



CHP+

Child Health Plan *Plus*

Colorado Children's Health Insurance Program

Fiscal Year 2017–2018 PIP Validation Report
Improving the Transition Process for Children
Aging Out of the CHP+ HMO Plan
for
Colorado Access

April 2018
For Validation Year 4

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Colorado Department of Health Care Policy & Financing.*



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1. Background

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 (HMO) to conduct and submit performance improvement projects (PIPs) annually.

In preparation for implementation of Public Law 111-3, The Children's Health Insurance Program Reauthorization Act of 2009, the State of Colorado required each contractor with the Colorado Child Health Plan *Plus* (CHP+) health insurance program to conduct and submit PIP reports annually. CHP+ is Colorado's implementation of the Children's Health Insurance Program (CHIP), a health maintenance organization (HMO) jointly financed by federal and state governments and administered by the states. Originally created in 1997, CHIP targets uninsured children in families with incomes too high to qualify for Medicaid programs, but often too low to afford private coverage.

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 the external quality review organization. The primary objective of the PIP validation is to determine compliance with requirements set forth in the Code of Federal Regulations (CFR) at 42 CFR §438.330(d), 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 to increase or sustain improvement.

In its PIP evaluation and validation, HSAG used the Department of Health and Human Services, Centers for Medicare & Medicaid Services (CMS) publication, *EQR Protocol 3: Validating Performance Improvement Projects (PIPs): A Mandatory Protocol for External Quality Review (EQR)*, Version 2.0, September 2012.¹⁻¹

¹⁻¹ Department of Health and Human Services, Centers for Medicare & Medicaid Services. *EQR Protocol 3: Validating Performance Improvement Projects (PIPs): A Mandatory Protocol for External Quality Review (EQR)*, Version 2.0, September 2012. Available at: <https://www.medicare.gov/medicaid/quality-of-care/medicaid-managed-care/external-quality-review/index.html>. Accessed on: Jul 18, 2017.

HSAG evaluates the following components of the quality improvement process:

1. The technical structure of the PIPs to ensure the HMO designed, conducted, and reported PIPs using sound methodology consistent with the CMS protocol for conducting PIPs. HSAG’s review determined whether a PIP could reliably measure outcomes. Successful execution of this component ensures that reported PIP results are accurate and capable of measuring real and sustained improvement.
2. The outcomes of the PIPs. Once designed, a PIP’s effectiveness in improving outcomes depends on the systematic identification of barriers and the subsequent development of relevant interventions. Evaluation of each PIP’s outcomes determined whether the HMO improved its rates through the implementation of effective processes (i.e., barrier analyses, intervention design, and evaluation of results) and, through these processes, achieved statistically significant improvement over the baseline rate. Once statistically significant improvement is achieved across all study indicators, HSAG evaluates whether the HMO was successful in sustaining the improvement. The goal of HSAG’s PIP validation is to ensure that the Department and key stakeholders can have confidence that reported improvement in study indicator outcomes is supported by statistically significant change and the HMO’s improvement strategies.

PIP Rationale

The purpose of a PIP is to achieve, through ongoing measurements and interventions, significant improvement sustained over time in clinical or nonclinical areas.

For fiscal year (FY) 2017–2018, **Colorado Access** continued its *Improving the Transition Process for Children Aging Out of the CHP+ HMO Plan* PIP. The topic selected addressed CMS’ requirements related to quality outcomes—specifically, timeliness of, and access to, care and services.

PIP Summary

For this FY 2017–2018 validation cycle, the PIP received an overall validation score of 95 percent and a *Met* validation status. The focus of this PIP is to improve the percentage of members with a chronic medical or mental illness who receives care management outreach within 90 days of their 19th birthday. The PIP had one study question that **Colorado Access** stated: “Do targeted interventions increase the percentage of high risk members aging out of the CHP+ HMO receiving transition-specific care management outreach within 90 days prior to exiting the plan?” The following table describes the study indicator for this PIP. The following table outlines the study indicator for the PIP.

Table 1–1—Study Indicator

PIP Topic	Study Indicator
<i>Improving the Transition Process for Children Aging Out of the CHP+ HMO Plan</i>	The percentage of eligible high risk members who received care management outreach within 90 days prior to their 19th birthday.

