

State of Colorado



Department of Health Care Policy & Financing

# FY 06–07 PIP VALIDATION REPORT

Increase NBH Center Provider  
Communication/Coordination with Primary  
Care Physicians and Other Health Providers

*for*

Northeast Behavioral Health, LLC

June 2007



1600 East Northern Avenue, Suite 100 • Phoenix, AZ 85020  
Phone 602.264.6382 • Fax 602.241.0757

<b>1. Executive Summary .....</b>	<b>1-1</b>
Overview.....	1-1
Summary of Study .....	1-1
Study Topic .....	1-2
Study Methodology .....	1-2
Study Results .....	1-2
Scoring .....	1-2
Summary of Validation Findings.....	1-3
Conclusions .....	1-3
Requirements .....	1-3
Recommendations.....	1-3
Comparison of Years 1 and 2.....	1-4
<b>2. Scoring Methodology .....</b>	<b>2-1</b>
PIP Scores.....	2-2
<b>3. Validation and Findings Summary.....</b>	<b>3-1</b>
Validations and Findings Summary .....	3-1
Activity I. Appropriate Study Topic .....	3-1
Activity II. Clearly Defined, Answerable Study Question.....	3-2
Activity III. Clearly Defined Study Indicator(s) .....	3-2
Activity IV. Use a Representative and Generalizable Study Population.....	3-3
Activity V. Valid Sampling Techniques.....	3-4
Activity VI. Accurate/Complete Data Collection .....	3-4
Activity VII. Appropriate Improvement Strategies.....	3-5
Activity VIII. Sufficient Data Analysis and Interpretation.....	3-6
Activity IX. Real Improvement Achieved .....	3-7
Activity X. Sustained Improvement Achieved.....	3-7
<b>4. FY 06–07 PIP Validation Tool .....</b>	<b>4-1</b>

**Appendices**

<b>Introduction .....</b>	<b>Appendices Cover Page</b>
<b>Appendix A: Summary Form: Northeast Behavioral Health, LLC’s <i>Increase NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers</i> .....</b>	<b>A-1</b>
<b>Appendix B: CMS Rationale by Activity.....</b>	<b>B-1</b>
<b>Appendix C: Definitions and Explanations by Activity.....</b>	<b>C-1</b>

### Overview

The Balanced Budget Act (BBA) of 1997 (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 consumers in MCOs and PIHPs must be tracked, analyzed, and reported annually. The Colorado Department of Health Care Policy & Financing (the Department) has contractual requirements with each MCO and behavioral health organization (BHO) to conduct and submit Performance Improvement Projects (PIPs) annually. As one of the mandatory external quality review activities under the BBA, the Department is required to validate the PIPs. To meet this validation requirement, the Department contracted with Health Services Advisory Group, Inc., (HSAG) as an external quality review organization. The primary objective of the PIP validation is to determine the compliance with requirements set forth in 42 CFR 438.240(b)(1), including:

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

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

### Summary of Study

**Northeast Behavioral Health, LLC (NBH)** evaluated the level of communication of care occurring between mental health providers and primary care physicians (PCPs). This study topic was chosen to determine the collaboration between **NBH** mental health centers and PCPs for the consumers they both serve. In 2002, **NBH** conducted a survey of PCPs throughout the 12-county area served by the centers. One important finding was that PCPs were concerned they were not receiving feedback from the centers when a consumer was referred. Two of the three **NBH** centers emphasized the need for a follow-up letter to a PCP, but this was not a requirement. The third **NBH** center did require that a letter be sent to the PCP of a consumer after a mental health intake had been completed.

## Study Topic

The topic addressed CMS' requirement related to quality of and access to care—that is, the coordination of services between the **NBH** centers and PCPs. The study reflected high-risk conditions since a significant number of consumers had co-occurring conditions.

The study question presented by **NBH** was, “Will the implementation of formal policies and procedures to require letters to be sent to **NBH** consumers' PCPs and other health care providers after the completion of an intake, increase the frequency of such letters being sent for the purpose of informing PCPs that their patients are receiving mental health services?” The increase in the frequency of letters sent to PCPs and other health care providers was the discrete measure of the study.

## Study Methodology

A total of 185 **NBH** Medicaid consumers receiving services were included in this study. Chart reviews were conducted to document the presence of a letter demonstrating coordination of care between mental and physical health providers.

## Study Results

The rate of communication between all three **NBH** centers and their consumers' primary care providers improved significantly from baseline to the first remeasurement. The first remeasurement results showed that 90.6 percent of cases had a letter mailed to a PCP/health care provider by the staff of Centennial Mental Health Center and 66 percent of cases had a letter mailed to a PCP/health care provider by the staff of North Range and Larimer Mental Health Centers combined. The benchmark was 62.4 percent for both study indicators. Centennial had a 28.2 percentage point increase from baseline and North Range and Larimer had a 64 percentage point increase from baseline. The results for both study indicators showed statistically significant increases from baseline to the first remeasurement. In addition, North Range's and Larimer's results were examined separately and both demonstrated significant improvement. North Range had a 70 percentage point increase from baseline to the first remeasurement and Larimer had a 58 percentage point increase from baseline to remeasurement.

## Scoring

HSAG validates a total of 10 activities for each PIP. The PIP is validated annually. The validation reflects activities that have been completed. A health plan (BHO) may take up to three years to complete all 10 activities. Each activity consists of elements necessary for the successful completion of a valid PIP. Evaluation elements are the key CMS protocol components for each activity that reflect the intent of what is being measured and evaluated. Some of the elements are critical elements and must be scored as *Met* to produce an accurate and reliable PIP. Given the importance of critical elements, any critical element that receives a *Not Met* score results in an

overall PIP validation status of *Not Met*. If one or more critical elements are *Partially Met*, but none is *Not Met*, the PIP will be considered valid with low confidence. Revisions and resubmission of the PIP would be required.

## Summary of Validation Findings

- ◆ For this review, nine activities, with a total of 52 elements, were validated. Of this number:
  - 48 evaluation elements were *Met*.
  - 0 evaluation elements were *Partially Met*.
  - 0 evaluation elements were *Not Met*.
  - 4 evaluation elements were *Not Applicable (N/A)*.
- ◆ The total number of critical elements that were evaluated equaled 11. Of this number:
  - 11 critical elements were *Met*.
  - 0 critical elements were *Partially Met*
  - 0 critical elements were *Not Met*.
  - 0 critical elements were *N/A*.

The final validation finding for **NBH's** PIP showed an overall percentage score of 100, a critical element percentage score of 100, and a *Met* validation status.

## Conclusions

For the FY 06-07 validation cycle, this study was reviewed through Activity IX—Real Improvement Achieved. The study addressed quality of and access to care through the coordination of care and services between mental health providers and PCP/health care providers. **NBH** provided baseline and first remeasurement results for this validation cycle. The rate of communication between all three **NBH** centers and their consumers' primary care providers improved significantly from baseline to the first remeasurement. **NBH** plans to collect a second remeasurement to show sustained improvement for the next annual PIP submission.

## Requirements

There were no requirements identified during this validation cycle.

## Recommendations

There were no recommendations identified during this validation cycle.

## Comparison of Years 1 and 2

For Year 1, only Activities I through VII—Appropriate Improvement Strategies were assessed because at the time of the submission, **NBH** had only completed a baseline measurement. For the Year 2 validation cycle (FY 06-07), Activities I through IX were assessed because **NBH** had collected baseline and the first remeasurement. The rate of communication between all three **NBH** centers and their consumers' primary care providers improved significantly from baseline to the first remeasurement. The results demonstrated that all Centers surpassed the benchmark of 62.4 percent.

## 2. Scoring Methodology

### for Northeast Behavioral Health, LLC

Validating PIPs involves a review of the following 10 activities:

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

All PIPs are scored as follows:

<i>Met</i>	(1) All critical elements were <i>Met</i> , <b>and</b> (2) 80 percent to 100 percent of all critical and non-critical elements were <i>Met</i> .
<i>Partially Met</i>	(1) All critical elements were <i>Met</i> , and 60 percent to 79 percent of all critical and non-critical elements were <i>Met</i> , <b>or</b> (2) One critical element or more was <i>Partially Met</i> .
<i>Not Met</i>	(1) All critical elements were <i>Met</i> , and <60 percent of all critical and non-critical elements were <i>Met</i> , <b>or</b> (2) One critical element or more was <i>Not Met</i> .
<i>Not Applicable (N/A)</i>	N/A elements (including critical elements if they were not assessed) were removed from all scoring.

For FY 06–07, the BHOs were provided an opportunity to resubmit additional information and/or documentation. The plans were required to take action for any evaluation element receiving a score of *Partially Met* or *Not Met*. The action could include resubmission of additional PIP documentation prior to final scoring. Future annual PIP submissions should include all information pertinent to the PIP study to achieve a *Met* status.

## PIP Scores

For this PIP, HSAG reviewed Activities I through IX. Table 2-1 and Table 2-2 show **NBH**'s scores based on HSAG's PIP evaluation of *Increase NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers*. Each activity has been reviewed and scored according to HSAG's validation methodology.

**Table 2-1—FY 06-07 Performance Improvement Project Scores  
for Increase NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers  
for Northeast Behavioral Health, LLC**

Review Activity	Total Possible Evaluation Elements (Including Critical Elements)	Total Met	Total Partially Met	Total Not Met	Total N/A	Total Possible Critical Elements	Total Critical Elements Met	Total Critical Elements Partially Met	Total Critical Elements Not Met	Total Critical Elements N/A
I. Appropriate Study Topic	6	6	0	0	0	1	1	0	0	0
II. Clearly Defined, Answerable Study Question	2	2	0	0	0	1	1	0	0	0
III. Clearly Defined Study Indicator(s)	7	5	0	0	2	3	3	0	0	0
IV. Use a Representative and Generalizable Study Population	3	3	0	0	0	2	2	0	0	0
V. Valid Sampling Techniques	6	6	0	0	0	1	1	0	0	0
VI. Accurate/Complete Data Collection	11	9	0	0	2	1	1	0	0	0
VII. Appropriate Improvement Strategies	4	4	0	0	0	No Critical Elements				
VIII. Sufficient Data Analysis and Interpretation	9	9	0	0	0	2	2	0	0	0
IX. Real Improvement Achieved	4	4	0	0	0	No Critical Elements				
X. Sustained Improvement Achieved	1	Not Assessed				No Critical Elements				
<b>Totals for All Activities</b>	<b>53</b>	<b>48</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>11</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Table 2-2—FY 06-07 Performance Improvement Project Overall Score  
for Increase NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers  
for Northeast Behavioral Health, LLC**

<b>Percentage Score of Evaluation Elements Met*</b>	<b>100%</b>
<b>Percentage Score of Critical Elements Met**</b>	<b>100%</b>
<b>Validation Status***</b>	<b>Met</b>

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

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

\*\*\* *Met* equals confidence/high confidence that the PIP was valid.

*Partially Met* equals low confidence that the PIP was valid.

*Not Met* equals reported PIP results that were not valid.



## 3. Validation and Findings Summary

for Northeast Behavioral Health, LLC

### Validations and Findings Summary

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

The validation was performed on an **NBH** PIP, which will evaluate quality of and access to care through the coordination of services between NBH centers and PCPs. Two indicators were developed for the study, one for Centennial Mental Health and one for North Range and Larimer Mental Health Centers combined. The indicators were identical: the percentage of cases where a letter was mailed to a PCP/health care provider (as evidenced by a copy of such letter in the consumer's chart) after a completed intake for mental health services, specific to each location.

