FY 07-08 Colorado PIP Validation Report

Improving Postpartum Visit Rates

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 the 1998 American College of Obstetricians and Gynecologists (ACOG) guidelines for practitioners providing postpartum care visits to Medicaid members enrolled with **Rocky Mountain Health Plans** (**RMHP**). Obstetrical deliveries were identified in the top 10 diagnoses for the **RMHP** Medicaid population. Based on HEDIS 2005 results, the postpartum care visit rate was 75.4 percent.

Study Topic

The topic addressed CMS' requirements related to access to, and timeliness of, care and services—namely, postpartum visits for **RMHP** members. The study topic, ***Improving Postpartum Visit***

Rates, reflected a high-volume condition for the plan's Medicaid population, with obstetrical deliveries ranking among the top 10 diagnoses for **RMHP** members.

The study question presented by **RMHP** was: "Do member and practitioner education and interventions improve compliance with national guidelines in obtaining a timely postpartum visit (HEDIS measurement criteria of 21–56 days post delivery) and subsequent improvement in visit rates?"

Study Methodology

RMHP used HEDIS technical specifications to define its postpartum study indicator. The study indicator collected data on postpartum visits between 21 and 56 days after delivery. Claims/encounters and medical record review were used to collect the data. The data was collected on eligible Medicaid women who had a live birth between November 6, 2005, and November 5, 2006. The data were collected and reported on timeliness of care and services provided by **RMHP**.

Study Results

RMHP reported results for baseline through the second remeasurement in this year's submission. The baseline result for the study indicator was 75.4 percent. For the first remeasurement period, **RMHP** demonstrated an improvement in its postpartum visit rate, with a result of 78.0 percent. These results were not statistically significant. For the second remeasurement period, **RMHP** demonstrated a decline, with a result of 76.0 percent. This decline was not statistically significant and the results remain above both the baseline of 75.4 percent and the HEDIS 2004 NCQA 90th percentile.

Scoring

HSAG validates a total of 10 activities for each PIP. The 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, 10 activities with a total of 53 elements were validated. Of this number:
  - 48 evaluation elements were *Met*.

- 2 evaluation elements were *Partially Met.*
- 1 evaluation element was *Not Met*.
- 2 evaluation elements were *Not Applicable (NA).*

- The total number of critical elements that were evaluated equaled 11. Of this number:
  - 11 critical elements were *Met*.
  - 0 critical elements were *Partially Met.*
  - 0 critical elements were *Not Met*.
  - 0 critical elements were *NA.*

The final validation finding of **RMHP** PIP showed an overall score of 94 percent, a critical element score of 100 percent, and *Met* validation status.

Conclusions

For the 2007–2008 validation cycle, the study successfully addressed access to, and timeliness of, care and services. **RMHP** completed Activities I through X, receiving scores of 94 percent for evaluation elements *Met* and 100 percent for critical elements *Met.* Although **RMHP** demonstrated a decline in the second remeasurement, the PIP has demonstrated improvement since baseline, and **RMHP** plans to continue its member incentive intervention through calendar year 2007, with remeasurement in 2008.

Requirements

There were no requirements identified during this review.

Recommendations

Upon re-review of the PIP, HSAG suggested that **RMHP** perform a second causal/barrier analysis in order to assess for necessary changes that could be made to existing interventions or implementation of new interventions. These changes may help **RMHP** achieve its desired goals and outcomes.

Comparison of Years 1 through 3

RMHP completed Activities I through III for the FY 05–06 validation cycle. **RMHP's** scores for this first year were 100 percent for evaluation elements *Met* and 100 percent for critical elements *Met.* For the FY 06–07 validation cycle, Year 2, **RMHP** progressed through Activity VI, completing data collection, and received scores of 100 percent for evaluation elements *Met* and 100 percent for critical elements *Met.* For the FY 07–08 validation cycle, Year 3, **RMHP** progressed through Activity X and received scores of 94 percent for evaluation elements *Met* and 100 percent for critical elements *Met.* All three years received an overall *Met* validation status.

