



CO L O R A D O

**Department of Health Care
Policy & Financing**

Health First Colorado
Community Mental Health Services Program

Fiscal Year 2017–2018 PIP Validation Report

**Adolescent Depression Screening and
Transition of Care to a Behavioral Health
Provider**

for

Behavioral Healthcare, Inc.

April 2018

For Validation Year 4

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Colorado Department of Health Care Policy & Financing.*



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Acknowledgements and Copyrights

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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 (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 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

HSAG evaluates the following components of the quality improvement process:

1. The technical structure of the PIPs to ensure the BHO 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 BHO improved its rates through the implementation of effective processes (i.e., barrier analyses, intervention design, and evaluation of

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.

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 BHO 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 BHO’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, **Behavioral Healthcare, Inc. (BHI)**, continued its *Adolescent Depression Screening and Transition of Care to a Behavioral Health Provider* PIP. The topic selected addressed CMS’ requirements related to quality outcomes—specifically, the timeliness of, and access to, care and services.

PIP Summary

For the FY 2017–2018 validation cycle, the PIP received a *Met* score for 95 percent of all evaluation elements and a *Met* overall validation status. The focus of the PIP is to improve the percentage of adolescent members who complete a follow-up visit with a behavioral health provider within 30 days of screening positive for depression with a medical provider. The PIP had one study question that **BHI** stated: “Do targeted interventions increase the percentage of adolescents who screened positive for depression with a healthcare provider and who completed a follow-up visit with a behavioral health provider within 30 days?” The following table describes the study indicator for this PIP.

Table 1–1—Study Indicator

PIP Topic	Study Indicator
<i>Adolescent Depression Screening and Transition of Care to a Behavioral Health Provider</i>	The percentage of eligible adolescent members who screened positive for depression with a medical health provider and completed a follow-up visit with a behavioral health provider within 30 days.

Validation Overview

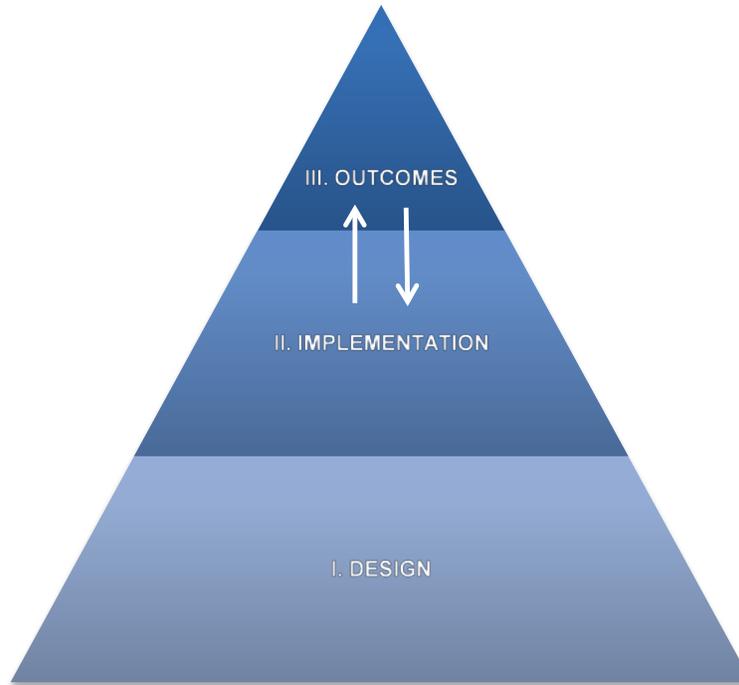
HSAG obtained the information needed to conduct the PIP validation from **BHI**'s PIP Summary Form. This form provided detailed information about the BHO's PIP related to the activities completed and HSAG evaluated for the FY 2017–2018 validation cycle.

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 BHO 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*.

