FY 07-08 Colorado PIP Validation Report

Improving Well-Care Visits for Children and Adolescents

for

Rocky Mountain Health Plans

March 2008

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

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for **Rocky Mountain Health Plans**

Overview

The Balanced Budget Act of 1997 (BBA), Public Law 105-33 requires that states conduct an annual evaluation of their managed care organizations (MCOs) and prepaid inpatient health plans (PIHPs) to determine the MCOs' and PIHPs' compliance with federal regulations and quality improvement standards. According to the BBA, the quality of health care delivered to Medicaid members in MCOs and PIHPs must be tracked, analyzed, and reported annually. The Colorado Department of Health Care Policy & Financing (the Department) has contractual requirements with each MCO and behavioral health organization (BHO) to conduct and submit performance improvement projects (PIPs) annually.

As one of the mandatory external quality review activities under the BBA, the Department is required to validate the PIPs. To meet this validation requirement, the Department contracted with Health Services Advisory Group, Inc. (HSAG), as an external quality review organization. The primary objective of the PIP validation is to determine the compliance with requirements set forth in the Code of Federal Regulations (CFR) at 42 CFR 438.240(b)(1), including:

- Measurement of performance using objective quality indicators.
- Implementation of system interventions to achieve improvement in quality.
- Evaluation of the effectiveness of the interventions.
- Planning and initiation of activities for increasing or sustaining improvement.

The Centers for Medicare & Medicaid Services (CMS) publication, *Validating Performance Improvement Projects: A Protocol for Use in Conducting Medicaid External Quality Review Activities*, Final Protocol, Version 1.0, May 1, 2002, was used in the evaluation and validation of the PIPs.

Summary of Study

The study evaluated compliance with national guidelines from the American Academy of Pediatrics (AAP) and the American Academy of Family Physicians (AAFP) for providing well-child/adolescent visits for Medicaid members enrolled with **Rocky Mountain Health Plans** (**RMHP**). The baseline HEDIS 2005 rate for adolescent well-care visits was 35.8 percent, which was at the NCQA 50th percentile. The HEDIS 2005 well-child visit rate was 60.8 percent, which was at the NCQA 50th percentile. However, **RMHP** has recently determined that HEDIS 2006 data will be reported as the new baseline period as the study moves forward. The first remeasurement will occur in 2009.

RMHP reported that the provider survey was completed during the HEDIS 2006 reporting year. The survey assisted **RMHP** in identifying barriers to access and availability of well-child and

adolescent services from the provider's perspective. Based on the results of this survey, **RMHP** developed provider education focused on coding of well-care visits in order to capture the care that was being provided. These educational interventions will take place in 2007 and 2008.

Study Topic

The topic addressed CMS' requirements related to timeliness of care and services—namely, well-care visits for **RMHP** children and adolescents. The study topic reflected a high-risk condition because well-care visits are important for early detection and tracking of members at risk for chronic conditions, education on the importance of preventive testing and immunizations, and counseling to promote healthy behaviors and reduction of risks.

The study question presented by **RMHP** was: "Do member and provider education and interventions improve guideline compliance with recommended well-child/adolescent visits with subsequent improvement in visit rates?"

Study Methodology

RMHP used *HEDIS 2006 Technical Specifications* for its well-care indicators. For the study indicators, **RMHP** collected data on well-care visits for children between 3 and 6 years of age and adolescents between 12 and 21 years of age.

The study reported the following study indicators:

- For adolescent well-care visits: "At least one comprehensive well-care visit with a primary care practitioner or an OB/GYN practitioner during the measurement year. The PCP does not have to be the practitioner assigned to the member."
- For well-child visits in the third, fourth, fifth, and sixth years of life: "At least one comprehensive well-care visit with a primary care practitioner during the measurement year. The PCP does not have to be the practitioner assigned to the member."

Study Results

RMHP interviewed 32 pediatric primary care physicians (PCPs) in 2006 to identify barriers to access and availability of well-child and adolescent services. The interview surveys were analyzed and, based on the results, three educational intervention strategies for providers were determined:

1. An article in the provider newsletter about the coding of well-care visits
2. Details in the provider manual about coding for well-care visits
3. Annual PCP office manager education on coding of well-care visits

Baseline results for this validation submission were reported. The baseline HEDIS 2005 rate for adolescent well-care visits was 35.8 percent, which was at the NCQA 50th percentile. The HEDIS 2005 well-child visit rate was 60.8 percent, which was at the NCQA 50th percentile. However, **RMHP** has recently determined that HEDIS 2006 data will be reported as the new baseline period as the study moves forward.

Although 8 of the 10 PIP validation activities had been completed, interventions from the survey began at the end of 2007 and will continue through 2008. The first remeasurement of the study indicators will occur in 2009.

Scoring

HSAG validates a total of 10 activities for each PIP. PIP validation takes place annually and reflects activities that have been completed. A health plan (MCO) may take up to three years to complete all 10 activities. Each activity consists of evaluation elements necessary for the successful completion of a valid PIP. Evaluation elements are the key CMS Protocol components for each activity that reflect the intent of what is being measured and evaluated. Some of the evaluation elements are critical elements and must be scored as *Met* to produce an accurate and reliable PIP. Given the importance of critical elements, any critical element that receives a *Not Met* score results in an overall PIP validation status of *Not Met*. If one or more critical elements are *Partially Met*, but none is *Not Met*, the PIP will be considered valid with low confidence. Revisions and resubmission of the PIP would be required.

Summary of Validation Findings

- For this review, 8 activities with a total of 48 elements were validated. Of this number:
  - 29 evaluation elements were *Met*.
  - 0 evaluation elements were *Partially Met.*
  - 0 evaluation elements were *Not Met*.
  - 19 evaluation elements were *Not Applicable (NA).*
- The total number of critical elements that were evaluated equaled 11. Of this number:
  - 8 critical elements were *Met*.
  - 0 critical elements were *Partially Met.*
  - 0 critical elements were *Not Met*.
  - 3 critical elements were *NA.*

The final validation finding of **RMHP's** PIP for this validation period showed an overall score of 100 percent, a critical element score of 100 percent, and *Met* validation status.

Conclusions

This study successfully addressed timeliness of care and services. The study topic and question were clearly and accurately stated to set and maintain the focus of the study. Baseline results were reported. **RMHP** has analyzed the results from the PCP interviews and has developed intervention strategies based on the results. **RMHP** completed Activities I through VIII, receiving a score of 100 percent for evaluation elements *Met*, a score of 100 percent for critical elements *Met*, and a *Met* validation status.

Requirements

There were no requirements identified during this review.

Recommendations

In Activity III, the remeasurement period date ranges should be added under the first and second measurement period dates.

In Activity IV, the year of the HEDIS technical specifications used to define the study population definition should be included in the population documentation.

In Activity VI, actual date ranges should be used for the data collection timeline.

In Activity VIII, the resubmitted PIP reported that the baseline result for well-child visits was 61.5 percent in Activity I, 60.8 percent in Activity VIII, and 60.8 percent in the table in Activity IX. Future submissions of the PIP should ensure the result is consistent throughout the PIP documentation.

Comparison of Years 1 through 3

RMHP completed Activities I through III for the FY 05–06 validation cycle, receiving a score of 100 percent for evaluation elements *Met*, a score of 100 percent for critical elements *Met*, and a *Met* validation status. For the FY 06–07 validation cycle, **RMHP** progressed through Activity VI, receiving a score of 100 percent for evaluation elements *Met*, a score of 100 percent for critical elements *Met*, and a *Met* validation status. For the FY 07–08 validation cycle, **RMHP** progressed through Activity VIII, receiving a score of 100 percent for evaluation elements *Met*, a score of 100 percent for critical elements *Met*, and a *Met* validation status. **RMHP** determined that the HEDIS 2006 data would be the new baseline as the study moves forward since the interventions are taking place in 2007 and 2008 with the first remeasurement scheduled to take place in 2009.

Validating PIPs involved a review of the following 10 activities:

- Activity I. Appropriate Study Topic
- Activity II. Clearly Defined, Answerable Study Question
- Activity III. Clearly Defined Study Indicator(s)
- Activity IV. Use a Representative and Generalizable Study Population
- Activity V. Valid Sampling Techniques (If Sampling Was Used)
- Activity VI. Accurate/Complete Data Collection
- Activity VII. Appropriate Improvement Strategies
- Activity VIII. Sufficient Data Analysis and Interpretation
- Activity IX. Real Improvement Achieved
- Activity X. Sustained Improvement Achieved

All PIPs are scored as follows:

Met	(1) All critical elements were *Met* **and** (2) 80 percent to 100 percent of all critical and noncritical elements were *Met*. No action required.
Partially Met	(1) All critical elements were *Met* and 60 percent to 79 percent of all critical and noncritical elements were *Met* **or** (2) One critical element or more was *Partially Met*. Requires revision and resubmission of the PIP.
Not Met	(1) All critical elements were *Met* and less than 60 percent of all critical and noncritical elements were *Met* **or** (2) One critical element or more was *Not Met*. Requires revision and resubmission of the PIP.
NA	Not applicable elements (including critical elements if they were not assessed) were removed from all scoring.