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 X. Table 2-1 and Table 2-2 show **RMHP's** scores based on HSAG's PIP evaluation of ***Improving Postpartum Visit Rates***. 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 Postpartum Visit Rates *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	6	0	0	0	1	1	0	0	0
VI. Accurate/Complete Data Collection	11	11	0	0	0	1	1	0	0	0
VII. Appropriate Improvement Strategies	4	3	0	0	1	No Critical Elements				
VIII. Sufficient Data Analysis and Interpretation	9	9	0	0	0	2	2	0	0	0
IX. Real Improvement Achieved	4	1	2	1	0	No Critical Elements				
X. Sustained Improvement Achieved	1	1	0	0	0	No Critical Elements				
Totals for All Activities	**53**	**48**	**2**	**1**	**2**	**11**	**11**	**0**	**0**	**0**

Table 2-2—FY 07-08 Performance Improvement Project Overall Score *for* Improving Postpartum Visit Rates *for* Rocky Mountain Health Plans

Percentage Score of Evaluation Elements *Met**	**94%**
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.

Validation 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 the CMS rationale for each activity.

The validation was performed on a PIP by **Rocky Mountain Health Plans**. The PIP will evaluate the rate of postpartum care visits received on or between 21 and 56 days after delivery. By increasing the rate of timely postpartum care, **RMHP** can achieve improved health outcomes for its members.

Activity I. Appropriate Study Topic

Study Topic

RMHP continues with postpartum care visits as its PIP topic for the FY 07–08 validation cycle.

Finding(s)

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

Strength(s)

The study topic addressed access to, and timeliness of, care and services provided by **RMHP**. The topic had the potential to affect members' health and functional status. The study topic reflected a high-volume condition 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: "Does member and practitioner education and interventions improve compliance with national guidelines in obtaining a timely postpartum visit (HEDIS measurement criteria of 21–56 days post delivery) and subsequent improvement 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 postpartum 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)

RMHP had one study indicator:

- Postpartum care visits on or between 21 and 56 days after delivery

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 based on *HEDIS 2005 Technical Specifications* and was not internally developed.

Strength(s)

The study indicator was developed to answer the study question and to measure change in health outcomes. The study indicator was based on *HEDIS 2005 Technical Specifications* and was well-

designed to address the CMS requirements for evaluating access to, and 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)

The year of the live births should be updated to reflect the year of the PIP submission.

Activity IV. Use a Representative and Generalizable Study Population

Study Population

RMHP defined the study population per HEDIS technical specifications:

- All women who delivered a live birth on or between November 6 of the year prior to the measurement year and November 5 of the measurement year, with continuous enrollment 43 days prior to the delivery and 56 days after delivery. There was no allowable gap during the continuous enrollment.

Finding(s)

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

Strength(s)

The method for identifying the eligible population was completely and accurately defined, included enrollment criteria, and captured all 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 and annually updated, if appropriate, in Activity IV.

Activity V. Valid Sampling Techniques

Sampling Technique(s)

RMHP used *HEDIS 2006 Technical Specifications* for its sampling methodology.

Finding(s)

All of the six evaluation elements were *Met*, including the one critical element.

Strength(s)

HEDIS 2006 Technical Specifications for sampling methodology was used, providing for a sound sample size and ensuring that sampling techniques were 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 a hybrid method for data collection, using both administrative data and medical record review. **RMHP** used VIPS MedMeasures software to enter abstracted hybrid data. This software is certified by the National Committee for Quality Assurance and is reviewed annually by an independent HEDIS auditor.

Finding(s)

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

Strength(s)

The data elements and sources for data collection were clearly defined. The manual data collection tools used ensured consistent and accurate data and supported interrater reliability. The systematic data collection processes for both manual and administrative data were clearly outlined. 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)

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

Activity VII. Appropriate Improvement Strategies

Improvement Strategies

RMHP used a causal/barrier analysis to determine improvement strategies. **RMHP** developed internal work groups and task force meetings as part of its quality improvement processes.

Finding(s)

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

Strength(s)

The improvement strategies were likely to induce permanent change.

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

RMHP used SAS® and Microsoft Access® chi-square tests of association to interpret the statistical significance of year-to-year rate differences.

Finding(s)

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

Strength(s)

The data analysis was performed according to the analysis plan in the study; statistical techniques used supported generalization of the results to the study population; the data findings were presented in a clear, accurate, and easily understood format; and **RMHP** discussed factors that could affect the ability to compare measurement periods.

