

Colorado Medicaid
Community Mental Health Services Program

FY 2010–2011 PIP VALIDATION
REPORT

Therapy With Children and Adolescents:
Increasing Caregiver Involvement

for
Northeast Behavioral Health Partnership

April 2011
for
Validation Year 4

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



3133 East Camelback Road, Suite 300 • Phoenix, AZ 85016

Phone 602.264.6382 • Fax 602.241.0757

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TABLE OF CONTENTS

for **Northeast Behavioral Health Partnership**

1. Executive Summary	1-1
Overview.....	1-1
Conclusions.....	1-2
Overall Validity and Reliability of the Findings.....	1-4
Strengths/PIP Progression	1-4
Opportunities for Improvement and Recommendations	1-4
Activity IV: Use a Representative and Generalizable Study Population.....	1-4
Activity VII: Implement Intervention and Improvement Strategies.....	1-5
Activity VIII: Review Data Analysis and the Interpretation of Study Results	1-5
Activity IX: Assess for Real Improvement	1-5
Activity X: Assess for Sustained Improvement.....	1-5
Comparison of Years 1 through 4.....	1-6
Analysis of Results	1-7
PIP Scores.....	1-9
2. Validation Methodology	2-1
Scoring Methodology	2-1
Scoring Methodology Examples	2-3
Example 1:	2-3
Example 2:	2-3
3. 2010–2011 PIP Validation Tool: <i>Therapy With Children and Adolescents: Increasing Caregiver Involvement</i>.....	3-1

Appendix

<i>Appendix A:</i> Northeast Behavioral Health Partnership’s PIP Summary Form: <i>Therapy With Children and Adolescents: Increasing Caregiver Involvement</i>.....	A-1
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1. Executive Summary

for Northeast Behavioral Health Partnership

The Balanced Budget Act of 1997 (BBA), Public Law 105-33, requires that states conduct an annual evaluation of their managed care organizations (MCOs) and prepaid inpatient health plans (PIHPs) to determine the MCOs' and PIHPs' compliance with federal regulations and quality improvement standards. According to the BBA, the quality of health care delivered to Medicaid members in MCOs and PIHPs must be tracked, analyzed, and reported annually. The Colorado Department of Health Care Policy & Financing (the Department) has contractual requirements with each MCO and behavioral health organization (BHO) to conduct and submit performance improvement projects (PIPs) annually.

As one of the mandatory external quality review activities under the BBA, the Department is required to validate the PIPs. To meet this validation requirement, the Department contracted with Health Services Advisory Group, Inc. (HSAG), as the external quality review organization. The primary objective of the PIP validation is to determine compliance with requirements set forth in the Code of Federal Regulations (CFR) at 42 CFR 438.240(b)(1), including:

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

In its PIP evaluation and validation, HSAG used the Centers for Medicare & Medicaid Services (CMS) publication, *Validating Performance Improvement Projects: A Protocol for Use in Conducting Medicaid External Quality Review Activities*, final protocol, Version 1.0, May 1, 2002.

Overview

Northeast Behavioral Health Partnership (NBHP) submitted its clinical PIP, *Therapy With Children and Adolescents: Increasing Caregiver Involvement*, for fiscal year (FY) 2010–2011. This was a fourth-year PIP submission. The topic addressed CMS' requirements related to the quality of, and access to, care and services. The goal of **NBHP's** PIP was to improve communication between the clinician or care coordinator and the caregiver. The study addressed the issue of caregiver involvement with child/adolescent outpatient service delivery through the implementation of interventions, including a voluntary treatment contract signed by the caregiver.

NBHP stated the study question as follows: “Will addressing the importance of caregiver involvement in service delivery via a treatment contract during the initial intake session improve the rate at which caregivers participate in treatment?”

NBHP defined three study indicators that measured:

- ◆ The number of Centennial Mental Health Center individuals 17 years of age and younger for whom at least two therapy/case management sessions included caregiver involvement within the measurement period.
- ◆ The number of Larimer Center for Mental Health individuals 17 years of age and younger for whom at least two therapy/case management sessions included caregiver involvement within the measurement period.
- ◆ The number of North Range Behavioral Health individuals 17 years of age and younger for whom at least two therapy/case management sessions included caregiver involvement within the measurement period.

The study population included the entire Medicaid population of individuals 17 years of age and younger enrolled during the measurement period who sought outpatient child or adolescent therapy services and attended two or more therapy sessions or case management sessions post-intake at each of the three centers. **NBHP** included the entire eligible population and did not use a sampling method. The data were collected administratively by a programmed pull from claims/encounters.

Conclusions

For FY 2010–2011, HSAG reviewed and validated 10 activities. In this year’s submission, the study methodology remained the same, and **NBHP** reported a third remeasurement. The study indicator for Larimer Center for Mental Health demonstrated improvement, with 89.2 percent of individuals 17 years of age and younger having at least two therapy/case management sessions that included caregiver involvement within the measurement period. The study indicator results for Centennial Mental Health Center and North Range Behavioral Health declined, with rates below the baseline results. Centennial Mental Health Center’s rate decreased to 42.9 percent, which was below the baseline result of 60.6 percent. North Range Behavioral Health’s rate decreased to 43.2 percent, which was below the baseline result of 54.7 percent.

During the third remeasurement period, **NBHP** completed a causal/barrier analysis by conducting a provider focus group. **NBHP** identified that providers did not always adhere to the updated definition of “family” and “caregiver,” which was the initial intervention. For example, several providers stated that they were not appropriately coding foster parent involvement as family or caregiver involvement. In addition, some treatment providers were unclear about what constituted family or caregiver involvement during a therapy session. **NBHP** concluded that it was likely that families and caregivers were involved in treatment at a high rate; however, the third remeasurement rates for two of the behavioral health centers did not support this. Since data were collected from electronic medical records, **NBHP** documented that it could not easily substantiate this conclusion without conducting a chart audit.

HSAG recommends that the PIP be considered for retirement from validation, with **NBHP** continuing to monitor the results internally. Although two of the behavioral health centers demonstrated declines for the third remeasurement, the PIP had a solid foundation. In addition, HSAG recommends that **NBHP** develop and implement interventions to address the causes/barriers identified as a result of the provider focus group barrier analysis. **NBHP** should also consider completing causal/barrier analysis of the two centers that demonstrated declines to determine if there were causes/barriers specific to each of the centers for which targeted, center-specific interventions could be implemented.

The final validation finding for **NBHP**'s PIP showed an overall score of 87 percent, a critical element score of 100 percent, and a *Met* validation status.

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

Table 1–1—Performance Across All Activities		
Review Activities	Total Number of Evaluation Elements <i>Met</i> /Total Number Applicable Evaluation Elements	Total Number of Critical Elements <i>Met</i> /Total Number of Applicable Critical Evaluation Elements
I. Select the Study Topic(s)	6/6	1/1
II. Define the Study Question(s)	2/2	2/2
III. Select the Study Indicator(s)	6/6	3/3
IV. Use a Representative and Generalizable Study Population	3/3	2/2
V. Use Sound Sampling Techniques	0/0	0/0
VI. Reliably Collect Data	5/5	0/0
VII. Implement Intervention and Improvement Strategies	3/4	1/1
VIII. Analyze Data and Interpret Study Results	8/8	1/1
IX. Assess for Real Improvement	1/4	No Critical Elements
X. Assess for Sustained Improvement	0/1	No Critical Elements

Overall Validity and Reliability of the Findings

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

Strengths/PIP Progression

NBHP demonstrated strength by documenting a solid study design in compliance with the CMS PIP protocol. **NBHP** received *Met* scores for all applicable evaluation elements in Activities I through VI. In addition, **NBHP** completed causal/barrier analysis and linked the interventions with the barriers. The plan implemented member-, provider-, and system-level interventions that were likely to induce permanent change. The interventions included redefining “family” and “caregiver” to include important people who may not be immediate family members (i.e., friends, mentors, foster families), revising the medical records database to allow for appropriate coding for family and caregiver telephone contacts, conducting PIP and computer training for staff members to ensure consistency and accuracy in medical record documentation, and implementing a standardized caregiver therapy contract. The caregiver therapy contract was implemented to provide more information regarding what consumers can expect from the therapy process, why it is important for family members to be involved in therapy, and what the mental health centers expect from consumers. For this year's submission, the plan progressed to reporting a third annual remeasurement.

Opportunities for Improvement and Recommendations

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

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

Activity IV: Use a Representative and Generalizable Study Population

The dates of the measurement period in the text of the study population definition should be updated to reflect the current measurement period.

Activity VII: Implement Intervention and Improvement Strategies

Two of the study indicators demonstrated statistically significant declines, and the plan reported that the interventions remained the same. Although the plan completed a causal/barrier analysis in the third remeasurement, it did not identify new or revised interventions to address the causes/barriers that were identified as a result of this analysis. The analysis identified that providers did not always adhere to the updated definition of “family” and “caregiver.” Also, the analysis found that some providers did not use electronic medical record codes specifically designed to document family/caregiver involvement; therefore, the data extraction process for the PIP would not have captured all instances of family or caregiver involvement. Based on this information, the plan should have implemented targeted interventions to address these problems. If the plan did not have sufficient time to implement revised or new interventions prior to the PIP submission, it should have explained this in the PIP and included plans to implement interventions based on the causes/barriers identified.