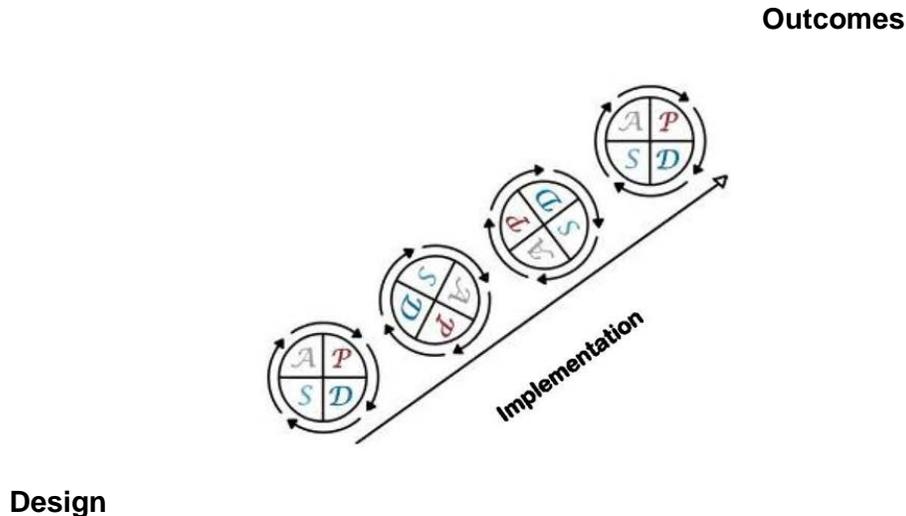
Figure 1–1 illustrates the three study stages of the PIP process—i.e., Design, Implementation, and Outcomes. Each sequential stage provides the foundation for the next stage. The Design stage establishes the methodological framework for the PIP. The activities in this section include development of the 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 **BHI** establishes its study design, the PIP process moves into the Implementation stage. This stage includes data analysis and interventions. During this stage, the BHOs analyze data, identify barriers to performance, and develop interventions targeted to improve outcomes. The BHOs 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 BHO should regularly evaluate interventions to ensure they are having the desired effect. A concurrent review of the data is encouraged. If the BHO’s evaluation of the interventions, and/or review of the data, indicates that the interventions are not having the desired effect, the BHO 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), the implementation of quality improvement activities, and the PIP outcomes at the first annual remeasurement. Based on its technical 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 a BHO’s update of a previously submitted PIP with modified/additional documentation.

BHOs have the opportunity to resubmit the PIP after HSAG’s initial validation to address any deficiencies identified. The PIP received a *Met* score for 76 percent of applicable evaluation elements and a *Partially Met* overall validation status when originally submitted. The BHO had the opportunity to receive technical assistance, incorporate HSAG’s recommendations, and resubmit the PIP. After resubmission, the PIP received a *Met* score for 95 percent of the evaluation elements, and the overall validation status was changed to *Met*.

Table 2–1—FY 2017–2018 Performance Improvement Project Validation for Behavioral Healthcare, Inc.

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>Adolescent Depression Screening and Transition of Care to a Behavioral Health Provider</i>	Submission	76%	73%	<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 BHO 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 **BHI** PIP validated during FY 2017–2018. This table illustrates the BHO’s overall application of the PIP process and achieved success in improving outcomes. 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 BHO completing Activities I through IX.

Table 2–2—Performance Improvement Project Validation Results for Behavioral Healthcare, Inc.

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	<i>Not Assessed</i>	<i>Not Assessed</i>	<i>Not Assessed</i>
Outcomes Total			100% (3/3)	0% (0/3)	0% (0/3)
Percentage Score of Applicable Evaluation Elements Met			95% (20/21)	5% (1/21)	0% (0/21)

* 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 Activity IX of the Outcomes stage were validated.

Design

BHI 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

BHI reported Remeasurement 2 study indicator results for this year's validation. The BHO reported accurate study indicator results in the Activity VII data table; however, an incorrect *p* value was reported in the narrative interpretation of results. The BHO used appropriate quality improvement tools to conduct its causal/barrier analysis and to prioritize identified barriers. **BHI** also evaluated interventions for effectiveness, reported evaluation results, and made decisions about continuing or discontinuing interventions based on the evaluation results.

Outcomes

For this year's PIP validation, the **BHI** PIP was evaluated for improvement of study indicator outcomes from baseline to the second remeasurement. The BHO reported an increase of 22.4 percentage points from baseline to Remeasurement 2. The Remeasurement 2 rate was a statistically significant improvement over baseline.