For fiscal year (FY) 07–08, the health plans were provided the opportunity to resubmit additional information and/or documentation. The health plans were required to take action on any evaluation element receiving a point of clarification or a score of *Partially Met* or *Not Met*. The action could include resubmission of additional PIP documentation prior to final scoring. Future annual PIP submissions should include all information pertinent to the PIP study to achieve a *Met* validation status

PIP Scores

For this PIP, HSAG reviewed Activities I through VIII. Table 2-1 and Table 2-2 show **RMHP's** scores based on HSAG's PIP evaluation of ***Improving Well-Care Visits for Children and Adolescents***. Each activity has been reviewed and scored according to HSAG's validation methodology.

Table 2-1—FY 07-08 Performance Improvement Project Scores *for* Improving Well-Care Visits for Children and Adolescents *for* Rocky Mountain Health Plans

Review Activity	Total Possible Evaluation Elements (Including Critical Elements)	Total *Met*	Total *Partially Met*	Total *Not Met*	Total *NA*	Total Possible Critical Elements	Total Critical Elements *Met*	Total Critical Elements *Partially Met*	Total Critical Elements *Not Met*	Total Critical Elements *NA*
I. Appropriate Study Topic	6	6	0	0	0	1	1	0	0	0
II. Clearly Defined, Answerable Study Question	2	2	0	0	0	1	1	0	0	0
III. Clearly Defined Study Indicator(s)	7	6	0	0	1	3	3	0	0	0
IV. Use a Representative and Generalizable Study Population	3	3	0	0	0	2	2	0	0	0
V. Valid Sampling Techniques	6	0	0	0	6	1	0	0	0	1
VI. Accurate/Complete Data Collection	11	6	0	0	5	1	0	0	0	1
VII. Appropriate Improvement Strategies	4	2	0	0	2	No Critical Elements				
VIII. Sufficient Data Analysis and Interpretation	9	4	0	0	5	2	1	0	0	1
IX. Real Improvement Achieved	4	Not Assessed				No Critical Elements				
X. Sustained Improvement Achieved	1	Not Assessed				No Critical Elements				
Totals for All Activities	**53**	**29**	**0**	**0**	**19**	**11**	**8**	**0**	**0**	**3**

Table 2-2—FY 07-08 Performance Improvement Project Overall Score *for* Improving Well-Care Visits for Children and Adolescents *for* Rocky Mountain Health Plans

Percentage Score of Evaluation Elements *Met**	**100%**
Percentage Score of Critical Elements *Met***	**100%**
Validation Status***	***Met***

* The percentage score is calculated by dividing the total *Met* by the sum of the total *Met*, *Partially Met*, and *Not Met*.
** The percentage score of critical elements *Met* is calculated by dividing the total critical elements *Met* by the sum of the critical elements *Met*, *Partially Met*, and *Not Met*.
*** *Met* equals confidence/high confidence that the PIP was valid.
Partially Met equals low confidence that the PIP was valid.
Not Met equals reported PIP results that were not valid.

Validations and Findings Summary

This section summarizes the evaluation of the activities validated for the PIP. A description of the findings, strengths, requirements, and recommendations is outlined under each activity section. See Appendix B for a complete description of CMS rationale for each activity.

The validation was performed on a PIP conducted by **RMHP.** The PIP evaluated the timeliness of care and services to children and adolescents and the barriers to receiving these services. National guidelines from the American Academy of Pediatrics and the American Academy of Family Physicians recommend annual well-care examinations for children 3 to 6 years of age and adolescents 12 to 21 years of age. **RMHP** used two measures from *HEDIS 2006 Technical Specifications*: one to measure well-child visits in the third, fourth, fifth, and sixth years of life, and another to measure adolescent well-care visits.

Activity I. Appropriate Study Topic

Study Topic

RMHP continues with its study topic of ***Improving Well-Care Visits for Children and Adolescents*** as its PIP for the fiscal year (FY) 07–08 validation cycle. The topic addressed CMS' requirements related to timeliness of care and services—namely, well-care visits for **RMHP** children and adolescents. The study topic reflected a high-risk condition because well-care visits are important for early detection and tracking of members at risk for chronic conditions, education on the importance of preventive testing and immunizations, and counseling to promote healthy behaviors and reduction of risks.

Finding(s)

All of the evaluation elements, including the one critical element, were *Met* for this activity.

Strength(s)

The study topic assessed timeliness of care and services provided by **RMHP**. The topic had the potential to affect member health and functional status. The study topic reflected a high-volume service and addressed a broad spectrum of services.

Requirement(s) (for Critical Elements)

There were no requirements identified for this activity during this review.

Recommendation(s) (for Noncritical Elements)

There were no recommendations identified for this activity during this review.

Activity II. Clearly Defined, Answerable Study Question

Study Question(s)

RMHP's study question was: "Do member and provider education and interventions improve guideline compliance with recommended well-child/adolescent visits with subsequent improvements in visit rates?"

Finding(s)

Both evaluation elements for this activity were *Met*, including the one critical element.

Strength(s)

The study question stated the problem in simple terms and maintained the focus of the study, which was to evaluate timeliness of care and services through the well-child and adolescent well-care visits received by **RMHP** Medicaid members.

Requirement(s) (for Critical Elements)

There were no requirements identified for this activity during this review.

Recommendation(s) (for Noncritical Elements)

There were no recommendations identified for this activity during this review.

Activity III. Clearly Defined Study Indicator(s)

Study Indicator(s)

The study reported the following study indicators:

- For adolescent well-care visits: "At least one comprehensive well-care visit with a primary care practitioner or an OB/GYN practitioner during the measurement year. The PCP does not have to be the practitioner assigned to the member."
- For well-child visits in the third, fourth, fifth, and sixth years of life: "At least one comprehensive well-care visit with a primary care practitioner during the measurement year. The PCP does not have to be the practitioner assigned to the member."

Finding(s)

Six of the seven evaluation elements for this activity were *Met*, including the three critical elements. One element was *Not Applicable* because the indicator was not internally developed.

Strength(s)

The study indicators were developed to answer the study question and measure change in the timeliness of care and services received. The study indicators were based on *HEDIS 2006 Technical Specifications* and were well-designed to address CMS' requirements to evaluate timeliness of care and services.

Requirement(s) (for Critical Elements)

There were no requirements identified for this activity during this review.

Recommendation(s) (for Noncritical Elements)

Date ranges for the first and second remeasurement periods should be added beneath "First Measurement Date."

Activity IV. Use a Representative and Generalizable Study Population

Study Population

RMHP's study population was defined as:

- Members who were 12 to 21 years of age as of December 31 of the measurement year and who were continuously enrolled with no more than one gap in enrollment of up to 45 days.
- Members who were 3 to 6 years of age as of December 31 of the measurement year and who were continuously enrolled with no more than one gap in enrollment of up to 45 days.

Finding(s)

All of the three evaluation elements were *Met*, including the two critical elements, for this activity.

Strength(s)

The study population was completely and accurately defined per *HEDIS 2006 Technical Specifications* and captured all eligible members to whom the study question applied.

Requirement(s) (for Critical Elements)

There were no requirements identified for this activity during this review.

Recommendation(s) (for Noncritical Elements)

The year of the HEDIS technical specifications used to define the study population should be included in the population documentation.

Activity V. Valid Sampling Techniques

Sampling Technique(s)

RMHP did not use sampling for this PIP study. The entire eligible population was used.

Finding(s)

All of the six elements for this activity were scored as *Not Applicable,* including the one critical element, based on the use of the entire eligible population.

Strength(s)

Sampling techniques were not used for this PIP. The use of the entire eligible population was in accordance with generally accepted principles of research design and statistical analysis.

Requirement(s) (for Critical Elements)

There were no requirements identified for this activity during this review.

Recommendation(s) (for Noncritical Elements)

There were no recommendations identified for this activity during this review.

Activity VI. Accurate/Complete Data Collection

Data Collection

RMHP used administrative data to capture all necessary data elements defined in the PIP study. Personal interviews were used for the provider survey.

Finding(s)

Six of the 11 evaluation elements were *Met* in this activity. The remaining 5 evaluation elements received a *Not Applicable* score, including the 1 critical element, because manual data collection was not used in this PIP study.

Strength(s)

RMHP clearly defined the data elements to be collected and the source for data collection. **RMHP** provided a clear understanding of the systematic process used for data collection. The estimated degree of administrative data completeness was reported as 95 percent.

Requirement(s) (for Critical Elements)

There were no requirements identified for this activity during this review.

Recommendation(s) (for Noncritical Elements)

The PIP documentation should provide the actual months for the data collection cycle rather than documenting that data collection would occur in the "spring of 2008."

Activity VII. Appropriate Improvement Strategies

Improvement Strategies

RMHP strategies were based on causes/barriers identified through data analysis. **RMHP** used provider interviews to assist in identifying barriers to access and availability of well-child and adolescent services from the provider's perspective.

Finding(s)

Two of the four evaluation elements for this activity were *Met.* There were no critical elements for this activity. Two elements were scored *Not Applicable* because revision and standardization of the interventions had not taken place at the time of the PIP submission.

Strength(s)

Based on the results of this survey, **RMHP** developed provider education focused on coding of well-care visits in order to capture the care that was being provided. These educational interventions will take place in 2007 and 2008.

Requirement(s) (for Critical Elements)

There were no requirements identified for this activity during this review.

Recommendation(s) (for Noncritical Elements)

There were no recommendations identified for this activity during this review.