Activity VIII: Review Data Analysis and the Interpretation of Study Results

The plan should discuss the actual rates for each study indicator, comparing these rates to the previous measurement period rates. The plan should also discuss how the rates compared to the goal/benchmark as a part of the interpretation.

Activity IX: Assess for Real Improvement

There was improvement in only one of the three study indicators, and the improvement was not statistically significant.

Activity X: Assess for Sustained Improvement

After four annual measurement periods, one of three study indicators demonstrated sustained improvement.

Comparison of Years 1 through 4

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

Table 1–2—Year-to-Year Comparison of Results				
Categories Compared	Year 1 2007–2008	Year 2 2008–2009	Year 3 2009–2010	Year 4 2010–2011
Activities Evaluated	VIII	IX	IX	X
Percentage Score of Evaluation Elements <i>Met</i>	100	97	92	87
Percentage Score of Critical Elements <i>Met</i>	100	100	100	100
Validation Status	<i>Met</i>	<i>Met</i>	<i>Met</i>	<i>Met</i>

For the FY 2007–2008 validation cycle, **NBHP**’s PIP received an overall score of 100 percent, a critical element score of 100 percent, and a *Met* validation status. **NBHP** collected baseline data and completed data analysis according to the plan outlined in the study. There were no opportunities for improvement.

For FY 2008–2009, HSAG validated the PIP through Activity IX. **NBHP** collected Remeasurement 1 data. All three study indicators showed statistically significant improvement. There was one *Partially Met* score in Activity VIII because the PIP did not identify factors that could affect the ability to compare measurements.

For FY 2009–2010, the study methodology changed; therefore, HSAG validated the PIP through Activity IX again. For this year’s validation, **NBHP** addressed the *Partially Met* score in Activity VIII; however, HSAG identified new opportunities for improvement in Activities VII and IX. In Activity VII, HSAG identified a *Point of Clarification*, stating that the next annual submission of the PIP should provide the details of the causal/barrier analysis that **NBHP** planned to conduct, including how the interventions were revised based on the analysis. In Activity IX, not all of the study indicators showed improvement, and none of the study indicators demonstrated statistically significant improvement.

For FY 2010–2011, the PIP reported Remeasurement 3 results, and HSAG validated the study through Activity X. The plan did not completely address the *Point of Clarification* in Activity VII from the previous year’s validation, resulting in a *Not Met* score for Evaluation Element 3 of Activity VII. Although **NBHP** provided the details of the causal/barrier analysis completed in the third remeasurement, the plan did not include how the interventions were revised based on the analysis. The plan showed an increase in the number of individuals 17 years of age and younger who had at least two therapy/case management sessions that included caregiver involvement for one of the three behavioral health centers—Larimer Center for Mental Health. **NBHP**’s other two centers, Centennial Mental Health Center and North Range Behavioral Health, showed declines for the third remeasurement. After four annual measurement periods,

one of the three centers, Larimer Center for Mental Health, demonstrated sustained improvement.

Analysis of Results

NBHP included the entire population in this study for the baseline and remeasurement periods. Table 1–3 presents the study indicators, goals, and results reported in the current submission. All the study indicators measured the percentage of members 17 years of age and younger who were admitted for outpatient therapy services and who had at least two therapy or case management sessions during the measurement period that included caregiver involvement. Each study indicator represented performance from a different behavioral health center (i.e., Centennial Mental Health Center, Larimer Center for Mental Health, and North Range Behavioral Health).

Table 1–3—Summary of Results									
Baseline Measurement		Remeasurement 1a*		Remeasurement 1b		Remeasurement 2		Remeasurement 3	
Goal	Results	Goal	Results	Goal	Results	Goal	Results	Goal	Results
Study Indicator 1: The number of Centennial Mental Health Center individuals 17 years of age and younger for whom at least two therapy/case management sessions included caregiver involvement within the six-month measurement period.									
NR	60.6%	60.6%	85.7%	NR	62.9%	60.6%	66.1%	60.6%	42.9%
Study Indicator 2: The number of Larimer Center for Mental Health individuals 17 years of age and younger for whom at least two therapy/case management sessions included caregiver involvement within the six-month measurement period.									
NR	68.2%	68.2%	90.6%	NR	89.3%	68.2%	84.7%	68.2%	89.2%
Study Indicator 3: The number of North Range Behavioral Health individuals 17 years of age and younger for whom at least two therapy/case management sessions included caregiver involvement within the six-month measurement period.									
NR	54.7%	54.7%	77.1%	NR	75.4%	54.7%	63.4%	54.7%	43.2%
* Remeasurement 1a represents the original first remeasurement, before the BHO recalculated the rate as Remeasurement 1b. NR = Not Reported									

NBHP documented a slight change in the data analysis plan for the Remeasurement 2 period. To maintain comparability across the remeasurement periods, **NBHP** included a recalculation of the Remeasurement 1 results (as reflected under the “Remeasurement 1b” column of Table 1–3). For Study Indicator 1, which represented Centennial Mental Health Center, improvements were documented from baseline (60.6 percent) to both remeasurements (62.9 percent for Remeasurement 1b and 66.1 percent for Remeasurement 2). Despite a 5.5 percentage-point increase from baseline to Remeasurement 2, the improvement was not statistically significant. Nonetheless, **NBHP**’s performance at this mental health center has been consistently above its goal of 60.6 percent through Remeasurement 2.

For Study Indicator 2, which represented Larimer Center for Mental Health, statistically significant improvement ($p < 0.05$) was noted from baseline (68.2 percent) to Remeasurement 1b (89.3 percent). Although there was a drop in performance by 4.6 percentage points from Remeasurement 1b to Remeasurement 2, the decline was not statistically significant. Furthermore, the Remeasurement 2 result was still significantly better than the baseline rate.

Similar to Study Indicator 2, **NBHP**'s performance for Study Indicator 3, which represented North Range Behavioral Health, showed significant improvement ($p < 0.05$) from baseline (54.7 percent) to Remeasurement 1b (75.4 percent). However, **NBHP**'s performance showed a statistically significant decline of 12 percentage points from Remeasurement 1b to Remeasurement 2 (63.4 percent). Nonetheless, **NBHP**'s performance at this mental health center was consistently above its baseline rate and goal (which were both 54.7 percent) through Remeasurement 2.

For Remeasurement 3, **NBHP** reported a statistically significant decline in performance for both Centennial Mental Health Center (Study Indicator 1) and North Range Behavioral Health (Study Indicator 3). Study Indicator 2 (Larimer Center for Mental Health) improved from 84.7 percent for Remeasurement 2 to 89.2 percent for Remeasurement 3. However, the increase was not statistically significant. During the current measurement period, **NBHP** conducted a focus group with providers to determine barriers. The group determined that one of the barriers was incorrect coding in the electronic medical record of therapy/case management sessions that included caregiver involvement. **NBHP** did not document new or revised interventions based on the barriers identified from the focus group. With the decline in rates for the current measurement period, combined with the barriers identified through the focus group, the HSAG PIP Review Team would have expected **NBHP** to implement interventions or, at a minimum, document planned interventions.

PIP Scores

For this PIP, HSAG reviewed Activities I through X. Table 1–4 and Table 1–5 show **NBHP’s** scores based on HSAG’s PIP evaluation of *Therapy With Children and Adolescents: Increasing Caregiver Involvement*. Evaluators reviewed and scored each activity according to HSAG’s validation methodology.

**Table 1–4—FY 2010–2011 PIP Validation Report Scores
for Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership**

Review Activity	Total Possible Evaluation Elements (Including Critical Elements)	Total Met	Total Partially Met	Total Not Met	Total NA	Total Possible Critical Elements	Total Critical Elements Met	Total Critical Elements Partially Met	Total Critical Elements Not Met	Total Critical Elements NA
I. Select the Study Topic(s)	6	6	0	0	0	1	1	0	0	0
II. Define the Study Question(s)	2	2	0	0	0	2	2	0	0	0
III. Select the Study Indicator(s)	7	6	0	0	1	3	3	0	0	0
IV. Use a Representative and Generalizable Study Population	3	3	0	0	0	2	2	0	0	0
V. Use Sound Sampling Techniques	6	0	0	0	6	1	0	0	0	1
VI. Reliably Collect Data	11	5	0	0	6	1	0	0	0	1
VII. Implement Intervention and Improvement Strategies	4	3	0	1	0	1	1	0	0	0
VIII. Analyze Data and Interpret Study Results	9	8	0	0	1	2	1	0	0	1
IX. Assess for Real Improvement	4	1	2	1	0	No Critical Elements				
X. Assess for Sustained Improvement	1	0	1	0	0	No Critical Elements				
Totals for All Activities	53	34	3	2	14	13	10	0	0	3

**Table 1–5—FY 2010–2011 PIP Validation Report Overall Score
for Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership**

Percentage Score of Evaluation Elements Met*	87%
Percentage Score of Critical Elements Met**	100%
Validation Status***	Met

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

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

*** *Met* equals high confidence/confidence that the PIP was valid.
Partially Met equals low confidence that the PIP was valid.
Not Met equals reported PIP results that were not valid.