Requirement(s) (for Critical Elements)

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

Recommendation(s) (for Noncritical Elements)

Documentation regarding the extent to which the study was successful should be moved from Activity I and Activity IX and be placed in Activity VIII.

Activity IX. Real Improvement Achieved

Real Improvement Achieved

Although **RMHP** has not achieved real improvement across all measurement periods for the study indicator, **RMHP** remains above its baseline and above industry benchmarks.

Finding(s)

Of the four evaluation elements, one was *Met*, two were *Partially Met*, and one was *Not Met.* There were no critical elements in this activity.

Strength(s)

The same methodology was used for the baseline and remeasurements.

Requirement(s) (for Critical Elements)

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

Recommendation(s) (for Noncritical Elements)

A second causal/barrier analysis should be performed to assess for necessary changes that could be made to existing interventions or implementation of new interventions so that **RMHP** can achieve its desired goals or outcomes.

Activity X. Sustained Improvement Achieved

Sustained Improvement Achieved

RMHP, over comparable time periods, demonstrated improvement for the first remeasurement period and achieved its goal of 78 percent. A decline in the second remeasurement period prevented **RMHP** from having sustained improvement; however, the decline was not statistically significant.

Finding(s)

The one evaluation element in Activity X was *Met.*

Strength(s)

The study indicator demonstrated improvement since baseline and remains above industry benchmarks.

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.

Section 4: Colorado FY 07-08 PIP Validation Tool: Improving Postpartum Visit Rates for Rocky Mountain Health Plans

DEMOGRAPHIC INFORMATION			
Health Plan Name:	Rocky Mountain Health Plans		
Study Leader Name:	Jackie Hudson	Title:	Quality Improvement Program Manager
Phone Number:	(970) 248-5190	E-mail Address:	jackie.hudson@rmhp.org
Name of Project/Study:	Improving Postpartum Visit Rates		
Type of Study:	Clinical		
Date of Study:	11/6/2004 to 11/5/2007		
Type of Delivery System:	PIHP	Number of Medicaid Members in PIHP: Number of Medicaid Members in Study:	13,200 3,300
Year 3 Validation:	Resubmission		
Results:	Remeasurement 2		

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 over time.
	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 indicator was well-defined, objective, and measurable. Point of clarification: The years for the live births need to be updated to reflect the year of the study in the denominator. Re-review February 2008: After review of the resubmitted PIP documentation, the point of clarification will remain. The year of the live births was not updated in the resubmitted PIP as requested and future submissions of the PIP should update this information to reflect the year of the PIP submission.
	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 indicator was 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 indicator 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 indicator 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 the 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 indicator was a nationally recognized HEDIS measure.
	7. Includes the basis on which the indicator(s) was adopted, if internally developed.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	The study indicator was 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 population was completely and accurately defined. Point of clarification: Future submissions of the PIP should include the year of the HEDIS technical specifications used to define the population. Re-review February 2008: After review of the resubmitted PIP documentation, the point of clarification will remain. The year of the HEDIS technical specifications used to define the study population was not provided as requested.
	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 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 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	The true or estimated frequency of occurrence was provided and considered in the sampling techniques.
	2. Identify the sample size.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The sample size was identified as 411 plus a valid oversample.
	3. Specify the confidence level.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The confidence level was reported as 95 percent.
	4. Specify the acceptable margin of error.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The acceptable margin of error was reported as 5 percent.
C*	5. Ensure a representative sample of the eligible population.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The sample size was representative of the eligible population.
	6. Are in accordance with generally accepted principles of research design and statistical analysis.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The PIP used HEDIS sampling techniques, per the HEDIS 2006 Technical Specifications, which were in accordance with generally accepted principles of research design and statistical analysis.

Results for Activity V				
# 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			
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 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 reported as medical record abstraction, administrative data, and survey data.
	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 included 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	A timeline that included both baseline and remeasurement data collection was provided.
	5. Qualified staff and personnel to abstract manual data.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The PIP documentation reported that Rocky Mountain Health Plans (RMHP) used its own staff for medical record abstraction. Re-review February 2008: After review of the resubmitted PIP documentation, the point of clarification to include the qualifications, education, experience, and training of the manual data collection staff was removed. The information requested for the manual data collection staff was provided in the resubmitted PIP.