#### Activity I. Appropriate Study Topic

##### Study Topic

NBH continues the study topic of *Increase NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers* as its nonclinical PIP for the FY 06-07 validation cycle.

##### Finding(s)

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

##### Strength(s)

The study topic assessed quality of and access to care through communication and collaboration between the **NBH** centers and PCPs and other health care providers. The study topic had the potential to affect consumer health and functional status. The study topic also reflected high-risk conditions since a significant number of consumers had co-occurring mental and physical health conditions.

##### Requirement(s) (for Critical Elements)

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

##### Recommendation(s) (for Noncritical Elements)

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

**Activity II. Clearly Defined, Answerable Study Question****Study Question(s)**

NBH's study question, as stated in its PIP Summary Form, was:

- ◆ “Will the implementation of formal policies and procedures to require letters to be sent to NBH consumers' PCPs and other health care providers after the completion of an intake, increase the frequency of such letters being sent for the purpose of informing PCPs that their patients are receiving mental health services?”

**Finding(s)**

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

**Strength(s)**

The study question stated the problem to be studied in simple terms and maintained the focus of the study, which was to increase the communication/coordination between NBH centers and PCPs or other health care providers.

**Requirement(s) (for Critical Elements)**

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

**Recommendation(s) (for Noncritical Elements)**

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

**Activity III. Clearly Defined Study Indicator(s)****Study Indicator(s)**

NBH, as stated in its PIP Summary Form, had two study indicators:

- ◆ “The percentage of cases in which a letter was mailed to a PCP/health care provider (as evidenced by a copy of such a letter in the consumer's chart) after the consumer received an intake for mental health services from one of the NBH provider centers (Centennial Mental Health Center).”
- ◆ “The percentage of cases in which a letter was mailed to a PCP/health care provider (as evidenced by a copy of such a letter in the consumer's chart) after the consumer received an intake for mental health services from one of two NBH provider centers (North Range and Larimer Mental Health Centers).”

### **Finding(s)**

Five of seven evaluation elements for this activity were *Met*, including three critical evaluation elements. Two evaluation elements were *Not Applicable* because the indicators were not nationally recognized measures or based on practice guidelines.

### **Strength(s)**

The study indicators were developed to answer the study question and measure quality of and access to care as it related to communication and/or coordination between **NBH** centers and PCPs or other health care providers. There were available data collected on each study indicator and the study included the basis on which the study indicators were adopted.

### **Requirement(s) (for Critical Elements)**

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

### **Recommendation(s) (for Noncritical Elements)**

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

## **Activity IV. Use a Representative and Generalizable Study Population**

### **Study Population**

The baseline study population for **NBH** was a sample of the entire Medicaid population of open cases at all three provider centers. The remeasurement study population included only newly admitted Medicaid consumers. If the consumer refused to give permission to the admitting or a subsequent therapist to contact their PCPs, they were excluded.

### **Finding(s)**

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

### **Strength(s)**

The study population was completely and accurately defined and captured all consumers to whom the study question applied.

### **Requirement(s) (for Critical Elements)**

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

### **Recommendation(s) (for Noncritical Elements)**

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

## Activity V. Valid Sampling Techniques

### Sampling Technique(s)

**NBH** used a systematic sampling approach. Every fifth case was selected, except when a consumer refused to give permission for the therapist to contact his or her PCP or other health care provider. In such an instance, the next case was selected. There were two sample sizes of open cases: One (Centennial Mental Health Center), totaled 85, the other (North Range and Larimer Mental Health Centers), 100.

### Finding(s)

Six out of six evaluation elements, including one critical element, were *Met*.

### Strength(s)

**NBH** provided a well-written explanation of how the confidence level and margin of error were calculated. For both samples, the confidence level was 95 percent, with a +/- 9.5 percent margin of error. The sampling technique was in accordance with generally accepted principles of research design and statistical analysis.

### Requirement(s) (for Critical Elements)

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

### Recommendation(s) (for Noncritical Elements)

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

## Activity VI. Accurate/Complete Data Collection

### Data Collection

**NBH** used medical record abstraction to collect data elements for the study. **NBH** expected three pieces of evidence to be present in the consumer's record to constitute evidence that coordination/communication of care had occurred. **NBH** discovered that in some cases, not all three pieces of evidence were present in the record, even though communication with the PCP or other health care provider had occurred. **NBH** made a determination regarding what, at a minimum, constituted communication/coordination with the consumer's PCP or other health care provider, and it developed four criteria. **NBH** deemed that communication/coordination with the consumer's PCP or other health care provider had occurred if one of the four following criteria were met:

- 1) The presence of a copy of the medical provider notification form (MPNF), release of information, and a copy of a letter to the PCP in the consumer's chart.

- 2) The presence of a copy of the MPNF and release of information in the consumer's chart.
- 3) The presence of a copy of a letter and a release of information in the consumer's chart.
- 4) The presence of an original MPNF, a release of information and a proof of faxing of the MPNF in the consumer's chart.

### **Finding(s)**

Nine of the 11 evaluation elements for this activity were *Met*, including one critical element. Two evaluation elements were scored *Not Applicable* because **NBH** did not use administrative data collection.

### **Strength(s)**

**NBH** clearly defined the data elements collected and data sources for this study, and it outlined a defined and systematic process for data collection. The manual data collection tool ensured consistent and accurate data collection and supported interrater reliability.

### **Requirement(s) (for Critical Elements)**

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

### **Recommendation(s) (for Noncritical Elements)**

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

## **Activity VII. Appropriate Improvement Strategies**

### **Improvement Strategies**

**NBH** determined that all consumers should be asked for permission to submit a letter to their PCP or other health care provider. One intervention developed by **NBH** was to require that intake therapists ask permission from consumers to contact their PCP or other health care providers. For the first remeasurement, **NBH** developed a special form called Medical Provider Notification Form (MPNF) to communicate with PCPs or other health care providers. For consumers who gave permission to contact their PCP, staff members were required to obtain a signed release of information and send the MPNF and/or letter to the PCP or other health care provider.

### **Finding(s)**

All four evaluation elements were *Met* for this activity.

**Strength(s)**

The interventions were related to causes/barriers identified through data analysis and quality improvement processes. The interventions were system changes that were likely to induce permanent change.

**Requirement(s) (for Critical Elements)**

There are no critical elements for this activity.

**Recommendation(s) (for Noncritical Elements)**

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

**Activity VIII. Sufficient Data Analysis and Interpretation****Data Analysis and Interpretation**

**NBH** performed data analysis and interpretation for baseline and the first remeasurement. The rates for Centennial increased to 90.6 percent from the baseline rate of 62.4 percent. The rate for Larimer and North Range increased to 66 percent from the baseline rate of 2 percent. Both of these increases in rates were statistically significant.

**Finding(s)**

Nine of the nine evaluation elements for this activity were *Met*, including two critical elements.

**Strength(s)**

**NBH** completed chi square testing to determine if differences in the rates were significant between baseline and the first remeasurement. Additionally, **NBH** examined Larimer and North Range's results separately to look for within-center differences. The data analysis was conducted according to the plan in the study. The data were presented in a clear and easily understood format and an interpretation of the data analysis findings was included in the study. **NBH** discussed factors that affected the ability to compare measurement periods and factors that could have affected the internal/external validity of the data analysis findings.

**Requirement(s) (for Critical Elements)**

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

**Recommendation (s) (for Noncritical Elements)**

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

### **Activity IX. Real Improvement Achieved**

#### **Real Improvement Achieved**

NBH provided statistical evidence that demonstrated real improvement was achieved for this PIP study.

#### **Finding(s)**

All four evaluation elements for this activity were *Met*.

#### **Strength(s)**

The remeasurement methodology remained the same as the baseline methodology. The statistically significant increases in rates were representative of real improvement from baseline to the first remeasurement. The improvement appears to be the result of the implemented interventions.

#### **Requirement(s) (for Critical Elements)**

There are no critical elements for this activity.

#### **Recommendation(s) (for Noncritical Elements)**

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

### **Activity X. Sustained Improvement Achieved**

Activity X was not assessed for the FY 06-07 submission of this PIP study. The PIP had completed baseline and one remeasurement period. Sustained improvement cannot be assessed until the PIP has completed two or more remeasurement periods.

The BHO will continue with the PIP process; Activity X will be assessed and validated at the next annual submission of the PIP.



Section 4: Colorado FY 06-07 PIP Validation Tool:

Increasing NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers for Northeast Behavioral Health, LLC

DEMOGRAPHIC INFORMATION

Health Plan Name:	Northeast Behavioral Health, LLC		
Study Leader Name:	Neil Benson	Title:	Director of Quality Improvement
Phone Number:	(970) 347-2377	E-mail Address:	neil.benson@northrange.org
Name of Project/Study:	Increasing NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers		
Type of Study:	Nonclinical		
Date of Study:	3/1/2006 to 12/31/2006		
Type of Delivery System:	BHO	Number of Medicaid Consumers in BHO:	2,500
		Number of Medicaid Consumers in Study:	185
Year 2 Validation	Initial Submission		





*Section 4: Colorado FY 06-07 PIP Validation Tool:*  
**Increasing NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers  
 for Northeast Behavioral Health, LLC**

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

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

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

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

*Section 4: Colorado FY 06-07 PIP Validation Tool:*  
**Increasing NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers  
 for Northeast Behavioral Health, LLC**

EVALUATION ELEMENTS		SCORING	COMMENTS
II.	<b>Clearly Defined, Answerable Study Question: Stating the study question(s) helps maintain the focus of the PIP and sets the framework for data collection, analysis, and interpretation.</b>		
	1. States the problem to be studied in simple terms. N/A is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The study question stated the problem to be studied in simple terms.
C*	2. Is answerable. N/A is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The study question was answerable.

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

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

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

*Section 4: Colorado FY 06-07 PIP Validation Tool:*  
**Increasing NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers  
 for Northeast Behavioral Health, LLC**

EVALUATION ELEMENTS		SCORING	COMMENTS
<b>III. Clearly Defined Study Indicator(s): A study indicator is a quantitative or qualitative characteristic or variable that reflects a discrete event (e.g., an older adult has not received a flu shot in the last 12 months) or a status (e.g., a 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.</b>			
C*	1. Are well-defined, objective, and measurable.  N/A is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The study indicators were well-defined, objective, and measurable.
	2. Are based on current, evidence-based practice guidelines, pertinent peer review literature, or consensus expert panels.	<input type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input checked="" type="checkbox"/> N/A	The study indicators were not based on practice guidelines.
C*	3. Allow for the study question to be answered.  N/A is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The study indicators allowed for the study question to be answered.
	4. Measure changes (outcomes) in health or functional status, consumer satisfaction, or valid process alternatives.  N/A is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The study indicators measured changes in valid process alternatives.
C*	5. Have available data that can be collected on each indicator.  N/A is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	There were available data that were collected on each study indicator.
	6. Are nationally recognized measures such as HEDIS specifications, when appropriate.  The scoring for this element will be Met or N/A.	<input type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input checked="" type="checkbox"/> N/A	The study indicators were not nationally recognized measures.
	7. Includes the basis on which the indicator(s) was adopted, if internally developed.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The basis on which each indicator was adopted was provided.

Results for Activity III				
# of Elements				
Critical Elements**	Met	Partially Met	Not Met	Not Applicable
3	5	0	0	2

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

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



*Section 4: Colorado FY 06-07 PIP Validation Tool:*  
**Increasing NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers  
 for Northeast Behavioral Health, LLC**

EVALUATION ELEMENTS		SCORING	COMMENTS
IV.	<b>Use a representative and generalizable study population: The selected topic should represent the entire eligible Medicaid enrollment population with systemwide measurement and improvement efforts to which the PIP study indicators apply.</b>		
C*	1. Is accurately and completely defined.  N/A is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The study population was accurately and completely defined.
	2. Includes requirements for the length of a consumer's enrollment in the BHO.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	Requirements for length of enrollment were included.
C*	3. Captures all consumers to whom the study question applies.  N/A is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The study population captured all consumers to whom the study question applied.