Scoring Methodology

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

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

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

	Evaluation Element	Scoring
C	The written study question is answerable.	<input type="checkbox"/> <i>Met</i> <input type="checkbox"/> <i>Partially Met</i> <input type="checkbox"/> <i>Not Met</i> <input type="checkbox"/> <i>NA</i>

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

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

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

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

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

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

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

- * The percentage score for all evaluation elements *Met* is calculated by dividing the total *Met* by the sum of all evaluations elements *Met*, *Partially Met*, and *Not Met*.
- ** The percentage score for critical elements *Met* is calculated by dividing the total critical elements *Met* by the sum of the critical elements *Met*, *Partially Met*, and *Not Met*.
- *** *Met* equals high confidence/confidence that the PIP was valid.
Partially Met equals low confidence that the PIP was valid.
Not Met equals reported PIP results that were not credible.

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

Scoring Methodology Examples

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

Example 1:

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

Example 2:

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

Section 3: Colorado FY 10-11 PIP Validation Tool:
**Therapy With Children and Adolescents: Increasing Caregiver Involvement
 for Northeast Behavioral Health Partnership**

DEMOGRAPHIC INFORMATION

Health Plan Name:	Northeast Behavioral Health Partnership		
Study Leader Name:	Julie A. Kellaway	Title:	Director of Quality Improvement
Phone Number:	(970) 347-2315	E-mail Address:	julie.kellaway@northeastbho.org
Name of Project/Study:	Therapy With Children and Adolescents: Increasing Caregiver Involvement		
Type of Study:	Clinical <input type="checkbox"/> Collaborative <input type="checkbox"/> HEDIS <input type="checkbox"/>		
Date of Study:	9/1/2006 to 8/31/2010		
Type of Delivery System:	BHO	Number of Medicaid Members in BHO:	7,200
		Number of Medicaid Members in Study:	425
Year 4 Validation	Resubmission	Validated through Activity:	X
Results:	Remeasurement 3		
Submission Date:	2/4/2011	Validation Date:	2/7/2011

Section 3: Colorado FY 10-11 PIP Validation Tool:
**Therapy With Children and Adolescents: Increasing Caregiver Involvement
 for Northeast Behavioral Health Partnership**

EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
I. Select the Study Topic(s): Topics selected for the study should reflect the Medicaid-enrolled population in terms of demographic characteristics, prevalence of disease, and the potential consequences (risks) of disease. Topics could also address the need for a specific service. The goal of the project should be to improve processes and outcomes of health care. The topic may be specified by the State Medicaid agency or based on input from Medicaid consumers. The study topic:			
1.	Reflects high-volume or high-risk conditions.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The PIP reflected a high-volume or high-risk condition.
2.	Is selected following collection and analysis of data. NA 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"/> NA	Selection of the PIP topic followed the collection and analysis of plan-specific data.
3.	Addresses a broad spectrum of care and services. The score for this element will be Met or Not Met.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The PIP addressed a broad spectrum of care and services.
4.	Includes all eligible populations that meet the study criteria. NA is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The PIP included all eligible populations that met the study criteria.
5.	Does not exclude consumers with special health care needs. The score for this element will be Met or Not Met.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The PIP did not exclude consumers with special health care needs.
C*	6. Has the potential to affect consumer health, functional status, or satisfaction. The score for this element will be Met or Not Met.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The PIP has the potential to affect health, functional status, or satisfaction.

Results for Activity I

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

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

** Total Evaluation Elements includes critical elements.

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

*Section 3: Colorado FY 10-11 PIP Validation Tool:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership*

EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
II.	Define the Study Question(s): Stating the study question(s) helps maintain the focus of the PIP and sets the framework for data collection, analysis, and interpretation. The study question:		
C*	1. States the problem to be studied in simple terms. NA is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The study question(s) was clear and stated in simple terms using the CMS PIP Protocol X/Y format.
C*	2. Is answerable. NA is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The study question(s) was answerable and presented in the CMS PIP Protocol X/Y format.

Results for Activity II

# of Total Evaluation Elements					# of Critical Elements				
Total Evaluation Elements**	Met	Partially Met	Not Met	Not Applicable	Critical Elements***	Met	Partially Met	Not Met	Not Applicable
2	2	0	0	0	2	2	0	0	0

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

** Total Evaluation Elements includes critical elements.

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

Section 3: Colorado FY 10-11 PIP Validation Tool:
**Therapy With Children and Adolescents: Increasing Caregiver Involvement
 for Northeast Behavioral Health Partnership**

EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation		
III. Select the Study Indicator(s): A study indicator is a quantitative characteristic or variable that reflects a discrete event (e.g., an older adult has not received an influenza vaccination in the last 12 months) or a status (e.g., a consumer's blood pressure is or is not below a specified level) that is to be measured. The selected indicators should track performance or improvement over time. The indicators should be objective, clearly and unambiguously defined, and based on current clinical knowledge or health services research. The study indicators:		
C* 1. Are well-defined, objective, and measurable. NA is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The study indicator(s) were objective, clear, and unambiguously defined. The PIP provided correct codes, when applicable, for the numerator(s). The documentation provided a description of the study indicator(s) as well as the definition(s) for the numerator(s) or denominator(s).
2. Are based on current, evidence-based practice guidelines, pertinent peer-reviewed literature, or consensus expert panels.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The PIP based the study indicator(s) on current clinical practice guidelines or health services research with identified sources.
C* 3. Allow for the study question to be answered. NA is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The study indicator(s) aligned with the study question(s), and the results of the study indicator(s) would answer the study question(s).
4. Measure changes (outcomes) in health or functional status, consumer satisfaction, or valid process alternatives. NA is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The study indicator(s) measured change in health, functional status, satisfaction, or valid process alternatives.
C* 5. Have available data that can be collected on each indicator. NA is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	Data were available for collection on each study indicator(s).
6. Are nationally recognized measures, such as HEDIS technical specifications, when appropriate. The scoring for this element will be Met or NA.	<input type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input checked="" type="checkbox"/> NA	The study indicator(s) were not nationally recognized measures.
7. Includes the basis on which each 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"/> NA	The plan provided the basis for adoption of the study indicator(s).

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

Section 3: Colorado FY 10-11 PIP Validation Tool:
**Therapy With Children and Adolescents: Increasing Caregiver Involvement
 for Northeast Behavioral Health Partnership**

EVALUATION ELEMENTS					SCORING					COMMENTS				
Performance Improvement Project/Health Care Study Evaluation														
Results for Activity III														
# of Total Evaluation Elements					# of Critical Elements									
Total Evaluation Elements**	Met	Partially Met	Not Met	Not Applicable	Critical Elements***	Met	Partially Met	Not Met	Not Applicable					
7	6	0	0	1	3	3	0	0	0					

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

** Total Evaluation Elements includes critical elements.

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

Section 3: Colorado FY 10-11 PIP Validation Tool:
**Therapy With Children and Adolescents: Increasing Caregiver Involvement
 for Northeast Behavioral Health Partnership**

EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
IV. Use a Representative and Generalizable Study Population: The selected topic should represent the entire eligible Medicaid-enrolled population, with systemwide measurement and improvement efforts to which the study indicators apply. The study population:			
C*	1. Is accurately and completely defined. NA is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The PIP accurately and completely defined the study population, providing correct codes, when applicable, for the denominator(s). Point of Clarification: The dates of the measurement period in the text of the study population definition should be updated to reflect the current measurement period. Re-review February 2011: In the resubmission, the plan did not update the dates of the measurement period in the text of the study population to reflect the most current measurement period. The Point of Clarification will remain.
	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"/> NA	The PIP documentation defined the requirements for length of enrollment for the eligible population.
C*	3. Captures all consumers to whom the study question applies. NA is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The eligible population captured all consumers to whom the study question(s) applied.

Results for Activity IV

# of Total Evaluation Elements					# of Critical Elements				
Total Evaluation Elements**	Met	Partially Met	Not Met	Not Applicable	Critical Elements***	Met	Partially Met	Not Met	Not Applicable
3	3	0	0	0	2	2	0	0	0

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

** Total Evaluation Elements includes critical elements.

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

Section 3: Colorado FY 10-11 PIP Validation Tool:
**Therapy With Children and Adolescents: Increasing Caregiver Involvement
 for Northeast Behavioral Health Partnership**

EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
V.	Use Sound Sampling Techniques: (This activity is scored only if sampling is used.) If sampling is used to select consumers of the study, proper sampling techniques are necessary to provide valid and reliable information on the quality of care provided. The true prevalence or incidence rate for the event in the population may not be known the first time a topic is studied. Sampling methods:		
	1. Consider and specify the true or estimated frequency of occurrence.	<input type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input checked="" type="checkbox"/> NA	Sampling techniques were not used in this study.
	2. Identify the sample size.	<input type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input checked="" type="checkbox"/> NA	Sampling techniques were not used in this study.
	3. Specify the confidence level.	<input type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input checked="" type="checkbox"/> NA	Sampling techniques were not used in this study.
	4. Specify the acceptable margin of error.	<input type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input checked="" type="checkbox"/> NA	Sampling techniques were not used in this study.
C*	5. Ensure a representative sample of the eligible population.	<input type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input checked="" type="checkbox"/> NA	Sampling techniques were not used in this study.
	6. Are in accordance with generally accepted principles of research design and statistical analysis.	<input type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input checked="" type="checkbox"/> NA	Sampling techniques were not used in this study.