Analysis of Results

Table 2–3 displays baseline, Remeasurement 1, and Remeasurement 2 data for **BHI**'s *Adolescent Depression Screening and Transition of Care to a Behavioral Health Provider* PIP. **BHI**'s Remeasurement 1 goal was to increase the percentage of eligible adolescent members who receive a behavioral health follow-up visit within 30 days of a positive depression screening completed by a medical provider by 5 percentage points, from 23.7 percent at baseline to 28.7 percent.

**Table 2–3—Performance Improvement Project Outcomes
for Behavioral Healthcare, Inc.**

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 adolescent members who screened positive for depression with a medical health provider and completed a follow-up visit with a behavioral health provider within 30 days.	23.7%	19.5%	46.1%	<i>Not Assessed</i>

The baseline rate of adolescent members who screened positive for depression with a medical provider and received a follow-up visit with a behavioral health provider within 30 days was 23.7 percent. The BHO set a goal of 28.7 percent for the Remeasurement 1 period.

At the first remeasurement, the rate of adolescent members who screened positive for depression with a medical provider and received a follow-up visit with a behavioral health provider within 30 days was 19.5 percent. The Remeasurement 1 rate represented a decline of 4.2 percentage points from the baseline rate. The Remeasurement 1 results did not meet the revised Remeasurement 1 goal of 28.7 percent.

At the second remeasurement, the rate of adolescent members who screened positive for depression with a medical provider and received a follow-up visit with a behavioral health provider within 30 days was 46.1 percent. The Remeasurement 2 rate represented a statistically significant ($p = 0.0081$) improvement of 22.4 percentage points over the baseline rate. The Remeasurement 2 rate exceeded the goal of 28.7 percent.

Barriers/Interventions

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

For the *Adolescent Depression Screening and Transition of Care to a Behavioral Health Provider* PIP, **BHI** reported that no new barriers were identified during the Remeasurement 1 period. The health plan continued to address the following barriers to a successful transition of care:

- Incorrect coding and billing practices for depression screening by behavioral health and primary care providers.
- Provider challenges in navigating the behavioral health system.



- Lack of an established workflow process following a positive depression screen.
- Reduced likelihood of receiving claims for transition of care services from an increasing number of co-located medical and behavioral health providers.

To address these barriers, **BHI** implemented the following interventions:

- Distributed a Depression Screening Clinic Workflow tool that medical clinics could adopt to standardize and refine the process for responding to positive depression screenings and referring to behavioral health providers.
- Established a provider and community forum providing organizations and stakeholders with information on Colorado Medicaid behavioral health systems, best practices and current efforts to integrate care, and a behavioral health panel discussion.
- Rolled out an e-referral system to allow primary care and medical providers electronically refer patients for behavioral health services through a secure portal on **BHI**'s website.
- Created a new integrated care coordinator position. The integrated care coordinator conducts onsite provider visits to educate and inform providers on resources to assist with behavioral health system navigation, behavioral health referrals, crisis service resources, and coding and billing for depression screens.

3. Conclusions and Recommendations

Conclusions

BHI designed a methodologically sound project. The sound PIP study design allowed the BHO to measure and evaluate study indicator outcomes. The BHO accurately reported the baseline through Remeasurement 2 study indicator rates; however, an error in the reported p value for the Remeasurement 1 results remained in the PIP summary form for this year's validation. For the baseline causal/barrier analysis process, the BHO involved internal and external stakeholders in identifying and prioritizing barriers to improvement, using quality improvement processes such as interdisciplinary brainstorming, analysis of survey data, and use of a key driver diagram. The BHO reported that the barriers identified during the baseline measurement period were unchanged during the two remeasurement periods; no new barriers were identified. In the Outcomes stage of the PIP, **BHI** succeeded in demonstrating statistically significant improvement over baseline at the second remeasurement.

Recommendations

HSAG recommends the following:

- **BHI** should conduct methodologically sound analyses of study indicator outcomes and accurately report all results.
- **BHI** should consider spreading successful interventions and develop a sustainability plan within the organization, and in collaboration with any key partners, to ensure that demonstrated improvement is maintained beyond the life of the PIP.