Colorado Medicaid
Community Mental Health Services Program

FY 2010–2011 PIP VALIDATION REPORT

Coordination of Care Between Behavioral Health and Primary Care

for

Behavioral HealthCare, Inc.

June 2011
for
Validation Year 4

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

HSAG HEALTH SERVICES ADVISORY GROUP

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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 438.240(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 to increase or sustain improvement.

In its PIP evaluation and validation, HSAG used 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.

Overview

Behavioral HealthCare, Inc. (**BHI**) continued its nonclinical PIP, *Coordination of Care Between Behavioral Health and Primary Care*, for fiscal year (FY) 2010–2011. This topic addressed CMS' requirements related to quality outcomes—specifically, access to care and services. The purpose of the study was to evaluate and improve coordination of care between Medicaid physical and behavioral health providers for consumers receiving behavioral health services. The goals of the study were to increase the number of consumers receiving physical health care and to increase communication between physical and mental health providers.

BHI stated the study question as follows: "Do targeted interventions improve coordination of care between physical and behavioral health providers for consumers with a diagnosis of schizophrenia, schizo-affective disorder, or bipolar disorder?"

The PIP had three study indicators, which **BHI** defined as follows:

◆ Study Indicator 1: "The percentage of consumers with a preventive or ambulatory medical office visit during the measurement period."

- Study Indicator 2: "The percentage of the study population with documentation in the behavioral health record that the consumer or family/guardian was given information on the need to secure a primary care physician."
- Study Indicator 3: "The percentage of the study population with documentation in the behavioral health record that the primary care physician was notified of treatment."

The study population included adult consumers, 21 years of age and older, with a diagnosis of schizophrenia, schizo-affective disorder, or bipolar disorder who received behavioral health services during the measurement period. For Study Indicator 1, **BHI** used the entire population; for Study Indicators 2 and 3, **BHI** used a sample of the identified population.

Conclusions

For the FY 2010–2011 validation cycle, HSAG validated all 10 activities. The final validation finding for **BHI**'s PIP showed an overall score of 94 percent, a critical element score of 100 percent, and a *Met* validation status. The results for Remeasurement 2 show that two of the three study indicators demonstrated improvement since baseline, although the improvement was not statistically significant for this last remeasurement period. Study Indicator 2's results have improved since baseline; however, they remained the same from Remeasurement 1 to Remeasurement 2. The identification of barriers through barrier analysis and the subsequent selection of appropriate interventions to address those barriers are necessary steps to improve outcomes. The plan's choice of interventions, the combination of intervention types, and the sequence of implementation of these interventions are essential to the success of the PIP. Moving forward, **BHI** should analyze its data to determine if any subgroup has a disproportionately lower rate that negatively affects the overall rate. This "drill-down" type of analysis should be conducted before and after the implementation of any interventions.

Table 1–1 displays the BHO's performance across all activities. The second column represents the total number of evaluation elements *Met* by the BHO compared to the total number of applicable evaluation elements for each activity reviewed, including critical elements. The third column represents the total number of critical elements *Met* by the BHO for each activity reviewed compared to the total number of applicable critical evaluation elements.

Table 1–1—Performance Across All Activities		
Review Activities	**Total Number of Evaluation Elements *Met*/Total Number Applicable Evaluation Elements**	**Total Number of Critical Elements *Met*/Total Number of Applicable Critical Evaluation Elements**
I. Select the Study Topic(s)	5/5	1/1
II. Define the Study Question(s)	2/2	2/2
III. Select the Study Indicator(s)	6/6	3/3
IV. Use a Representative and Generalizable Study Population	3/3	2/2
V. Use Sound Sampling Techniques	6/6	1/1
VI. Reliably Collect Data	9/9	1/1

Table 1–1—Performance Across All Activities		
Review Activities	Total Number of Evaluation Elements *Met*/Total Number Applicable Evaluation Elements	Total Number of Critical Elements *Met*/Total Number of Applicable Critical Evaluation Elements
VII. Implement Intervention and Improvement Strategies	4/4	1/1
VIII. Analyze Data and Interpret Study Results	9/9	2/2
IX. Assess for Real Improvement	1/4	No Critical Elements
X. Assess for Sustained Improvement	1/1	No Critical Elements

Overall Validity and Reliability of the Findings

Based on the validation of this PIP, HSAG's assessment determined confidence in the results.

Strengths/PIP Progression

BHI demonstrated strength in its study design and study implementation by receiving *Met* scores in all applicable evaluation elements for Activities I through VIII. The plan has achieved improvement for all indicators when compared to baseline.

Opportunities for Improvement and Recommendations

HSAG determines opportunities for improvement based on those evaluation elements that receive a *Partially Met* or a *Not Met* score, indicating that those elements are not in full compliance with CMS protocols. The PIP also includes *Points of Clarification* as opportunities for improvement. For a detailed explanation of opportunities for improvement, see the PIP Validation Tool section of this report under the corresponding activity.

BHI should address all *Points of Clarification* and all *Partially Met* and *Not Met* scores, as noted in the discussion that follows.

Activity VIII: Analyze Data and Interpret Study Results

In Attachment H, the plan discussed how the rates will be calculated, which statistical test was used, and provided information on what the goal was for each indicator; however, the plan did not state that the rates will be compared to this established goal. The data analysis plan should be one statement that includes how the rates will be calculated, how the rates will be compared to the goal, and which statistical test will be used to determine statistical significance.

Activity IX: Assess for Real Improvement

There was improvement for two of three study indicators; however, this improvement was not statistically significant from Remeasurement 1 to Remeasurement 2.

Comparison of Years 1 through 4

Each year, HSAG completes a review and evaluation of the entire PIP. The following table illustrates the PIP's progression, describing the activities completed for each PIP submission and the evaluation scores.

Table 1–2—Year-to-Year Comparison of Results				
Categories Compared	Year 1 2007–2008	Year 2 2008–2009	Year 3 2009–2010	Year 4 2010–2011
Activities Evaluated	IV	VIII	IX	X
Percentage Score of Evaluation Elements *Met*	100	97	96	94
Percentage Score of Critical Elements *Met*	100	100	100	100
Validation Status	*Met*	*Met*	*Met*	*Met*

For the FY 2007–2008 validation cycle, **BHI** completed Activities I through IV in the PIP Summary Form, receiving scores of 100 percent for evaluation elements and critical elements *Met*, and a *Met* validation status. **BHI** designed a scientifically sound study that was supported by use of key research principles. HSAG identified an opportunity for improvement in Activity III for **BHI** to document the rationale for the study indicators.

For the FY 2008–2009 validation cycle, **BHI** progressed through Activity VIII, reporting baseline data. The PIP received a score of 97 percent for evaluation elements *Met*, 100 percent for critical elements *Met*, and a *Met* validation status. These findings suggest that **BHI** documented and executed the implementation of the study design and established a robust process for identifying barriers and developing interventions. The opportunity for improvement from last year's validation cycle remained in this year's submission. With the progression of the PIP, HSAG identified five additional opportunities for improvement.

For the FY 2009–2010 validation cycle, **BHI** completed Activities I through IX, reporting Remeasurement 1 data. **BHI** addressed the *Not Met* evaluation element in Activity VI from last year's validation; however, it did not address any of the *Points of Clarification*. The results for this year showed improvement for all indicators.

For this year's FY 2010–2011 validation cycle, HSAG validated all 10 activities with the plan reporting Remeasurement 2 data. The PIP received a score of 94 percent for evaluation elements *Met*, 100 percent for critical evaluation elements *Met*, and a *Met* validation status. The improvement **BHI** achieved for two of three study indicators was not real improvement from Remeasurement 1 to Remeasurement 2; however, the improvement was statistically significant when compared to baseline. **BHI** achieved its goal of 80 percent at Remeasurement 1 for Study Indicator 2; however,

the results were unchanged for this last remeasurement period. As the study continues, the plan is hopeful that the systemwide interventions implemented will have a positive impact on all indicators.