Activity VIII. Sufficient Data Analysis and Interpretation

Data Analysis and Interpretation

The baseline HEDIS 2005 rate for adolescent well-care visits was 35.8 percent, which was at the NCQA 50th percentile. The HEDIS 2005 well-child visit rate was 60.8 percent, which was at the NCQA 50th percentile. However, **RMHP** has recently determined that HEDIS 2006 data will be reported as the new baseline as the study moves forward. The first remeasurement will occur in 2009.

Finding(s)

Four of the nine evaluation elements for this activity were *Met*, including one critical element. Five elements were scored *Not Applicable*, including one critical element, because sampling techniques were not used and the study had progressed to the point of reporting only baseline results for this validation cycle.

Strength(s)

Baseline data analysis was conducted according to the analysis plan in the study. An interpretation of the baseline results was provided in this submission.

Requirement(s) (for Critical Elements)

There were no requirements identified for this activity during this review.

Requirement(s) (for Noncritical Elements)

The resubmitted PIP reported the baseline result for well-child visits as 61.5 percent in Activity I, 60.8 percent in Activity VIII, and 60.8 percent in the table in Activity IX. Future submissions of the PIP should ensure the result is consistent throughout the PIP documentation.

Activities IX and X

Activities IX and X were not assessed for the FY 07–08 submission of this PIP report. **RMHP** had not progressed to the point of assessing for real or sustained improvement.

Section 4: Colorado FY 07-08 PIP Validation Tool: Improving Well-Care Visits for Children and Adolescents for Rocky Mountain Health Plans

DEMOGRAPHIC INFORMATION			
Health Plan Name:	Rocky Mountain Health Plans		
Study Leader Name:	Jackie Hudson	Title:	Quality Improvement Manager
Phone Number:	(970) 248-5190	E-mail Address:	jackie.hudson@rmhp.org
Name of Project/Study:	Improving Well-Care Visits for Children and Adolescents		
Type of Study:	Clinical		
Date of Study:	1/1/2005 to 12/31/2007		
Type of Delivery System:	PIHP	Number of Medicaid Members in PIHP:	13,200
		Number of Medicaid Members in Study:	3,290
Year 3 Validation:	Resubmission		
Results:	Baseline		

	EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
I.	**Appropriate Study Topic: Topics selected for the study should reflect the Medicaid enrollment in terms of demographic characteristics, prevalence of disease, and the potential consequences (risks) of the disease. Topics could also address the need for a specific service. The goal of the project should be to improve processes and outcomes of health care. The topic may be specified by the State Medicaid agency or on the basis of Medicaid member input.**		
	1. Reflects high-volume or high-risk conditions (or was selected by the State). NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study topic reflected a high-volume/high-risk condition.
	2. Is selected following collection and analysis of data. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study topic was selected following the collection and analysis of plan-specific data.
	3. Addresses a broad spectrum of care and services (or was selected by the State). The score for this element will be Met or Not Met.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study topic addressed a broad spectrum of care and services.
	4. Includes all eligible populations that meet the study criteria. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	All eligible populations that met the study criteria were included in the study.
	5. Does not exclude members with special health care needs. The score for this element will be Met or Not Met.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	Members with special health care needs were not excluded.
C*	6. Has the potential to affect member health, functional status, or satisfaction. The score for this element will be Met or Not Met.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study topic had the potential to affect member health and functional status.

Results for Activity I				
# of Elements				
Critical Elements**	**Met**	**Partially Met**	**Not Met**	**Not Applicable**
1	6	0	0	0

* "C" in this column denotes a critical evaluation element.

** This number is a tally of the total number of critical evaluation elements for this review activity.

EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
II.	**Clearly Defined, Answerable Study Question: Stating the study question(s) helps maintain the focus of the PIP and sets the framework for data collection, analysis, and interpretation.**		
	1. States the problem to be studied in simple terms. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study question was stated in clear and simple terms and maintained the focus of the study.
C*	2. Is answerable. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study question was answerable.

Results for Activity II				
# of Elements				
Critical Elements**	**Met**	**Partially Met**	**Not Met**	**Not Applicable**
1	2	0	0	0

* "C" in this column denotes a critical evaluation element.

** This number is a tally of the total number of critical evaluation elements for this review activity.

	EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
III.	**Clearly Defined Study Indicator(s): A study indicator is a quantitative or qualitative characteristic or variable that reflects a discrete event (e.g., an older adult has not received a flu shot in the last 12 months) or a status (e.g., a member's blood pressure is or is not below a specified level) that is to be measured. The selected indicators should track performance or improvement over time. The indicators should be objective, clearly and unambiguously defined, and based on current clinical knowledge or health services research.**		
C*	1. Are well-defined, objective, and measurable. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study indicators were well-defined, objective, and measurable. Point of clarification: Remeasurement period date ranges should be added under the first measurement period dates. Re-review February 2008: After review of the resubmitted PIP documentation, the point of clarification will remain. Remeasurement date ranges for the first and second remeasurement periods were not added beneath "First Measurement Period Dates" for each study indicator. Future submissions of the PIP should add this information.
	2. Are based on current, evidence-based practice guidelines, pertinent peer review literature, or consensus expert panels.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study indicators were based on current, evidence-based practice guidelines.
C*	3. Allow for the study question to be answered. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study indicators allowed for the study question to be answered.
	4. Measure changes (outcomes) in health or functional status, member satisfaction, or valid process alternatives. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study indicators measured changes (outcomes) in member health and functional status.
C*	5. Have available data that can be collected on each indicator. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	There were data available to be collected for each study indicator.

* "C" in this column denotes a critical evaluation element.

** This number is a tally of the total number of critical evaluation elements for this review activity.

EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
III.	**Clearly Defined Study Indicator(s): A study indicator is a quantitative or qualitative characteristic or variable that reflects a discrete event (e.g., an older adult has not received a flu shot in the last 12 months) or a status (e.g., a member's blood pressure is or is not below a specified level) that is to be measured. The selected indicators should track performance or improvement over time. The indicators should be objective, clearly and unambiguously defined, and based on current clinical knowledge or health services research.**		
	6. Are nationally recognized measures such as HEDIS specifications, when appropriate. The scoring for this element will be Met or NA.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study indicators were nationally recognized HEDIS measures.
	7. Includes the basis on which the indicator(s) was adopted, if internally developed.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	The study indicators were not internally developed.

Results for Activity III				
# of Elements				
Critical Elements**	**Met**	**Partially Met**	**Not Met**	**Not Applicable**
3	6	0	0	1

* "C" in this column denotes a critical evaluation element.

** This number is a tally of the total number of critical evaluation elements for this review activity.

EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
IV.	**Use a representative and generalizable study population: The selected topic should represent the entire eligible Medicaid enrollment population with systemwide measurement and improvement efforts to which the PIP study indicators apply.**		
C*	1. Is accurately and completely defined. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The method for identifying the eligible study population was accurately and completely defined. Point of clarification: The year of the HEDIS technical specifications used for the study population definition should be included in the population documentation. Re-review February 2008: After review of the resubmitted PIP documentation, the point of clarification will remain. The resubmitted PIP did not include the year of the HEDIS technical specifications used to define the study population as requested. Future submissions of the PIP must include the year of the technical specifications used.
	2. Includes requirements for the length of a member's enrollment in the health plan.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The method for identifying the eligible study population included the required length of enrollment.
C*	3. Captures all members to whom the study question applies. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The method for identifying the eligible study population captured all members to whom the study question applied.

Results for Activity IV				
# of Elements				
Critical Elements**	**Met**	**Partially Met**	**Not Met**	**Not Applicable**
2	3	0	0	0

* "C" in this column denotes a critical evaluation element.

** This number is a tally of the total number of critical evaluation elements for this review activity.

EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
V.	**Valid Sampling Techniques: (This activity is only scored if sampling was used.) If sampling is to be used to select members of the study, proper sampling techniques are necessary to provide valid and reliable information on the quality of care provided. The true prevalence or incidence rate for the event in the population may not be known the first time a topic is studied.**		
	1. Consider and specify the true or estimated frequency of occurrence.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	Sampling techniques were not used in this study.
	2. Identify the sample size.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	Sampling techniques were not used in this study.
	3. Specify the confidence level.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	Sampling techniques were not used in this study.
	4. Specify the acceptable margin of error.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	Sampling techniques were not used in this study.
C*	5. Ensure a representative sample of the eligible population.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	Sampling techniques were not used in this study.
	6. Are in accordance with generally accepted principles of research design and statistical analysis.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	Sampling techniques were not used in this study.

Results for Activity V				
# of Elements				
Critical Elements**	**Met**	**Partially Met**	**Not Met**	**Not Applicable**
1	0	0	0	6

* "C" in this column denotes a critical evaluation element.

** This number is a tally of the total number of critical evaluation elements for this review activity.

EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
VI.	**Accurate/Complete Data Collection: Data collection must ensure that the data collected on the PIP indicators are valid and reliable. Validity is an indication of the accuracy of the information obtained. Reliability is an indication of the repeatability or reproducibility of a measurement.**		
	1. Clearly defined data elements to be collected. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The data elements to be collected were clearly defined.
	2. Clearly identified sources of data. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The sources for data collection were specified as administrative data and personal interview.
	3. A clearly defined and systematic process for collecting data that includes how baseline and remeasurement data will be collected. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The report included a defined and systematic process for collecting baseline and remeasurement data. Information regarding the data collection process was supported by the inclusion of the NCQA audit report.
	4. A timeline for the collection of baseline and remeasurement data. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The timeline for the collection of baseline and remeasurement data was reported as the calendar year. Point of clarification: Future submissions of the PIP should include the actual date ranges instead of stating "spring of 2008." Re-review February 2008: After review of the resubmitted PIP documentation, the point of clarification will remain. The resubmitted PIP did not include actual data collection dates as requested. The data collection cycle was still referred to as "spring of 2008." Future submissions of the PIP should include the actual date ranges.
	5. Qualified staff and personnel to abstract manual data.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	Manual data collection was not used for this study.