* "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	A manual data collection tool that ensured consistent and accurate data collection was provided.
	7. A manual data collection tool that supports interrater reliability.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The manual data collection tool and the survey tool used supported interrater reliability. The supplied NCQA audit report noted that RMHP was in compliance with the interrater reliability process and no issues were identified.
	8. Clear and concise written instructions for completing the manual data collection tool.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	Written instructions for the manual data collection tool were provided.
	9. An overview of the study in written instructions.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	An overview of the study was included in the written manual data collection tool instructions.
	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 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 provided NCQA audit report supported the data completeness process used by RMHP and no deficiencies were identified.

* "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		

Results for Activity VI				
# of Elements				
Critical Elements**	**Met**	**Partially Met**	**Not Met**	**Not Applicable**
1	11	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			
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	Interventions undertaken were not related to causes/barriers identified through data analysis and quality improvement processes. 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 quality improvement process used by RMHP to identify barriers and develop corresponding interventions was discussed in the resubmitted PIP.
	2. System changes that are likely to induce permanent change.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The system changes 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	It was reported that interventions were not successful and an additional intervention was implemented.
	4. Standardized and monitored if interventions were successful.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	Standardization of interventions had not taken place at the time of this review.

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

** 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 data analysis was conducted according to the plan in the study; however, there were no chi-square p values provided for the first remeasurement to the second remeasurement for the study indicator. 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 p values were provided in the resubmitted PIP for the first remeasurement to the second remeasurement period.
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	Statistical techniques used support generalization of the results to the study population.
	3. Identifies factors that threaten internal or external validity of findings.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The PIP did not discuss factors that threatened internal or external validity of the results. 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 resubmitted PIP reported that there were no factors that threatened the internal or external validity of the findings.

* "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.**		
	4. Includes an interpretation of findings.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	An interpretation of the baseline, first remeasurement, and second remeasurement findings was not provided in the PIP. 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 findings was provided in the resubmitted PIP.
	5. Is presented in a way that provides accurate, clear, and easily understood information.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The data findings were presented in a clear and easily understood format.
	6. Identifies initial measurement and remeasurement of study indicators.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The initial measurement and remeasurements were identified for the study indicator.
	7. Identifies statistical differences between initial measurement and remeasurement.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study provided a p value for baseline to the first remeasurement of P<=1 but not for the first remeasurement to the second remeasurement. Re-review February 2008: After review of the resubmitted PIP documentation, the point of clarification to include complete p values for each measurement period has been removed. The score for this evaluation element has been changed from Partially Met to Met. The resubmitted PIP included the requested p values.

* "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.**		
	8. Identifies factors that affect the ability to compare initial measurement with remeasurement.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	A discussion of factors that could affect the ability to compare remeasurement periods was not included in the PIP. 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 resubmitted PIP reported that there were no factors that affected the ability to compare measurement periods.
	9. Includes interpretation of the extent to which the study was successful.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	An interpretation of the extent to which the study was successful was provided and the information was located on page 1 in Activity I. Point of clarification: Future submissions of the PIP should include the information regarding the extent to which the study was successful in Activity VIII. Re-review February 2008: After review of the resubmitted PIP documentation, the point of clarification requesting that information regarding the extent to which the study was successful be documented in Activity VIII, will remain. The information regarding the study's success was still documented in Activity I and Activity IX.

* "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		

Results for Activity VIII				
# of Elements				
Critical Elements**	**Met**	**Partially Met**	**Not Met**	**Not Applicable**
2	9	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			
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	The remeasurement methodology was the same as the baseline methodology.
	2. There is documented improvement in processes or outcomes of care.	☐ Met ☑ Partially Met ☐ Not Met ☐ NA	There was improvement in the first remeasurement period; however, the second remeasurement demonstrated a decline in the rate. Follow-up Conference Call January 22, 2008: HSAG held a conference call with RMHP and discussed the score for this element. HSAG suggested that a second causal/barrier analysis be performed to assess for necessary changes that could be made to existing interventions or implementation of new interventions in order to achieve the desired goal or outcomes.
	3. The improvement appears to be the result of planned intervention(s).	☐ Met ☑ Partially Met ☐ Not Met ☐ NA	The improvement for the first remeasurement period appeared to be the result of the planned interventions. Follow-up Conference Call January 22, 2008: HSAG held a conference call with RMHP and discussed the score for this element. HSAG suggested that a second causal/barrier analysis be performed to assess for necessary changes that could be made to existing interventions or implementation of new interventions in order to achieve the desired goal or outcomes.