Analysis of Results

Table 1–3 provides a summary of the baseline, Remeasurement 1, and Remeasurement 2 performance for **BHI**'s *Coordination of Care Between Behavioral Health and Primary Care* PIP. For Study Indicator 1, **BHI** included the entire population in the study; for Study Indicators 2 and 3, **BHI** randomly selected cases from the entire population for the study. Notably, Study Indicator 1 used FY 2006–2007 (July 1, 2006, through June 30, 2007) as the baseline measurement period, whereas Study Indicators 2 and 3 used FY 2007–2008 (July 1, 2007, through June 30, 2008) as the baseline measurement period. For Remeasurement 1 and Remeasurement 2, all three study indictors used the same measurement period.

Table 1–3—Summary of Results						
Study Indicator	**Baseline Measurement**		**Remeasurement 1**		**Remeasurement 2**	
	Goal	**Results**	**Goal**	**Results**	**Goal**	**Results**
Study Indicator 1: The percentage of consumers with a preventive or ambulatory medical office visit during the measurement period.	NR	68.44%	NR	75.05%	80%	76.61%
Study Indicator 2: The percentage of the study population with documentation of coordination of care in the behavioral health record that the consumer of family/guardian was given information on the need to secure a primary care physician.	NR	68.04%	NR	88.96%	80%	88.96%
Study Indicator 3: The percentage of the study population with documentation in the behavioral health record that the primary care physician was notified of treatment.	NR	52.85%	NR	61.51%	80%	64.67%

For Study Indicator 1, the baseline results indicated that, 670 out of 979 consumers, or 68.44 percent, had at least one preventive or ambulatory medical office visit. Study Indicator 2 results indicated that, 68.04 percent of 316 behavioral health records had documentation of coordination of care (i.e., the consumer was given information on the need to secure a primary care physician). Study Indicator 3 reported that 52.85 percent of the sampled behavioral health records indicated that the primary care physician was notified of the treatment. Although baseline results were available to determine goals for improvement, **BHI** did not report a baseline goal for any of its study indicators in the submission.

For Remeasurement 1, **BHI** reported 75.05 percent of consumers had at least one preventive or ambulatory medical office visit. The 6.61 percentage point increase for Study Indicator 1 from baseline to Remeasurement 1 was statistically significant, with a p value equal to 0.000937. **BHI** documented statistically significant improvement (Study Indicator 2 had a p value less than or equal to 0.0001 and Study Indicator 3 had a p value equal 0.0276) for both Study Indicators 2 and 3 with

20.92 and 8.66 percentage point increases, respectively. Similar to the baseline measurement period, **BHI** did not report a goal for any of its study indicators for Remeasurement 1.

For Remeasurement 2, Study Indicator 1 had a slight non-statistically significant improvement from 75.05 percent to 76.61 percent while Study Indicator 2 remained the same at 88.96 percent. Similar to Study Indicator 1, Study Indicator 3 had a non-statistically significant increase from 61.51 percent to 64.67 percent. **BHI** reported a goal of 80 percent for all three study indicators. Study Indicator 2's result was above the goal of 80 percent; however, Study Indicators 1 and 3 were below the goal of 80 percent.

BHI implemented four interventions during Remeasurement 2; desktop training to encourage members to see their PCP, updating the peer review process to incorporate coordination of care, contracting with Colorado Access to provide care for **BHI** members, and re-release of the above desktop training.

PIP Scores

For this PIP, HSAG reviewed Activities I through X. Table 1–4 and Table 1–5 show **BHI**'s scores based on HSAG's PIP evaluation of *Coordination of Care Between Behavioral Health and Primary Care*. Evaluators reviewed and scored each activity according to HSAG's validation methodology.

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*
Table 1–4—FY 2010–2011 PIP Validation Report Scores *for* **Coordination of Care Between Behavioral Health and Primary Care** *for* **Behavioral HealthCare, Inc.**										
I. Select the Study Topic(s)	6	5	0	0	1	1	1	0	0	0
II. Define the Study Question(s)	2	2	0	0	0	2	2	0	0	0
III. Select the 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. Use Sound Sampling Techniques	6	6	0	0	0	1	1	0	0	0
VI. Reliably Collect Data	11	9	0	0	2	1	1	0	0	0
VII. Implement Intervention and Improvement Strategies	4	4	0	0	0	1	1	0	0	0
VIII. Analyze Data and Interpret Study Results	9	9	0	0	0	2	2	0	0	0
IX. Assess for Real Improvement	4	1	2	1	0	No Critical Elements				
X. Assess for Sustained Improvement	1	1	0	0	0	No Critical Elements				
Totals for All Activities	**53**	46	2	1	4	13	13	0	0	0

Table 1–5—FY 2010–2011 PIP Validation Report Overall Score *for* Coordination of Care Between Behavioral Health and Primary Care *for* Behavioral HealthCare, Inc.	
Percentage Score of Evaluation Elements *Met*	**94%**
Percentage Score of Critical Elements *Met*	**100%**
Validation Status*	*Met*

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

** The percentage score for 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 high confidence/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.

Scoring Methodology

Below is the scoring methodology HSAG uses to evaluate PIPs conducted by the BHO to determine if a PIP is valid and to rate the percentage of compliance with the CMS protocol for conducting PIPs.

Each PIP activity consists of critical and noncritical evaluation elements necessary for successful completion of a valid PIP. Each evaluation element is scored as *Met*, *Partially Met, Not Met*, *Not Applicable,* or *Not Assessed*. In the PIP Validation Tool (Section 3), the column to the left of the evaluation element description indicates if that evaluation element is a critical element. Critical elements are essential to producing a valid and reliable PIP; therefore, each critical element must have a score of *Met*. For example, for Activity II of the PIP Validation Tool, if the study question cannot be answered, then the critical element is scored as *Not Met* and the PIP is not valid.

The following is an example of how critical elements are designated in the PIP Validation Tool.

	Evaluation Element	**Scoring**
C	The written study question is answerable.	☐ *Met* ☐ *Partially Met* ☐ *Not Met* ☐ *NA*

HSAG scores each evaluation element as noted above and creates a table that totals all scores (for critical and noncritical elements). From this table (Table 3-1 in Section 3) HSAG calculates percentage scores and a validation status (Table 3-2 in Section 3). The percentage score for all evaluation elements is calculated by dividing the number of elements (including critical elements) *Met* by the sum of evaluation elements that were *Met, Partially Met*, and *Not Met*. The percentage score for critical elements *Met* is calculated by dividing the critical elements *Met* by the sum of critical elements that were *Met, Partially Met*, and *Not Met*. The validation status score is based on the percentage score and whether critical elements were *Met*, *Partially Met*, or *Not Met.* (See the scoring table on page 2-2 for more details.) The scoring methodology also includes the *Not Applicable* designation for those situations in which the evaluation element does not apply to the PIP. For example, in Activity V, if the PIP did not use sampling techniques, HSAG would score the evaluation elements in Activity V as *Not Applicable*. HSAG uses the *Not Assessed* scoring designation when the PIP has not progressed to the remaining activities in the CMS protocol. HSAG uses a *Point of Clarification* when documentation for an evaluation element includes the basic components to meet requirements for the evaluation element (as described in the narrative of the PIP), but enhanced documentation would demonstrate a stronger understanding of CMS protocols.

Due to the importance of critical elements, any critical element scored as *Not Met* will invalidate the PIP. Critical elements that are *Partially Met* and noncritical elements that are *Partially Met* or *Not Met* will not invalidate the PIP; however, will affect the overall percentage score (which indicates the percentage of the PIP's compliance with the CMS protocol for conducting PIPs).

HSAG will provide technical assistance to help the BHO understand the CMS protocol and make necessary revisions to the PIP. For future submissions, the BHO will submit a revised PIP Summary Form that includes additional information to address any *Points of Clarification* and any critical and noncritical areas scored as *Partially Met* or *Not Met* for the next validation cycle.