Validation Overview

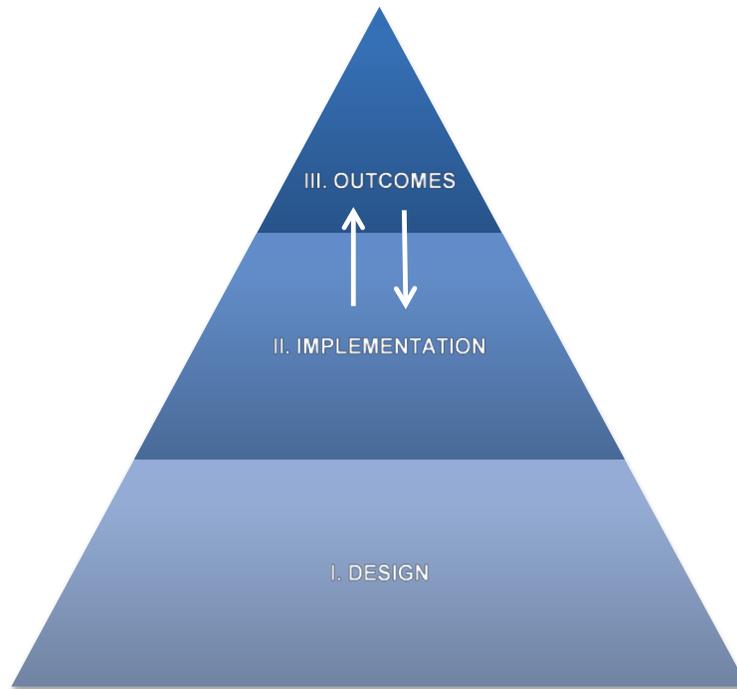
HSAG obtained the information needed to conduct the PIP validation from **Colorado Access**’s PIP Summary Form. This form provided detailed information about the HMO’s PIP related to the activities completed and HSAG evaluated for the FY 2017–2018 validation cycle.

Each required activity was evaluated on one or more elements that form a valid PIP. The HSAG PIP Review Team scored each evaluation element within a given activity as *Met*, *Partially Met*, *Not Met*, *Not Applicable*, or *Not Assessed (NA)*. HSAG designated some of the evaluation elements pivotal to the PIP process as critical elements. For a PIP to produce valid and reliable results, all critical elements had to be *Met*. Given the importance of critical elements to the scoring methodology, any critical element that received a *Not Met* score resulted in an overall validation rating for the PIP of *Not Met*. A HMO would be given a *Partially Met* score if 60 percent to 79 percent of all evaluation elements were *Met* or one or more critical elements were *Partially Met*. HSAG provided a *Point of Clarification* when enhanced documentation would have demonstrated a stronger understanding and application of the PIP activities and evaluation elements.

In addition to the validation status (e.g., *Met*), HSAG gave each PIP an overall percentage score for all evaluation elements (including critical elements). HSAG calculated the overall percentage score by dividing the total number of elements scored as *Met* by the total number of elements scored as *Met*, *Partially Met*, and *Not Met*. HSAG also calculated a critical element percentage score by dividing the total number of critical elements scored as *Met* by the sum of the critical elements scored as *Met*, *Partially Met*, and *Not Met*.

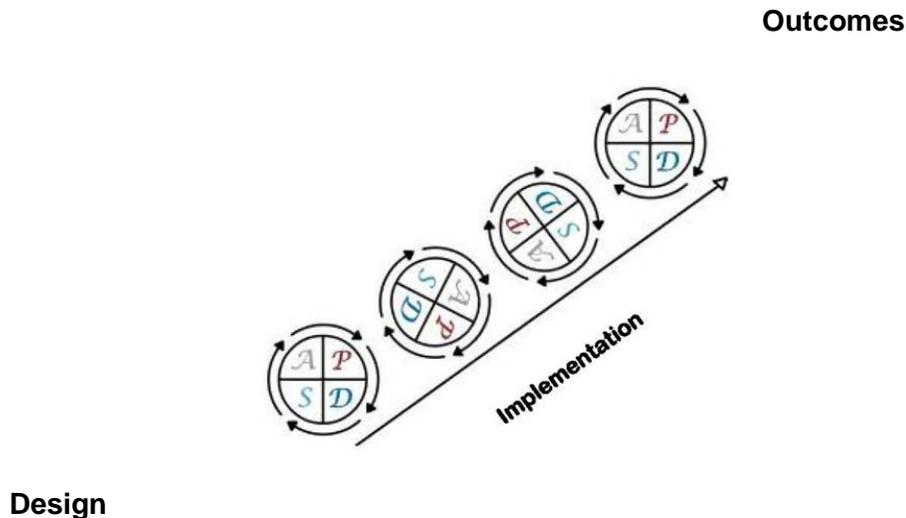
Figure 1–1 illustrates the three study stages of the PIP process—i.e., Design, Implementation, and Outcomes. Each sequential stage provides the foundation for the next stage. The Design stage establishes the methodological framework for the PIP. The activities in this section include development of the study topic, question, indicators, population, sampling, and data collection. To implement successful improvement strategies, a strong study design is necessary.