* "C" in this column denotes a critical evaluation element.

** This number is a tally of the total number of critical evaluation elements for this review activity.

EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
VI.	**Accurate/Complete Data Collection: Data collection must ensure that the data collected on the PIP indicators are valid and reliable. Validity is an indication of the accuracy of the information obtained. Reliability is an indication of the repeatability or reproducibility of a measurement.**		
C*	6. A manual data collection tool that ensures consistent and accurate collection of data according to indicator specifications.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	Manual data collection was not used for this study.
	7. A manual data collection tool that supports interrater reliability.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	Manual data collection was not used for this study.
	8. Clear and concise written instructions for completing the manual data collection tool.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	Manual data collection was not used for this study.
	9. An overview of the study in written instructions.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	Manual data collection was not used for this study.
	10. Administrative data collection algorithms/flow charts that show activities in the production of indicators.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The PIP reported that Rocky Mountain Health Plans (RMHP) used VIPS MedMeasures software to run all measures and the software was NCQA certified. The PIP submission included the NCQA audit report that supported the administrative data collection process used by RMHP.
	11. An estimated degree of administrative data completeness. Met = 80 - 100% Partially Met = 50 - 79% Not Met = <50% or not provided	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The estimated degree of administrative data completeness was reported as 95 percent. The NCQA audit report supported the data completeness used by RMHP and no deficiencies were identified.

Results for Activity VI				
# of Elements				
Critical Elements**	**Met**	**Partially Met**	**Not Met**	**Not Applicable**
1	6	0	0	5

* "C" in this column denotes a critical evaluation element.

** This number is a tally of the total number of critical evaluation elements for this review activity.

EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
VII.	**Appropriate Improvement Strategies: Real, sustained improvements in care result from a continuous cycle of measuring and analyzing performance, and developing and implementing systemwide improvements in care. Interventions are designed to change behavior at an institutional, practitioner, or member level.**		
	1. Related to causes/barriers identified through data analysis and quality improvement processes. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The improvement strategies were based on causes/barriers identified through data analysis.
	2. System changes that are likely to induce permanent change.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The improvement strategies noted in the PIP were likely to induce permanent change.
	3. Revised if the original interventions were not successful.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	Interventions had not been revised at the time of this review.
	4. Standardized and monitored if interventions were successful.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	Interventions had not been standardized at the time of this review.

Results for Activity VII				
# of Elements				
Critical Elements**	**Met**	**Partially Met**	**Not Met**	**Not Applicable**
0	2	0	0	2

** This number is a tally of the total number of critical evaluation elements for this review activity.

EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
VIII.	**Sufficient Data Analysis and Interpretation: Describe the data analysis process on the selected clinical or nonclinical study indicators. Include the statistical analysis techniques used.**		
C*	1. Is conducted according to the data analysis plan in the study design. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The baseline data analysis was conducted according to the analysis plan in the study.
C*	2. Allows for the generalization of results to the study population if a sample was selected. If no sampling was performed, this element is scored NA.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	Sampling techniques were not used in this PIP.
	3. Identifies factors that threaten internal or external validity of findings.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The PIP did not discuss factors that could threaten the internal or external validity of the data results. If no factors were identified, the PIP documentation should reflect this. Re-review February 2008: After review of the resubmitted PIP documentation, the score for this evaluation element has been changed from Not Met to Met. The PIP reported that there were no factors that threatened the internal/external validity of the findings.
	4. Includes an interpretation of findings.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	An interpretation of the baseline results was not included in the PIP documentation. Re-review February 2008: After review of the resubmitted PIP documentation, the score for this evaluation element has been changed from Not Met to Met. An interpretation of the baseline findings for both study indicators was provided.

* "C" in this column denotes a critical evaluation element.

** This number is a tally of the total number of critical evaluation elements for this review activity.

EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation		
VIII. **Sufficient Data Analysis and Interpretation: Describe the data analysis process on the selected clinical or nonclinical study indicators. Include the statistical analysis techniques used.**		
5. Is presented in a way that provides accurate, clear, and easily understood information.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The baseline data was reported in an easily understood format; however, the denominators listed in the table in Activity IX were not consistent with the study population sizes reported in Activity V. The PIP should discuss these inconsistencies. Also, Health Services Advisory Group (HSAG) noted that the 2005 HEDIS reported results on page 1 of the PIP Summary Form were 29 percent and the reported 2005 health plan (baseline) results in the PIP Summary Form table were 36 percent. Future submissions of the PIP should address this discrepancy. Re-review February 2008: After review of the resubmitted PIP documentation, the score for this evaluation element has been changed from Partially Met to Met. The denominators have been corrected and are consistent throughout the PIP. However, in the resubmitted PIP, RMHP should make note that the reported baseline result for well-child visits was 61.5 percent in Activity 1 and 60.8 percent in Activity VIII and in the table in Activity IX. Future submissions of the PIP should make sure the result is consistent throughout the PIP documentation. HSAG noted that there was a gap in the reported 2004 (HEDIS 2005) baseline results to the proposed first

* "C" in this column denotes a critical evaluation element.

** This number is a tally of the total number of critical evaluation elements for this review activity.

EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
			remeasurement scheduled for 2009. During a conference call with the RMHP staff, RMHP reported its plans to have HEDIS 2006 data as its new baseline period. It was reported by RMHP that its provider survey was completed in 2006 and interventions are taking place in 2007 and 2008. RMHP will make these changes as they move forward with the study.
	6. Identifies initial measurement and remeasurement of study indicators.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	The study had only progressed to the point of reporting baseline results for this validation cycle.
	7. Identifies statistical differences between initial measurement and remeasurement.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	The study had only progressed to the point of reporting baseline results for this validation cycle.
	8. Identifies factors that affect the ability to compare initial measurement with remeasurement.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	The study had only progressed to the point of reporting baseline results for this validation cycle.
	9. Includes interpretation of the extent to which the study was successful.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	The study had only progressed to the point of reporting baseline results for this validation cycle.

Results for Activity VIII				
# of Elements				
Critical Elements**	**Met**	**Partially Met**	**Not Met**	**Not Applicable**
2	4	0	0	5

* "C" in this column denotes a critical evaluation element.

** This number is a tally of the total number of critical evaluation elements for this review activity.

EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
IX.	**Real Improvement Achieved: Describe any meaningful change in performance observed and demonstrated during baseline measurement. Discuss any random, year-to-year variation, population changes, and sampling error that may have occurred during the measurement process.**		
	1. Remeasurement methodology is the same as baseline methodology.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The study had not progressed to the point of assessing for real improvement.
	2. There is documented improvement in processes or outcomes of care.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The study had not progressed to the point of assessing for real improvement.
	3. The improvement appears to be the result of planned intervention(s).	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The study had not progressed to the point of assessing for real improvement.
	4. There is statistical evidence that observed improvement is true improvement.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The study had not progressed to the point of assessing for real improvement.

Results for Activity IX				
# of Elements				
Critical Elements**	**Met**	**Partially Met**	**Not Met**	**Not Applicable**
0	0	0	0	0

** This number is a tally of the total number of critical evaluation elements for this review activity.

EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
X.	**Sustained Improvement Achieved: Describe any demonstrated improvement through repeated measurements over comparable time periods. Discuss any random, year-to-year variation, population changes, and sampling error that may have occurred during the remeasurement process.**		
	1. Repeated measurements over comparable time periods demonstrate sustained improvement, or that a decline in improvement is not statistically significant.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. Activity X is not assessed until there has been at least a baseline and two annual remeasurements reported in order to assess for sustained improvement.

Results for Activity X				
# of Elements				
Critical Elements**	**Met**	**Partially Met**	**Not Met**	**Not Applicable**
0	0	0	0	0

** This number is a tally of the total number of critical evaluation elements for this review activity.

**Table 4-1—FY 07-08 PIP Validation Report Scores:
Improving Well-Care Visits for Children and Adolescents
for Rocky Mountain Health Plans**

	Review Activity	Total Possible Evaluation Elements (Including Critical Elements)	Total Met	Total Partially Met	Total Not Met	Total NA	Total Possible Critical Elements	Total Critical Elements Met	Total Critical Elements Partially Met	Total Critical Elements Not Met	Total Critical Elements NA
I.	Appropriate Study Topic	6	6	0	0	0	1	1	0	0	0
II.	Clearly Defined, Answerable Study Question	2	2	0	0	0	1	1	0	0	0
III.	Clearly Defined Study Indicator(s)	7	6	0	0	1	3	3	0	0	0
IV.	Use a representative and generalizable study population	3	3	0	0	0	2	2	0	0	0
V.	Valid Sampling Techniques	6	0	0	0	6	1	0	0	0	1
VI.	Accurate/Complete Data Collection	11	6	0	0	5	1	0	0	0	1
VII.	Appropriate Improvement Strategies	4	2	0	0	2	0	No Critical Elements			
VIII.	Sufficient Data Analysis and Interpretation	9	4	0	0	5	2	1	0	0	1
IX.	Real Improvement Achieved	4		Not Assessed			0	No Critical Elements			
X.	Sustained Improvement Achieved	1		Not Assessed			0	No Critical Elements			
Totals for All Activities		**53**	**29**	**0**	**0**	**19**	**11**	**8**	**0**	**0**	**3**

**Table 4-2—FY 07-08 PIP Validation Report Overall Scores:
Improving Well-Care Visits for Children and Adolescents
for Rocky Mountain Health Plans**

Percentage Score of Evaluation Elements Met*	**100%**
Percentage Score of Critical Elements Met**	**100%**
Validation Status***	***Met***

* The percentage score is calculated by dividing the total Met by the sum of the total Met, Partially Met, and Not Met.