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

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

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

*Section 4: Colorado FY 06-07 PIP Validation Tool:*  
**Increasing NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers**  
**for Northeast Behavioral Health, LLC**

EVALUATION ELEMENTS	SCORING	COMMENTS
<b>V. Valid Sampling Techniques: (This activity is only scored if sampling was used.) If sampling is to be 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.</b>		
1. Consider and specify the true or estimated frequency of occurrence.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The frequency of occurrence was specified.
2. Identify the sample size.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The sample size was identified.
3. Specify the confidence level.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The confidence level was 95 percent.
4. Specify the acceptable margin of error.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The acceptable margin of error was specified as +/- 9.5 percent.
C* 5. Ensure a representative sample of the eligible population.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The sampling techniques ensured a representative sample of the eligible population.
6. Are in accordance with generally accepted principles of research design and statistical analysis.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The sampling techniques were in accordance with generally accepted principles of research design and analysis.

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

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

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

*Section 4: Colorado FY 06-07 PIP Validation Tool:*  
**Increasing NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers**  
**for Northeast Behavioral Health, LLC**

EVALUATION ELEMENTS	SCORING	COMMENTS
<b>VI. Accurate/Complete Data Collection: Data collection must ensure that the data collected on the PIP indicators are valid and reliable. Validity is an indication of the accuracy of the information obtained. Reliability is an indication of the repeatability or reproducibility of a measurement.</b>		
1. Clearly defined data elements to be collected.  N/A is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The data elements collected were defined.
2. Clearly identified sources of data.  N/A is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The source of data was identified.
3. A clearly defined and systematic process for collecting data that includes how baseline and remeasurement data will be collected.  N/A is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The process for collecting data was defined and systematic.
4. A timeline for the collection of baseline and remeasurement data.  N/A is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	A timeline for the collection of data was included.
5. Qualified staff and personnel to abstract manual data.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	Qualifications, experience, and training of manual data collection staff were provided.
C* 6. A manual data collection tool that ensures consistent and accurate collection of data according to indicator specifications.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The manual data collection tool ensured consistent and accurate collection of data.
7. A manual data collection tool that supports interrater reliability.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	Interrater reliability was discussed.
8. Clear and concise written instructions for completing the manual data collection tool.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The manual data collection tool contained clear and concise instructions.
9. An overview of the study in written instructions.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	An overview of the study was included in the written instructions for the manual data collection tool.
10. Administrative data collection algorithms/flow charts that show activities in the production of indicators.	<input type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input checked="" type="checkbox"/> N/A	Administrative data collection was not used.

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

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



*Section 4: Colorado FY 06-07 PIP Validation Tool:*  
**Increasing NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers  
 for Northeast Behavioral Health, LLC**

EVALUATION ELEMENTS	SCORING	COMMENTS
<b>VI. Accurate/Complete Data Collection: Data collection must ensure that the data collected on the PIP indicators are valid and reliable. Validity is an indication of the accuracy of the information obtained. Reliability is an indication of the repeatability or reproducibility of a measurement.</b>		
11. An estimated degree of administrative data completeness. Met = 80 - 100% Partially Met = 50 - 79% Not Met = <50% or not provided	<input type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input checked="" type="checkbox"/> N/A	Administrative data collection was not used.

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

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

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



*Section 4: Colorado FY 06-07 PIP Validation Tool:*  
**Increasing NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers  
 for Northeast Behavioral Health, LLC**

EVALUATION ELEMENTS	SCORING	COMMENTS
<b>VII. Appropriate Improvement Strategies: Real, sustained improvements in care result from a continuous cycle of measuring and analyzing performance, and developing and implementing systemwide improvements in care. Interventions are designed to change behavior at an institutional, practitioner, or consumer level.</b>		
1. Related to causes/barriers identified through data analysis and quality improvement processes.  N/A is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	Interventions were related to causes/barriers identified through data analysis and quality improvement processes.
2. System changes that are likely to induce permanent change.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The interventions were system changes that were likely to induce permanent change.
3. Revised if the original interventions were not successful.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The interventions were evaluated and revised as necessary.
4. Standardized and monitored if interventions were successful.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The interventions were standardized and monitored.

Results for Activity VII				
# of Elements				
Critical Elements**	Met	Partially Met	Not Met	Not Applicable
0	4	0	0	0

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



*Section 4: Colorado FY 06-07 PIP Validation Tool:*  
**Increasing NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers  
 for Northeast Behavioral Health, LLC**

EVALUATION ELEMENTS		SCORING	COMMENTS
<b>VIII. Sufficient Data Analysis and Interpretation: Describe the data analysis process on the selected clinical or nonclinical study indicators. Include the statistical analysis techniques used.</b>			
C*	1. Is conducted according to the data analysis plan in the study design.  N/A is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The data analysis was conducted according to the data analysis plan.
C*	2. Allows for the generalization of results to the study population if a sample was selected.  If no sampling was performed, this element is scored N/A.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The data analysis allowed for generalization of the results to the study population.
	3. Identifies factors that threaten internal or external validity of findings.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	Factors that threatened the internal or external validity of the findings were identified.
	4. Includes an interpretation of findings.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	An interpretation of findings was included.
	5. Is presented in a way that provides accurate, clear, and easily understood information.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The data were presented in an accurate and easily understood way.
	6. Identifies initial measurement and remeasurement of study indicators.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	Initial measurement and remeasurement were identified for both study indicators.
	7. Identifies statistical differences between initial measurement and remeasurement.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	Statistical differences between measurements were identified.
	8. Identifies factors that affect the ability to compare initial measurement with remeasurement.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	Factors that affected the ability to compare measurements were identified.
	9. Includes interpretation of the extent to which the study was successful.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	An interpretation of the extent to which the study was successful was included.

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

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

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



*Section 4: Colorado FY 06-07 PIP Validation Tool:*  
**Increasing NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers  
 for Northeast Behavioral Health, LLC**

EVALUATION ELEMENTS	SCORING	COMMENTS
<b>IX. Real Improvement Achieved: Describe any meaningful change in performance observed and demonstrated during baseline measurement. Discuss any random year-to-year variation, population changes, and sampling error that may have occurred during the measurement process.</b>		
1. Remeasurement methodology is the same as baseline methodology.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	Remeasurement methodology was the same as baseline methodology.
2. There is documented improvement in processes or outcomes of care.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	There was documented improvement in processes and outcomes of care.
3. The improvement appears to be the result of planned intervention(s).	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	The improvement appeared to be the result of the planned interventions.
4. There is statistical evidence that observed improvement is true improvement.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	There was statistical evidence that observed improvement was true improvement.

Results for Activity IX				
# of Elements				
Critical Elements**	Met	Partially Met	Not Met	Not Applicable
0	4	0	0	0

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

*Section 4: Colorado FY 06-07 PIP Validation Tool:*  
**Increasing NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers  
 for Northeast Behavioral Health, LLC**

EVALUATION ELEMENTS	SCORING	COMMENTS
X. <b>Sustained Improvement Achieved: Describe any demonstrated improvement through repeated measurements over comparable time periods. Discuss any random year-to-year variation, population changes, and sampling error that may have occurred during the remeasurement process.</b>		
1. Repeated measurements over comparable time periods demonstrate sustained improvement, or that a decline in improvement is not statistically significant.	<input type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> N/A	Not assessed. NBH had only collected baseline and one remeasurement at the time of the PIP submission.

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

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

*Section 4: Colorado FY 06-07 PIP Validation Tool:*  
**Increasing NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers**  
**for Northeast Behavioral Health, LLC**

**Table A-1—FY 06-07 PIP Validation Report Scores:**

<b>Increasing NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers for Northeast Behavioral Health, LLC</b>											
<b>Review Activity</b>		<b>Total Possible Evaluation Elements (Including Critical Elements)</b>	<b>Total Met</b>	<b>Total Partially Met</b>	<b>Total Not Met</b>	<b>Total N/A</b>	<b>Total Possible Critical Elements</b>	<b>Total Critical Elements Met</b>	<b>Total Critical Elements Partially Met</b>	<b>Total Critical Elements Not Met</b>	<b>Total Critical Elements N/A</b>
I.	Appropriate Study Topic	6	6	0	0	0	1	1	0	0	0
II.	Clearly Defined, Answerable Study Question	2	2	0	0	0	1	1	0	0	0
III.	Clearly Defined Study Indicator(s)	7	5	0	0	2	3	3	0	0	0
IV.	Use a representative and generalizable study population	3	3	0	0	0	2	2	0	0	0
V.	Valid Sampling Techniques	6	6	0	0	0	1	1	0	0	0
VI.	Accurate/Complete Data Collection	11	9	0	0	2	1	1	0	0	0
VII.	Appropriate Improvement Strategies	4	4	0	0	0	0	No Critical Elements			
VIII.	Sufficient Data Analysis and Interpretation	9	9	0	0	0	2	2	0	0	0
IX.	Real Improvement Achieved	4	4	0	0	0	0	No Critical Elements			
X.	Sustained Improvement Achieved	1		Not Assessed			0	No Critical Elements			
<b>Totals for All Activities</b>		<b>53</b>	<b>48</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>11</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Table A-2—FY 06-07 PIP Validation Report Overall Scores:**

**Increasing NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers**  
**for Northeast Behavioral Health, LLC**

<b>Percentage Score of Evaluation Elements Met*</b>	<b>100%</b>
<b>Percentage Score of Critical Elements Met**</b>	<b>100%</b>
<b>Validation Status***</b>	<b>Met</b>

\* 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.

*Section 4: Colorado FY 06-07 PIP Validation Tool:*  
**Increasing NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers  
 for Northeast Behavioral Health, LLC**

**EVALUATION OF THE OVERALL VALIDITY AND RELIABILITY OF PIP/STUDY RESULTS**

HSAG assessed the implications of the study's findings on the likely validity and reliability of the results based on CMS protocols. HSAG also assessed whether the State should have confidence in the reported PIP findings. Determining when an accumulation of threats to validity and reliability, and PIP design problems, reach a point at which the PIP findings are no longer credible is always a judgment call.

**\*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**

\*  **Met**

\*\*  **Partially Met**

\*\*\*  **Not Met**

**Summary statement on the validation findings:**

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

## Introduction

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

- ◆ Appendix A: **Northeast Behavioral Health, LLC's PIP Study: *Increase NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers***
- ◆ Appendix B: CMS Rationale by Activity
- ◆ Appendix C: Definitions and Explanations by Activity



**Appendix A: PIP Summary Form:**  
**Increase NBH Center Provider Communication/Coordination with**  
**Primary Care Physicians and Other Health Providers**  
*for* **Northeast Behavioral Health, LLC**

**DEMOGRAPHIC INFORMATION**

BHO Name and ID: Northeast Behavioral Health

Study Leader Name: Neil Benson Title: Director of Quality Improvement

Telephone Number: 970-347-2377 E-mail Address:

Name of Project/Study: Increase NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers

Type of Study:  Clinical  Nonclinical

Date of Study Period: From March 1, 2006 to December 31, 2006

2,500 Number of Medicaid Consumers served by BHO

185 Number of Medicaid Consumers in Project/Study

**Section to be completed by HSAG**

Year 1 Validation  Initial Submission  Resubmission

Year 2 Validation  Initial Submission  Resubmission

Year 3 Validation  Initial Submission  Resubmission

## **Appendix A: PIP Summary Form: Increase NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers for Northeast Behavioral Health, LLC**

**A. Activity I: Choose the Selected Study Topic.** Topics selected for study should reflect the Medicaid enrollment in terms of demographic characteristics, prevalence of disease, and the potential consequences (risks) of the disease. Topics could also address the need for a specific nonclinical service. The goal of the project should be to improve processes and outcomes of health care for the full affected population. The topic may be specified by the State Medicaid agency or on the basis of Medicaid consumer input.