Met, *Partially Met*, and *Not Met* scores are aggregated to reflect an overall score based on the following criteria:

Met	(1)	All critical elements are *Met*
		and
	(2)	80 to 100 percent of all elements are *Met* across all activities.
Partially Met	(1)	All critical elements are *Met* **and** 60 to 79 percent of all elements are *Met* across all activities
		or
	(2)	One or more critical elements are *Partially Met* and the percentage score for all elements across all activities is 60 percent or more.
Not Met	(1)	All critical elements are *Met* **and** less than 60 percent of all elements are *Met* across all activities
		or
	(2)	One or more critical elements are *Not Met*.
Not Applicable (NA)	*Not Applicable* elements (including critical elements) are removed from all scoring.	
Not Assessed	*Not Assessed* elements (including critical elements) are removed from all scoring.	
Point of Clarification	A *Point of Clarification* is used when documentation for an evaluation element includes the basic components to meet requirements for the evaluation element (as described in the narrative of the PIP); however, enhanced documentation would demonstrate a stronger understanding of CMS protocols.	

HSAG then calculates an overall percentage and validation status score as follows:

Percentage Score of Evaluation Elements *Met*	**%**
Percentage Score of Critical Elements *Met*	**%**
Validation Status*	***<Met/Partially Met/Not Met>***

*   The percentage score for all evaluation elements *Met* is calculated by dividing the total *Met* by the sum of all evaluations elements *Met*, *Partially Met*, and *Not Met*.

**   The percentage score for 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 high confidence/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.

The scoring methodology is designed to ensure that critical elements are a must-pass step. If at least one critical element is *Not Met*, the overall validation status is *Not Met*. In addition, the methodology addresses the potential situation in which all critical elements are *Met*; however, suboptimal performance is observed for noncritical elements. The final outcome would be based on the overall percentage score.

Scoring Methodology Examples

HSAG calculates the score for the BHO as the percentage of elements across all activities that receive a *Met* score. The following examples demonstrate how scoring is applied.

Example 1:

The PIP scores are as follows: *Met*=43, *Partially Met*=1, *Not Met*=1, *NA*=8, and one critical element is *Partially Met*. The BHO receives an overall *Partially Met* validation status, indicating a valid PIP. The percentage score of evaluation elements *Met* for the BHO is calculated as 43/45=95.6 percent. The percentage score of critical elements *Met* is calculated as 12/13=92 percent.

Example 2:

The PIP scores are as follows: *Met*=38, *Partially Met*=11, *Not Met*=4, *NA*=0, and all the critical elements are *Met*. The BHO receives an overall *Partially Met* status, indicating a valid PIP. The percentage score of evaluation elements *Met* for the BHO is calculated as 38/53=71.7 percent. The percentage score of critical elements *Met* is calculated as 13/13=100 percent.

DEMOGRAPHIC INFORMATION			
Health Plan Name:	Behavioral HealthCare, Inc.		
Study Leader Name:	Melissa Kulasekere	Title:	Program Evaluator and Disease Management Specialist
Phone Number:	(720) 490-4416	E-mail Address:	mkulasekere@bhiinc.org
Name of Project/Study:	Coordination of Care Between Behavioral Health and Primary Care		
Type of Study:	Nonclinical ☐ Collaborative ☐ HEDIS		
Date of Study:	7/1/2006 to 6/30/2010		
Type of Delivery System:	BHO	Number of Medicaid Consumers in BHO:	13,117
		Number of Medicaid Consumers in Study:	1,981
Year 4 Validation	Resubmission	Validated through Activity: X	
Results:	Remeasurement 2		
Submission Date:	5/13/2011	Validation Date:	5/13/2011

EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation		
I. **Select the Study Topic(s): Topics selected for the study should reflect the Medicaid-enrolled population in terms of demographic characteristics, prevalence of disease, and the potential consequences (risks) of 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 based on input from Medicaid consumers. The study topic:**		
1. Reflects high-volume or high-risk conditions.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	The PIP was a nonclinical study.
2. Is selected following collection and analysis of data. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	Selection of the PIP topic followed the collection and analysis of plan-specific data.
3. Addresses a broad spectrum of care and services. The score for this element will be Met or Not Met.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The PIP addressed a broad spectrum of care and services.
4. Includes all eligible populations that meet the study criteria. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The PIP included all eligible populations that met the study criteria.
5. Does not exclude consumers with special health care needs. The score for this element will be Met or Not Met.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The plan should specify in Activity I that consumers with special health care needs were not excluded from the study. This was identified as an opportunity for improvement in last years validation and was not addressed in this years submission. Re-review May 2011: After a review of the resubmitted PIP documentation, the score for this evaluation element has been changed from Not Met to Met. The plan specifically stated that the PIP did not exclude any clients with special health care needs.
C* 6. Has the potential to affect consumer health, functional status, or satisfaction. The score for this element will be Met or Not Met.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The PIP has the potential to affect health, functional status, or satisfaction.

* "C" in this column denotes a critical evaluation element.
** Total Evaluation Elements includes critical elements.
*** 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 I									
# of Total Evaluation Elements					# of Critical Elements				
Total Evaluation Elements**	Met	Partially Met	Not Met	Not Applicable	Critical Elements***	Met	Partially Met	Not Met	Not Applicable
6	5	0	0	1	1	1	0	0	0

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

** Total Evaluation Elements includes critical elements.

*** 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. **Define the Study Question(s): Stating the study question(s) helps maintain the focus of the PIP and sets the framework for data collection, analysis, and interpretation. The study question:**		
C* 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 clear and stated in simple terms using the CMS PIP protocol X/Y format.
C* 2. Is answerable. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study question(s) was answerable and presented in the CMS PIP protocol X/Y format.

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

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

** Total Evaluation Elements includes critical elements.

*** 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.	**Select the Study Indicator(s): A study indicator is a quantitative characteristic or variable that reflects a discrete event (e.g., an older adult has not received an influenza vaccination in the last 12 months) or a status (e.g., a consumer'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. The study indicators:**	
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(s) were objective, clear, and unambiguously defined. The PIP provided correct codes, when applicable, for the numerator(s). The documentation provided a description of the study indicator(s) as well as the definition(s) for the numerator(s) or denominator(s).
2. Are based on current, evidence-based practice guidelines, pertinent peer-reviewed literature, or consensus expert panels.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The PIP based the study indicator(s) on current clinical practice guidelines or health services research with identified sources.
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(s) aligned with the study question(s), and the results of the study indicator(s) would answer the study question(s).
4. Measure changes (outcomes) in health or functional status, consumer satisfaction, or valid process alternatives. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study indicator(s) measured change in health, functional status, satisfaction, or valid process alternatives.
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	Data were available for collection on each study indicator(s).
6. Are nationally recognized measures, such as HEDIS technical specifications, when appropriate. The scoring for this element will be Met or NA.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	The study indicator(s) were not nationally recognized measures.

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

** Total Evaluation Elements includes critical elements.

*** 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. **Select the Study Indicator(s): A study indicator is a quantitative characteristic or variable that reflects a discrete event (e.g., an older adult has not received an influenza vaccination in the last 12 months) or a status (e.g., a consumer'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. The study indicators:**

7. Includes the basis on which each indicator(s) was adopted, if internally developed.

☑ Met ☐ Partially Met ☐ Not Met ☐ NA

The plan should provide the rationale for the study indicators in Activity III. This was identified as an opportunity for improvement in last years submission and was not addressed in this years submission.

Re-review May 2011:
After a review of the resubmitted PIP documentation, the score for this evaluation element has been changed from Partially Met to Met. The plan provided the rationale for the study indicators as requested.

Results for Activity III

# of Total Evaluation Elements					# of Critical Elements				
Total Evaluation Elements**	Met	Partially Met	Not Met	Not Applicable	Critical Elements***	Met	Partially Met	Not Met	Not Applicable
7	6	0	0	1	3	3	0	0	0

* "C" in this column denotes a critical evaluation element.
** Total Evaluation Elements includes critical elements.
*** 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-enrolled population, with systemwide measurement and improvement efforts to which the study indicators apply. The study population:**	
C* 1. Is accurately and completely defined. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The PIP accurately and completely defined the study population, providing correct codes, when applicable, for the denominator(s).
2. Includes requirements for the length of a consumer's enrollment in the BHO.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The PIP documentation defined the requirements for length of enrollment for the eligible population.
C* 3. Captures all consumers to whom the study question applies. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The eligible population captured all consumers to whom the study question(s) applied.