** The percentage score of critical elements Met is calculated by dividing the total critical elements Met by the sum of the critical elements Met, Partially Met, and Not Met.

*** Met equals confidence/high confidence that the PIP was valid.
Partially Met equals low confidence that the PIP was valid.
Not Met equals reported PIP results that were not credible.

EVALUATION OF THE OVERALL VALIDITY AND RELIABILITY OF PIP RESULTS
HSAG assessed the implications of the study's findings on the likely validity and reliability of the results based on CMS Protocols. HSAG also assessed whether the State should have confidence in the reported PIP findings.
***Met* = Confidence/high confidence in reported PIP results** ****Partially Met = Low confidence in reported PIP results** *****Not Met = Reported PIP results not credible**

Summary of Aggregate Validation Findings

*		**		***	
	X				
Met		***Partially Met***		***Not Met***	

Summary statement on the validation findings:

Activities I through VIII were assessed for this PIP Validation Report. Based on the validation of this PIP, HSAG's assessment determined high confidence in the results.

Introduction

The appendices consist of documentation supporting the validation process conducted by HSAG using the CMS Protocol for validating PIPs. Appendix A is the study ***Rocky Mountain*** submitted to HSAG for review, Appendix B is the CMS rationale for each activity, and Appendix C includes PIP definitions and explanations.

- Appendix A: **Rocky Mountain Health Plans**' PIP Study: ***Improving Well-Care Visits for Children and Adolescents***
- Appendix B: CMS Rationale by Activity
- Appendix C: Definitions and Explanations by Activity

Appendix A: PIP Summary Form: Improving Well-Care Visits for Children and Adolescents *for* Rocky Mountain Health Plans

DEMOGRAPHIC INFORMATION			
MCO Name or ID:	**Rocky Mountain Health Plans**		
Study Leader Name:	Jackie Hudson	Title: Quality Improvement Program Manager	
Telephone Number:	970-248-5190	E-Mail Address: jackie.hudson@rmhp.org	
Name of Project/Study:	***Improving Well-Care Visits for Children and Adolescents***		
Type of Study:	☐ Clinical	☒ Nonclinical	

13,200	Number of Medicaid Members	**Section to be completed by HSAG** _____ Year 1 Validation _____ Initial Submission _____ Resubmission _____ Year 2 Validation _____ Initial Submission _____ Resubmission __X__ Year 3 Validation _____ Initial Submission __X__ Resubmission
3,290	Number of Medicaid Members in Study	
		Section to be completed by HSAG __X__ Baseline Assessment _____ Remeasurement 1 _____ Remeasurement 2 _____ Remeasurement 3

Appendix A: PIP Summary Form: Improving Well-Care Visits for Children and Adolescents *for* Rocky Mountain Health Plans

A. Activity I: Choose the study topic. PIP topics should target improvement in relevant areas of services and reflect the population in terms of demographic characteristics, prevalence of disease, and the potential consequences (risks) of the disease. Topics may be derived from utilization data (ICD-9 or CPT coding data related to diagnoses and procedures; NDC codes for medications; HCPC codes for medications, medical supplies, and medical equipment; adverse events; admissions; readmissions; etc.); grievances and appeals data; survey data; provider access or appointment availability data; member characteristics data such as race/ethnicity/language; other fee-for-service data; local or national data related to Medicaid risk populations; etc. The goal of the project should be to improve processes and outcomes of health care or services in order to have a potentially significant impact on member health, functional status, or satisfaction. The topic may be specified by the State Medicaid agency or CMS and be based on input from members. Over time, topics must cover a broad spectrum of key aspects of member care and services, including clinical and nonclinical areas, and should include all enrolled populations (i.e., certain subsets of members should not be consistently excluded from studies).

Study topic:

National Guidelines from the American Academy of Pediatrics (AAP) and the American Academy of Family Physicians (AAFP) recommend annual well care exams for children age 3 – 6 years and adolescents 12 – 21 years. Well care visits are important for early detection and tracking of patients at risk for chronic conditions, education about the importance of preventive testing and immunizations, and anticipatory guidance to promote healthy behaviors and reduce risks form injuries, accidents, and substance abuse.

Rocky Mountain Health Plans (RMHP) noted a decline in 2005 HEDIS rates for well care visits for all age groups less than 21 years. The 2005 HEDIS adolescent well care visit rate was **35.8%** which is at the NCQA **50th percentile**. The 2005 HEDIS child well visit rate is **61.5%** which is at the NCQA 50th percentile. Fifty-seven percent of RMHP Medicaid membership falls in the 0 – 19 years age group. All members within the two age groups are eligible for this study including those with special health care needs. RMHP initial data analysis raises questions about access and availability of services to practitioners who see children and potential barriers to receiving these services.

11/07

This PIP is ongoing. A face to face provider survey was completed during HEDIS 2006 to assist in identifying barriers to access and availability of well child and adolescent services from the provider office perspective. Based on these results of the survey, the decision was to develop provider education focused around coding of well care visits to capture the care being provided. The first remeasurement will occur during HEDIS 2009.

B. Activity II: Define the study question(s). Stating the question(s) helps maintain the focus of the PIP and sets the framework for data collection, analysis, and interpretation.

Study question:

Do member and provider education and interventions improve guideline compliance with recommended well child/adolescent visits with subsequent improvements in visit rates?

Appendix A: PIP Summary Form: Improving Well-Care Visits for Children and Adolescents *for* Rocky Mountain Health Plans

C. Activity III: Select the study indicator(s). A study indicator is a quantitative or qualitative characteristic or variable that reflects a discrete event (e.g., an older adult has not received an influenza vaccination in the last twelve months), or a status (e.g., a member's blood pressure is/is not below a specified level) that is to be measured. The selected indicators should track performance or improvement over time. The indicators should be objective, clearly and unambiguously defined, and based on current clinical knowledge or health services research.

Study Indicator 1 ***Adolescent Well-Care Visits***	**Describe rationale for selection of study indicator:** This indicator measures adolescent well care visit rates. This is a HEDIS measure.
Numerator	At least one comprehensive well-care visit with a primary care practitioner or an OB/GYN practitioner during the measurement year. The PCP does not have to be the practitioner assigned to the member.
Denominator	The eligible Medicaid population. Members ages 12 – 21 years as of December 31 of the measurement year. (HEDIS 2006 Specifications)
First Measurement Period Dates	1/1/04 – 12/31/04
Benchmark	**45%**
Source of Benchmark	HEDIS 2004 NCQA National Percentiles (**75th** Percentile)
Baseline Goal	**37%**
Study Indicator 2 ***Well Child Visits in the Third, Fourth, Fifth and Sixth Years of Life***	**Describe rationale for selection of study indicator:** This indicator measures well child visits in the third, fourth, fifth, and sixth years of life. This is a HEDIS measure.
Numerator	At least one comprehensive well-care visit with a primary care practitioner during the measurement year. The PCP does not have to be the practitioner assigned to the member.
Denominator	The eligible Medicaid population. Members ages 3 – 6 years as of December 31 of the measurement year. (HEDIS 2006 Specifications)
First Measurement Period Dates	1/1/04 – 12/31/04
Benchmark	70%
Source of Benchmark	HEDIS 2004 NCQA National Percentiles (75th Percentile)
Baseline Goal	64%

Appendix A: PIP Summary Form: Improving Well-Care Visits for Children and Adolescents *for* Rocky Mountain Health Plans

C. Activity III: Select the study indicator(s). A study indicator is a quantitative or qualitative characteristic or variable that reflects a discrete event (e.g., an older adult has not received an influenza vaccination in the last twelve months), or a status (e.g., a member's blood pressure is/is not below a specified level) that is to be measured. The selected indicators should track performance or improvement over time. The indicators should be objective, clearly and unambiguously defined, and based on current clinical knowledge or health services research.

Study Indicator 3	**Describe rationale for selection of study indicator:**
Numerator	
Denominator	
First Measurement Period Dates	
Benchmark	
Source of Benchmark	
Baseline Goal	

Use this area for the provision of additional information:

Appendix A: PIP Summary Form: Improving Well-Care Visits for Children and Adolescents *for* Rocky Mountain Health Plans

D. Activity IV: Use a representative and generalizable study population. The selected topic should represent the entire Medicaid enrolled population, with system wide measurement and improvement efforts to which the study indicators apply. Once the population is identified, a decision must be made whether to review data for the entire population or a sample of that population. The length of a member's enrollment needs to be defined in order to meet the study population criteria.

Study population:

HEDIS Measure Description

Study Indicator # 1

Description: HEDIS Use of Services: Adolescent Well Care Visits

The percentage of enrolled members who were 12-21 years of age and who had at least one comprehensive well care visit with a primary care practitioner or an OB/GYN practitioner during the measurement year.