**Study Topic:** The study topic is the relationship between the therapists at the Northeast Behavioral Health (NBH) provider Centers and the Primary Care Physicians (PCPs) and other healthcare providers of the consumers they both serve. The measure is the frequency with which letters are sent to PCPs and other healthcare providers when their patients are admitted for services at any one of the three NBH Centers. In an article in Behavioral Healthcare Tomorrow (April 2004), William Kanapaux cited the importance of a close working relationship between mental health care providers and primary care medical services when he described the promise of co-located behavioral and primary care services in the State of Tennessee.

The management and clinical staff of NBH are keenly aware of the importance of a close working relationship between the mental health Centers and primary care physicians. North Range Behavioral Health has its Multicultural Service Program co-located at a medical facility in Greeley. Other provider Centers are working with local health clinics to coordinate services and, when possible, place Center therapists at these clinics. The importance of this project was emphasized to administrative and clinical staff in informal memos as well as in discussions among the programs throughout the three NBH Centers.

In 2002, NBH conducted a survey of primary care physicians throughout the 12 county area served by the Centers. One of the main findings of that study was that physicians throughout the area were concerned that when they referred patients to mental health Centers they obtained no feedback. As a result of that survey, letters were sent to primary care physicians informing them of the current circumstances of the mental health Centers and how the Centers could best work with them. Two of the NBH Centers emphasized the need for a follow-up letter to a primary care physician when a Medicaid consumer is admitted for services, however this was not required. In the other NBH Center it was required that a letter be sent to the primary care physician of a consumer after an intake.

This Performance Improvement Project (PIP) affects the broad-spectrum of care provided to consumers by increasing communication/coordination for the purpose of sharing information between mental health service providers and primary care physicians and other health providers. Increased collaboration among healthcare providers can have a direct bearing on consumer's health because co-occurring physical and mental health disorders would be collaboratively addressed and result in increased symptomatic remediation. A significant proportion of these consumers have co-occurring disorders, potentially identifying them in a high-risk status. All Medicaid consumers enrolled at the three provider Centers were eligible to be included in the initial study sample. Remeasurement samples will be limited to Medicaid consumers who have been admitted for services during specified time periods. All Medicaid consumers are expected to be able to benefit from the PIP because of the aforementioned increase in communication/coordination among Healthcare providers. Medicaid consumers with special healthcare needs will not be excluded from the study.



**Appendix A: PIP Summary Form:**  
**Increase NBH Center Provider Communication/Coordination with**  
**Primary Care Physicians and Other Health Providers**  
*for* **Northeast Behavioral Health, LLC**

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

**Study Question:** Will the implementation of formal policies and procedures to require letters to be sent to NBH consumers' Primary Care Physicians and other health care providers after the completion of an intake, increase the frequency of such letters being sent for the purpose of informing PCPs that their patients are receiving mental health services?\*

\*The increase in frequency of letters being sent to PCPs and other Healthcare providers is the discrete measure of the study. However, increased coordination with all Healthcare providers of NBH consumers is the broader, but not currently measurable goal.

**Explanation for Change of Study Design.**

1. The original sample of 150 was based on a total of 2500 NBH Medicaid open cases. This resulted in a confidence interval of +/- 8.0% at the 95% level. To obtain a confidence interval of +/- 5% would have required a sample of 330. In order to achieve a confidence interval of +/- 5%, 180 additional records would have needed to be sampled. The additional administrative burden on the Centers to reduce the interval level from 8% to 5% did not seem warranted.
2. When we conducted the original formal survey we obtained the following results.
  - The Centennial sample of 50 had a 62% rate of letters sent to Primary Care Physicians.
  - The North Range sample of 50 had a 0% rate of letters sent to Primary Care Physicians.
  - The Larimer sample of 50 had a 4% rate of letters sent to Primary Care Physicians.

**The total sample of 150 had a 22% rate of letters sent to Primary Care Physicians. Of the 33 letters sent to physicians, 31 of them were from Centennial.**

Based on these results we did not feel it was appropriate to combine Centennial with North Range and Larimer. For over two years, Centennial had a requirement that therapists ask consumers for permission to send a letter notifying their Primary Care Physician. North Range and Larimer had no such requirement. While the difference in requirements among the Centers had been known prior to the sampling procedure, the rate at which letters were sent to Primary Care Physicians and/or other Healthcare providers at North Range and at Larimer was lower than anticipated.

NBH hired a consultant to help us determine the best possible Performance Improvement Project design. After considerable discussion, it was decided to have two study indicators. The reasoning for the study design we developed is described below.

We combined North Range and Larimer to obtain a sample of 100 which resulted in a confidence interval of +/- 9.5% at the 95% confidence level. By themselves, a sample of 50 at each Center would have yielded a confidence interval of +/- 13.5%. North Range had 905 open

## *Appendix A: PIP Summary Form:* **Increase NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers** *for Northeast Behavioral Health, LLC*

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

cases and Larimer had 1100 open cases at the time the formal sampling survey was conducted.

By combining the Larimer and North Range Centers, we were able to tighten the confidence intervals (by using a sampling technique) without causing a significant administrative burden to review the increased number of charts required to produce a representative sample. We also combined the Centers because they both had no requirement to ask permission to send letters to PCPs, and because they both had a very low rate at which such letters were sent. To obtain a confidence interval of +/- 5% at North Range and Larimer would have required a sample of 330. This would have placed an undue burden on administrative staff time at the Centers.

Though presented as a single pool of 100 cases, we will conduct separate, secondary analyses analyzing the rates and other variables at North Range and Larimer.

If Centennial continued to have a sample of 50 (it had 523 open cases), it would have a confidence interval of +/- 13.5%. **By increasing the sample size to 85 we tightened the confidence interval to +/- 9.5%.** To obtain a confidence interval of +/- 5% at Centennial it would have required a sample of 220. This would have changed the study design even further and placed an undue burden on their administrative staff.

- The original benchmark of 78% was based on a preliminary survey of 40 cases from Centennial. One of the unexpected findings of this survey was that 25% of the Centennial consumers refused to give permission for the intake therapist to contact their Primary Care Physician. This was an early indication of the importance of tracking whether or not the consumer gave permission to contact the Primary Care Physician. During the baseline data collection it was noted that 10% of the consumers refused permission to contact their PCPs. While the preliminary survey was randomized, it was not conducted with the full rigor of the baseline sampling. The current benchmark of 62% is based on rigorous sampling procedure that included 85 out of 523 open Medicaid consumers at Centennial. In follow-up discussions, it was determined that there was a higher rate of "refusal" in the small cities serving very rural areas. This is another reason to look at Centennial as a separate indicator. Lastly, the design is intended to enable NBH to conduct the Performance Improvement Project in accordance with all requirements, and optimize the implementation process of increasing communication and coordination between Center provider therapists and consumer health care providers.

In summary, our decision to change the design was based on the results of the formal sampling survey and the difference in requirements at the three Centers. The current design is intended to obtain representative samples without placing undue administrative burdens on the staffs of the Centers.

## Appendix A: PIP Summary Form: Increase NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers *for* Northeast Behavioral Health, LLC

**C. Activity III: Selected Study Indicators.** A study indicator is a quantitative or qualitative characteristic or variable that reflects a discrete event (e.g., rates of hospital readmissions within 30 or 90 days), or a status (e.g., percent of consumers reporting that they actively participate in treatment planning) that is to be measured. The selected indicators should be appropriate for the study topic and question as well as 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.

<b>Study Indicator #1:</b>	The study indicator for the Centennial Mental Health Center was the percentage of cases where a letter was mailed to a PCP/healthcare provider (as evidenced by a copy of such a letter in the consumers' charts) after the consumers received an intake for mental health services from the Center. (The requirement that the intake therapist ask permission to send a letter to the consumer's Primary Care Physician had been in effect for over two years.)
<b>Numerator:</b>	The number of consumers' charts in the sample survey with a copy of a letter sent to the primary care physician/Healthcare provider indicating the consumer had been admitted for services at Centennial Mental Health Center.
<b>Denominator:</b>	The total number of consumers in the sample survey (N= 85).
<b>First Measurement Period Dates:</b>	September 1, 2005 through December 15, 2005
<b>Baseline Benchmark:</b>	<b>62%.</b> (Of those consumers at the Centennial Mental Health Center who consented to have a letter sent to their PCP).
<b>Source of Benchmark:</b>	We were unable to find a formal study of this topic from which to obtain a recognized benchmark. This benchmark is based on data obtained from the Centennial Mental Health Center which was the only NBH provider Center that required intake therapists to ask consumer's permission to send a letter to their Primary Care Physician or other healthcare provider. The data consists of the percentage of cases, obtained from a systematic sampling approach, when a letter was sent to the primary care physician.
<b>Baseline Goal:</b>	75%. This goal was determined by the administrative staff of the Centennial Mental Health Center as being minimally acceptable at this point in time.

## Appendix A: PIP Summary Form: Increase NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers *for* Northeast Behavioral Health, LLC

**C. Activity III: Selected Study Indicators.** A study indicator is a quantitative or qualitative characteristic or variable that reflects a discrete event (e.g., rates of hospital readmissions within 30 or 90 days), or a status (e.g., percent of consumers reporting that they actively participate in treatment planning) that is to be measured. The selected indicators should be appropriate for the study topic and question as well as 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.

<b>Study Indicator #2:</b>	The study indicator for the combined North Range and Larimer Centers was the percentage of cases where a letter was mailed to a PCP/healthcare provider (as evidenced by a copy of such a letter in the consumers' charts) after the consumers received an intake for mental health services from one of the NBH provider Centers. These two NBH Centers did not have a requirement to send a letter to the PCP/other healthcare provider:
<b>Numerator:</b>	The number of consumers' charts in the sample survey with a copy of a letter sent to the primary care physician/Healthcare provider indicating the consumer had been admitted for services at North Range and Larimer Centers.
<b>Denominator:</b>	The total number of consumers in the sample survey (N= 100).
<b>First Measurement Period Dates:</b>	September 1, 2005 through December 15, 2005
<b>Benchmark:</b>	<b>62%.</b> This was based on the rate at which letters were sent to Primary Care Physicians and other Healthcare providers at the Centennial Mental Health Center. It excludes consumers who refused permission to contact their medical provider.
<b>Source of Benchmark:</b>	We were unable to find a formal study of this topic from which to obtain a recognized benchmark. This benchmark is based on data obtained from the Centennial Mental Health Center which was the only NBH provider Center that required intake therapists to ask consumer's permission to send a letter to their Primary Care Physician or other healthcare provider. The data consists of the percentage of cases, obtained from a systematic sampling approach, when a letter was sent to the primary care physician. Preliminary baselines were obtained by reviewing samples of open cases at these two NBH provider Centers.
<b>Baseline Goal:</b>	Meet or exceed the 62% Centennial benchmark. (Of those consumers who consented to have a letter sent to their PCP after an intake was completed).