** 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.**		
	4. There is statistical evidence that observed improvement is true improvement.	☐ Met ☐ Partially Met ☑ Not Met ☐ NA	The improvement for the first remeasurement period was not statistically significant. Follow-up Conference Call January 22, 2008: HSAG held a conference call with RMHP and discussed the score for this element. HSAG suggested that a second causal/barrier analysis be performed to assess for necessary changes that could be made to existing interventions or implementation of new interventions in order to achieve the desired goal or outcomes.

Results for Activity IX				
# of Elements				
Critical Elements**	**Met**	**Partially Met**	**Not Met**	**Not Applicable**
0	1	2	1	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	The study indicator demonstrated improvement for the first remeasurement; however, the second remeasurement demonstrated a non-statistically significant decline. The study indicator has demonstrated improvement since the baseline measurement.

Results for Activity X				
# of Elements				
Critical Elements**	**Met**	**Partially Met**	**Not Met**	**Not Applicable**
0	1	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 Postpartum Visit Rates 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	6	0	0	0	1	1	0	0	0
VI.	Accurate/Complete Data Collection	11	11	0	0	0	1	1	0	0	0
VII.	Appropriate Improvement Strategies	4	3	0	0	1	0	No Critical Elements			
VIII.	Sufficient Data Analysis and Interpretation	9	9	0	0	0	2	2	0	0	0
IX.	Real Improvement Achieved	4	1	2	1	0	0	No Critical Elements			
X.	Sustained Improvement Achieved	1	1	0	0	0	0	No Critical Elements			
Totals for All Activities		**53**	**48**	**2**	**1**	**2**	**11**	**11**	**0**	**0**	**0**

Table 4-2—FY 07-08 PIP Validation Report Overall Scores: Improving Postpartum Visit Rates for Rocky Mountain Health Plans	
Percentage Score of Evaluation Elements Met*	**94%**
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 X were assessed for this PIP Validation Report. Based on the validation of this PIP, HSAG's assessment determined 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 Postpartum Visits***
- Appendix B: CMS Rationale by Activity
- Appendix C: Definitions and Explanations by Activity

Appendix A: PIP Summary Form: Improving Postpartum Visit Rates *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 Postpartum Visit Rates***		
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
3,300	Number of Medicaid Members in Study	
		Section to be completed by HSAG _____ Baseline Assessment _____ Remeasurement 1 __X__ Remeasurement 2 _____ Remeasurement 3

Appendix A: PIP Summary Form: Improving Postpartum Visit Rates *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:

Rocky Mountain Health Plans (RMHP) implemented a high risk obstetrical program in 1998 based on guidelines developed by the American College of Obstetricians and Gynecologists (ACOG). Numerous interventions have been implemented and there have been significant improvements in guideline compliance and clinical outcomes. The Timeliness of Prenatal Care Health Employer Data and Information Set (HEDIS) measure was 98% in HEDIS 2005. The Post Partum Care Visit rate was 75.4% in HEDIS 2005. While many of these measures have shown significant improvements over the years, the HEDIS postpartum visit rate has not yet reached goal.

Postpartum visits are important to prevent postpartum complications such as postpartum hemorrhage and postpartum depression. These visits provide an opportunity for practitioners to discuss interpregnancy intervals, postpartum depression screening as well as education related to contraception, smoking cessation and smoke free environments, childhood immunizations and well care visits.

Obstetrical deliveries have been identified in the Top 10 diagnosis for the RMHP Medicaid population making it a high volume procedure. Approximately 25% of RMHP Medicaid population is within childbearing age. This study includes all eligible members including those with special health care needs.