HEDIS Eligible Population

Product Line	Medicaid
Age	12- 21 years as of December 31 of the measurement year
Continuous Enrollment	The measurement year.
Allowable Gap	Members who have had no more than one gap in enrollment of up to 45 days during the measurement year. To determine continuous enrollment for a Medicaid member for whom enrollment is verified monthly, the member may not have more than a one month gap in coverage (i.e., a member whose coverage lapses for two months [60 days] is considered continuously enrollment).
Anchor Date	December 31 of the measurement year.
Benefit	Medical
Event/Diagnosis	None

Appendix A: PIP Summary Form: Improving Well-Care Visits for Children and Adolescents *for* Rocky Mountain Health Plans

D. Activity IV: Use a representative and generalizable study population. The selected topic should represent the entire Medicaid enrolled population, with system wide measurement and improvement efforts to which the study indicators apply. Once the population is identified, a decision must be made whether to review data for the entire population or a sample of that population. The length of a member's enrollment needs to be defined in order to meet the study population criteria.

Study Indicator # 2

Description: HEDIS Use of Services: Well Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life

The percentage of members who were three, four, five, or six years of age who received one or more well child visits with a primary care practitioner during the measurement year.

HEDIS Eligible Population

Product Line	Medicaid
Age	3 – 6 years as of December 31 of the measurement year
Continuous Enrollment	The measurement year.
Allowable Gap	No more than one gap in enrollment of up to 45 days during the continuous enrollment period. To determine continuous enrollment for a Medicaid member for whom enrollment is verified monthly, the member may not have more than a one month gap in coverage (i.e., a member whose coverage lapses for two months [60 days] is considered continuously enrollment).
Anchor Date	December 31 of the measurement year.
Benefit	Medical
Event/Diagnosis	None

Appendix A: PIP Summary Form: Improving Well-Care Visits for Children and Adolescents *for* Rocky Mountain Health Plans

E. Activity V: Use sound sampling methods. If sampling is to be used to select members of the study, proper sampling techniques are necessary to provide valid and reliable information on the quality of care provided. The true prevalence or incidence rate for the event in the population may not be known the first time a topic is studied.

Measure	Sample Error and Confidence Level	Sample Size	Population	Method for Determining Size (*describe*)	Sampling Method (*describe*)
Study Indicator #1-HEDIS Use of Services: Adolescent Well Care Visits Study Indicator #2- HEDIS use of Services: Well Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life		Study Indicator #1- 1,570* Study Indicator #2- 1,720* *Sampling was not used for this PIP. These numbers reflect the actual eligible population.	As defined in Activity 4 As defined in Activity 4	HEDIS 2006 technical specifications.	HEDIS 2006 Technical Specifications RMHP uses VIPS MedMeasures software to generate the eligible population. The software has been certified by NCQA and is reviewed annually by an independent HEDIS auditor. Confidence Level: N/A* Acceptable Margin of Error: N/A* *Sampling was not used for this PIP. These numbers reflect the actual eligible population.

Appendix A: PIP Summary Form: Improving Well-Care Visits for Children and Adolescents *for* Rocky Mountain Health Plans

F. Activity VIa: Use valid and reliable data collection procedures. Data collection must ensure that the data collected on study indicators are valid and reliable. Validity is an indication of the accuracy of the information obtained. Reliability is an indication of the repeatability or reproducibility of a measurement.

Data Sources

[ ] Hybrid (medical/treatment records and administrative)

[ ] Medical/Treatment Record Abstraction

Record Type

[ ] Outpatient
[ ] Inpatient
[ ] Other _____

Other Requirements

[ ] Data collection tool attached
[ ] Data collection instructions attached
[ ] Summary of data collection training attached
[ ] IRR process and results attached

[X] Other data: RMHP uses VIPS MedMeasures software to run all HEDIS measures. MedMeasures software is NCQA certified. The following documents are attached: Attachment # 1 2006 NCQA HEDIS Compliance Audit Final Report and, Attachment #2 HEDIS Data Integration document. These two documents explain the data integration process and provide evidence that the organization passed the NCQA HEDIS compliance audit.

Description of data collection staff (include training, experience and qualifications): **RMHP used its own staff to perform the provider survey. All clinicians have significant clinical experience. The clinicians received training on how to administer the survey tool at the annual HEDIS training session.**

[X] Administrative Data

Data Source

[X] Programmed pull from claims/encounters
[ ] Complaint/appeal
[ ] Pharmacy data
[ ] Telephone service data /call center data
[ ] Appointment/access data
[ ] Delegated entity/vendor data _____
[ ] Other _____

Other Requirements

[ ] Data completeness assessment attached
[ ] Coding verification process attached

[X] Survey Data

Fielding Method

[X] Personal interview
[ ] Mail
[ ] Phone with CATI script
[ ] Phone with IVR
[ ] Internet
[X] Other _HEDIS Audit Certificate

Other Requirements

[ ] Number of waves _____
[ ] Response rate _____
[ ] Incentives used _____

Appendix A: PIP Summary Form: Improving Well-Care Visits for Children and Adolescents *for* Rocky Mountain Health Plans

F. Activity VIb: Determine the data collection cycle.	Determine the data analysis cycle.
[X] Once a year [ ] Twice a year [ ] Once a season [ ] Once a quarter [ ] Once a month [ ] Once a week [ ] Once a day [ ] Continuous [ ] Other (list and describe): The data collection cycle is based on the calendar year. The data is collected during the spring of each year. An intervention will be developed and implemented in 2007. Data re-measurement will occur in the spring of 2008.	[X] Once a year [ ] Once a season [ ] Once a quarter [ ] Once a month [ ] Continuous [ ] Other (list and describe):

F. Activity VIc. Data analysis plan and other pertinent methodological features. Complete only if needed.

Estimated percentage degree of administrative data completeness: _95_ percent.

Supporting documentation:

During 2006 HEDIS data collection, 32 pediatric primary care physician offices were interviewed in to identify barriers to access and availability of well child and adolescent services from the provider office perspective. Office managers were interviewed by nurses from RMHP using a standardized interview form. RMHP is currently analyzing the results of the interviews to determine intervention strategies.

11/01/07 The results of the primary care physician office survey were analyzed. The results of the survey are included in the file named PIP_RMHP Barriers to Access Survey.doc. Below is a summary of the survey results. The survey questions have been divided into four categories.

- Appointment Wait Times

F. Activity VIc. Data analysis plan and other pertinent methodological features. Complete only if needed.

- 84% of the offices indicated appointment wait times were 15 days or less

- Use of Guidelines for Scheduling Appointments
  - 81% of the offices indicated they have guidelines for the scheduling of appointments
- Reminder/Recall/Tracking Systems
  - Multiple responses allowed
    - 30% used a reminder system
    - 24% review the medical record at each visit and schedule the next appointment as indicated
    - 18% used a recall system
    - 16% used a tracking system
    - 12% indicated no standard system
- Children/Adolescents Presenting Ill at Planned Well Care Visits
  - Multiple responses allowed
    - 54% proceeded with well care visit
    - 34% variety of responses indicating care was depended upon severity of child's illness
    - 12% reschedule the well care visit

Lessons Learned

- more difficult to interpret surveys when multiple answers are allowed
- next time will add more responses instead of using the "other" category to capture information

Appendix A: PIP Summary Form: Improving Well-Care Visits for Children and Adolescents *for* Rocky Mountain Health Plans

G. Activity VIIa: Include improvement strategies (interventions for improvement as a result of analysis). List chronologically the interventions that have had the most impact on improving the measure. Describe only the interventions and provide quantitative details whenever possible (e.g., "Hired four customer service representatives" as opposed to "Hired customer service representatives"). Do not include intervention planning activities.

Date Implemented (MMYY)	Check if Ongoing	Interventions	Barriers That Interventions Address

G. Activity VIIb: Implement intervention and improvement strategies. Real, sustained improvements in care result from a continuous cycle of measuring and analyzing performance, and developing and implementing systemwide improvements in care. Describe interventions designed to change behavior at an institutional, practitioner, or member level.

Describe interventions:

Based on these results of the survey, the final decision was to develop provider education focused around coding of well care visits to capture the care being provided. A series of educational efforts will be conducted.

1) Provider Newsletter- The December 2007 provider newsletter will include an article about the coding of well care visits.
2) Provider Manual- The Spring 2008 provider manual will be revised to include additional details about coding for well care visits.
3) Annual PCP Education- The annual PCP office manager meetings will include specific education on coding of well care visits.

Interventions will begin the end of 2007 and continue through 2008. The first re-measurement of this measure will occur during HEDIS 2009. This measure was rotated for HEDIS 2007.

Baseline to Remeasurement 1:

Remeasurement 1 to Remeasurement 2:

Remeasurement 2 to Remeasurement 3:

H. Activity VIIIa. Data analysis: Describe the data analysis process in accordance with the analysis plan and any ad hoc analysis done on the selected clinical or nonclinical study indicators. Include the statistical analysis techniques used and *p* values.

Data analysis process:

Using the methodology described in Activity 6, the results for each of the measure is calculated. Once this information is gathered, all available information (demographic and utilization) is pulled from the available resources and the search for possible trends begins. Using SAS® and Microsoft Access®, Chi Square Tests of Association are used to interpret the statistical significant of year to year rate differences. The sampled population results are also compared to other known population rates in an attempt to further define and understand the population and its utilization.

Baseline Measurement: 01/01/2004 – 12/31/2004

Data analysis was performed as indicated above.