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

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

** Total Evaluation Elements includes critical elements.

*** 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. **Use Sound Sampling Techniques: (This activity is scored only if sampling is used.) If sampling is used to select consumers 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. Sampling methods:**		
1. Consider and specify the true or estimated frequency of occurrence.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The sampling equation considered the true or estimated frequency of occurrence.
2. Identify the sample size.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The documentation identified the sample size for Study Indicators 2 and 3.
3. Specify the confidence level.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The documentation specified the confidence level.
4. Specify the acceptable margin of error.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The documentation specified the acceptable margin of error.

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

** Total Evaluation Elements includes critical elements.

*** 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.	**Use Sound Sampling Techniques: (This activity is scored only if sampling is used.) If sampling is used to select consumers 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. Sampling methods:**	
C*	5. Ensure a representative sample of the eligible population.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The documentation specified the process used to calculate/select the sample, and the study used a representative sampling technique to ensure generalizable information.

Point of Clarification: Some of the information in Table 6 in the attachment for Activity V appeared to be incorrectly reported. The column labeled "% of BHIs Population" had some discrepancies. For example, Center As percent of the population of 3.87 percent should have been assigned to CPN. The correct percentages of the population for each center are as follows: Center A is 20.79 percent, Center B is 38.75 percent, Center C is 36.59 percent, and CPN is 3.87 percent. In future submissions, the plan should ensure that the information has been reported correctly.

Re-review May 2011:
After a review of the resubmitted PIP documentation, HSAG has determined that the Point of Clarification has been addressed. The plan provided the correct percentages of each population as requested in Attachment E for Activity V, Sampling Techniques. |

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

** Total Evaluation Elements includes critical elements.

*** 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. **Use Sound Sampling Techniques: (This activity is scored only if sampling is used.) If sampling is used to select consumers 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. Sampling methods:**		
6. Are in accordance with generally accepted principles of research design and statistical analysis.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The sampling techniques were in accordance with generally accepted principles of research design and statistical analysis.

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

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

** Total Evaluation Elements includes critical elements.

*** 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.	**Reliably Collect Data: Data collection 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.**	
1. The identification of data elements to be collected. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The documentation included the identification of data elements for collection.
2. The identification of specified sources of data. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The documentation clearly specified the sources of data.
3. A defined and systematic process for collecting baseline and remeasurement data.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The PIP specified a systematic method for collecting baseline and remeasurement data.
4. A timeline for the collection of baseline and remeasurement data. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The documentation provided a timeline with dates that delineate data collection in both the baseline and remeasurement periods.
5. Qualified staff and personnel to abstract manual data.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The PIP documentation described staff credentials, experience, and training for manual data collection.
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	The documentation included a manual data collection tool that ensured consistent and accurate collection of data.
7. A manual data collection tool that supports interrater reliability.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The documentation included the policy or procedure for the manual data collection interrater reliability process.
8. Clear and concise written instructions for completing the manual data collection tool.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The data collection tool included clear and succinctly written instructions.
9. An overview of the study in written instructions.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The written instructions for the manual data collection tool included an overview of the PIP.
10. Administrative data collection algorithms/flow charts that show activities in the production of indicators.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	The Department of Health Care Policy and Financing provided the administrative data for this PIP.

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

** Total Evaluation Elements includes critical elements.

*** 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.	**Reliably Collect Data: Data collection 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.**		
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 Department of Health Care and Policy Financing provided the administrative data for this PIP.

Results for Activity VI									
# of Total Evaluation Elements					**# of Critical Elements**				
Total Evaluation Elements**	Met	Partially Met	Not Met	Not Applicable	Critical Elements***	Met	Partially Met	Not Met	Not Applicable
11	9	0	0	2	1	1	0	0	0

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

** Total Evaluation Elements includes critical elements.

*** 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. **Implement Intervention and Improvement Strategies: Real, sustained improvements in care result from a continuous cycle of measuring and analyzing performance, as well as, developing and implementing systemwide improvements in care. Interventions are designed to change behavior at an institutional, practitioner, or consumer level. The improvement strategies are:**		
C* 1. Related to causes/barriers identified through data analysis and quality improvement processes. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The plan completed a causal/barrier analysis and used improvement strategies related to the causes/barriers identified through data analysis and a quality improvement process. Point of Clarification: In future submissions, the plan should link each intervention with an identified barrier. Re-review May 2011: After a review of the resubmitted PIP documentation, HSAG has determined that the Point of Clarification has been addressed. Each intervention has a corresponding barrier listed in the Barrier/Intervention table in Activity VII.
2. System changes that are likely to induce permanent change.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The documentation included system intervention(s) that were likely to have a long-term effect.
3. Revised if the original interventions are not successful.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The documentation described problem-solving techniques using data analysis to identify possible causes and solutions.
4. Standardized and monitored if interventions are successful.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The documentation included a narrative discussion about the success of quality improvement actions and how the intervention(s) were standardized and monitored as a result of those actions.

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

** Total Evaluation Elements includes critical elements.

*** 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 VII									
# of Total Evaluation Elements					**# of Critical Elements**				
Total Evaluation Elements**	Met	Partially Met	Not Met	Not Applicable	Critical Elements***	Met	Partially Met	Not Met	Not Applicable
4	4	0	0	0	1	1	0	0	0

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

** Total Evaluation Elements includes critical elements.

*** 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. **Analyze Data and Interpret Study Results: Review the data analysis process for the selected clinical or nonclinical study indicators. Review appropriateness of, and adherence to, the statistical analysis techniques used.**		
C* 1. Are 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 plan did not include a comparison to goals in the data analysis plan. This was identified as an opportunity for improvement in last years validation and was not addressed in this years submission. The data analysis plan should specify that the results for each study indicator will be compared to its goal for the measurement period. In addition, the plan should specify in the data analysis plan the statistical test that was used. Re-review May 2011: After a review of the resubmitted PIP documentation, the score for this evaluation element has been changed from Partially Met to Met with a Point of Clarification. The PIP conducted data analysis according to the data analysis plan. The data analysis plan included the type of data analysis the PIP would conduct, how the PIP would calculate the rate, how the PIP would compare the rate to the goal, and which statistical test the data analysis plan would use. Point of Clarification: In Attachment H, the plan discussed how the rates will be calculated, what statistical test was used, and provided information on what the goal was for each indicator; however, it did not state that the rates will be compared to this established goal. The data analysis

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

** Total Evaluation Elements includes critical elements.

*** 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			
			plan should be one statement that includes how the rates will be calculated, how the rates will be compared to the goal, and what statistical test will be used to determine statistical significance.
C*	2. Allow for the generalization of results to the study population if a sample was selected. If no sampling was performed, this element is scored NA.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	Sampling techniques used for this PIP supported the generalization of results to the study population.
	3. Identify factors that threaten internal or external validity of findings. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The documentation identified that no factors threatened the internal or external validity of the findings.
	4. Include an interpretation of findings. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The plan did not include a discussion of the comparison between the results and the goals. This was identified as an opportunity for improvement in last years validation and was not addressed in this years submission. The plan should establish a goal for each study indicator for every measurement period, and the interpretation of the findings should discuss the rates in comparison to the goals. Re-review May 2011: After a review of the resubmitted PIP documentation, the score for this evaluation element has been changed from Partially Met to Met. The PIP documentation included a complete interpretation of the findings for each study indicator.

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

** Total Evaluation Elements includes critical elements.

*** 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.	**Analyze Data and Interpret Study Results: Review the data analysis process for the selected clinical or nonclinical study indicators. Review appropriateness of, and adherence to, the statistical analysis techniques used.**	
5. Are presented in a way that provides accurate, clear, and easily understood information. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The statistical testing Chi-square statistic and p value reported in "H Attachment VIII" for Study Indicator 1 between Remeasurement 1 and Remeasurement 2 does not match the statistical testing statistics entered in the Activity IX table. In addition, the plan documented a 3.16 percent increase from Remeasurement 1 to Remeasurement 2 for Study Indicator 3; however, the increase was a 3.16 percentage point increase. In future submissions, the plan should ensure that all of the information was documented accurately and consistently. Re-review May 2011: After a review of the resubmitted PIP documentation, the score for this evaluation element has been changed from Partially Met to Met. The statistical testing was consistent and accurate in Attachment H and PIP Summary Form table in Activity IX. The plan made all corrections as requested.
6. Identify the initial measurement and the remeasurement of study indicators.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The data analysis identified the initial measurement and remeasurement results for all study indicator(s).
7. Identify statistical differences between the initial measurement and the remeasurement.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The PIP included documentation of statistical testing between measurement periods.