**Appendix A: PIP Summary Form:  
Increase NBH Center Provider Communication/Coordination with  
Primary Care Physicians and Other Health Providers  
for Northeast Behavioral Health, LLC**

**D. Activity IV: Identified Study Population.** The study population should be clearly defined to represent the entire population to which the PIP study question and indicators apply. The length of consumer enrollment should be considered and defined. All selection criteria should be listed here. Once the population is identified, a decision must be made whether to review data for the entire population or a sample of that population.

**Identified Study Population:**

The baseline study population was a sample of the entire Medicaid population of open cases at all three provider Centers. The consumer had to be enrolled as a Medicaid recipient during the baseline period of September 1, 2005 – December 15, 2005. Ultimately, after the intervention of requiring intake therapists to ask permission to contact the consumer's Primary Care Physician, or other Medical Provider, all Medicaid consumers are expected to benefit from this project. Length of enrollment was not an exclusionary criterion for the baseline period. Consumers who refused to give permission for the admitting, or subsequent therapist, to contact their primary care physician or other medical provider were excluded from this study. Given the nature of the study question, studying the entire population was not feasible; therefore a sampling procedure was utilized.

In the remeasurement periods, only newly admitted Medicaid consumers will be eligible for the study project. Selected cases will not be reviewed until one month after the date of admission. However, consumers who were terminated before one month will not be excluded and will be included in the sampling procedure. Consumers who refused permission for the admitting or subsequent therapist to contact their primary care physician or other medical provider will be excluded from this study.

## Appendix A: PIP Summary Form: Increase NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers *for* Northeast Behavioral Health, LLC

**E. Activity V: Sampling Methods.** If sampling is to be 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 for the first time a topic is studied. In this case, an estimate should be used and the basis for that estimate indicated.

Measure	Sample Error and Confidence Level	Sample Size	Population	Method for Determining Size (describe)	Sampling Method (describe)
The number of cases in which a letter was sent to the consumers' Primary Care Physicians or other healthcare providers informing them that their patients' are receiving services from the mental health Center.	For both of the samples in the baseline measurement period, the confidence levels equaled 95% with a confidence interval of +/- 9.5%.	<p>There were two sample sizes for the baseline data.</p> <p>One sample size (N = 85) was based on the number of Medicaid open cases (N=523) selected for the Centennial Mental Health Center. It had a pre-existing requirement that intake therapists ask consumers for permission to send a letter to their PCPs or other healthcare providers.</p> <p>The other sample size (N=100) was for the two Centers (North Range and</p>	<p><u>Baseline Measurement Period:</u> The population of Medicaid eligible consumers who were open cases at an NBH provider mental health Center during September 1, 2005 through December 15, 2005.</p> <p>For Centennial, the population of Medicaid open cases was 523.</p> <p>For the combined North Range and Larimer Centers, the population of Medicaid open cases was 2005.</p>	<p>To ensure a representative sample of the Medicaid open consumers, the size of the samples was based on the following:</p> <ul style="list-style-type: none"> <li>■ the total number of open cases</li> <li>■ and the number of cases that needed to be selected to obtain a confidence level of 95% with a confidence interval of +/- 9.5%.</li> </ul> <p>While a confidence interval of +/-5% would have been ideal, the additional number of cases to be reviewed to obtain that level, would have put a significant administrative burden on the Centers. For example, 330 (instead of</p>	A systematic sampling approach was used for the baseline measurement period. Every 5th case was selected, except in those instances when a consumer refused to give permission for the therapist to contact their Primary Care Physician or other healthcare provider. In such an instance, the next case and was selected.

## Appendix A: PIP Summary Form: Increase NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers *for* Northeast Behavioral Health, LLC

**E. Activity V: Sampling Methods.** If sampling is to be 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 for the first time a topic is studied. In this case, an estimate should be used and the basis for that estimate indicated.

		Larimer) that did not have a requirement for the therapist to ask the consumer for permission to send a letter to their PCP or other healthcare provider. The sample was based on an open caseload of 2005 Medicaid cases.		the 100) cases would have needed to be reviewed to obtain a + /- 5% confidence interval for the two Centers that did not have the requirement to contact the PCPs.	



## Appendix A: PIP Summary Form: Increase NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers *for* Northeast Behavioral Health, LLC

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

**Data Sources**

Hybrid (medical/treatment records and administrative)

Medical/treatment record abstraction

Record Type

Outpatient

Inpatient

Other \_\_\_\_\_

Other Requirements

Data collection tool attached

Data collection instructions attached\*

Summary of data collection training attached

IRR process and results attached

\*an additional 35 charts were selected from the Center which had previously implemented a requirement to contact PCPs.

Other data

**Description of Data Collection Staff**

The baseline data collection staff consisted of the senior medical records personnel for all three NBH provider Centers. Their names are listed on the attached minutes for the training session (Appendix C, p 20).

Their background and training varied from formal medical records training, to a work history at the Center in which they had progressively taken on more responsibility for the medical record system.

Administrative data

Data Source

Programmed pull from claims/encounters

Complaint/appeal

Pharmacy data

Telephone service data /call center data

Appointment/access data

Delegated entity/vendor data \_\_\_\_\_

Other \_\_\_\_\_

Other Requirements

Data completeness assessment attached

Coding verification process attached

Survey Data

Fielding Method

Personal interview

Mail

Phone with CATI script

Phone with IVR

Internet

Other \_\_\_\_\_

Other Requirements      NA

Number of waves \_\_\_\_\_

Response rate \_\_\_\_\_

Incentives used \_\_\_\_\_





**Appendix A: PIP Summary Form:**  
**Increase NBH Center Provider Communication/Coordination with**  
**Primary Care Physicians and Other Health Providers**  
*for* **Northeast Behavioral Health, LLC**

F. Activity VIb: Data Collection Cycle.	Data Analysis Cycle.
<p> <input type="checkbox"/> Once a year  <input type="checkbox"/> Twice a year  <input type="checkbox"/> Once a season  <input type="checkbox"/> Once a quarter  <input type="checkbox"/> Once a month  <input type="checkbox"/> Once a week  <input type="checkbox"/> Once a day  <input type="checkbox"/> Continuous  <input checked="" type="checkbox"/> Other (list and describe):            For the remeasurement periods, it is anticipated that it will take eight months to select 85 cases (which is the denominator) from the Centennial Center which required therapists to ask permission to contact primary care physicians prior to the baseline measurement period. The cases will be selected utilizing a systematic sampling approach (every Nth case). Centennial has the smallest number of open cases and will take the longest amount of time to generate the denominator of 85 whether every 2<sup>nd</sup>, 3<sup>rd</sup> etc. case is chosen.         </p> <hr/> <hr/> <hr/>	<p> <input checked="" type="checkbox"/> Once a year  <input type="checkbox"/> Once a season  <input type="checkbox"/> Once a quarter  <input type="checkbox"/> Once a month  <input type="checkbox"/> Continuous  <input type="checkbox"/> Other (list and describe):         </p> <hr/> <hr/> <hr/> <hr/>

## **Appendix A: PIP Summary Form: Increase NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers for Northeast Behavioral Health, LLC**

### **F. Activity VIc. Data Analysis Plan and Other Pertinent Methodological Features**

The data element collected was whether a letter was sent to the consumer's Primary Care Physician or other medical provider informing them that their patient was receiving services at one of the NBH provider Centers. The source of the data was the medical records chart for each consumer at each provider Center.

A manual data collection methodology was used to obtain the data for the baseline period, and will also be used for the remeasurement periods. The baseline data collection tool is attached as Appendix A (p. 18). This data collection tool was defined as the systematic process for collecting data. The timeline for collecting *baseline (February 2007)* data was September 1, 2005 through December 15, 2005. Qualified staff to collect this data included the senior medical records personnel at each of the Centers. As stated earlier in this report, their training ranged from formal medical records training, to a work history at the Center in which they had progressively taken on more responsibility for the medical record system until they were put in charge of it.

A training session was conducted by Neil Benson, Ph.D, the NBH Director of Quality Improvement, on October 5, 2005 for the senior medical records personnel. Instructions for collection of the data were reviewed and are attached as Appendix B (p. 19).

This tool contains an indication of whether the PIP indicator was present. It also contains a list of all of the other data elements collected.

This tool was designed to be simple and straightforward to enhance the consistency and accuracy of the data collected. The 100% interrater reliability obtained from the over sampling procedure conducted at the three Centers was evidence of the ease-of-use of this tool (Appendix D, p. 21).

The purpose and nature (overview) of the study, as well as the directions for completion of the data collection tool, were explained at that time. This is documented in the minutes (Appendix C p.20) for that meeting. Though this overview was not specifically in the instructions, the overview was presented immediately prior to the instruction and training in the use of the tool for the project.

A systematic sampling approach, the Nth selection technique, was utilized. Once the required sample size was calculated, every 5<sup>th</sup> record was selected from a list of Medicaid open consumers. All Medicaid open consumers were eligible for the systematic sampling for the baseline measurement period. As stated earlier, the only exclusions were those consumers who refused permission for the intake therapist to contact their Primary Care Physician or other healthcare provider.

All cases, 100%, selected in the systematic sampling contained the study measure of whether or not a letter had been sent to the consumer's Primary Care Physician or other healthcare provider. As cited above, over sampling was conducted at all three Centers and there was a 100% reliability rate (see Appendix D, p. 21). This result, combined with the experience of the medical records persons from all three Centers, gives a "high level of confidence" in the completeness of the study measure data. The completeness of the other items on the data form ranged between 90% and 100% with the exception of the following two items:

- Ethnicity/race which was completed approximately 85% of the time
- The indication of whether the consumer had a Primary Care Physician or other healthcare provider was completed 63% of the time at Larimer and North Range, and 80% of the time at Centennial.

The plan for data analysis consists of the use of chi-square analyses comparing the baseline years to the first remeasurement years, the first remeasurement years to the second remeasurement years, and the continuation of this process until the project is judged a success.

## **Appendix A: PIP Summary Form: Increase NBH Center Provider Communication/Coordination with Primary Care Physicians and Other Health Providers for Northeast Behavioral Health, LLC**

### **F. Activity VIc. Data Analysis Plan and Other Pertinent Methodological Features**

#### ***First Remeasurement Period***

*For the baseline data, the available pieces of data that constituted evidence as to whether or not communication between the Center and the consumer's Primary Care Physician or other healthcare provider primary care provider (PCP) was the presence of both a release of information and a letter to the PCP. For the first remeasurement period, it was decided to develop a special form to communicate with the PCP's. This form was called the Medical Provider Notification Form (MPNF) and instructions on how to utilize the Form were developed (see Appendix E). Discussions regarding the MPNF were conducted with the Center's deputy directors at the NBH Quality Improvement Administrative Subcommittee (QIAS) and training sessions were held with medical records personnel doing the sampling and obtaining the information (see Appendices F and G for minutes to the QIAS and training meetings).*

*Once the first remeasurement period was underway, a number of factors became evident. It was expected that when a consumer gave permission to contact their PCP that there would be a copy of a completed MPNF, release of information, and a letter to the PCP. The presence of these three items was conceptualized to constitute a complete dataset and full evidence that the PCP was contacted. The medical records personnel recorded the data in an Excel spreadsheet and submitted it, along with the MPNF, to NBH. However, when the first month's data sample was sent to NBH, many missing pieces were discovered. For example, in some cases there was a copy of the MNPF and a release of information, but no copy of a letter to the PCP. In other cases, there was a copy of a letter to the PCP and a release of information, but no MNPF. Discussions were held with the Center's deputy directors to address these deficiencies; however, these deficiencies were addressed several months into the remeasurement period, due to the timing of the flow of information. (The first month of data to be sampled was for February 2006, but the report of all new admissions does not get to medical records personnel until the middle of the following month (March), and the data is not due to NBH until the month after the medical records personnel receive the admission data (April).) This meant that the discovery of the missing pieces of information occurred several months into the remeasurement period.*

*The discovery of the missing pieces of data called into question the original study question, which focused on letters sent to the PCP. Though the letters (and MPNF) constituted a form of proof of communication, they were not the outcome variable. The outcome variable was proof of contact with the PCP and the letters were the mechanism by which the contact occurred. Thus, a determination regarding what minimally constituted communication with the consumer's PCP was made, yielding four criteria. It was deemed that communication with a consumer's PCP occurred if one of the following criteria were met:*

- The presence of a copy of the MNPF, release of information, and a copy of a letter to the PCP in the consumer's chart (indicating that the originals had been mailed).*
- The presence of a copy of the MNPF and release of information in the consumer's chart (indicating the original had been mailed to the PCP).*
- The presence of a copy of a letter and a release of information in the consumer's chart (indicating that the original had been mailed to the PCP).*
- The presences of an original MNPF, a release of information, and a proof of the faxing of the MNPF in the consumer's chart. (February 2007)*

**Appendix A: PIP Summary Form:**  
**Increase NBH Center Provider Communication/Coordination with**  
**Primary Care Physicians and Other Health Providers**  
*for* **Northeast Behavioral Health, LLC**

**G. Activity VII. Improvement Strategies.** Real, sustained improvements in care result from a continuous cycle of measuring and analyzing performance, and developing and implementing system wide improvements in care. Describe interventions designed to change behavior at an institutional, practitioner, or consumer level.