11/01/2007

This PIP is ongoing. Remeasurements for post partum visit rates occurred during HEDIS 2006 and HEDIS 2007. Statistically significant improvement has not been achieved and the goal of 78% has not been achieved. This PIP will continue through 2008. Remeasurement will occur during HEDIS 2008.

Appendix A: PIP Summary Form: Improving Postpartum Visit Rates *for* Rocky Mountain Health Plans

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 practitioner education and interventions improve compliance with national guidelines in obtaining a timely postpartum visit (HEDIS measurement criteria of 21 – 56 days post delivery) and subsequent improvement in visit rates?

Appendix A: PIP Summary Form: Improving Postpartum Visit Rates *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 ***Postpartum Care***	**Describe rationale for selection of study indicator:** This indicator measures post partum visit rates. This is a HEDIS measure.
Numerator	A postpartum visit on or between 21 and 56 days after delivery, as documented through either administrative data or medical record review. Postpartum care may be completed during any visit that occurs on or between 21 and 56 days after delivery. (HEDIS 2005 Specifications
Denominator	A systematic sample drawn from the from the eligible Medicaid population of member who had a live birth between November 6th 2003 and November 5th 2004.
First Measurement Period Dates	11/6/03 – 11/5/04, **11/6/04 – 11/5/05, 11/6/05 – 11/5/06**
Benchmark	69%
Source of Benchmark	HEDIS 2004 NCQA National Percentile (90th Percentile)
Baseline Goal	78%
Study Indicator 2	**Describe rationale for selection of study indicator:**
Numerator	
Denominator	
First Measurement Period Dates	
Benchmark	
Source of Benchmark	
Baseline Goal	

Appendix A: PIP Summary Form: Improving Postpartum Visit Rates *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:

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

HEDIS Access and Availability of Care: Prenatal and Postpartum Care Measure Description

The percentage of deliveries of live births between November 6 of the year prior to the measurement year and November 5 of the measurement year. For these women, the measure assesses the following facets of prenatal and postpartum care.

- HEDIS Postpartum Care Submeasure Description- The percentage of deliveries that had a postpartum visit on or between 21 and 56 days after delivery.

HEDIS Eligible Population

Product Line	Medicaid
Age	None Specified
Continuous Enrollment	43 days prior to the delivery through 56 days after delivery
Allowable Gap	No allowable gap during the continuous enrollment period
Anchor Date	Date of delivery
Benefit	Medical
Event/Diagnosis	Delivered a live birth on or between November 6 of the year prior to the measurement year and November 5 of the measurement year. Women who delivered in a birthing center should be included in this measure. HEDIS Tables PPC-A and PPC-B list the codes to identify deliveries and live births, Multiple Births- Women who had separate deliveries (different dates of service) between November 6 of the year prior to the measurement year and November 5 of the measurement year should be counted twice. Women who had multiple live births during one pregnancy should be counted once in the measure.

Appendix A: PIP Summary Form: Improving Postpartum Visit Rates *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*)
HEDIS Access/Availability of Care: Postpartum Care Measure		411 plus valid oversample	As defined in Activity 4	HEDIS 2006 Technical Specifications	HEDIS 2006 Technical Specifications RMHP uses VIPS MedMeasures software to generate the population and sample. The software has been certified by NCQA and is reviewed annually by an independent HEDIS auditor. Confidence Level: 95% Acceptable Margin of Error: 0.5

Appendix A: PIP Summary Form: Improving Postpartum Visit Rates *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

[X] Hybrid (medical/treatment records and administrative)

[X] 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. RMHP uses VIPS MedCapture software to enter abstracted hybrid data. Both MedMeasures and MedCapture software are NCQA certified.