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

** Total Evaluation Elements includes critical elements.

*** 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. **Analyze Data and Interpret Study Results: Review the data analysis process for the selected clinical or nonclinical study indicators. Review appropriateness of, and adherence to, the statistical analysis techniques used.**		
8. Identify factors that affect the ability to compare the initial measurement with the remeasurement.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The plan reported that the results between Remeasurements 1 and 2 were easily replicable; however, it did not specifically state if there were any factors that could affect the ability to compare measurements. This was identified as an opportunity for improvement in last years validation and was not addressed in this years submission. In future submissions, the plan should identify factors that could affect the ability to compare measurements, including the impact and resolution. If there were no factors, the plan should state this. Re-review May 2011: After a review of the resubmitted PIP documentation, the score for this evaluation element has been changed from Partially Met to Met. The plan reported that there were no factors that affected the ability to compare measurement periods.
9. Include an interpretation of the extent to which the study was successful.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The analysis of the data included an interpretation of the extent to which the PIP was successful.

Results for Activity VIII									
# of Total Evaluation Elements					**# of Critical Elements**				
Total Evaluation Elements**	Met	Partially Met	Not Met	Not Applicable	Critical Elements***	Met	Partially Met	Not Met	Not Applicable
9	9	0	0	0	2	2	0	0	0

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

** Total Evaluation Elements includes critical elements.

*** 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.	**Assess for Real Improvement: Assess for any meaningful changes in performance observed and was demonstrated during the Baseline measurement. Assess for any random year-to-year variations, population changes, or sampling errors that may have occurred during the measurement process.**	
1. The remeasurement methodology is the same as the baseline methodology.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	Repeated measurements used the same methodology used for the baseline measurement.
2. There is documented improvement in processes or outcomes of care.	☐ Met ☑ Partially Met ☐ Not Met ☐ NA	Study Indicators 1 and 3 demonstrated improvement for Remeasurement 2; however, Study Indicator 2 remained the same. Re-review May 2011: After a review of the resubmitted PIP documentation, the score for this evaluation element will remain Partially Met. The outcomes for the study indicators did not change with the resubmitted PIP.
3. The improvement appears to be the result of planned intervention(s).	☐ Met ☑ Partially Met ☐ Not Met ☐ NA	Not all of the study indicators demonstrated improvement from Remeasurement 1 to Remeasurement 2. Re-review May 2011: After a review of the resubmitted PIP documentation, the score for this evaluation element will remain Partially Met. The outcomes for the study indicators did not change with the resubmitted PIP.

** Total Evaluation Elements includes critical elements.

*** 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. **Assess for Real Improvement: Assess for any meaningful changes in performance observed and was demonstrated during the Baseline measurement. Assess for any random year-to-year variations, population changes, or sampling errors 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	None of the study indicators demonstrated statistically significant improvement from Remeasurement 1 to Remeasurement 2. Re-review May 2011: After a review of the resubmitted PIP documentation, the score for this evaluation element will remain Not Met. The outcomes for the study indicators did not change with the resubmitted PIP.

Results for Activity IX									
# of Total Evaluation Elements					**# of Critical Elements**				
Total Evaluation Elements**	Met	Partially Met	Not Met	Not Applicable	Critical Elements***	Met	Partially Met	Not Met	Not Applicable
4	1	2	1	0	0	0	0	0	0

** Total Evaluation Elements includes critical elements.

*** 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. **Assess for Sustained Improvement: Assess for any demonstrated improvement through repeated measurements over comparable time periods. Assess for any random year-to-year variations, population changes, or 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	Repeated measurements over comparable time periods demonstrated sustained improvement without a statistically significant decline in performance results.

Results for Activity X									
# of Total Evaluation Elements					# of Critical Elements				
Total Evaluation Elements**	Met	Partially Met	Not Met	Not Applicable	Critical Elements***	Met	Partially Met	Not Met	Not Applicable
1	1	0	0	0	0	0	0	0	0

** Total Evaluation Elements includes critical elements.

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

Table 3-1—FY 10-11 PIP Validation Report Scores: Coordination of Care Between Behavioral Health and Primary Care for Behavioral HealthCare, Inc.										
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. Select the Study Topic(s)	6	5	0	0	1	1	1	0	0	0
II. Define the Study Question(s)	2	2	0	0	0	2	2	0	0	0
III. Select the 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. Use Sound Sampling Techniques	6	6	0	0	0	1	1	0	0	0
VI. Reliably Collect Data	11	9	0	0	2	1	1	0	0	0
VII. Implement Intervention and Improvement Strategies	4	4	0	0	0	1	1	0	0	0
VIII. Analyze Data and Interpret Study Results	9	9	0	0	0	2	2	0	0	0
IX. Assess for Real Improvement	4	1	2	1	0	0	No Critical Elements			
X. Assess for Sustained Improvement	1	1	0	0	0	0	No Critical Elements			
Totals for All Activities	**53**	**46**	**2**	**1**	**4**	**13**	**13**	**0**	**0**	**0**

Table 3-2—FY 10-11 PIP Validation Report Overall Scores: Coordination of Care Between Behavioral Health and Primary Care for Behavioral HealthCare, Inc.	
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 Validating 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.

Appendix A contains the PIP Summary Form **BHI** submitted to HSAG for review. HSAG has not altered the content or made grammatical corrections. Any attachments provided with the PIP submission are not included in this appendix. New or altered information in the PIP Summary Form will be dated and highlighted or in bold. Deleted information appears in strikethrough font.

- Appendix A: **Behavioral HealthCare, Inc.**'s PIP Summary Form: *Coordination of Care Between Behavioral Health and Primary Care*

Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Coordination of Care Between Behavioral Health and Primary Care
for Behavioral HealthCare, Inc.

DEMOGRAPHIC INFORMATION

BHO name: **Behavioral Healthcare Inc.**

Study Leader Name: Melissa Kulasekere   Title: Program Evaluator and Disease Management Specialist

Telephone Number: (720) 490-4416   E-mail Address: mkulasekere@bhiinc.org

Name of Project/Study: *Coordination of Care Between Behavioral Health and Primary Care*

Type of Study:

☐ Clinical   ☒ Nonclinical

☐ Collaborative   ☐ HEDIS

Type of Delivery System: BHO

Date of Study: 7/1/2007 to 6/30/2010

Number of Medicaid Consumers Served by BHOs: 9,326 (FY08), 9,189 (FY09), **13,117(FY10)**

Number of Medicaid Consumers in Project/Study: 1212 (FY08), 1244 (FY09), **1343(FY10)**

Submission Date: 4/1/2011

Section to be completed by HSAG

	Year 1 Validation	_____ Initial Submission	_____ Resubmission
_____	Year 2 Validation	_____ Initial Submission	_____ Resubmission
_____	Year 3 Validation	_____ Initial Submission	_____ Resubmission
__X__	Year 4 Validation	_____ Initial Submission	__X__ Resubmission

_____ Baseline Assessment   _____ Remeasurement 1

__X__ Remeasurement 2   _____ Remeasurement 3

Year 1 validated through Activity __IV__

Year 2 validated through Activity __VIII__

Year 3 validated through Activity __IX__

Year 4 validated through Activity __X__

A. Activity I: Select the study topic(s). 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 disease. Topics may be derived from utilization data (ICD-9 or CPT coding data related to diagnoses and procedures; NDC codes for medications; HCPCS 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; consumer characteristics data such as race/ethnicity/language; other fee-for-service data; or local or national data related to Medicaid risk populations. The goal of the project should be to improve processes and outcomes of health care or services to have a potentially significant impact on consumer health, functional status, or satisfaction. The topic may be specified by the state Medicaid agency or CMS, or it may be based on input from consumers. Over time, topics must cover a broad spectrum of key aspects of consumer care and services, including clinical and nonclinical areas, and should include all enrolled populations (i.e., certain subsets of consumers should not be consistently excluded from studies).