Figure 1-1—PIP Stages



Once **Colorado Access** establishes its study design, the PIP process moves into the Implementation stage. This stage includes data analysis and interventions. During this stage, the HMOs analyze data, identify barriers to performance, and develop interventions targeted to improve outcomes. The HMOs should incorporate a continuous or rapid cycle improvement model such as the Plan-Do-Study-Act (PDSA) to determine the effectiveness of the implemented interventions. The implementation of effective improvement strategies is necessary to improve PIP outcomes.

Figure 1–2—PIP Stages Incorporating the PDSA Cycle



The PDSA cycle includes the following actions:

- **Plan**—conduct barrier analyses; prioritize barriers; develop targeted intervention(s) to address barriers; and develop an intervention evaluation plan for each intervention
- **Do**—implement intervention; track and monitor the intervention; and record the data
- **Study**—analyze the data; compare results; and evaluate the intervention’s effectiveness
- **Act**—based on the evaluation results, standardize, modify, or discontinue the intervention

The final stage is Outcomes, which involves the evaluation of real and sustained improvement based on reported results and statistical testing. Sustained improvement is achieved when outcomes exhibit statistical improvement over time and multiple measurements. This stage is the culmination of the previous two stages. The HMO should regularly evaluate interventions to ensure they are having the desired effect. A concurrent review of the data is encouraged. If the HMO’s evaluation of the interventions, and/or review of the data, indicates that the interventions are not having the desired effect, the HMO should revisit its causal/barrier analysis process; verify the proper barriers are being addressed; and discontinue, revise, or implement new interventions as needed. This cyclical process should be used throughout the duration of the PIP and revisited as often as needed.

2. Findings

This year, the PIP validation process evaluated the technical methods of the PIP (i.e., the study design), as well as the implementation of quality improvement activities, and the PIP outcomes at the first annual remeasurement. Based on its review, HSAG determined the overall methodological validity of the PIP and evaluated whether there was statistically significant improvement in the study indicator outcomes.

Table 2–1 summarizes the PIP validated during the review period with an overall validation status of *Met*, *Partially Met*, or *Not Met*. In addition, Table 2–1 displays the percentage score of evaluation elements that received a *Met* score, as well as the percentage score of critical elements that received a *Met* score. Critical elements are those within the validation tool that HSAG has identified as essential for producing a valid and reliable PIP. All critical elements must receive a *Met* score for a PIP to receive an overall *Met* validation status. A resubmission is an HMO’s update of a previously submitted PIP with modified/additional documentation.

HMOs have the opportunity to resubmit the PIP after HSAG’s initial validation to address any identified deficiencies. The PIP received a *Met* score for 86 percent of the applicable evaluation elements and received a *Partially Met* overall validation status when originally submitted. The HMO received HSAG’s feedback, incorporated HSAG’s recommendations, and resubmitted the PIP. After resubmission, the PIP received a *Met* score for 95 percent of the evaluation elements and a *Met* overall validation status.

Table 2–1—FY 2017–2018 Performance Improvement Project Validation for Colorado Access

Name of Project	Type of Annual Review ¹	Percentage Score of Evaluation Elements <i>Met</i> ²	Percentage Score of Critical Elements <i>Met</i> ³	Overall Validation Status ⁴
<i>Improving the Transition Process for Children Aging Out of the CHP+ HMO Plan</i>	Submission	86%	92%	<i>Partially Met</i>
	Resubmission	95%	100%	<i>Met</i>

¹ **Type of Review**—Designates the PIP review as an annual submission, or resubmission. A resubmission means the HMO was required to resubmit the PIP with updated documentation because it did not meet HSAG’s validation criteria to receive an overall *Met* validation status.