Results for Activity V

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

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

** Total Evaluation Elements includes critical elements.

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

Section 3: Colorado FY 10-11 PIP Validation Tool:
**Therapy With Children and Adolescents: Increasing Caregiver Involvement
 for Northeast Behavioral Health Partnership**

EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation		
VI. Reliably Collect Data: Data collection must ensure that the data collected on the study indicators are valid and reliable. Validity is an indication of the accuracy of the information obtained. Reliability is an indication of the repeatability or reproducibility of a measurement.		
1. The identification of data elements to be collected. NA is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The documentation included the identification of data elements for collection.
2. The identification of specified sources of data. NA is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The documentation clearly specified the sources of data.
3. A defined and systematic process for collecting baseline and remeasurement data.	<input type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input checked="" type="checkbox"/> NA	The PIP used only administrative data collection.
4. A timeline for the collection of baseline and remeasurement data. NA 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"/> NA	The documentation provided a timeline with dates that delineate data collection in both the baseline and remeasurement periods.
5. Qualified staff and personnel to abstract manual data.	<input type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input checked="" type="checkbox"/> NA	The PIP did not use manual data collection.
C* 6. A manual data collection tool that ensures consistent and accurate collection of data according to indicator specifications.	<input type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input checked="" type="checkbox"/> NA	The PIP did not use manual data collection.
7. A manual data collection tool that supports interrater reliability.	<input type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input checked="" type="checkbox"/> NA	The PIP did not use manual data collection.
8. Clear and concise written instructions for completing the manual data collection tool.	<input type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input checked="" type="checkbox"/> NA	The PIP did not use manual data collection.
9. An overview of the study in written instructions.	<input type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input checked="" type="checkbox"/> NA	The PIP did not use manual data collection.
10. Administrative data collection algorithms/flow charts that show activities in the production of indicators.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The PIP used administrative data collection, and the documentation included the development of the step(s) in the production of the study indicator(s).

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

** Total Evaluation Elements includes critical elements.

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

Section 3: Colorado FY 10-11 PIP Validation Tool:
**Therapy With Children and Adolescents: Increasing Caregiver Involvement
 for Northeast Behavioral Health Partnership**

EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation		
VI. Reliably Collect Data: Data collection must ensure that the data collected on the study indicators are valid and reliable. Validity is an indication of the accuracy of the information obtained. Reliability is an indication of the repeatability or reproducibility of a measurement.		
11. An estimated degree of administrative data completeness. Met = 80 - 100% Partially Met = 50 - 79% Not Met = <50% or not provided	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The estimated degree of administrative data completeness was between 80 percent and 100 percent, and the documentation explained how the health plan determined administrative data completeness.

Results for Activity VI									
# of Total Evaluation Elements					# of Critical Elements				
Total Evaluation Elements**	Met	Partially Met	Not Met	Not Applicable	Critical Elements***	Met	Partially Met	Not Met	Not Applicable
11	5	0	0	6	1	0	0	0	1

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

** Total Evaluation Elements includes critical elements.

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

Section 3: Colorado FY 10-11 PIP Validation Tool:
**Therapy With Children and Adolescents: Increasing Caregiver Involvement
 for Northeast Behavioral Health Partnership**

EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
VII.	Implement Intervention and Improvement Strategies: Real, sustained improvements in care result from a continuous cycle of measuring and analyzing performance, as well as, developing and implementing systemwide improvements in care. Interventions are designed to change behavior at an institutional, practitioner, or consumer level. The improvement strategies are:		
C*	1. Related to causes/barriers identified through data analysis and quality improvement processes. NA is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The plan completed a causal/barrier analysis and used improvement strategies related to the causes/barriers identified through data analysis and a quality improvement process.
	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"/> NA	The documentation included system intervention(s) that were likely to have a long-term effect.

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** Total Evaluation Elements includes critical elements.

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

Section 3: Colorado FY 10-11 PIP Validation Tool:
**Therapy With Children and Adolescents: Increasing Caregiver Involvement
 for Northeast Behavioral Health Partnership**

EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation		
VII. Implement Intervention and Improvement Strategies: Real, sustained improvements in care result from a continuous cycle of measuring and analyzing performance, as well as, developing and implementing systemwide improvements in care. Interventions are designed to change behavior at an institutional, practitioner, or consumer level. The improvement strategies are:		
3. Revised if the original interventions are not successful.	<input type="checkbox"/> Met <input type="checkbox"/> Partially Met <input checked="" type="checkbox"/> Not Met <input type="checkbox"/> NA	<p>Two of the study indicators had statistically significant declines and the plan reported that the interventions remained the same. HSAG would have expected the completion of a causal/barrier analysis to determine why two of the three indicators demonstrated declines in performance with targeted interventions developed based on the outcomes of this analysis.</p> <p>Re-review February 2011: In the resubmission, the plan provided information in Activity VII regarding a causal/barrier analysis completed during the third remeasurement period. Although the plan completed a causal/barrier analysis, it did not identify new or revised interventions to address the causes/barriers identified as a result of this analysis. The analysis identified that providers did not always adhere to the updated definition of "family" and "caregiver." Also, the analysis found that some providers did not use electronic medical record codes specifically designed to document family/caregiver involvement; therefore, the data extraction process for the PIP would not have captured all instances of family or caregiver involvement. Based on this information, the plan should have</p>

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

** Total Evaluation Elements includes critical elements.

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

Section 3: Colorado FY 10-11 PIP Validation Tool:
**Therapy With Children and Adolescents: Increasing Caregiver Involvement
 for Northeast Behavioral Health Partnership**

EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
			implemented targeted interventions to address these problems. If the plan did not have sufficient time to implement revised or new interventions prior to the PIP submission, it should have explained this in the PIP and included plans to implement interventions based on the causes/barriers identified. The score for this evaluation element will remain Not Met.
4.	Standardized and monitored if interventions are successful.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The documentation included a narrative discussion about the standardization of the therapy contract at intake process and how the plan monitors this intervention.

Results for Activity VII

# of Total Evaluation Elements					# of Critical Elements				
Total Evaluation Elements**	Met	Partially Met	Not Met	Not Applicable	Critical Elements***	Met	Partially Met	Not Met	Not Applicable
4	3	0	1	0	1	1	0	0	0

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

** Total Evaluation Elements includes critical elements.

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

Section 3: Colorado FY 10-11 PIP Validation Tool:
**Therapy With Children and Adolescents: Increasing Caregiver Involvement
 for Northeast Behavioral Health Partnership**

EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
VIII. Analyze Data and Interpret Study Results: Review the data analysis process for the selected clinical or nonclinical study indicators. Review appropriateness of, and adherence to, the statistical analysis techniques used.			
C*	1. Are conducted according to the data analysis plan in the study design. NA is not applicable to this element for scoring.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The PIP conducted data analysis according to the data analysis plan. The data analysis plan included the type of data analysis the PIP would conduct, how the PIP would calculate the rate, how the PIP would compare the rate to the goal, and the statistical test that the data analysis plan would use.
C*	2. Allow for the generalization of results to the study population if a sample was selected. If no sampling was performed, this element is scored NA.	<input type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input checked="" type="checkbox"/> NA	The PIP did not use sampling.
	3. Identify factors that threaten internal or external validity of findings. NA 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"/> NA	The documentation identified that no factors threatened the internal or external validity of the findings.

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

** Total Evaluation Elements includes critical elements.

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

Section 3: Colorado FY 10-11 PIP Validation Tool:
**Therapy With Children and Adolescents: Increasing Caregiver Involvement
 for Northeast Behavioral Health Partnership**

EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation		
VIII. Analyze Data and Interpret Study Results: Review the data analysis process for the selected clinical or nonclinical study indicators. Review appropriateness of, and adherence to, the statistical analysis techniques used.		
4. Include an interpretation of findings. NA 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"/> NA	<p>The PIP documentation included an interpretation of the findings for each study indicator(s).</p> <p>Point of Clarification: The plan should discuss the actual rates for each indicator, comparing these rates to the previous measurement period rates. The plan should also discuss how the rates compared to the goal/benchmark as part of its interpretation.</p> <p>Re-review February 2011: In the resubmission, the plan did not discuss the actual rates for each study indicator. Future PIP submissions should discuss the actual rates for each study indicator and compare these rates to the previous measurement periods. In addition, the plan should discuss how the rates compared with the goal/benchmark as part of the interpretation. The Point of Clarification will remain.</p>
5. Are presented in a way that provides accurate, clear, and easily understood information. NA 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"/> NA	<p>The PIP presented results in a clear, accurate, and easy-to-understand format.</p>
6. Identify the initial measurement and the remeasurement of study indicators.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	<p>The data analysis identified the initial measurement and remeasurement results for all study indicator(s).</p>

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

** Total Evaluation Elements includes critical elements.

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

Section 3: Colorado FY 10-11 PIP Validation Tool:
**Therapy With Children and Adolescents: Increasing Caregiver Involvement
 for Northeast Behavioral Health Partnership**

EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
VIII. Analyze Data and Interpret Study Results: Review the data analysis process for the selected clinical or nonclinical study indicators. Review appropriateness of, and adherence to, the statistical analysis techniques used.			
7.	Identify statistical differences between the initial measurement and the remeasurement.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The PIP included documentation of statistical testing between measurement periods.
8.	Identify factors that affect the ability to compare the initial measurement with the remeasurement.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	The documentation reported that the PIP had no factors that affected the ability to compare results between measurement periods.
9.	Include an 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"/> NA	The analysis of the data included an interpretation of the extent to which the PIP was successful.