Study Indicator #1 Results: 35.8%

Study Indicator #2 Results: 60.8%

The Quality Improvement team elected to perform a provider survey during HEDIS 2006 to determine if there were any access issues that may be causing the low well child and adolescent visit rate.

Remeasurement 1:

Remeasurement 2:

Remeasurement 3:

H. Activity VIIIb. Interpretation of study results: Describe the results of the statistical analysis, interpret the findings, discuss the successfulness of the study, and indicate follow-up activities. Also, identify any factors that could influence the measurement or validity of the findings.

Interpretation of study results:

Address factors that threaten internal or external validity of the findings for each measurement period.

Baseline Measurement: 01/01/2004 – 12/31/2004

Two HEDIS measures were used for the study indicators as listed in Activity III. The HEDIS technical specifications were reviewed to revisions. NCQA made minor changes to the technical specifications in HEDIS 2005 clarifying reporting requirements for these two measures. No factors were identified that would affect the internal or external validity of the findings. No factors were identified that would affect the ability to compare remeasurement period one with the baseline year.

Remeasurement 1:

Remeasurement 2:

Remeasurement 3:

Appendix A: PIP Summary Form: Improving Well-Care Visits for Children and Adolescents *for* Rocky Mountain Health Plans

I. Activity IX: Report improvement. Describe any meaningful change in performance observed and demonstrated during baseline measurement.

Quantifiable Measure No. 1:

Time Period Measurement Covers	Baseline Project Indicator Measurement	Numerator	Denominator	Rate or Results	Industry Benchmark	Statistical Test and Significance* Test statistic and p-value
01/01/04 – 12/31/04	***Baseline 1***	563	1570	35.8%	46%	
	Remeasurement 1					
	Remeasurement 2					
	Remeasurement 3					
	Remeasurement 4					
	Remeasurement 5					

Quantifiable Measure No. 2:

Time Period Measurement Covers	Baseline Project Indicator Measurement	Numerator	Denominator	Rate or Results	Industry Benchmark	Statistical Test and Significance* Test statistic and p-value
01/01/04 – 12/31/04	***Baseline 1***	1046	1720	60.8%	71%	
	Remeasurement 1					
	Remeasurement 2					
	Remeasurement 3					
	Remeasurement 4					
	Remeasurement 5					

Quantifiable Measure No. 3:

Time Period Measurement Covers	Baseline Project Indicator Measurement	Numerator	Denominator	Rate or Results	Industry Benchmark	Statistical Test and Significance* Test statistic and p-value
	Baseline:					
	Remeasurement 1					
	Remeasurement 2					
	Remeasurement 3					
	Remeasurement 4					
	Remeasurement 5					

* Specify the test, *p* value, and specific measurements (e.g., baseline to remeasurement 1, remeasurement 1 to remeasurement 2, etc., or baseline to final remeasurement) included in the calculations.

Appendix A: PIP Summary Form: Improving Well-Care Visits for Children and Adolescents *for* Rocky Mountain Health Plans

J. Activity X: Describe sustained improvement. Describe any demonstrated improvement through repeated measurements over comparable time periods. Discuss any random year-to-year variation, population changes, sampling error, or statistically significant declines that may have occurred during the remeasurement process
Sustained improvement:

PIPs provide a structured method of assessing and improving the processes, and thereby the outcomes, of care for the population that a health plan serves. This structure facilitates the documentation and evaluation of improvements in care or service. PIPs are conducted by the health plans to assess and improve the quality of clinical and nonclinical health care services received by members.

The PIP evaluation is based on CMS guidelines as outlined in the CMS publication, *Validating Performance Improvement Projects: A Protocol for Use in Conducting Medicaid External Quality Review Activities*, Final Protocol, Version 1.0, May 1, 2002 (CMS PIP Protocol).

This document highlights the rationale for each activity as established by CMS. The protocols for conducting PIPs can assist the health plans in complying with requirements.

CMS Rationale

Activity I. Appropriate Study Topic

All PIPs should target improvement in relevant areas of clinical care and nonclinical services. Topics selected for study by Medicaid managed care organizations must reflect the health plan's Medicaid enrollment in terms of demographic characteristics, prevalence of disease, and the potential consequences (risks) of disease (CMS PIP Protocol, page 2).

Activity II. Clearly Defined, Answerable Study Question

It is important for the health plan to clearly state, in writing, the question(s) the study is designed to answer. Stating the question(s) helps maintain the focus of the PIP and sets the framework for data collection, analysis, and interpretation (CMS PIP Protocol, page 5).

Activity III. Clearly Defined Study Indicator(s)

A study indicator is a quantitative or qualitative characteristic (variable) reflecting a discrete event (e.g., an older adult has/has not received an influenza vaccination in the last 12 months) or a status (e.g., a member's blood pressure is/is not below a specified level) that is to be measured.

Each project should have one or more quality indicators for use in tracking performance and improvement over time. All indicators must be objective, clearly and unambiguously defined, and based on current clinical knowledge or health services research. In addition, all indicators must be capable of objectively measuring either member outcomes, such as health status, functional status, or member satisfaction, or valid proxies of these outcomes.

Indicators can be few and simple, many and complex, or any combination thereof, depending on the study question(s), the complexity of existing practice guidelines for a clinical condition, and the availability of data and resources to gather the data.

Indicator criteria are the set of rules by which the data collector or reviewer determines whether an indicator has been met. Pilot or field testing is helpful in the development of effective indicator criteria. Such testing allows the opportunity to add criteria that might not have been anticipated in the design phase. In addition, criteria are often refined over time based on results of previous studies. However, if criteria are changed significantly, the method for calculating an indicator will not be consistent and performance on indicators will not be comparable over time.

It is important, therefore, for indicator criteria to be developed as fully as possible during the design and field testing of data collection instruments (CMS PIP Protocol, page 5).

Activity IV. Use a Representative and Generalizable Study Population

Once a topic has been selected, measurement and improvement efforts must be systemwide (i.e., each project must represent the entire Medicaid-enrolled population to which the study indicators apply). Once that population is identified, the health plan must decide whether to review data for that entire population or use a sample of that population. Sampling is acceptable as long as the samples are representative of the identified population (CMS PIP Protocol, page 8). (See Activity V. Valid Sampling Techniques.)

Activity V. Valid Sampling Techniques

If the health plan uses a sample to select members for the study, proper sampling techniques are necessary to provide valid and reliable (and, therefore, generalizable) information on the quality of care provided. When conducting a study designed to estimate the rates at which certain events occur, the sample size has a large impact on the level of statistical confidence in the study estimates. Statistical confidence is a numerical statement of the probable degree of certainty or accuracy of an estimate. In some situations, it expresses the probability that a difference could be due to chance alone. In other applications, it expresses the probability of the accuracy of the estimate. For example, a study may report that a disease is estimated to be present in 35 percent of the population. This estimate might have a 95 percent level of confidence, plus or minus 5 percentage points, implying a 95 percent certainty that between 30 percent and 40 percent of the population has the disease.

The true prevalence or incidence rate for the event in the population may not be known the first time a topic is studied. In such situations, the most prudent course of action is to assume that a maximum sample size is needed to establish a statistically valid baseline for the project indicators (CMS PIP Protocol, page 9).

Activity VI. Accurate/Complete Data Collection

Procedures used by the health plan to collect data for its PIP must ensure that the data collected on the study indicators are valid and reliable. Validity is an indication of the accuracy of the information obtained. Reliability is an indication of the repeatability or reproducibility of a measurement. The health plan should employ a data collection plan that includes:

- Clear identification of the data to be collected.
- Identification of the data sources and how and when the baseline and repeat indicator data will be collected.
- Specification of who will collect the data.
- Identification of instruments used to collect the data.

When data are collected from automated data systems, development of specifications for automated retrieval of the data should be devised. When data are obtained from visual inspection of medical records or other primary source documents, several steps should be taken to ensure the data are consistently extracted and recorded:

1. The key to successful manual data collection is in the selection of the data collection staff. Appropriately qualified personnel with conceptual and organizational skills should be used to abstract the data. However, their specific skills should vary depending on the nature of the data collected and the degree of professional judgment required. For example, if data collection involves searching throughout the medical record to find and abstract information or judge whether clinical criteria were met, experienced clinical staff members, such as registered nurses, should collect the data. However, if the abstraction involves verifying the presence of a diagnostic test report, trained medical assistants or medical records clerks may be used.
2. Clear guidelines for obtaining and recording data should be established, especially if multiple reviewers are used to perform this activity. The health plan should determine the necessary qualifications of the data collection staff before finalizing the data collection instrument. An abstractor would need fewer clinical skills if the data elements within the data source are more clearly defined. Defining a glossary of terms for each project should be part of the training of abstractors to ensure consistent interpretation among project staff members.
3. The number of data collection staff members used for a given project affects the reliability of the data. A smaller number of staff members promotes interrater reliability; however, it may also increase the amount of time it takes to complete this task. Intrarater reliability (i.e., reproducibility of judgments by the same abstractor at a different time) should also be considered (CMS PIP Protocol, page 12).

Activity VII. Appropriate Improvement Strategies

Real, sustained improvements in care result from a continuous cycle of measuring and analyzing performance and developing and implementing systemwide improvements in care. Actual improvements in care depend far more on thorough analysis and implementation of appropriate solutions than on any other steps in the process.