Study topic:

The intent of this study is to evaluate and improve coordination of care between Medicaid physical and behavioral health providers for consumers who are receiving BHO services and are diagnosed with schizophrenia, schizoaffective disorder, or bipolar disorder. This population represents a high-risk group which frequently has co-occurring medical conditions, and is at higher risk of early death due to medical conditions being undiagnosed or untreated, complications from medications associated with mental health conditions, and behaviors associated with mental health conditions.

Individuals with severe mental illness often have co-morbid medical conditions and see multiple medical providers. The 2003 Presidents New Freedom Commission report states that a "chasm exists between the mental health and general health care systems in financing and practice" (pg 21). The 2001 Institute of Medicine Crossing the Quality Chasm report recognized that multiple providers and health care organizations fail to coordinate care. The report called on providers to actively collaborate and communicate to ensure an appropriate exchange of information and coordination of care. A follow-up IOM report in 2003 identified care coordination as one of 20 priority health care areas deserving immediate attention. The 2006 IOM report, Improving the Quality of Health Care for Mental and Substance-Use Conditions, devotes an entire chapter to care coordination. This report highlights deficiencies in the health care system which create barriers to care coordination for persons with mental illness. For example, persons diagnosed with schizophrenia, depression, and bipolar disorders are more likely than the general population to have asthma, chronic bronchitis, and emphysema (Jeste, Gladsjo, Lindamer, & Lacro, 1996; Koran et al., 1989; Sokal et al., 2004; Tsuang, Perkins, & Simpson, 1983). Individuals with schizophrenia are at increased risk for obesity, heart disease, diabetes, hyperlipidemia, hepatitis, and osteoporosis (ADA, 2004; Goff et al., 2005; Green, Canuso, Brenner, & Wojcik, 2003). In a survey of 59 community mental health center consumers, 40% of respondents indicated that coordination between their medical and mental health caregivers was poor—45% said that their mental health provider did not ask them about medical issues, and 39%

A. Activity I: Select the study topic(s). 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 disease. Topics may be derived from utilization data (ICD-9 or CPT coding data related to diagnoses and procedures; NDC codes for medications; HCPCS 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; consumer characteristics data such as race/ethnicity/language; other fee-for-service data; or local or national data related to Medicaid risk populations. The goal of the project should be to improve processes and outcomes of health care or services to have a potentially significant impact on consumer health, functional status, or satisfaction. The topic may be specified by the state Medicaid agency or CMS, or it may be based on input from consumers. Over time, topics must cover a broad spectrum of key aspects of consumer care and services, including clinical and nonclinical areas, and should include all enrolled populations (i.e., certain subsets of consumers should not be consistently excluded from studies).

said that their medical provider did not ask about mental health issues (Levinson, 2003). As cited in the technical report, Morbidity and Mortality in People with Serious Mental Illness, October 2006, published by the National Association of State Mental Health Program Directors Medical Directors Council, consumers who have a serious mental illness are now dying 25 years earlier than the general population.

Behavioral Healthcare Inc. (BHI) received feedback from the FY06 Medicaid EQRO site visit about the need to improve continuity of care. The monitoring of continuity of care was incorporated into BHI's FY07 delegation process with the Community Mental Health Centers (CMHCs). The CMHCs perform a peer review quarterly with survey tools that ask a very similar question across all centers: "Is there evidence that the Primary Care Physician (PCP) was notified of treatment, or that the consumer was informed of the need to secure a Primary Care Physician?" In spite of monitoring this process, BHI's PCP contact or consumer notification, as determined from the charts reviewed during the CMHCs' peer review process, was only at 62% for FY07 and 72.6% for the first three quarters of FY08. Peer reviews include coordination of care only for clients who have a PCP, and are not limited to a specific measurement period. The CMHCs should improve the PCP contact or consumer notification process through new interventions.

This study assigned by the Colorado State Department of Healthcare Policy and Financing is a collaborative, state-wide study designed to achieve the overall goal of improving consumer health, functioning, and satisfaction with the health care delivery system by coordinating care with physical health providers. This study will evaluate Study Indicator 1: The percentage of the study population receiving mental health services that have also had a visit with a physical health provider over the past year. BHI will also evaluate Study Indicator 2: The percentage of the study population that received notification on the need to secure a primary care physician and Study Indicator 3: Whether there is documentation in the clinical record of communication between the physical and mental health providers for those receiving services. The Coordination of Care PIP was a collaborative PIP among the five BHOs. However, for Northeast Behavioral Health this was an

A. Activity I: Select the study topic(s). 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 disease. Topics may be derived from utilization data (ICD-9 or CPT coding data related to diagnoses and procedures; NDC codes for medications; HCPCS 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; consumer characteristics data such as race/ethnicity/language; other fee-for-service data; or local or national data related to Medicaid risk populations. The goal of the project should be to improve processes and outcomes of health care or services to have a potentially significant impact on consumer health, functional status, or satisfaction. The topic may be specified by the state Medicaid agency or CMS, or it may be based on input from consumers. Over time, topics must cover a broad spectrum of key aspects of consumer care and services, including clinical and nonclinical areas, and should include all enrolled populations (i.e., certain subsets of consumers should not be consistently excluded from studies).

ongoing PIP from previous years. For BHI, coordination of care had been identified as an important focus of service delivery and BHI has been monitoring data on contacts with PCPs since FY07. Due to these differences, only Study Indicator 1 will be common among the five BHOs. The measurement period for this indicator is Fiscal Year 2007 for all BHOs.

BHI chose Study Indicator 2 because clinicians are in a position to empower clients to take steps to see a PCP, emphasizing the importance of maintaining or improving physical health, hopefully leading to increased medical visits. Indicator 3 helps improve the care provided to clients by clinicians by improving the coordination of physical and mental health treatment, and through monitoring for contraindications in medication prescribed by both the Psychiatric staff and the PCP. BHI chose FY08 as the baseline measurement period for Study Indictors 1 and 2 due to the fact that interventions to improve Coordination of Care were implemented during FY09 and therefore the two data sets are most comparable in terms of continuity in measurement periods.

Baseline information will be collected and evaluated, and interventions developed, as appropriate to each BHO, to increase the number of consumers receiving physical health care, as well as to increase communication between physical and mental health providers, resulting in improved continuity of physical and behavioral health care over time.

The population for this study includes all clients who meet inclusionary criteria (see Activity IV), and does not exclude any clients with special health care needs.

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 targeted interventions improve coordination of care between physical and behavioral health providers for consumers with a diagnosis of Schizophrenia (295.10, 295.20, 295.30, 295.60, and 295.90), Schizoaffective disorder (295.70), or Bipolar Disorder (296.0x, 296.40, 296.4x, 296.5x, 296.6x, and 296.7)?

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 12 months) or a status (e.g., a consumer'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	The percentage of consumers with preventive or ambulatory medical office visit during the measurement period. Describe rationale for selection of study indicator: **This study assigned by the Colorado State Department of Healthcare Policy and Financing is a collaborative, state-wide study designed to achieve the overall goal of improving consumer health, functioning, and satisfaction with the health care delivery system by coordinating care with physical health providers. Another goal was to increase the number of members seeing a physical health doctor each year. Study Indicator 1 was decided on and adopted at the State level among the 5 BHOs.**
Numerator: (no numeric value)	The number of consumers defined in the denominator with at least one preventive or ambulatory medical visit during the measurement period. Acceptable CPT, HCPSC, ICD-9 or UB-92 codes are defined by HEDIS in Table AAP-A with the exception of the ophthalmology and optometry CPT codes. (See attachment AAP HEDIS Access to Preventive Ambulatory Care).
Denominator: (no numeric value)	The number of consumers at least 21 years of age as of the first day of the measurement period with at least one BHO outpatient claim in the measurement period containing a schizophrenia (295.10, 295. 20, 295.30, 295.60, 295.90), schizoaffective disorder (295.70), or bipolar disorder (296.0x, 296.40, 296.4x, 296.5x, 296.6x, 296.7) diagnosis. Consumers must be Medicaid eligible and enrolled at least ten months with the same BHO during the measurement period.
Baseline Measurement Period	July1, 2006 – June 30, 2007
Baseline Goal	Establish baseline.
Remeasurement 1 Period	July 1, 2008 – June 30, 2009
Remeasurement 2 Period	July 1, 2009 – June 30, 2010
Benchmark	~~To be decided.~~ **80%**
Source of Benchmark	~~To be decided.~~ **BHI's Program Evaluation and Outcomes committee agreed on 80% as a reasonable benchmark for this indicator.**