**Describe interventions.**

**Baseline to Remeasurement 1**

The intervention is to require that intake therapists ask permission from consumers to contact their Primary Care Physician or other healthcare providers. *The intervention was implemented at Larimer and North Range on February 1, 2006, and required the therapist to obtain a signed release of information and send an MNPF and/or letter to the PCP. (February 2007)* The first remeasurement ~~will begin~~ began March 1, 2006. (February 2007) While the Centennial Mental Health Center already had this requirement, the staff has and will continue to receive the same memos and information that have been and will be distributed at Larimer and North Range. As stated earlier, the data was tracked *manually and proof of contact was determined by the presence of any one of the following criteria:*

- *The presence of a copy of the MNPF, release of information, and a copy of a letter to the PCP in the consumer's chart (indicating that the originals had been mailed).*
- *The presence of a copy of the MNPF and release of information in the consumer's chart (indicating the original had been mailed to the PCP).*
- *The presence of a copy of a letter and a release of information in the consumer's chart (indicating that the original had been mailed to the PCP).*
- *The presences of an original MNPF, a release of information, and a proof of the faxing of the MNPF in the consumer's chart.(February 2007)*

**Remeasurement 1 to Remeasurement 2**

**Remeasurement 2 to Remeasurement 3**

**Appendix A: PIP Summary Form:  
Increase NBH Center Provider Communication/Coordination with  
Primary Care Physicians and Other Health Providers  
for Northeast Behavioral Health, LLC**

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

**Baseline Measurement**

A potential threat to validity is the confidence interval of +/- 9.5% as represented in the sample. Because the baseline rate of North Range and Larimer combined was 2%, the likelihood of exceeding the confidence interval declines. This would decrease the potential threat to validity posed by the confidence interval of +/- 9.5%. This effectively tightens the interval which increases the reliability of the indicator.

**Remeasurement 1**

*The numerators and denominators were used to obtain the rates at which the Centers evidenced communication with the consumer's PCP. These rates increased significantly from the baseline measurement in 2005 to the first remeasurement period in 2006 (see page 16). The rates for Larimer and North Range increased to 66% (first remeasurement) from 2% (baseline), which represents a statistically significant increase ( $X^2$  (df=1,N=200)=91.27,  $p<.001$ ). Likewise, the rates for Centennial increased to 90.6% (first remeasurement) from 62.4% (baseline), which also represents a statistically significant increase ( $X^2$  (df=1,N=170)=18.83,  $p<.01$ ). As the sampling procedure for the first remeasurement period was identical to the baseline sampling procedure, the aforementioned potential validity issues relating to the confidence interval of +/- 9.5% should still be considered.*

*The data for both Larimer and North Range were parsed to look for within-Center differences. Post hoc comparisons using Bonferroni's correction for chi square (.05/3=.017) were conducted to determine if the differences between both Center's baseline and first remeasurement rates were significant. Analysis on Larimer's data indicated that the increase from 4.0% (baseline) to 62.0% is statistically significant ( $X^2$  (df=1,N=100)=38.04,  $p<.001$ ). North Range's data indicated similar results; the increase from 0% (baseline) to 70% (first remeasurement) is statistically significant (df=1,N=100)=53.85,  $p<.001$ )(February 2007)*

**Remeasurement 2**

**Remeasurement 3**

**Appendix A: PIP Summary Form:  
Increase NBH Center Provider Communication/Coordination with  
Primary Care Physicians and Other Health Providers  
for Northeast Behavioral Health, LLC**

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

**Baseline Measurement**

**Remeasurement 1**

*The rate of communication between all three Centers and their consumers' primary care provider improved significantly from the baseline to the first remeasurement period. In addition, the results demonstrated that all Centers surpassed the benchmark of 62.4%. Centennial's rate of 90.6% represented a 28.2% increase beyond the benchmark and Larimer and North Range's combined rate of 66.0% surpassed the benchmark by 3.6%.*

*In addition, Larimer and North Range's results were examined separately post hoc and both demonstrated substantial improvement. Larimer's rate increase from 4% (n=2 at baseline) to 62% (n=31 at first remeasurement) was statistically significant, as was North Range's rate increase from 0% (n=0 at baseline) to 70% (n=35 at first measurement).*

*Possible threats to the validity of these results include the relative incompleteness of the records and the confidence interval related to the sampling procedure. With regard to the completeness of the records, it is likely that more communication occurred than what was credited because of lack of adequate documentation. This is expected to be corrected based on the discussions with each Center's deputy director, subsequent corrective actions taken by each Center to assure the completeness of the data. (February 2007)*

**Remeasurement 2**

**Remeasurement 3**

**Appendix A: PIP Summary Form:**  
**Increase NBH Center Provider Communication/Coordination with**  
**Primary Care Physicians and Other Health Providers**  
*for* **Northeast Behavioral Health, LLC**

**I. Activity IX. Study Results Summary and Improvement:** List study results and describe any meaningful change in performance observed during the time period of analysis.

**#1 Quantifiable Measure:** The percentage of cases where a letter was mailed to a PCP/healthcare provider by the staff of the Centennial Mental Health Center.

Time Period Measurement Covers	Baseline Project Indicator Measurement	Numerator	Denominator <sup>^</sup>	Rate or Results	Industry Benchmark	Statistical Test and Significance*
<b>Centennial Mental Health Center</b>						
September 1, 2005 – December 15, 2005	<b>Baseline:</b>	53	85 <sup>^</sup>	62.4%	62.4%**	NA
March 1, 2006-December 31, 2006	<b>Remeasurement 1:</b>	77	85 <sup>^</sup>	90.6%	62.4%**	$\chi^2 (df=1, N=170)=18.83, p<.01$

**#2 Quantifiable Measure:** The percentage of cases where a letter was mailed to a PCP/healthcare provider by the staff of North Range and Larimer Centers.

Time Period Measurement Covers	Baseline Project Indicator Measurement	Numerator	Denominator <sup>^</sup>	Rate or Results	Industry Benchmark	Statistical Test and Significance*
<b>North Range and Larimer Mental Health Centers</b>						
September 1, 2005 – December 15, 2005	<b>Baseline:</b>	2	100 <sup>^</sup>	2.0%	62.4%**	NA
March 1, 2006-May 31, 2006	<b>Remeasurement 1:</b>	66	100 <sup>^</sup>	66.0%	62.4%**	$\chi^2 (df=1, N=200)=91.27, p<.01$

\*\*Not an industry benchmark, as stated in Activity Three.

<sup>^</sup> The denominator will remain at 85 for Centennial and 100 for the combination of North Range and Larimer throughout the remeasurement periods.



**Appendix A: PIP Summary Form:**  
**Increase NBH Center Provider Communication/Coordination with**  
**Primary Care Physicians and Other Health Providers**  
*for* **Northeast Behavioral Health, LLC**

**I. Activity IX. Study Results Summary and Improvement:** List study results and describe any meaningful change in performance observed during the time period of analysis.

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

*The first remeasurement methodology was the same as the baseline methodology and therefore was not a factor in the substantial changes noted between the measurement periods. This suggests that the statistically significant differences represent real change from baseline to the first remeasurement. (February 2007)*



**Appendix A: PIP Summary Form:**  
**Increase NBH Center Provider Communication/Coordination with**  
**Primary Care Physicians and Other Health Providers**  
*for* **Northeast Behavioral Health, LLC**

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

*It is highly likely that intervention, along with the corrective action, described in G, activity VII (page 14) are the reasons behind the statistically significant improvement between the measurement periods. Given that there was no substantial changes in the number of open cases between the measurement periods and that the sampling method was the same, it is unlikely that there are random population fluctuations accounting for the improvements. Likewise, issues related to sampling error are not likely to have caused variation, considering the adherence to the prescribed procedure and validity checks. Given these considerations, it is highly likely that this improvement can be sustained to the next measurement period, provided the methodology remains the same. (February 2007)*



**Appendix A: PIP Summary Form:  
Increase NBH Center Provider Communication/Coordination with  
Primary Care Physicians and Other Health Providers  
for Northeast Behavioral Health, LLC**

**Appendix A  
Data Collection Tool**

**Northeast Behavioral Health**

**Primary Care Physician Data Collection Form**

Center \_\_\_\_\_ Consumer Name \_\_\_\_\_

Admission Date \_\_\_\_\_ Gender \_\_\_\_ (M/F)      DOB \_\_\_\_\_

Intake Clinician \_\_\_\_\_ Program \_\_\_\_\_

Ethnicity/Race (How does consumer identify himself/herself?) \_\_\_\_\_

Name of Primary Care Physician or healthcare provider (If none indicate none, or, if unclear, indicate that.) \_\_\_\_\_

Did consumer refused to give permission to contact Primary Healthcare Provider? \_\_\_\_\_ ( Yes, or No)

\_\_\_\_\_   
If consumer refused to give permission delete this case from the study. (see instructions)

Was a letter sent to the Primary Care Physician or Other Health Provider? \_\_\_\_\_ ( Yes, or No)

Was there a signed and dated release by the consumer giving permission to contact the Primary Care Physician or other healthcare provider? \_\_\_\_\_ (Yes, or No)

November 5, 2005 nb

**Appendix A: PIP Summary Form:  
Increase NBH Center Provider Communication/Coordination with  
Primary Care Physicians and Other Health Providers  
for Northeast Behavioral Health, LLC**

**Appendix B.**

**Northeast Behavioral Health**

**Instructions for Chart Selection and Data Collection for Increasing Communication with Primary Care Physicians PIP**

1. Obtain an alphabetic listing of all Medicaid consumers currently receiving services (open cases).
2. Starting with the first consumer, select every fifth case. **A total of 50 Chart's need to be reviewed.**
3. Once a case has been selected, complete the initial sections (name, age, Center, Etc.) of the Primary Care Physicians recording form.
4. Go to the section in the chart that has the intake.
5. Examine the entire intake, or medical history (as appropriate by Center), to determine if there is an indication that the consumer has a Primary Care Physician or other persons providing ongoing health care, such as a health clinic, or a Physicians Assistant. Indicate this in the appropriate section on the form. If none found, or the consumer did not name a specific medical care personnel indicate so. If it is determined in the intake, or subsequent sections, that the consumer has refused permission for a letter to be sent to the primary care physician, or others providing medical care, then this case must be omitted from the study. For example, if it was #30, then select the next case and it becomes #30. (#31 becomes #30) if two people are doing this at a Center, they must work closely together to assure that the procedures regarding Selection and omission of records are carried out correctly
6. Go to the section of the chart that contains letters sent to other professionals, agencies, family members, and other persons.
7. Determine if a letter has been sent to the primary care physician or other person or agencies providing ongoing medical care. Indicate the finding in the appropriate section of the form. If a letter was sent six months later, please note this.
8. If a letter has been sent, determine if there has been a release of information that was completed indicating permission to send a letter to the doctor or health source. Indicate the finding in the appropriate section of the form.
9. Make a final review of the reporting form to assure the form is complete.
10. Oversampling. After the sample of 50 cases is reviewed, select an additional five cases. If two persons reviewed the records, each person should review all five of these records and compare findings. If only one person reviewed all 50 records, have other qualified medical records staff do the co-review of the oversampling. A report of the oversampling needs to be sent to the NBH Director of Quality Improvement.