Results for Activity VIII									
# of Total Evaluation Elements					# of Critical Elements				
Total Evaluation Elements**	Met	Partially Met	Not Met	Not Applicable	Critical Elements***	Met	Partially Met	Not Met	Not Applicable
9	8	0	0	1	2	1	0	0	1

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

** Total Evaluation Elements includes critical elements.

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

Section 3: Colorado FY 10-11 PIP Validation Tool:
**Therapy With Children and Adolescents: Increasing Caregiver Involvement
 for Northeast Behavioral Health Partnership**

EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation		
IX. Assess for Real Improvement: Assess for any meaningful changes in performance observed and was demonstrated during the Baseline measurement. Assess for any random year-to-year variations, population changes, or sampling errors that may have occurred during the measurement process.		
1. The remeasurement methodology is the same as the baseline methodology.	<input checked="" type="checkbox"/> Met <input type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	Repeated measurements used the same methodology used for the baseline measurement.
2. There is documented improvement in processes or outcomes of care.	<input type="checkbox"/> Met <input checked="" type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	There was improvement for one of three study indicators. Re-review February 2011: The study indicator results remained the same in the resubmission. The score for this evaluation element will remain Partially Met.
3. The improvement appears to be the result of planned intervention(s).	<input type="checkbox"/> Met <input checked="" type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	There was improvement for one of three study indicators. Re-review February 2011: The study indicator results remained the same in the resubmission. The score for this evaluation element will remain Partially Met.
4. There is statistical evidence that observed improvement is true improvement.	<input type="checkbox"/> Met <input type="checkbox"/> Partially Met <input checked="" type="checkbox"/> Not Met <input type="checkbox"/> NA	The improvement noted for one of the study indicators was not statistically significant. Re-review February 2011: The study indicator results remained the same in the resubmission. The score for this evaluation element will remain Not Met.

** Total Evaluation Elements includes critical elements.

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

Section 3: Colorado FY 10-11 PIP Validation Tool:
**Therapy With Children and Adolescents: Increasing Caregiver Involvement
 for Northeast Behavioral Health Partnership**

EVALUATION ELEMENTS					SCORING					COMMENTS				
Performance Improvement Project/Health Care Study Evaluation														
Results for Activity IX														
# of Total Evaluation Elements					# of Critical Elements									
Total Evaluation Elements**	Met	Partially Met	Not Met	Not Applicable	Critical Elements***	Met	Partially Met	Not Met	Not Applicable					
4	1	2	1	0	0	0	0	0	0					

** Total Evaluation Elements includes critical elements.

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

Section 3: Colorado FY 10-11 PIP Validation Tool:
**Therapy With Children and Adolescents: Increasing Caregiver Involvement
 for Northeast Behavioral Health Partnership**

EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation		
X. Assess for Sustained Improvement: Assess for any demonstrated improvement through repeated measurements over comparable time periods. Assess for any random year-to-year variations, population changes, or sampling error that may have occurred during the remeasurement process.		
1. Repeated measurements over comparable time periods demonstrate sustained improvement or that a decline in improvement is not statistically significant.	<input type="checkbox"/> Met <input checked="" type="checkbox"/> Partially Met <input type="checkbox"/> Not Met <input type="checkbox"/> NA	After four annual measurement periods, one of three study indicators demonstrated sustained improvement. Re-review February 2011: The study indicator results remained the same in the resubmission. The score for this evaluation element will remain Partially Met.

Results for Activity X

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

** Total Evaluation Elements includes critical elements.

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

*Section 3: Colorado FY 10-11 PIP Validation Tool:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership*

Table 3-1—FY 10-11 PIP Validation Report Scores:

**Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership**

Review Activity	Total Possible Evaluation Elements (Including Critical Elements)	Total Met	Total Partially Met	Total Not Met	Total NA	Total Possible Critical Elements	Total Critical Elements Met	Total Critical Elements Partially Met	Total Critical Elements Not Met	Total Critical Elements NA
I. Select the Study Topic(s)	6	6	0	0	0	1	1	0	0	0
II. Define the Study Question(s)	2	2	0	0	0	2	2	0	0	0
III. Select the Study Indicator(s)	7	6	0	0	1	3	3	0	0	0
IV. Use a Representative and Generalizable Study Population	3	3	0	0	0	2	2	0	0	0
V. Use Sound Sampling Techniques	6	0	0	0	6	1	0	0	0	1
VI. Reliably Collect Data	11	5	0	0	6	1	0	0	0	1
VII. Implement Intervention and Improvement Strategies	4	3	0	1	0	1	1	0	0	0
VIII. Analyze Data and Interpret Study Results	9	8	0	0	1	2	1	0	0	1
IX. Assess for Real Improvement	4	1	2	1	0	0	No Critical Elements			
X. Assess for Sustained Improvement	1	0	1	0	0	0	No Critical Elements			
Totals for All Activities	53	34	3	2	14	13	10	0	0	3

Table 3-2—FY 10-11 PIP Validation Report Overall Scores:

**Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership**

Percentage Score of Evaluation Elements Met*	87%
Percentage Score of Critical Elements Met**	100%
Validation Status***	Met

- * The percentage score is calculated by dividing the total Met by the sum of the total Met, Partially Met, and Not Met.
- ** The percentage score of critical elements Met is calculated by dividing the total critical elements Met by the sum of the critical elements Met, Partially Met, and Not Met.
- *** Met equals confidence/high confidence that the PIP was valid.
Partially Met equals low confidence that the PIP was valid.
Not Met equals reported PIP results that were not credible.

Section 3: Colorado FY 10-11 PIP Validation Tool:
**Therapy With Children and Adolescents: Increasing Caregiver Involvement
 for Northeast Behavioral Health Partnership**

EVALUATION OF THE OVERALL VALIDITY AND RELIABILITY OF PIP RESULTS

HSAG assessed the implications of the study's findings on the likely validity and reliability of the results based on CMS Validating protocols. HSAG also assessed whether the State should have confidence in the reported PIP findings.

***Met = Confidence/high confidence in reported PIP results**

****Partially Met = Low confidence in reported PIP results**

*****Not Met = Reported PIP results not credible**

Summary of Aggregate Validation Findings

* **Met**

** **Partially Met**

*** **Not Met**

Summary statement on the validation findings:

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

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

- ◆ Appendix A: **Northeast Behavioral Health Partnership's** PIP Summary Form: *Therapy With Children and Adolescents: Increasing Caregiver Involvement*



Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership

DEMOGRAPHIC INFORMATION

BHO name: Northeast Behavioral Health, LLC

Study Leader Name: Julie A. Kellaway Title: Director of Quality Improvement

Telephone Number: 970-347-2315 E-mail Address: julie.kellaway@northeastbho.org

Name of Project/Study: *Therapy with Children and Adolescents: Increasing Caregiver Involvement*

Type of Study:

- Clinical Nonclinical
 Collaborative HEDIS

Type of Delivery System: BHO

Date of Study: 9/1/06 to 08/31/2010

Number of Medicaid Consumers Served by BHOs : 7200

Number of Medicaid Consumers in Project/Study: 425

Submission Date: 02/04/2011

Section to be completed by HSAG

_____ Year 1 Validation	_____ Initial Submission	_____ Resubmission
_____ Year 2 Validation	_____ Initial Submission	_____ Resubmission
_____ Year 3 Validation	_____ Initial Submission	_____ Resubmission
<u>X</u> Year 4 Validation	_____ Initial Submission	<u>X</u> Resubmission
_____ Baseline Assessment	_____ Remeasurement 1	
_____ Remeasurement 2	<u>X</u> Remeasurement 3	
Year 1 validated through Activity <u>VIII</u>		
Year 2 validated through Activity <u>IX</u>		
Year 3 validated through Activity <u>IX</u>		
Year 4 validated through Activity <u>X</u>		

Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership

A. Activity I: Select the study topic(s). PIP topics should target improvement in relevant areas of services and reflect the population in terms of demographic characteristics, prevalence of disease, and the potential consequences (risks) of disease. Topics may be derived from utilization data (ICD-9 or CPT coding data related to diagnoses and procedures; NDC codes for medications; HCPCS codes for medications, medical supplies, and medical equipment; adverse events; admissions; readmissions; etc.); grievances and appeals data; survey data; provider access or appointment availability data; consumer characteristics data such as race/ethnicity/language; other fee-for-service data; or local or national data related to Medicaid risk populations. The goal of the project should be to improve processes and outcomes of health care or services to have a potentially significant impact on consumer health, functional status, or satisfaction. The topic may be specified by the state Medicaid agency or CMS, or it may be based on input from consumers. Over time, topics must cover a broad spectrum of key aspects of consumer care and services, including clinical and nonclinical areas, and should include all enrolled populations (i.e., certain subsets of consumers should not be consistently excluded from studies).