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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 12 months) or a status (e.g., a consumer'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 2	The percentage of the statistically valid sample of the study population with documentation in the behavioral health record that the consumer or family/guardian was given information on the need to secure a primary care physician. **Describe rationale for selection of study indicator: BHI chose Study Indicator 2 because clinicians are in a position to empower clients to take steps to see a PCP, emphasizing the importance of maintaining or improving physical health, hopefully leading to increased medical visits. BHI has also been monitoring this indicator through the center peer review process since 2006.**
Numerator: (no numeric value)	The number of consumers whose behavioral health provider documented in the consumer's behavioral health record that the consumer or family/guardian was given information on the need to secure a primary care physician.
Denominator: (no numeric value)	A statistically valid sample of consumers at least 21 years of age as of the first day of the measurement period with at least one BHO outpatient claim in the measurement period containing a schizophrenia (295.10, 295. 20, 295.30, 295.60, 295.90), schizoaffective disorder (295.70), or bipolar disorder (296.0x, 296.40, 296.4x, 296.5x, 296.6x, 296.7) diagnosis. Consumers must be Medicaid eligible and enrolled at least ten months with the same BHO during the measurement period.
Baseline Measurement Period	July 1, 2007 – June 30, 2008
Baseline Goal	Establish baseline.
Remeasurement 1 Period	July 1, 2008 – June 30, 2009
Remeasurement 2 Period	July 1, 2009 – June 30, 2010
Benchmark	~~To be decided.~~ **80%**
Source of Benchmark	~~To be decided.~~ **BHI has established this benchmark through collaboration with the mental health centers and the Program Evaluations and Outcomes committee. BHI has maintained this benchmark since 2006, when monitoring this indicator through the center peer review process began.**

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 12 months) or a status (e.g., a consumer'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	The percentage of the statistically valid sample of the study population with documentation in the behavioral health record that the primary care physician was notified of treatment. **Describe rationale for selection of study indicator: Indicator 3 helps improve the care provided to clients by clinicians by improving the frequency of coordination of physical and mental health treatment, and through monitoring for contraindications in medication prescribed by both the Psychiatric staff and the PCP. BHI has also been monitoring this indicator through the center peer review process since 2006.**
Numerator: (no numeric value)	The number of consumers whose behavioral health provider documented in the consumer's behavioral health record that the primary care physician was notified of treatment.
Denominator: (no numeric value)	A statistically valid sample of consumers at least 21 years of age as of the first day of the measurement period with at least one BHO outpatient claim in the measurement period containing a schizophrenia (295.10, 295. 20, 295.30, 295.60, 295.90), schizoaffective disorder (295.70), or bipolar disorder (296.0x, 296.40, 296.4x, 296.5x, 296.6x, 296.7) diagnosis. Consumers must be Medicaid eligible and enrolled at least ten months with the same BHO during the measurement period.
Baseline Measurement Period	July 1, 2007 – June 30, 2008
Baseline Goal	Establish baseline.
Remeasurement 1 Period	July 1, 2008 – June 30, 2009
Remeasurement 2 Period	July 1, 2009 – June 30, 2010
Benchmark	~~To be decided.~~ **80%**
Source of Benchmark	~~To be decided.~~ **BHI has established this benchmark through collaboration with the mental health centers and the Program Evaluations and Outcomes committee. BHI has maintained this benchmark since 2006, when monitoring this indicator through the center peer review process began.**
Use this area to provide additional information. Discuss the guidelines used and the basis for each study indicator.	

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D. Activity IV: Use a representative and generalizable study population. The selected topic should represent the entire eligible population of Medicaid consumers, with systemwide measurement and improvement efforts to which the study indicators apply. Once the population is identified, a decision must be made whether or not to review data for the entire population or a sample of that population. The length of a consumer's enrollment needs to be defined to meet the study population criteria.

Study population:

This study would include adult consumers (age 21 and older) with a diagnosis of schizophrenia (295.10, 295. 20, 295.30, 295.60, 295.90), schizoaffective disorder (295.70) or bipolar disorder (296.0x, 296.40, 296.4x, 296.5x, 296.6x, 296.7 who received BHO services during the measurement time period. Consumers must be Medicaid eligible and enrolled with Behavioral Healthcare Inc. during the measurement period. Consumers must be at least 21 years of age as of the first day of the measurement period.

Preventive or ambulatory medical visits are identified using acceptable CPT, HCPSC, ICD-9 or UB-92 codes defined by HEDIS in Table AAP-A, with the exception of the ophthalmology and optometry CPT codes. (See attachment AAP HEDIS Access to Preventive Ambulatory Care**).**

For Study Indicators 2 and 3, a statistically valid random sample of the identified population will be used as denominators.

None of the clients who meet inclusionary criteria for the study population are excluded from the study, including clients with special health care needs.

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E. Activity V: Use sound sampling techniques. If sampling is used to select consumers 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*)
See E. Activity V attached)					

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F. Activity VIa: Reliably collect data. Data collection must ensure that 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

      [X] Outpatient

      [   ] Inpatient

      [   ] Other _____

    Other Requirements

      [X] Data collection tool attached

      [X] Data collection instructions attached

      [X] Summary of data collection training attached

      [X] IRR process and results attached

[   ] Other Data

_____

_____

_____

Description of data collection staff (include training, experience, and qualifications):

_____

(See F. Activity VI attached)

_____

[   ] Administrative Data

    Data Source

      [X] Programmed pull from claims/encounters

      [   ] Complaint/appeal

      [   ] Pharmacy data

      [   ] Telephone service data/call center data

      [   ] Appointment/access data

      [   ] Delegated entity/vendor data _____

      [   ] Other _____

    Other Requirements

      [X] Data completeness assessment attached

      [X] Coding verification process attached

[   ] Survey Data

    Fielding Method

      [   ] Personal interview

      [   ] Mail

      [   ] Phone with CATI script

      [   ] Phone with IVR

      [   ] Internet

      [   ] Other _____

    Other Requirements

      [   ] Number of waves _____

      [   ] Response rate _____

      [   ] Incentives used _____

F. Activity VIb: Determine the data collection cycle.	Determine the data analysis cycle.
[X] Once a year [ ] Twice a year [ ] Once a season [ ] Once a quarter [ ] Once a month [ ] Once a week [ ] Once a day [ ] Continuous [ ] Other (list and describe):	[X] Once a year [ ] Once a season [ ] Once a quarter [ ] Once a month [ ] Continuous [ ] Other (list and describe):

F. Activity VIc: Data analysis plan and other pertinent methodological features.

Estimated degree of administrative data completeness: 100% percent.

Describe the process used to determine data completeness and accuracy: (See F. Activity VI attached)

Supporting documentation: (See F. Activity VI attached)

G. Activity VIIa: Implement intervention and 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
(See G. Activity VII attached)			
7/06	X	**CMHC Peer Review Process includes an item locating the PCP Notification of Care letter in the clients chart**	**Low awareness of importance; Lack of follow-up with client about PCP; Lack of documentation of attempts to coordinate care.**
6/08	X	**Colorado Regional Integrated Care Collaborative (CRICC) – BHOs and MCOs working together to identify both "shared" members and those with behavioral health diagnoses in physical health data. Especially for members with high behavioral health and high physical health complexities/risks.**	**Client low awareness of importance; Hassle for clients to navigate both physical and mental health systems; Transparency of health information exchange and HIPAA compliance; Disparity of care provided to impoverished populations using state managed care; Dismissal of physical symptoms for individuals with mental illness;**
7/08		**Desktop Training to improve awareness of importance, address physical health concerns with clients, encourage client to obtain and see a PCP regularly, encourage documentation, overall increase in coordination of care.**	**Clinicians lack of follow-up with client about PCP; CMHC dismissal of physical symptoms for individuals with mental illness; Clinicians lack of clarity in responsibilities and roles; Med Management Team lack of documentation of attempts to coordinate care; CMHC cultural perception of separation of physical and mental health; Individual complacency with CMHC of assuming responsibility**
7/08	X	**Desktop Training and PCP Notification of Care letter is available on BHIcares.org for viewing and download**	**Cultural perception of separation of physical and mental health; Clinician doesn't know how to complete the letter; Low awareness of importance; Individual complacency within an institution of assuming responsibility**