**Appendix A: PIP Summary Form:  
Increase NBH Center Provider Communication/Coordination with  
Primary Care Physicians and Other Health Providers  
for Northeast Behavioral Health, LLC**

**Appendix C.**

**Northeast Behavioral Health**

**Minutes of Formal Training for Data Collection for the Primary Care Physician Performance Improvement Project  
for October 5, 2005 at 1:30 p.m.**

Present: Sandy Mitchell, Medical Records Coordinator for NRBH  
Lynn Coxon, QA Assistant of Medical Records for LCMH  
Chantell Christner, Office Manager for CMHC  
Laura Martinez, Assistant Director of Evaluation and Planning for NBH  
Neil Benson, Director of QI for NRBH and NBH

1. Neil Benson, Ph.D., Director of Quality Improvement thoroughly gave an overview of the importance of the Performance Improvement Project of Increasing Communications with Primary Care Physicians. He explained the instructions for Chart Selection and Data Collection for Increasing Communication with Primary Care Physicians PIP with the selected reviewers.
2. Neil Benson also explained the process of oversampling if the reviewers are supervising others who are reviewing the charts or if there are two reviewers.
3. The reviewers were instructed to send forms to Laura Martinez within the first week of December.
4. Neil Benson stated if there are any questions which require a change in the process, the reviewers will be notified by e-mail as soon as possible.
5. Neil Benson addressed any questions that were raised by the reviewers.

**Appendix A: PIP Summary Form:  
Increase NBH Center Provider Communication/Coordination with  
Primary Care Physicians and Other Health Providers  
for Northeast Behavioral Health, LLC**

**Appendix D**

**Northeast Behavioral Health  
Over sampling Procedure**

Each Center was required to conduct an over sampling of 5 to 10 clients after completing the sample.

1. North Range Behavioral Health had an over sampling of 5 charts. There was 100% interrater-reliability present with all 5 of these charts.
2. Larimer Center for Mental Health had an over sampling of 5 charts. There was 100% interrater-reliability present with all 5 of these charts.
3. Centennial Mental Health had an over sampling of 10 charts. There was 100% interrater-reliability present with all 10 of these charts.

In Summary: There was 100% interrater-reliability for all 20 charts. This is evidence of the instructions being clear and the form being easy to complete.



**Appendix A: PIP Summary Form:  
Increase NBH Center Provider Communication/Coordination with  
Primary Care Physicians and Other Health Providers  
for Northeast Behavioral Health, LLC**

**Appendix E**

**Northeast Behavioral Health  
Instructions for the Medical Provider Notification Form**

NBH conducts formal research projects called Performance Improvement Projects (PIP), to improve processes and outcomes of mental health care. One of the current projects is designed to increase the communication and coordination mental health providers have with primary health care providers.

The Primary Care Physician and Other Medical Provider Notification form is the mechanism that has been designed for increasing communication/coordination with PCP's and other Health Care Providers.

**ALL THE INFORMATION MUST BE COMPLETED.**

**To:** Write the name of the Primary Care Physician or other Medical Provider whom the consumer listed.

**DATE:** Write the date when this form was completed.

**ADDRESS:** Write the address of the Primary Care Physician or other Medical Provider to whom this form is being sent.

**PHONE #:** List the phone number of the Primary Care Physician or other Medical Provider to whom this form is being sent.

**FAX#:** Write the fax number if known of the Primary Care Physician or other Medical Provider to whom this form is being sent.

**PATIENT NAME:** Write the legal name of the consumer, or the name for which the Physician is familiar.

**MEDICAID#:** Write the consumer's current Medicaid number.

**DOB:** Write the consumers date of birth --/--/----

**DATE OF ADMISSION TO**\_\_\_\_\_. Write the date the consumer was admitted into your facility.

**DSM IV-TR ADMITTING DIAGNOSIS:** Provide the DSM IV-TR diagnosis that was given to the consumer upon admission to your agency.

**TREATMENT PROGRAM NAME:** Write the name of the agency or program in which the consumer was admitted to.



**Appendix A: PIP Summary Form:**  
**Increase NBH Center Provider Communication/Coordination with**  
**Primary Care Physicians and Other Health Providers**  
*for* **Northeast Behavioral Health, LLC**

**CLINICIAN:** Write the name of the clinician who will be treating the consumer.

**ADDRESS:** Write the address of the agency where the consumer will be receiving treatment.

**PHONE#:** List the phone number of the agency where the consumer will be receiving treatment for the purpose of enabling the Primary Care Physician or other Medical Provider to contact the treating clinician if necessary.

**FAX#:** Write the fax number of your agency where the consumer will be receiving treatment.

**THE FOLLOWING INITIAL/ONGOING SERVICES HAS BEEN RECOMMENDED TO THE PATIENT AND AUTHORIZED AS MEDICALLY NECESSARY:**  
Complete this section as it pertains to the services the consumer will be receiving while at your agency. For Group and Psychotropic Medications-referred for evaluation, be as specific as possible.

**PRINTED NAME OF CLINICAL CARE COORDINATOR:** The Clinical Care Coordinator who is completing this form must print his/her name in the space provided.

**SIGNATURE/DATE:** The Clinical Care Coordinator who is completing this form must sign his/her name and provide the date the form was completed in the space provided.

**COPY OF THE RELEASE OF INFORMATION HAS BEEN ATTACHED:** Always put a check mark by this statement and attach the Release of Information with this form prior to sending it to the Primary Care Physician or other Medical Provider. (If the consumer has given consent for a letter to be sent.)

**PLEASE PROVIDE US WITH A SUMMARY OF THIS PATIENT'S MEDICAL HISTORY AND ANY MEDICATIONS YOU ARE CURRENTLY PRESCRIBING:**  
Always put a check mark by this statement when completing this form.(If the consumer has given consent for a letter to be sent.)

**PLEASE CONTACT US IF YOU WOULD LIKE FRUTHER INFORMATION REGARDING THE MENTAL HEALTH TREATMENT OF THIS PATIENT:** Always put a check mark by this statement when completing this form.(If the consumer has given consent for a letter to be sent.)

**PHONE #:** Write the phone number of the agency/therapist of whom the Primary Care Physician or other Medical Provider can contact if needed.

**PLEASE CHECK ALL THAT APPLY:**

**I DO NOT HAVE A PRIMARY CARE PHYSICIAN OR OTHER PRIMARY MEDICAL PROVIDER:** It is imperative that this statement be checked if the consumer reports he/she does not have a Primary Care Physician or Other Primary Medical Provider.



**Appendix A: PIP Summary Form:**  
**Increase NBH Center Provider Communication/Coordination with**  
**Primary Care Physicians and Other Health Providers**  
*for* **Northeast Behavioral Health, LLC**

**A REFERRAL HAS BEEN MADE TO A PRIMARY CARE PHYSICIAN OR MEDICAL FACILITY:** If a consumer reports he/she does not have a Primary Care Physician or other Medical Provider and the consumer appears to be in need of medical attention, or the consumer request a referral, give the consumer the toll free phone number for medical Medicaid: 1-800- 221-3943. If a referral was provided put a check mark next to this statement.

**I DO NOT WANT YOU TO CONTACT MY PRIMARY CARE PHYSICIAN:**

If the consumer states he/she does not want you to contact the Primary Care Physician it is imperative that this statement be checked as it constitutes a refusal. **Even if the consumer refuses contact with the PCP, the Primary Care Physician and Other Medical Provider Notification, form MUST be placed in the consumer's chart.**

**PATIENT SIGNATURE:** Legal name of the consumer.

**DATE:** The date in which the consumer signed the form.



**Appendix A: PIP Summary Form:**  
**Increase NBH Center Provider Communication/Coordination with**  
**Primary Care Physicians and Other Health Providers**  
*for* **Northeast Behavioral Health, LLC**

**Appendix F**

**Northeast Behavioral Health**  
**Minutes for QIAS**

<b>NORTHEAST BEHAVIORAL HEALTH COMMITTEE MINUTES</b>				
<b>NAME OF COMMITTEE :</b> QI Administrative Subcommittee			<b>DATE OF MEETING:</b> January 3, 2006	
			<b>LOCATION OF MEETING OR TELECONFERENCE:</b> Main Conference Room	
<b>MEMBER ATTENDANCE:</b>	X	Neil Benson		Phyllis Sitzman
	X	Karen Thompson	X	Laura Martinez
	X	Spencer Green	X	Larry Pottorff
	X	Vicki Grassman	X	Anne Mitchell
<b>RECORDER:</b> Libby Goode-Grasmick				
<b>Agenda</b>		<b>Discussion</b>		<b>Action Taken</b>
<b>Old Business</b>				
1. Update on status of PIPS.		All three Centers have submitted samples of 50 charts and an over sample of 5 charts for inter-rater reliability. Laura will input the data into SPSS for further evaluation.		Update at next meeting.
2. Update on PCP PIP. a. Discussion of form/letter to be sent to PCPs. b. Discussion of policies and procedures that need to be implemented. c. Discussion of over sampling methods and procedures.		2a. The Committee reviewed the form/letter to be sent to the PCP's. Neil will make the changes and e-mail today. 2b. Neil read the policies and procedures regarding the PCP letter that will be sent out to the intake therapist. Neil will make changes and e-mail today. 2c. See 1. above.		Update at the next meeting or before then via phone and e-mail if necessary.

**Appendix A: PIP Summary Form:  
Increase NBH Center Provider Communication/Coordination with  
Primary Care Physicians and Other Health Providers  
for Northeast Behavioral Health, LLC**

**Appendix G**

**Northeast Behavioral Health  
Minutes on Training Issues**

<b>NORTHEAST BEHAVIORAL HEALTH TRAINING MINUTES</b>					
<b>NAME OF TRAINING :</b> Instructions for the first remeasurement period of the PCP/Medical Provider Communication/Coordination Performance Improvement Project for the clinician care coordinators.			<b>DATE OF TRAINING:</b> March 22, 2006		
			<b>LOCATION OF MEETING OR TELECONFERENCE:</b> Main Conference Room		
<b>MEMBER ATTENDANCE:</b>	X	Neil Benson	X	Jean Knopp	
	X	Laura Martinez	X	Monica Schaeffer	
	X	Tamara McCoy	X	Lynne Coxon	
	X	Adrienne Ware			
<b>RECORDER:</b> Laura Martinez					
<b>Agenda</b>		<b>Discussion</b>		<b>Action Taken</b>	
1. Brief overview and purpose of the PIP		Neil provided a brief overview of the PIP and described its purpose to the clinician care coordinators.		None at this time.	
2. Instructions for completing the forms for the remeasurement period		Neil reviewed the instructions for completing the forms for the remeasurement period. (See instructions attached).		None at this time.	
3. Review of the tracking log.		Neil reviewed the tracking log. Laura will add an amendments section to the log and e-mail the log to the coordinators.		None at this time.	
4. Review of oversampling process		Neil reviewed the oversampling process with the coordinators.		None at this time.	
5. Due date for the data		Neil discussed the due dates for the data. He stated all data is to be turned into Laura by the 15 <sup>th</sup> of each month. For this remeasurement period we are beginning with March's data which will be due April 15, 2006		None at this time.	