² **Percentage Score of Evaluation Elements *Met***—The percentage score is calculated by dividing the total elements *Met* (critical and non-critical) by the sum of the total elements of all categories (*Met*, *Partially Met*, and *Not Met*).

³ **Percentage Score of Critical Elements *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*.

⁴ **Overall Validation Status**—Populated from the PIP Validation Tool and based on the percentage scores.

Validation Findings

Table 2–2 displays the validation results for the **Colorado Access** PIP validated during FY 2017–2018. This table illustrates the HMO’s overall application of the PIP process and achieved success in implementing the studies. Each activity is composed of individual evaluation elements scored as *Met*, *Partially Met*, or *Not Met*. Elements receiving a *Met* score have satisfied the necessary technical

requirements for a specific element. The validation results presented in Table 2–2 show the percentage of applicable evaluation elements that received each score by activity. Additionally, HSAG calculated a score for each stage and an overall score across all activities. This was the fourth validation year for the PIP, with the HMO completing Activities I through X.

Table 2–2—Performance Improvement Project Validation Results for Colorado Access

Stage	Activity		Percentage of Applicable Elements*		
			Met	Partially Met	Not Met
Design	I.	Appropriate Study Topic	100% (2/2)	0% (0/2)	0% (0/2)
	II.	Clearly Defined, Answerable Study Question(s)	100% (1/1)	0% (0/1)	0% (0/1)
	III.	Correctly Identified Study Population	100% (1/1)	0% (0/1)	0% (0/1)
	IV.	Clearly Defined Study Indicator(s)	100% (2/2)	0% (0/2)	0% (0/2)
	V.	Valid Sampling Techniques (if sampling was used)	<i>Not Applicable</i>	<i>Not Applicable</i>	<i>Not Applicable</i>
	VI.	Accurate/Complete Data Collection	100% (3/3)	0% (0/3)	0% (0/3)
Design Total			100% (9/9)	0% (0/9)	0% (0/9)
Implementation	VII.	Sufficient Data Analysis and Interpretation	67% (2/3)	33% (1/3)	0% (0/3)
	VIII.	Appropriate Improvement Strategies	100% (6/6)	0% (0/6)	0% (0/6)
Implementation Total			89% (8/9)	11% (1/9)	0% (0/9)
Outcomes	IX.	Real Improvement Achieved	100% (3/3)	0% (0/3)	0% (0/3)
	X.	Sustained Improvement Achieved	100% (1/1)	0% (0/1)	0% (0/1)
Outcomes Total			100% (4/4)	0% (0/4)	0% (0/4)
Percentage Score of Applicable Evaluation Elements Met			95% (21/22)	5% (1/22)	0% (0/22)

* Percentage totals may not equal 100 due to rounding.

Overall, 95 percent of all applicable evaluation elements validated received a score of *Met*. For this year's submission, the Design stage (Activities I through VI), the Implementation stage (Activities VII through VIII), and the Outcomes stage (Activities IX and X) were validated.

Design

Colorado Access designed a scientifically sound project supported by key research principles. The technical design of the PIP was sufficient to measure outcomes, allowing for successful progression to the next stage of the PIP process.

Implementation

Colorado Access reported and interpreted its Remeasurement 2 results accurately. The HMO revisited the causal/barrier analyses for the Remeasurement 2 period and used appropriate quality improvement tools to identify and prioritize barriers. Timely interventions were implemented, were linked to the identified barriers, and had the potential to impact study indicator outcomes. The HMO evaluated interventions for effectiveness and used the intervention evaluation results to guide future improvement strategies.

Outcomes

For this year's PIP validation, the **Colorado Access** PIP progressed to Activity X and was evaluated for sustained improvement of study indicator outcomes for the first time. The Remeasurement 2 study indicator rate was a statistically significant improvement of 54.3 percentage points over the baseline rate. Because the study indicator demonstrated statistically significant improvement over baseline at both Remeasurement 1 and Remeasurement 2, sustained improvement was achieved at the second remeasurement.

Analysis of Results

Table 2–3 displays baseline, Remeasurement 1, and Remeasurement 2 data for **Colorado Access's Improving the Transition Process for Children Aging Out of the CHP+ HMO Plan** PIP. **Colorado Access's** goal is to increase the percentage of eligible high-risk members who received care management outreach within 90 days prior to their 19th birthday.