G. Activity VIIa: Implement intervention and 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
7/08	X	Improvements to PCP Notification of Care Letter to make letter simpler and easier to complete, easier to document in chart, improve awareness of importance.	Client low awareness of importance; Client doesn't think they need a PCP; Med Management Team lack of documentation of attempts to coordinate care; Clinician doesn't know how to complete the letter; PCP Notification of Care letter is confusing;
7/09		Desktop Training to improve awareness of importance, address physical health concerns with clients, encourage client to obtain and see a PCP regularly, follow-up with client about PCP, encourage documentation, overall increased coordination of care, practical methods of coordination of care within CMHC.	Clinicians lack of follow-up with client about PCP; CMHC dismissal of physical symptoms for individuals with mental illness; Clinicians lack of clarity in responsibilities and roles; Med Management Team lack of documentation of attempts to coordinate care; CMHC cultural perception of separation of physical and mental health; Individual complacency with CMHC of assuming responsibility
7/09	X	New item added to CMHC peer review process, evidence/documentation of coordination of care for med management teams	Lack of documentation of attempts to coordinate care
10/09	X	BHI contracted with CO Access to provide care management services to BHI clients at each CMHC. Includes co-locating a Health Coordinator at each center	Hassle for clients to navigate both physical and mental health systems; client low awareness of importance; ease of coordination of care varies from PCP to PCP; Follow-up with clients about PCP; Transparency of health information exchange and HIPAA compliance; Lack of documentation attempts to coordinate care; other mental health professional case-load burden; administrative time to direct services ratio requirements; client doesn't think they need a PCP.
7/10	X	Re-released the desktop training to CMHCs to reinforce awareness of importance and provide practical methods for coordinating care within CMHC.	Lack of clarity in responsibilities and roles for clinicians and med management teams; Client doesn't think they need a PCP; Dismissal of physical symptoms for individuals with mental illness; PCP less likely to coordinate care with lesser credentialed clinicians.

G. Activity VIIa: Implement intervention and 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.

Describe the process used for the causal/barrier analyses that led to the development of the interventions:

(See G. Activity VII attached)

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

Describe interventions: (See G. Activity VII attached)

Baseline to Remeasurement 1:

Remeasurement 1 to Remeasurement 2:

Remeasurement 2 to Remeasurement 3:

H. Activity VIIIa: Analyze data. Describe the data analysis process done in accordance with the data analysis plan and any ad hoc analyses (e.g., data mining) done on the selected clinical or nonclinical study indicators. Include the statistical analysis techniques used and *p* values.
Describe the data analysis process (include the data analysis plan): (See H. Activity VIII attached)   **Baseline Measurement:**   **Baseline to Remeasurement 1:**   **Remeasurement 1 to Remeasurement 2:**   **Remeasurement 2 to Remeasurement 3:**

H. Activity VIIIb: Interpret study results. Describe the results of the statistical analysis, interpret the findings, and compare and discuss results/changes from measurement period to measurement period. Discuss the successfulness of the study and indicate follow-up activities. Identify any factors that could influence the measurement or validity of the findings.

Interpretation of study results (address factors that threaten the internal or external validity of the findings for each measurement period):

(See H. Activity VIII attached)

Baseline Measurement:

Baseline to Remeasurement 1:

Remeasurement 1 to Remeasurement 2:

Remeasurement 2 to Remeasurement 3:

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I. Activity IX: Assess for real improvement. Enter results for each study indicator, including benchmarks and statistical testing with complete *p* values, and statistical significance.

Quantifiable Measure 1: Percentage of Consumers with Preventive or Ambulatory Medical Office Visit during Measurement Period

Time Period Measurement Covers	Baseline Project Indicator Measurement	Numerator	Denominator	Rate or Results	Industry Benchmark	Statistical Test Significance and *p* value
July 1, 2006 – June 30, 2007	*Baseline:*	*670*	*979*	*68.44%*	*n.a.*	*n.a*
July 1, 2008 – June 30, 2009	**Remeasurement 1**	788	1050	75.05%	n.a.	χ^2=10.948, *df*=1, *p*<0.001
July 1, 2009 – June 30, 2010	**Remeasurement 2**	**1032**	**1347**	**76.61%**	**n.a.**	**Remeasurement #1 to #2:** χ^2**=0.793, *df*=1, *p*=0.373** **Baseline to Remeasurement#2:** χ^2**=19.313, *df*=1, *p*<0.001**
	Remeasurement 3					
	Remeasurement 4					
	Remeasurement 5					

Describe any demonstration of meaningful change in performance observed from Baseline and each measurement period (e.g., Baseline to Remeasurement 1 and Remeasurement 1 to Remeasurement 2)

(See Activity H. VIII attached for additional analysis for Indicator 1)

I. Activity IX: Assess for real improvement. Enter results for each study indicator, including benchmarks and statistical testing with complete *p* values, and statistical significance.

Quantifiable Measure 2: Percentage of Statistically Valid Sample of the Study Population with Documentation in the Behavioral Health Record that the Consumer or Family/Guardian was Given Information on the Need to Secure a Primary Care Physician

Time Period Measurement Covers	Baseline Project Indicator Measurement	Numerator	Denominator	Rate or Results	Industry Benchmark	Statistical Test Significance and *p* value
July 1, 2007 – June 30, 2008	*Baseline:*	*215*	*316*	*68.04%*	*n.a.*	*n.a.*
July 1, 2008 – June 30, 2009	**Remeasurement 1**	282	317	88.96%	n.a.	χ^2 =41.06, *df*=1, *p*<0.001
July 1, 2009 – June 30, 2010	**Remeasurement 2**	**282**	**317**	**88.96%**	**n.a.**	**Remeasurement #1 to #2:** χ^2 **=0.00,** *df***=1,** *p***=1.0** **Baseline to Remeasurement #2:** χ^2 **=41.06,** *df***=1,** *p***<0.001**
	Remeasurement 3					
	Remeasurement 4					
	Remeasurement 5					

Describe any demonstration of meaningful change in performance observed from Baseline and each measurement period (e.g., Baseline to Remeasurement 1 and Remeasurement 1 to Remeasurement 2)

(See Activity H. VIII attached for additional analysis for Indicator 2)

I. Activity IX: Assess for real improvement. Enter results for each study indicator, including benchmarks and statistical testing with complete *p* values, and statistical significance.

Quantifiable Measure 3: Percentage of the Statistically Valid Sample of the Study Population with Documentation in the Behavioral Health Record that the Primary Care Physician was Notified of Treatment

Time Period Measurement Covers	Baseline Project Indicator Measurement	Numerator	Denominator	Rate or Results	Industry Benchmark	Statistical Test Significance and *p* value
July 1, 2007 – June 30, 2008	*Baseline*	*167*	*316*	*52.85%*	*n.a.*	*n.a.*
July 1, 2008 – June 30, 2009	**Remeasurement 1**	195	317	61.51%	n.a.	χ^2 =4.854, *df*=1, *p*=0.028
July 1, 2009 – June 30, 2010	**Remeasurement 2**	**205**	**317**	**64.67%**	**n.a.**	**Remeasurement #1 to #2:** χ^2 **=0.677, *df*=1 , *p*=0.411** **Baseline to Remeasurement #2:** χ^2 **=9.125, *df*=1, *p*=0.003**
	Remeasurement 3					
	Remeasurement 4					
	Remeasurement 5					

Describe any demonstration of meaningful change in performance observed from Baseline and each measurement period (e.g., Baseline to Remeasurement 1 and Remeasurement 1 to Remeasurement 2)

(See Activity H. VIII attached for additional analysis for Indicator 3)

J. Activity X: Assess for sustained improvement. Describe any demonstrated improvement through repeated measurements over comparable time periods. Discuss any random, year-to-year variations, population changes, sampling errors, or statistically significant declines that may have occurred during the remeasurement process.
Sustained improvement: (See J. Activity X attached)