An improvement strategy is defined as an intervention designed to change behavior at an institutional, practitioner, or member level. The effectiveness of the intervention activity or activities can be determined by measuring the health plan's change in performance according to predefined quality indicators. Interventions are key to an improvement project's ability to bring about improved health care outcomes. The health plan must identify and develop appropriate interventions for each PIP to ensure the likelihood of measurable change.

If repeated measurements of quality improvement (QI) indicate that QI actions were not successful (i.e., the QI actions did not achieve significant improvement), the problem-solving process begins again with data analysis to identify possible causes, propose and implement solutions, and so forth. If QI actions were successful, the new processes should be standardized and monitored (CMS PIP Protocol, page 16).

Activity VIII. Sufficient Data Analysis and Interpretation

Review of health plan data analysis begins with examining the health plan's calculated plan performance on the selected clinical or nonclinical indicators. The review examines the appropriateness of, and the health plan's adherence to, the statistical analysis techniques defined in the data analysis plan (CMS PIP Protocol, page 17).

Activity IX. Real Improvement Achieved

When a health plan reports a change in its performance, it is important to know whether the reported change represents real change, is an artifact of a short-term event unrelated to the intervention, or is due to random chance. The external quality review organization (EQRO) will need to assess the probability that reported improvement is actually true improvement. This probability can be assessed in several ways, but is most confidently assessed by calculating the degree to which an intervention is statistically significant. While the protocol for this activity does not specify a level of statistical significance that a reported change must meet, it does require that EQROs assess the extent to which any performance changes reported by the health plan can be found to be statistically significant. States may choose to establish their own numerical thresholds for the significance of reported improvements (CMS PIP Protocol, page 18).

Activity X. Sustained Improvement Achieved

Real change results from changes in the fundamental processes of health care delivery. Such changes should result in sustained improvements. In contrast, a spurious, one-time improvement can result from unplanned, accidental occurrences or random chance. If real change has occurred, the health plan should be able to document sustained improvement (CMS PIP Protocol, page 19).

Appendix C. Definitions and Explanations by Activity

for Rocky Mountain Health Plans

This document was developed by HSAG as a resource to assist health plans in understanding the broad concepts in each activity related to PIPs. The specific concept is delineated in the left column, and the explanations and examples are provided in the right column.

Concepts	Definitions and Explanations
Activity I. Appropriate Study Topic	
Broad spectrum of care	◆ Clinical focus areas: Includes prevention and care of acute and chronic conditions and high-volume/high-risk services. High-risk procedures may also be targeted (e.g., care received from specialized centers). ◆ Nonclinical areas: Continuity or coordination of care addressed in a manner in which care is provided from multiple providers and across multiple episodes of care (e.g., disease-specific or condition-specific care).
Eligible population	◆ May be defined as members who meet the study population parameters.
Selected by the State	◆ If the study topic was selected by the state Medicaid agency, this information is included as part of the description under Activity I: "Choose the Selected Study Topic" in the PIP Summary Form.
Activity II. Clearly Defined, Answerable Study Question	
Study question	◆ The question(s) directs and maintains the focus of the PIP and sets the framework for data collection, analysis, and interpretation. The question(s) must be measurable and clearly defined. ◆ Examples: 1. Does educational outreach about immunizations increase the rates of immunizations for children 0–2 years of age? 2. Does increasing flu immunizations for members with chronic asthma impact overall health status? 3. Will increased planning and attention to follow-up after inpatient discharge improve the rate of mental health follow-up services?

Concepts	Definitions and Explanations
Activity III. Clearly Defined Study Indicator(s)	
Study indicator	◆ A quantitative or qualitative characteristic reflecting a discrete event or status that is to be measured. Indicators are used to track performance and improvement over time. ◆ Example: The percentage of enrolled members who were 12–21 years of age who had at least one comprehensive well-care visit with a primary care practitioner or an obstetrician-gynecologist during the measurement year.
Sources identified	◆ Documentation/background information that supports the rationale for the study topic, study question, and indicators. ◆ Examples: HEDIS®[1] measures, medical community practice guidelines, evidence-based practices, or provider agreements. ◆ Practice guideline examples: American Academy of Pediatrics and American Diabetes Association.
Activity IV. Use a Representative and Generalizable Study Population	
Eligible population	◆ Refers to members who are included in the study. ◆ Includes age, conditions, enrollment criteria, and measurement periods. ◆ Example: The eligible population includes all children 0–2 years of age as of December 31 of the measurement period, with continuous enrollment and no more than one enrollment gap of 30 days or less.
Activity V. Valid Sampling Techniques	
True or estimated frequency of occurrence	◆ This may not be known the first time a topic is studied. In this case, the health plan should assume the need for a maximum sample size to establish a statistically valid baseline for the study. HSAG will review whether the health plan defined the impact the topic has on the population or the number of eligible members in the population.
Sample size	◆ Indicates the size of the sample to be used.
Representative sample	◆ Refers to the sample reflecting the entire population.
Confidence level	◆ Statistical confidence is a numerical statement of the probable degree of certainty or accuracy of an estimate (e.g., 95 percent level of confidence with a 5 percent margin of error).

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

Concepts	Definitions and Explanations
Activity VI. Accurate/Complete Data Collection	
Data elements	◆ Identification of data elements includes unambiguous definitions of data that will be collected (e.g., the numerator/denominator, laboratory values).
Interrater reliability (IRR)	◆ The HSAG review team evaluates if there is a tool, policy, and/or process in place to verify the accuracy of the data abstracted. Is there an over-read (IRR) process for the review of a minimum percentage of records? ◆ Examples: A policy that includes how IRR is tested, documentation of training, and instruments and tools used.
Algorithms	◆ The development of any systematic process that consists of an ordered sequence of steps. Each step depends on the outcome of the previous step. ◆ The HSAG review team expects for the health plan to describe the process used in data collection. What are the criteria (e.g., what Current Procedural Terminology and/or source codes were used)?
Data completeness	◆ For the purposes of PIP scoring, data completeness refers to the degree of complete administrative data (e.g., encounter data or claims data). Health plans that compensate their providers on a fee-for-service basis require a submission of claims for reimbursement. However, providers generally have several months before they must submit the claim for reimbursement, and processing claims by the health plan may take several additional months, creating a claims lag. Providers paid on a capitated or salaried basis do not need to submit a claim to be paid, but should provide encounter data for the visit. In this type of arrangement, some encounter data may not be submitted. ◆ PIPs that use administrative data need to ensure that the data has a high degree of completeness prior to its use. Evidence of data completeness levels may include claim processing lag reports, trending of provider submission rates, policies and procedures regarding timeliness requirements for claims and encounter data submission, encounter data submission studies, and comparison reports of claims/encounter data versus medical record review. Discussion in the PIP should focus on evidence at the time the data was collected for use in identifying the population, sampling, and/or calculation of the study indicators. Statements such as, "Data completeness at the time of the data pull was estimated to be 97.8 percent based on claims lag reports (see attached Incurred But Not Reported report)," along with the attachment mentioned, usually (but not always) are sufficient evidence to demonstrate data completeness.

Concepts	Definitions and Explanations
Activity VII. Appropriate Improvement Strategies	
Causes and barriers	◆ Interventions for improvement are identified through evaluation or barrier analysis. If there is no improvement, what problem-solving processes are put in place to identify possible causes and proposed changes to implement solutions? ◆ It is expected that interventions associated with improvement of quality indicators will be system interventions.
Standardized	◆ If the interventions result in successful outcomes, the interventions should continue and the health plan should monitor them to ensure that the outcomes remain. ◆ Examples: If an intervention is the use of practice guidelines, then the health plan continue to use them. If mailers are a successful intervention, then the health plan continues the mailings and monitors the outcomes.
Activity VIII. Sufficient Data Analysis and Interpretation	
Analysis plan	◆ Each study should have a plan for how data analysis will occur. ◆ The HSAG review team will ensure that this plan was followed.
Generalization to the study population	◆ Study results can be applied to the general population with the premise that comparable results will occur.
Factors that threaten internal and external validity	◆ Did the analysis identify any factors (internal or external) that would threaten the validity of study results? ◆ Example: There was a change in record extraction (e.g., a vendor was hired or there were changes in HEDIS methodology).
Presentation of the data analysis	◆ Results should be presented in tables or graphs with measurement periods, results, and benchmarks clearly identified.
Identification of initial measurement and remeasurement of study indicators	◆ Clearly identify in the report which measurement period the indicator results reflect.
Statistical differences between initial measurement and remeasurement periods	◆ The HSAG review team looks for evidence of a statistical test (e.g., a *t* test or Chi-square test).
Identification of the extent to which the study was successful	◆ The HSAG review team looks for improvement over several measurement periods. ◆ Both interpretation and analysis should be based on continuous improvement philosophies, with the health plan documenting data results and the follow-up steps that will be taken for improvement.

Concepts	Definitions and Explanations
Activity IX. Real Improvement Achieved	
Remeasurement methodology is the same as baseline	◆ The HSAG review team looks to see that the study methodology remains the same for the entire study.
Documented improvement in processes or outcomes of care	◆ The study should document how interventions were successful in impacting system processes or outcomes. ◆ Examples: There was a change in data collection or a rate increase or decrease demonstrated in graphs/tables.
Activity X. Sustained Improvement Achieved	
Sustained improvement	◆ The HSAG review team looks to see if study improvements have been sustained over the course of the study. This needs to be demonstrated over a period of several (more than two) remeasurement periods.