCQA national percentiles for each HEDIS measure for the Medicaid product line used to compare health plan performance and assess the reliability of a health plan's HEDIS rates.

Membership Data

Electronic health plan files containing information about members, such as name, date of birth, gender, current address, and enrollment (i.e., when the member joined the health plan).

Mg/dL

Milligrams per deciliter.

Modifier Codes

Two- or five-digit extensions added to CPT® codes to provide additional information about services/procedures.

MMR

Measles, mumps, and rubella vaccine.

NA

Not Applicable: If a health plan's denominator for a measure is too small (i.e., less than 30) to report a valid rate, the result/rate is NA.

NB

No Benefit: If a health plan did not offer the benefit required by the measure.

NCQA

The National Committee for Quality Assurance (NCQA) is a not-for-profit organization that assesses, through accreditation reviews and standardized measures, the quality of care provided by managed health care delivery systems; reports results of those assessments to employers, consumers, public purchasers, and regulators; and ultimately seeks to improve the health care provided within the managed care industry.

NDC

National drug codes used for billing pharmacy services.

NR

The *Not Report* HEDIS audit finding.

A measure has an *NR* audit finding for one of three reasons:

1. The health plan chose not to report the measure.
2. The health plan calculated the measure but the result was materially biased.
3. The health plan was not required to report.

Numerator

The number of members in the denominator who received all the services as specified in the measure.

Over-read Process

The process of re-reviewing a sample of medical records by a different abstractor to assess the degree of agreement between two different abstractors and ensure the accuracy of abstracted data. The over-read process should be conducted by a health plan as part of its medical record review process. Auditors overread a sample of the health plan's medical records as part of the audit process.

PCPP

Primary Care Physician Program.

Pharmacy Data

Data derived from the provision of pharmacy services.

Primary Source Verification

The practice of reviewing the processes and procedures to input, transmit, and track data from the originating source to the HEDIS repository to verify that the originating information matches the output information for HEDIS reporting.

Proprietary Codes

Unique billing codes developed by a health plan that have to be mapped to industry standard codes for HEDIS reporting.

Provider Data

Electronic files containing information about physicians, such as type of physician, specialty, reimbursement arrangement, and office location.

Record of Administration, Data Management, and Processes (Roadmap)

The Roadmap, completed by each health plan undergoing the HEDIS audit process, provides information to auditors regarding the health plan's systems for collecting and processing data for HEDIS reporting. Auditors review the Roadmap prior to the scheduled on-site visit to gather preliminary information for planning/targeting on-site visit assessment activities; determining the core set of measures to be reviewed; determining which hybrid measures will be included in medical record validation; requesting core measures' source code, as needed; identifying areas that require additional clarification during the on-site visit; and determining whether the core set of measures needs to be expanded.

Previously the Baseline Assessment Tool (BAT).

Retroactive Enrollment

When the effective date of a member's enrollment in a health plan occurs prior to the date that the health plan is notified of that member's enrollment. Medicaid members who are retroactively enrolled in a health plan must be excluded from a HEDIS measure denominator if the time period from the date of enrollment to the date of notification exceeds the measure's allowable gap specifications.

Revenue Codes

Cost codes for facilities to bill based on the categories of services, procedures, supplies, and materials.

RMHP

Rocky Mountain Health Plans.

Sample Frame

Members of the eligible population who meet all criteria specified in the measure from which a systematic sample is drawn.

Source Code

The written computer programming logic for determining the eligible population and the denominators/numerators for calculating the rate for each measure.

Standard Codes

Industry standard billing codes such as ICD-9-CM, CPT®, DRG, Revenue, and UB-92 codes used for billing inpatient and outpatient health care services.

The Department

The Colorado Department of Health Care Policy & Financing.

T-test Validation

A statistical validation of a health plan's positive medical record numerator events.

UB-04 Claims

A type of claim form used to bill hospital-based inpatient, outpatient, emergency room and clinic drugs, supplies, and/or services. UB-04 codes are primarily Type of Bill and Revenue codes. The UB-04 replaced the UB-92.

Vendor

Any third party that contracts with a health plan to perform services. The most common delegated services from venders are pharmacy services, vision care services, laboratory services, claims processing, HEDIS software services, and provider credentialing.

VZV

Varicella zoster virus (chicken pox) vaccine.