Description of data collection staff (include training, experience and qualifications): **RMHP uses its known staff to abstract hybrid data. All data abstraction clinicians have significant clinical experience. Registered Nurses and registered dieticians are utilized for data abstraction. All data abstracters are required to attend annual training prior to data collection. Interater Reliability is performed using a sample of medical records abstracted by each reviewer. The reviewer must maintain 95% accuracy and reviewers are removed from the project if 95% accuracy is not maintained.**

[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 _____
[X] Other HEDIS Audit Certificate

Other Requirements

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

[X] Survey Data

Fielding Method

[X] Personal interview
[X] Mail
[ ] Phone with CATI script
[ ] Phone with IVR
[ ] Internet
[ ] Other _____

Other Requirements

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

Appendix A: PIP Summary Form: Improving Postpartum Visit Rates *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 [X] Other (list and describe): PDSA cycles developed November 2005. See Activity 7	[X] Once a year [ ] Once a season [ ] Once a quarter [ ] Once a month [ ] Continuous [X] Other (list and describe): PDSA cycles developed November 2005. See Activity 7

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:

Appendix A: PIP Summary Form: Improving Postpartum Visit Rates *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
12/01/2005	**X**	**Member Incentive: $10 Gift Card**	**Lack of Knowledge about need for postpartum exam**

Appendix A: PIP Summary Form: Improving Postpartum Visit Rates *for* Rocky Mountain Health Plans

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.

RMHP began developing a risk obstetrical program in January 1998. Through internal work groups and task force meetings with obstetrical providers, it was determined that development of routine and high risk obstetrical guidelines, educational tools, and high risk case management, RMHP could include clinical outcomes for our members and improve out HEDIS scores in the obstetrical area.

Describe interventions:

Baseline to Remeasurement 1: Time Period 11/06/04-11/05/05

As the RMHP high risk obstetrical program has evolved, the HEDIS Timeliness of Care Measure improved; however, improvement was needed in the HEDIS Postpartum care measure. A workgroup was formed with clinicians and a data analyst to review the present data on postpartum visit rates and develop a plan to improve the rates. HEDIS data was reviewed and clinicians shared their assessment of the post partum rates based on their observations and interactions with providers and members. A literature review was also performed to determine current best practices for improving postpartum visit rates. After reviewing the available data, it was determined that member lack of knowledge about the importance of postpartum care may be the cause of members not obtaining postpartum care.

a) Intervention #1- During the last quarter of 2004, the nurse case managers began contacting women after delivery to assess them for case management needs as well as remind woman to attend their postpartum visit with their provider. Due to frequent changes in phone numbers, the members were difficult to reach and the members often did not return the case managers' phone calls. The HEDIS 2005 rates indicated that we did not have a statistically significant improvement in the postpartum visit rates; therefore, it was determined that another intervention needed to be developed.

b) Intervention #2- During the fall 2005, a postpartum assessment tool was developed. The tool was developed as screening tool to be mailed to members after they delivery to identify any case management needs and identify whether the women had scheduled her postpartum appointment. Three one week Plan Do Study Act (PDSA) cycles were developed to determine if offering an incentive to members would increase the postpartum survey return rate and thus increase the awareness of the need for postpartum care.

The PDSA results were as follows:

Week 1

Phone calls were placed to members for verbal discussion of postpartum care.

Total Number of Outbound Calls = 30

Total Number of Members Reached = 12

Percentage of Members Reached 12/30 = 40%

Week 2

Postpartum screening tool sent to members with cover letter asking member to complete the screening tool and mail it back to the health plan.

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.

Total Number of Letters Sent = 46
Total Number of Letters Returned = 20
Percentage of Letters Returned 20/46 = 43%
Week 3
Postpartum screening tool sent to members with a cover letter notifying members they would receive a $10 gift card if they returned the completed screening tool to the health plan.
Total Number of Letters Sent = 85
Total Number of Letters Returned = 57
Percentage of Letters Returned 57/85 = 67%

Based on the response rate to the incentive, RMHP began offering the $10 incentive to all members postpartum beginning 12/01/2005. We will review the results of this intervention after HEDIS 2007 data collection has occurred.

Remeasurement 1 to Remeasurement 2: Time Period 11/06/05-11/05/06

11/01/07 The HEDIS results for this period were 76%. There was a decline in the post partum rates**; however, the change was not statistically significant**. **The workgroup met to review these results and discuss current best practices in improving post partum care. Based on telephone interactions with members, the clinicians indicated lack of knowledge about the importance of post partum care continued to be an issue. The decision was made to continue the member incentive for an additional year.** The member incentive will continue through calendar year 2007**. This will allow the member incentive to be in place for two full years.** A remeasurement of post partum rates will occur during HEDIS 2008.