**Table 2–3—Performance Improvement Project Outcomes
for Colorado Access**

PIP Study Indicator	Baseline Period (1/1/2014–12/31/2014)	Remeasurement 1 (1/1/2015–12/31/2015)	Remeasurement 2 (1/1/2016–12/31/2016)	Sustained Improvement
The percentage of eligible high risk members who received care management outreach within 90 days prior to their 19th birthday.	0.0%	24.5%*	54.3%*	Yes

* The remeasurement rate was a statistically significant improvement over the baseline rate.

The baseline rate of high-risk members who received care management outreach within 90 days prior to their 19th birthday was zero. **Colorado Access**’s goal is to increase the rate to 75.0 percent at the first remeasurement. With a baseline rate of zero, HSAG recommended that **Colorado Access** should ensure that a Remeasurement 1 goal of 75.0 percent is reasonable and attainable.

At the first remeasurement, the rate of high-risk members who received care management outreach within 90 days prior to their 19th birthday increased to 24.5 percent. The health plan addressed HSAG’s recommendation and revised the Remeasurement 1 goal from 75.0 percent to 30.0 percent. While the Remeasurement 1 rate did not meet the HMO’s revised Remeasurement 1 goal of 30.0 percent, the increase of 24.5 percentage points from baseline to Remeasurement 1 was statistically significant ($p < 0.0001$). The PIP will be evaluated for sustained improvement during the next validation cycle, when the HMO reports results from the second remeasurement.

At the second remeasurement, the rate of high-risk members who received care management outreach within 90 days prior to their 19th birthday increased to 54.3 percent. The Remeasurement 2 rate exceeded the goal of 30.0 percent and demonstrated statistically significant improvement over the baseline. Sustained improvement was achieved at Remeasurement 2 because the study indicator demonstrated statistically significant improvement over baseline at Remeasurement 1 and maintained the improvement for a subsequent measurement period.

Barriers/Interventions

The identification of barriers through barrier analysis and the subsequent selection of appropriate interventions to address these barriers are necessary steps to improve outcomes. The HMO’s choice of interventions, combination of intervention types, and sequence of implementing the interventions are essential to the HMO’s overall success in improving PIP rates.



For the *Improving the Transition Process for Children Aging Out of the CHP+ HMO Plan* PIP, **Colorado Access** identified the following barriers to address:

- No transition program in place.
- Options for health insurance transition are unknown to members.
- Limited health literacy among members and member parents/caregivers.
- Limited resources for providers to assist members with the transition.

To address these barriers, **Colorado Access** implemented the following interventions:

- Conducted a mailing to members 18 years of age as a reminder of the importance of having health insurance, knowing what options are available, and the contact information for requesting assistance.
- Conducted transition-specific care management outreach within 90 days of the member losing CHP+ coverage.
- Referred members to the Access Medical Enrollment Services (AMES) program to identify eligibility for government health insurance programs.
- Developed a comprehensive curriculum to educate members under 19 years of age and prepare them for the transition out of CHP+ coverage (planned intervention).

3. Conclusions and Recommendations

Conclusions

Colorado Access developed a methodologically sound project. The solid PIP design allowed the HMO to measure and monitor PIP outcomes. The HMO accurately reported and interpreted the Remeasurement 2 study indicator results. The HMO revisited the causal/barrier analysis process and provided an updated, prioritized list of barriers for the Remeasurement 2 period using a key driver diagram. **Colorado Access** evaluated the Remeasurement 2 interventions and used the intervention evaluation results to guide next steps for improvement strategies. The HMO reported further improvement in the study indicator rate from Remeasurement 1 to Remeasurement 2 and succeeded in demonstrating sustained improvement over baseline at the second remeasurement.

Recommendations

HSAG recommends the following:

- **Colorado Access** should document a thorough and complete interpretation of study indicator results for each measurement period to monitor and communicate progress toward meeting outcome-related goals.
- **Colorado Access** should consider spreading successful improvement strategies to other populations or other identified areas in need of improvement. Use iterative quality improvement science techniques, such as the Plan-Do-Study-Act (PDSA) model, to test an intervention on a small scale, evaluate initial results, and then gradually expand to full implementation, if the intervention is deemed successful.
- **Colorado Access** should develop a sustainability plan within the organization, and in collaboration with any key partners, to ensure that the improvement demonstrated through the PIP is maintained beyond the life of the PIP.