## *Appendix B.* **CMS Rationale by Activity** *for* **Northeast Behavioral Health, LLC**

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

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

This document highlights the rationale for each activity as established by CMS. The protocols for conducting PIPs can be used to assist the BHOs in complying with requirements.

### **CMS Rationale**

#### ***Activity I. Appropriate Study Topic***

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

#### ***Activity II. Clearly Defined, Answerable Study Question***

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

#### ***Activity III. Clearly Defined Study Indicator(s)***

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

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

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

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

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

#### **Activity IV. Use a Representative and Generalizable Study Population**

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

#### **Activity V. Valid Sampling Techniques**

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

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

## **Activity VI. Accurate/Complete Data Collection**

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

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

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

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

## **Activity VII. Appropriate Improvement Strategies**

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

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

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

### ***Activity VIII. Sufficient Data Analysis and Interpretation***

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

### ***Activity IX. Real Improvement Achieved***

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

### ***Activity X. Sustained Improvement Achieved***

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

## Appendix C. Definitions and Explanations by Activity for Northeast Behavioral Health, LLC

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

Definitions and Explanations	
<b>Activity I. Appropriate Study Topic</b>	
<b>Broad Spectrum of Care</b>	<ul style="list-style-type: none"> <li>◆ Clinical focus areas: includes prevention and care of acute and chronic conditions and high volume/high-risk services. High-risk procedures may also be targeted (e.g., care received from specialized centers).</li> <li>◆ Nonclinical areas: continuity or coordination of care addressed in a manner in which care is provided from multiple providers and across multiple episodes of care (e.g., disease-specific or condition-specific care).</li> </ul>
<b>Eligible Population</b>	<ul style="list-style-type: none"> <li>◆ May be defined as consumers who meet the study topic parameters.</li> </ul>
<b>Selected by the State</b>	<ul style="list-style-type: none"> <li>◆ If the study topic was selected by the state Medicaid agency, this information is included as part of the description under Activity One: Choose the Selected Study Topic in the PIP tool.</li> </ul>
<b>Activity II. Clearly Defined, Answerable Study Question</b>	
<b>Study Question</b>	<ul style="list-style-type: none"> <li>◆ The question(s) directs and maintains the focus of the PIP and sets the framework for data collection, analysis, and interpretation. The question(s) must be measurable and clearly defined.</li> <li>◆ Examples:               <ol style="list-style-type: none"> <li>1. Does outreach immunization education increase the rates of immunizations for children 0–2 years of age?</li> <li>2. Does increasing flu immunizations for consumers with chronic asthma impact overall health status?</li> <li>3. Will increased planning and attention to follow-up after inpatient discharge improve the rate of mental health follow-up services?</li> </ol> </li> </ul>



Definitions and Explanations	
<b>Activity III. Clearly Defined Study Indicator(s)</b>	
<b>Study Indicator</b>	<ul style="list-style-type: none"> <li>◆ A quantitative or qualitative characteristic reflecting a discrete event or status that is to be measured. Indicators are used to track performance and improvement over time.</li> <li>◆ Example: The percentage of enrolled consumers who were 12–21 years of age who had at least one comprehensive well-care visit with a primary care practitioner or an obstetrician-gynecologist during the measurement year.</li> </ul>
<b>Sources Identified</b>	<ul style="list-style-type: none"> <li>◆ Documentation/background information that supports the rationale for the study topic, study question, and indicators.</li> <li>◆ Examples: HEDIS<sup>®1</sup> measures, medical community practice guidelines, evidence-based practices, or provider agreements.</li> <li>◆ Practice guideline examples: American Academy of Pediatrics and American Diabetes Association.</li> </ul>
<b>Activity IV. Use a Representative and Generalizable Study Population</b>	
<b>Eligible Population</b>	<ul style="list-style-type: none"> <li>◆ Refers to consumers who are included in the study.</li> <li>◆ Includes age, conditions, enrollment criteria, and measurement periods.</li> <li>◆ Example: the eligible population includes all children ages 0–2 as of December 31 of the measurement period, with continuous enrollment and no more than one enrollment gap of 30 days or less.</li> </ul>
<b>Activity V. Valid Sampling Techniques</b>	
<b>True or Estimated Frequency of Occurrence</b>	<ul style="list-style-type: none"> <li>◆ This may not be known the first time a topic is studied. In this case, assume that a maximum sample size is needed to establish a statistically valid baseline for the study. HSAG will review whether the BHOs defined the impact the topic has on the population or the number of eligible consumers in the population.</li> </ul>
<b>Sample Size</b>	<ul style="list-style-type: none"> <li>◆ Indicates the size of the sample to be used.</li> </ul>
<b>Representative Sample</b>	<ul style="list-style-type: none"> <li>◆ Refers to the sample resembling the entire population.</li> </ul>
<b>Confidence Level</b>	<ul style="list-style-type: none"> <li>◆ Statistical confidence is a numerical statement of the probable degree of certainty or accuracy of an estimate (e.g., 95 percent level of confidence with a 5 percent margin of error).</li> </ul>

<sup>1</sup> HEDIS<sup>®</sup> refers to the Health Plan Employer Data and Information Set and is a registered trademark of the National Committee for Quality Assurance (NCQA).



Definitions and Explanations	
<b>Activity VI. Accurate/Complete Data Collection</b>	
<b>Data Elements</b>	<ul style="list-style-type: none"> <li>◆ Identification of data elements includes unambiguous definitions of data that will be collected (e.g., the numerator/denominator, laboratory values).</li> </ul>
<b>Interrater Reliability (IRR)</b>	<ul style="list-style-type: none"> <li>◆ The HSAG review team evaluates if there is a tool, policy, and/or process in place to verify the accuracy of the data abstracted. Is there an over-read (IRR) process of a minimum-percentage review?</li> <li>◆ Examples: a policy that includes how IRR is tested, documentation of training, and instruments and tools used.</li> </ul>
<b>Algorithms</b>	<ul style="list-style-type: none"> <li>◆ The development of any systematic process that consists of an ordered sequence of steps. Each step depends on the outcome of the previous step.</li> <li>◆ The HSAG review team looks for the BHOs to describe the process used in data collection. What are the criteria (e.g., what Current Procedural Terminology and/or source codes were used)?</li> </ul>
<b>Data Completeness</b>	<ul style="list-style-type: none"> <li>◆ For the purposes of PIP scoring, data completeness refers to the degree of complete administrative data (e.g., encounter data or claims data). BHOs that compensate their providers on a fee-for-service basis require a submission of claims for reimbursement. However, providers generally have several months before they must submit the claim for reimbursement, and processing claims by the health plan may take several additional months, creating a claims lag. Providers paid on a capitated or salaried basis do not need to submit a claim to be paid, but should provide encounter data for the visit. In this type of arrangement, some encounter data may not be submitted.</li> <li>◆ PIPs that use administrative data need to ensure the data has a high degree of data completeness prior to its use. Evidence of data completeness levels may include claim processing lag reports, trending of provider submission rates, policies and procedures regarding timeliness requirements for claims and encounter data submission, encounter data submission studies, and comparison reports of claims/encounter data versus medical record review. Discussion in the PIP should focus on evidence at the time the data was collected for use in identifying the population, sampling and/or calculation of the study indicators. Statements such as, “Data completeness at the time of the data pull was estimated to be 97.8 percent based on claims lag reports (see attached Incurred But Not Reported report),” along with the attachment mentioned, usually (but not always) are sufficient evidence to demonstrate data completeness.</li> </ul>

Definitions and Explanations	
<b>Activity VII. Appropriate Improvement Strategies</b>	
<b>Causes and Barriers</b>	<ul style="list-style-type: none"> <li>◆ Interventions for improvement are identified through evaluation or barrier analysis. If there was no improvement, what problem-solving processes were put in place to identify possible causes and proposed changes to implement solutions?</li> <li>◆ It is expected that interventions associated with improvement of quality indicators will be system interventions.</li> </ul>
<b>Standardized</b>	<ul style="list-style-type: none"> <li>◆ If the interventions have resulted in successful outcomes, the interventions should continue and the BHO should monitor to assure the outcomes remain.</li> <li>◆ Examples: if an intervention is the use of practice guidelines, then the BHOs continue to use them; if mailers are a successful intervention, then the BHOs continue the mailings and monitor outcomes.</li> </ul>
<b>Activity VIII. Sufficient Data Analysis and Interpretation</b>	
<b>Analysis Plan</b>	<ul style="list-style-type: none"> <li>◆ Each study should have a plan for how data analysis will occur.</li> <li>◆ The HSAG review team will ensure that this plan was followed.</li> </ul>
<b>Generalization to the Study Population</b>	<ul style="list-style-type: none"> <li>◆ Study results can be applied to the general population with the premise that comparable results will occur.</li> </ul>
<b>Factors that Threaten Internal and External Validity</b>	<ul style="list-style-type: none"> <li>◆ Did the analysis identify any factors (internal or external) that would threaten the validity of study results?</li> <li>◆ Example: there was a change in record extraction (e.g., a vendor was hired or there were changes in HEDIS methodology).</li> </ul>
<b>Presentation of the Data Analysis</b>	<ul style="list-style-type: none"> <li>◆ Results should be presented in tables or graphs with measurement periods, results, and benchmarks clearly identified.</li> </ul>
<b>Identification of Initial Measurement and Remeasurement of Study Indicators</b>	<ul style="list-style-type: none"> <li>◆ Clearly identify in the report which measurement period the indicator results reflect.</li> </ul>
<b>Statistical Differences Between Initial Measurement and Remeasurement Periods</b>	<ul style="list-style-type: none"> <li>◆ The HSAG review team looks for evidence of a statistical test (e.g., a t-test, or chi square test).</li> </ul>
<b>Identification of the Extent to Which the Study Was Successful</b>	<ul style="list-style-type: none"> <li>◆ The HSAG review team looks for improvement over several measurement periods.</li> <li>◆ Both interpretation and analysis should be based on continuous improvement philosophies such that the BHO document data results and what follow-up steps will be taken for improvement.</li> </ul>

**Definitions and Explanations**

**Activity IX. Real Improvement Achieved**

<p><b>Remeasurement Methodology Is the Same as Baseline</b></p>	<ul style="list-style-type: none"> <li>◆ The HSAG review team looks to see that the study methodology remained the same for the entire study.</li> </ul>
<p><b>Documented Improvement in Processes or Outcomes of Care</b></p>	<ul style="list-style-type: none"> <li>◆ The study report should document how interventions were successful in impacting system processes or outcomes.</li> <li>◆ Examples: there was a change in data collection or a rate increase or decrease demonstrated in graphs/tables.</li> </ul>

**Activity X. Sustained Improvement Achieved**

<p><b>Sustained Improvement</b></p>	<ul style="list-style-type: none"> <li>◆ The HSAG review team looks to see if study improvements have been sustained over the course of the study. This needs to be demonstrated over a period of several (more than two) remeasurement periods.</li> </ul>
-------------------------------------	---