Study topic: It is well known that fostering family involvement in the delivery of mental health services to children and adolescents can positively impact treatment. Specifically, primary caregivers have an especially important role in the treatment and maintenance of mental health of the children under their care. As such, the primary caregivers are an important source of clinical information and are crucial in implementing treatment interventions^{1,2}. Northeast Behavioral Health (NBH) is dedicated to optimizing treatment outcomes for children, adolescents and their families. To facilitate this, the clinicians/care-coordinators are highly encouraged to involve family or caregivers during treatment when appropriate. In addition, NBH monitors the results of the Youth Services Survey for Families (YSS-F), which is a survey that is conducted annually by the State of Colorado's Division of Mental Health. NBH's 2006 YSS-F results were somewhat concerning, however, as only 68.5% of the respondents indicated that they participate in their child's treatment. This percentage was below the statewide Medicaid average for the "Participation in Treatment" domain (75.1%). The concerning issue was not whether or not caregivers are involved in the treatment planning process (since the caregiver, clinician/care-coordinator, and supervisor must sign off on the treatment plans every six months); rather, the issue revolves around whether or not caregivers of NBH child and adolescent consumers are active, ongoing participants in treatment.

To address this concern, NBH designed a Performance Improvement Project (PIP) to encourage clinicians/care coordinators to not only create child and family centered treatment plans, but to actively involve caregivers in carrying out treatment plans. Initial discussions with treatment teams regarding this PIP yielded both a feasible idea and measurement obstacles. The idea came from one child treatment team that had recently adopted an informal policy to increase caregiver involvement by introducing a therapy contract and cover letter in the initial intake session. The cover letter explained the "family approach to therapy" and the accompanying therapy contract operationalized both the therapist's expectation of caregiver involvement and the caregiver's rights (see Attachment A). Caregivers were asked to sign the treatment contract, if they agreed to its contents. The treatment contract was voluntary and treatment was not denied if the contract was not signed. Voluntary treatment contracting has been known to promote adherence to treatment by providing a framework for accountability³. ~~and~~ This intervention was presented to the NBH Quality Improvement (QI) Committees, Center Quality Improvement/Assurance Committees, and treatment child teams at the Centers and was well received. Discussions at each of the Centers and during the QI Committee meetings involved gathering ideas about how utilizing a therapy contract could impact child/adolescent therapy, soliciting feedback regarding the therapy contract, and other issues surrounding caregiver involvement in child/adolescent therapy (See Attachments B, C, and D). However, the issue of how to measure caregiver involvement became problematic, as the clinician/care coordinators from the three Centers did not utilize the computer coding strategies in a consistent manner.

Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership

A. Activity I: Select the study topic(s). PIP topics should target improvement in relevant areas of services and reflect the population in terms of demographic characteristics, prevalence of disease, and the potential consequences (risks) of disease. Topics may be derived from utilization data (ICD-9 or CPT coding data related to diagnoses and procedures; NDC codes for medications; HCPCS codes for medications, medical supplies, and medical equipment; adverse events; admissions; readmissions; etc.); grievances and appeals data; survey data; provider access or appointment availability data; consumer characteristics data such as race/ethnicity/language; other fee-for-service data; or local or national data related to Medicaid risk populations. The goal of the project should be to improve processes and outcomes of health care or services to have a potentially significant impact on consumer health, functional status, or satisfaction. The topic may be specified by the state Medicaid agency or CMS, or it may be based on input from consumers. Over time, topics must cover a broad spectrum of key aspects of consumer care and services, including clinical and nonclinical areas, and should include all enrolled populations (i.e., certain subsets of consumers should not be consistently excluded from studies).

Further investigation yielded confusion on behalf of the treatment teams regarding what constituted family involvement and how to accurately code the different ways a caregiver can be involved treatment. For example, questions were raised about how to best code a 10 minute caregiver “check-in” prior to a child’s individual therapy session or whether or not a telephone case management with the caregiver after the child’s individual therapy session was sufficient to constitute “caregiver involvement.” These issues were presented to NBH’s QI team and to certain members of each Center’s information technology department; both entities determined that additional computer coding training would be beneficial and necessary.

To summarize, this PIP will primarily address the issue of getting caregivers involved in child/adolescent outpatient service delivery by introducing a voluntary treatment contract as foundation upon which to increase communication between the clinician/care-coordinator and caregiver regarding the expectations and benefits of caregiver involvement in treatment, thereby increasing consumer health literacy regarding mental health treatment. Though caregivers will be encouraged to review and sign the treatment contract, a refusal to sign the treatment contract will not hinder treatment. In fact, the refusal to sign the contract may provide the clinician/care-coordinator with valuable information about the family system and the caregiver is still informed about the importance of a “family approach to therapy.” In addition, a secondary issue that speaks to the reliability and validity of this PIP data collection process will be the provision of computer coding training to clinician/care-coordinators that specifically targets accurately coding the many ways caregivers can be involved with treatment.

1. Chamberlin, J. (2005). “Family therapy enhances treatment for children’s mental disorders.” *Monitor on Psychology*, 36 (11), p. 64.
2. Huang, L., Stroul, B., Friedman, R., Mrazek, P., Priesen, B., Pires, S., and Mayberg, S. (2005). “Transforming mental health care for children and their families.” *American Psychologist*, 60 (6), 615-627.
3. Otto, M.W., Reilly-Harrington, N.A., Kogan, J. N., and Winett, C.A. (2003). “Treatment contracting in cognitive-behavior therapy.” *Cognitive and Behavioral Practice*, 10, 199-203.

Appendix A: **Colorado FY 2010–2011 PIP Summary Form:**
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for **Northeast Behavioral Health Partnership**

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

Study question:

Will addressing the importance of caregiver involvement in service delivery via a treatment contract during the initial intake session improve the rate at which caregivers participate in treatment?

Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership

C. Activity III: Select the study indicator(s). A study indicator is a quantitative or qualitative characteristic or variable that reflects a discrete event (e.g., an older adult has not received an influenza vaccination in the last 12 months) or a status (e.g., a consumer’s blood pressure is/is not below a specified level) that is to be measured. The selected indicators should track performance or improvement over time. The indicators should be objective, clearly and unambiguously defined, and based on current clinical knowledge or health services research.

Study Indicator 1	Describe the rationale for selection of the study indicator: Primary caregivers play an important role in the treatment of mental health issues of the children in their care. Additionally, caregivers are an important source of clinical information and are crucial in implementing treatment interventions with children and adolescents
Numerator: (no numeric value)	The number of individuals from the denominator with medical record documentation of at least two therapy/case management sessions that included the primary caregiver(s).
Denominator: (no numeric value)	The total number of Centennial Mental Health Center Medicaid enrolled consumers age 17 and under who have received at least two therapy/case management sessions during the six month measurement period (as identified in electronic medical record extraction data).
Baseline Measurement Period	September 1, 2006 through August 31, 2007
Baseline Goal	To determine benchmark
Remeasurement 1 Period	September 1, 2007 through August 31, 2008
Remeasurement 2 Period	September 1, 2008 through August 31, 2009
Remeasurement 3 Period	September 1, 2009 through August 31, 2010
Benchmark	60.6%
Source of Benchmark	Baseline rates.

Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership

C. Activity III: Select the study indicator(s). A study indicator is a quantitative or qualitative characteristic or variable that reflects a discrete event (e.g., an older adult has not received an influenza vaccination in the last 12 months) or a status (e.g., a consumer’s blood pressure is/is not below a specified level) that is to be measured. The selected indicators should track performance or improvement over time. The indicators should be objective, clearly and unambiguously defined, and based on current clinical knowledge or health services research.

Study Indicator 2	Describe the rationale for selection of the study indicator: Primary caregivers play an important role in the treatment of mental health issues of the children in their care. Additionally, caregivers are an important source of clinical information and are crucial in implementing treatment interventions with children and adolescents
Numerator: (no numeric value)	The number of individuals from the denominator with medical record documentation of at least two therapy/case management sessions that included the primary caregiver(s).
Denominator: (no numeric value)	The total number of Larimer Center for Mental Health Medicaid enrolled consumers age 17 and under who have received at least two therapy/case management sessions during the six month measurement period (as identified in electronic medical record extraction data).
Baseline Measurement Period	September 1, 2006 through August 31, 2007
Baseline Goal	To determine benchmark
Remeasurement 1 Period	September 1, 2007 through August 31, 2008
Remeasurement 2 Period	September 1, 2008 through August 31, 2009
Remeasurement 3 Period	September 1, 2009 through August 31, 2010
Benchmark	68.2%
Source of Benchmark	Baseline rates.

Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership

C. Activity III: Select the study indicator(s). A study indicator is a quantitative or qualitative characteristic or variable that reflects a discrete event (e.g., an older adult has not received an influenza vaccination in the last 12 months) or a status (e.g., a consumer’s blood pressure is/is not below a specified level) that is to be measured. The selected indicators should track performance or improvement over time. The indicators should be objective, clearly and unambiguously defined, and based on current clinical knowledge or health services research.

Study Indicator 3	Describe the rationale for selection of the study indicator: Primary caregivers play an important role in the treatment of mental health issues of the children in their care. Additionally, caregivers are an important source of clinical information and are crucial in implementing treatment interventions with children and adolescents
Numerator: (no numeric value)	The number of individuals from the denominator with medical record documentation of at least two therapy/case management sessions that included the primary caregiver(s).
Denominator: (no numeric value)	The total number of North Range Behavioral Health Medicaid enrolled consumers age 17 and under who have received at least two therapy/case management sessions during the six month measurement period (as identified in electronic medical record extraction data).
Baseline Measurement Period	September 1, 2006 through August 31, 2007
Baseline Goal	To determine benchmark
Remeasurement 1 Period	September 1, 2007 through August 31, 2008
Remeasurement 2 Period	September 1, 2008 through August 31, 2009
Remeasurement 3 Period	September 1, 2009 through August 31, 2010
Benchmark	54.7%
Source of Benchmark	Baseline rates.

Use this area to provide additional information. Discuss the guidelines used and the basis for each study indicator. Available industry standards are from the American Managed Behavioral Healthcare Association (AMBHA) and American College of Mental Health Administration (ACMHA). The stated benchmark caregiver participation as “at least one session that included primary caregiver involvement per calendar year.” However, NBH discussions on this issue with Center deputy and program directors indicated that this standard was too low. The benchmark for this project will be determined by the baseline data.

Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership

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

Study population: The identified study population will be all admitted enrolled Medicaid consumers age 17 and under seeking outpatient child or adolescent therapy services and attending two or more therapy sessions or case management sessions post intake at each of the three Centers between September 1, 2006 and August 31, 2007. Service Process Quality Management (SPQM) data from two of the Centers indicates that the average combined number of intake sessions with Medicaid enrolled children/adolescents is 76 per month (data averaged between April-October 2006). Similar data is not readily available from the third Center, thus a two-month average was calculated for this Center across November-December 2006, yielding an average of 13 Medicaid enrolled child/adolescent intake sessions per month. Attrition rates (defined by those consumers who do not return for therapy following the screening and intake session) could not be determined, though anecdotal information suggests this may be between 20-50%. The consumers in this PIP will be tracked for six months (from intake session to the six-month treatment planning session), thereby ending the measurement period at August 31, 2007. While consumers will be tracked for a six-month period, they do not have to receive services for the full six months. For instance, if a consumer received an intake in September 2006 and attended two therapy/case management sessions over the next six months, they will be included in the study; a consumer that received an intake in September 2006 and only attended one therapy/case management session over the next six months will not be included. The consumers must be Medicaid enrollees during the measurement period, although length of enrollment will not be an exclusionary criterion.

11/2008 Update: The description of the study population for the first remeasurement remains identical to the baseline description. The only exception is the time span, which is updated as follows: The identified study population will be all admitted enrolled Medicaid consumers age 17 and under seeking outpatient child or adolescent therapy services and attending two or more therapy sessions or case management sessions post intake at each of the three Centers between September 1, 2007 and August 31, 2008.

11/2009 Update: There were no changes in the study population for Remeasurement 2. However, planned changes in the study analysis plan affected the number of individuals included in the demoninator and numerator. Please refer to Activities VIc and VIIb for detailed information.

11/2010 Update: There were no changes in the study population for Remeasurement 3.

Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership

E. Activity V: Use sound sampling techniques. If sampling is used to select consumers of the study, proper sampling techniques are necessary to provide valid and reliable information on the quality of care provided. The true prevalence or incidence rate for the event in the population may not be known the first time a topic is studied.

Measure	Sample Error and Confidence Level	Sample Size	Population	Method for Determining Size (<i>describe</i>)	Sampling Method (<i>describe</i>)
No sampling method is necessary as the entire population of consumers age 17 and under admitted for outpatient therapy services and attending two or more therapy/case management sessions post intake during the measurement period will be included in the data analysis.					



Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership

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

Data Sources

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

Other Data

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

The data collection staff will be the NBH Quality Improvement and electronic medical records management personnel working in conjunction with the administrative staff at the respective Centers. The Quality Improvement personnel have postgraduate degrees in Psychology and research methods, the medical records staff are supervised by the Director of Data and Financial Services, and the Center administrative staff were trained by the NBH Quality Improvement Personnel.

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

Number of waves _____

Response rate _____

Incentives used _____

Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership

F. Activity VIb: Determine the data collection cycle.	Determine the data analysis cycle.
<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 checked="" type="checkbox"/> Once a month <input type="checkbox"/> Once a week <input type="checkbox"/> Once a day <input type="checkbox"/> Continuous <input type="checkbox"/> Other (list and describe):	<input type="checkbox"/> Once a year <input type="checkbox"/> Once a season <input checked="" type="checkbox"/> Once a quarter <input type="checkbox"/> Once a month <input type="checkbox"/> Continuous <input type="checkbox"/> Other (list and describe): <hr style="border: 0; border-top: 1px solid black; margin-top: 10px;"/>

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

Estimated degree of administrative data completeness: 95% percent.

Describe the process used to determine data completeness and accuracy: The data collection and analysis process involves the clinician, data analysts, and QI Department personnel. A brief summary is presented here as well as on Attachments E and F. When a clinician enters information into the electronic records database, he/she records a service code (i.e., the type of clinical service), an attendance code (e.g., appointment kept, client cancelled), and a recipient code (i.e., who was present). In terms of the service code, NBH's mental health centers each use internal codes that directly coincide with CPT/HCPCs codes, such as 90804, 90806, 90810, 90812, 90846, 90847, T1016. During the data collection process, data analysts are able to pull encounter information based upon these codes; for the purposes of this study, the codes listed above were of primary interest. The attendance codes associated with the encounters provide additional important information such as when the client was not present (when family members only were present, telephone contacts, etc.). Finally, the recipient code provides specific information about who was involved in the therapy session: client only, client and family members; client, collaterals and family members, etc. Caregiver involvement includes, but is not limited to, individual therapy, family therapy, and case management (e.g., 10-minute check-in). As noted previously, each clinician is responsible for recording caregiver involvement in the session through appropriate coding in the electronic medical record database. What constitutes involvement is based on clinical judgment.

11/2008 Update: There were no changes to the data analysis plan or to the data collection plan during this remeasurement cycle.

11/2009 Update: There was one change to the data analysis plan. Case management contacts by telephone were included in this analysis. To ensure direct comparisons could be made from Remeasurement 1 to Remeasurement 2, the data from Remeasurement 1 was updated to include telephone case management contacts.

11/2010 Update: There were no changes to the data analysis plan or to the data collection plan during this remeasurement cycle.

Supporting documentation: Please refer to the attachments for this section that were previously submitted during initial project validation

Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership

G. Activity VIIa: Implement intervention and improvement strategies (interventions for improvement as a result of analysis). List chronologically the interventions that have had the most impact on improving the measure. Describe only the interventions and provide quantitative details whenever possible (e.g., “Hired four customer service representatives” as opposed to “Hired customer service representatives”). Do not include intervention planning activities.

Date Implemented (MMYY)	Check if Ongoing	Interventions	Barriers That Interventions Address
05/07		Redefined “family” and “caregiver” to include important people that may not be immediate family members (i.e., family friends, mentors, foster families).	The Quality Improvement process leading to this barrier and intervention included discussions with NBH Quality Improvement (QI) Committees, Center Quality Improvement/Assurance Committees, and child treatment teams at the Centers (See Activity I, and Attachments B, C, D). During these discussions, it was noted that key people not biologically related to a child/adolescent are often involved in therapy/case management. Thus, the definition of “family” and “caregiver” was identified as a barrier and redefined. Allows inclusion of other people already involved in a child/adolescent’s therapy that may not be biologically related.
09/07		Revised the medical records database to allow for appropriate coding for involvement via telephone contacts.	Through the QI process detailed above and in Activity I and Attachments B, C, and D, clinicians indicated that family members and caregivers often participated in their child/adolescent’s therapy via telephone. Coding issues in the electronic medical records database were identified as a barrier to accurate representation of involvement. Thus, revising the database provides a more accurate manner in which to measure involvement in therapy.
08/07		Conducted PIP and computer training for staff in order to help staff become more consistent with medical records documentation and coding.	Increases consistency and accuracy in coding and documenting involvement across the three mental health centers.
09/07	XX	Implemented a caregiver therapy contract.	The therapy contract increases health literacy (See Attachment A and see footnote 3 in Activity I).