Remeasurement 2 to Remeasurement 3:

Appendix A: PIP Summary Form: Improving Postpartum Visit Rates *for* Rocky Mountain Health Plans

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 hybrid methodology described in step 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®, ChiSquare Tests of Association are used to interpret the statistical significant of year to year rate differences. **This process is used for each measurement cycle.** 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: 11/06/03 – 11/05/04 Results: 75.4%

Data analysis was performed as listed above.

Remeasurement 1: 11/06/04 – 11/05/05 Results: 78.0%, Chi-square P value =.1917, not significant, R1 to Baseline

Data analysis performed as listed above.

Remeasurement 2: 11/06/05 – 11/05/06 Results: 76.0%, Chi-square P value = .5351, not significant, R2 to R1

Data analysis performed as listed above.

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: 11/06/03 – 11/05/04

The measurement used for this study is the HEDIS Access/Availability of Care- Post Partum Care Measure. HEDIS technical specifications were used to calculate the post partum visit rate. The baseline post partum rate is 75.4%. The goals has been set at 78%. At this point no factors have been identified that might threaten the internal or external validity of this study.

Remeasurement 1: 11/06/04 – 11/05/05

This study continues to use the HEDIS Access/Availability of Care- Post Partum Care Measure as the study indicator. HEDIS technical specifications were used to calculate the post partum visit rate. The HEDIS technical specifications were reviewed for revisions. NCQA made revisions to the code lists used to identify post partum visits. The addition of these codes will help improve the administrative identification of post partum visits. No factors were identified that would affect the ability to compare remeasurement period one with the baseline year.

The post partum visit rate for remeasurement period one is 78%. Although improvement in this rate was realized, it was not statistically significant. The Chi-square P value was p = .1917. No factors were identified that might threaten the internal or external validity of the post partum visit measurement. The intervention was only in place for one month; therefore, the decision was made to continue the intervention.

Remeasurement 2: 11/06/05 – 11/05/06

This study continues to use the HEDIS Access/Availability of Care- Post Partum Care Measure as the study indicator. HEDIS technical specifications were used to calculate the post partum visit rate. The HEDIS technical specifications were reviewed for revisions. NCQA made revisions to the code lists used to identify post partum visits. The addition of these codes will help improve the administrative identification of post partum visits. No factors were identified that would affect the ability to compare remeasurement period two to remeasurement period one. No factors were identified that would affect the internal or external validity of the study results.

The post partum visit rate for remeasurment period two is 76%. A slight decline was seen in the post partum visit rate when these results were compared to remeasurement period one; however, the decline was not statistically significant. The Chi-square P value comparing remeasurement one to remeasurement two is p=.5351. Improvement was not achieved in this rate; therefore, the intervention will continue for an additional year. Pending the results from the next remeasurement period, additional research and analysis may need to be performed if significant improvement is not achieved in this study indicator.

Remeasurement 3:

Appendix A: PIP Summary Form: Improving Postpartum Visit Rates *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
11/06/03-11/05/04	***Baseline:***	258	342	75.4%	69%	
11/06/04-11/05/05	**Remeasurement 1**	244	313	78.0%	71%	**1- p=.1917, not significant, R1 to Baseline**
11/06/05-11/05/06	**Remeasurement 2**	312	411	76.0%	***	2- p=.5351, **not significant, R2 to R1**
	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
	Baseline:					
	Remeasurement 1					
	Remeasurement 2					
	Remeasurement 3					
	Remeasurement 4					
	Remeasurement 5					

Appendix A: PIP Summary Form: Improving Postpartum Visit Rates *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. 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.

*** The HEDIS 2007 Mean, Percentiles, and Ratios was not available when this report was completed.

Appendix A: PIP Summary Form: Improving Postpartum Visit Rates *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:

11/07

Two remeasurements have been completed for this study. A slight increase in rates was achieved for calendar year 2005 followed by a slight decrease in rates during calendar year 2006. Neither remeasurement was statistically significant. The post partum gift card incentive was only in place during the last quarter of remeasurement period one. The member incentive will remain in place during calendar year 2007 and remeasurement will occur during HEDIS 2008.

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 in performance must meet, it does require that EQROs assess the extent to which any performance changes reported by a 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 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 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.