Describe the process used for the causal/barrier analyses that led to the development of the interventions: This information was presented Activity A. (Step 1) for the initial project validation. Please refer to the second and third paragraph of that section.

Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership

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

Describe interventions:

At the institutional level, the Centers updated the medical records database to allow for appropriate coding for involvement via telephone contacts. Previously, the medical records database did not allow telephone contact codes to accurately report family involvement in a way that was easily accessible. Additionally, at the institutional and practitioner levels, “family” was redefined to include important people that may not be immediate family members (i.e., family friends, mentors, foster families), such as individuals not living in the home with significant attachment to the child/adolescent. Computer training was also conducted in order to help staff become more consistent with medical records documentation and coding. During these training sessions, clinicians were provided with information about the expanded definition of family, the new medical records coding, and the importance of involving family members in a child/adolescent’s therapy. At the consumer level, a caregiver therapy contract was implemented in order to provide more information regarding what consumers can expect from the therapy process, why it is important for family members to be involved in therapy, and what the mental health centers expect from consumers.

Baseline to Remeasurement 1:

The intervention for the first remeasurement period focused on changes at the institutional, practitioner, and consumer level. Before the first remeasurement period commenced, the Centers updated their electronic medical records to allow for appropriate documentation of telephone contacts. This allowed the data management staff to accurately extract data pertaining to case management contacts that occurred with the caregiver either in person or by telephone. However, since this information was not available during the baseline phase, case management contacts involving caregivers were not included in the first remeasurement analyses. At the institutional *and* practitioner level, the clinicians utilized the computer trainings and the redefinition of “family” (both received prior to the first remeasurement period) to enhance care coordination with caregivers and to properly document these activities in the electronic medical record. At the consumer level, clinicians reviewed a therapy contract with the caretakers of all individuals aged 17 and under who presented for an intake session for outpatient mental health services. The clinicians requested that the caregiver sign the therapy contract and then give a copy to the caregiver, put a copy in the client’s chart, and forward a copy to NBH quality improvement personnel. Caregivers were not mandated to sign the therapy contract; signing the contract was voluntary and in no way impacted the quality or quantity of outpatient mental health services provided to the child or adolescent. Additionally, if the client was an adolescent 15 years age or older, they were given the choice to receive outpatient mental health services with or without their caregiver, per state law. **01/2009 Update:** The intervention of the therapy contract at intake was a standardized process that occurred throughout the organization’s service area. The therapy contract intervention is a continuous, long-term intervention and will continue throughout the 2nd remeasurement period. All of NBH’s mental health centers participated in the therapy contract intervention and the degree to which this intervention was implemented is monitored by NBH’s quality improvement department. The mechanism by which NBH monitors the intervention involves the mental health centers forwarding a paper copy of the therapy contract to the NBH quality improvement department, who then cross-references the therapy contracts with a list of the therapy intakes that occurred during the measurement period.

Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership

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

Remeasurement 1 to Remeasurement 2:

The intervention from Remeasurement 1 to Remeasurement 2 remained the same. As previously stated, presenting the therapy contract at intake was a standardized process that occurred throughout NBHP's mental health centers. The therapy contract intervention remains a continuous, long-term intervention and continued throughout the 2nd remeasurement period. All of NBHP's mental health centers participated in the therapy contract intervention and the degree to which this intervention was implemented was monitored by NBHP's quality improvement department. The mechanism by which NBHP monitors the intervention involves the mental health centers forwarding a paper copy of the therapy contract to the NBH quality improvement department, who then cross-references the therapy contracts with a list of the therapy intakes that occurred during the measurement period. While the intervention remained the same as the previous remeasurement cycle, there was one notable change in the data collection process. Before the first remeasurement period commenced, the Centers updated their electronic medical records to allow for appropriate documentation of case management telephone contacts. This allowed the data management staff to accurately extract data pertaining to case management contacts that occurred with the caregiver either in person or by telephone. However, since this information was not available during the baseline phase, telephone case management contacts involving caregivers were not included in the first remeasurement analyses, but are included for the first time in the current remeasurement analysis.

Remeasurement 2 to Remeasurement 3:

The intervention from Remeasurement 2 to Remeasurement 3 remained the same. As previously stated in the preceding two remeasurement cycles, presenting the therapy contract at intake was a standardized process that occurred throughout NBHP's mental health centers. The therapy contract intervention remains a continuous, long-term intervention and continued throughout the 2nd remeasurement period. All of NBHP's mental health centers participated in the therapy contract intervention and the degree to which this intervention was implemented was monitored by NBHP's quality improvement department. The mechanism by which NBHP monitors the intervention involves the mental health centers forwarding a paper copy of the therapy contract to the NBH quality improvement department, who then cross-references the therapy contracts with a list of the therapy intakes that occurred during the measurement period.

Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership

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

UPDATE 02/04/2011 The following information was originally presented in Activity X and is presented verbatim here in Activity VII:

Update 11/2010

A causal-barrier analysis (conducted via focus groups with the providers) that was conducted during the 3rd remeasurement indicated that providers understood the nature of the performance improvement project, but that there was a breakdown in the understanding of how to properly identify a family member or caregiver and how to correctly document caregiver involvement.

One of the primary interventions for this PIP was for NBHP's three provider mental health center's to arrive at a common and inclusive understanding of what could be construed as a family member or caregiver. All three of the centers agreed to a very inclusive definition of family and caregivers, which included foster parents and extended family members (e.g., grandparents, aunts, uncles, non-married partners); however, the focus groups indicated that the updated definition of family and caregiver was not being strictly adhered to. For example, several providers stated that they were not appropriately coding foster parent involvement in treatment as family or caregiver involvement.

Additionally, treatment providers were unclear about what exactly constituted family or caregiver involvement during an individual therapy session. For example, most providers stated that they routinely bring the adult family member or caregiver back to their office at the end of the individual therapy session. While they would document this occurrence in the text of the medical record, they would not utilize the EMR codes designed to facilitate easy documentation of family or caregiver involvement. Moreover, when the provider did not use the EMR codes specifically designed to document family/caregiver involvement, the data extraction process for this PIP would not capture these instances in which there was involvement.

The causal-barrier analysis was conducted during the 3rd remeasurement period and therefore would not have had a substantial impact on the improvement rates of this PIP. Though overwhelming anecdotal evidence suggests that family and caregivers are being involved at an extremely high rate, the bottom line is that the anecdotal evidence does not match in the data collected from the EMR.

With the exception of Larimer Center for Mental Health, the 3rd remeasurement results remain concerning since the results for Centennial and North Range fell below the benchmark rate. While it is extremely likely that family and caregivers are being involved in the treatment process for children and adolescents, there is no easy way to substantiate this claim without conducting a chart audit. As such, it is recommended that this PIP be continued for a 4th remeasurement cycle.

Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership

H. Activity VIIIa: Analyze data. Describe the data analysis process done in accordance with the data analysis plan and any ad hoc analyses (e.g., data mining) done on the selected clinical or nonclinical study indicators. Include the statistical analysis techniques used and *p* values.

Describe the data analysis process (include the data analysis plan): The data will be collected via automated procedures. The presence of an intake session for an individual age 17 and under will be determined via monthly reports from the electronic medical record database that is utilized by all three centers. The data is expected to be >95% complete given the nature of each Center's internal mechanisms used to monitor and protect the data in the electronic record. In addition, a copy of the treatment contract introduced at the intake session will be cross-referenced with the electronic admission data to ensure the intervention occurred. To track caregiver involvement, the presence of subsequent outpatient therapy sessions for the identified individuals will also be generated from the electronic medical record database on a monthly basis and examined for caregiver involvement. The above information will be tracked on each individual during the measurement period and will be stored in a separate database which has statistical capabilities (e.g., Excel or SPSS). The data will be analyzed on a quarterly basis to determine the effect of introducing a treatment contract during the intake session towards involving caregivers in outpatient service delivery. Factors to be examined include, but are not limited to: caregiver involvement by the legal and target status of the child, the degree to which the presence of a signed treatment contract impacts caregiver involvement, and treatment attrition rates (See Attachment F).

Baseline Measurement: Data analysis involved determining the rate at which caregivers attended child/adolescent therapy sessions during the measurement period at each of the three mental health centers. To do this, individuals receiving an intake for child/adolescent therapy during each month from September 2006 through August 2007 were tracked for six months. The number of individuals that had at least two therapy/case management sessions that included primary caregiver involvement within a six month period was then divided by the total number of individuals presenting for treatment.

Remeasurement 1: Data analysis involved determining the rate at which caregivers attended child/adolescent therapy sessions during the measurement period at each of the three mental health centers. To do this, individuals receiving an intake for child/adolescent therapy during each month from September 2007 through August 2008 were tracked for six months. The number of individuals that had at least two therapy/case management sessions that included primary caregiver involvement within a six month period was then divided by the total number of individuals presenting for treatment. **1/2009 Update:** The benchmark for the first remeasurement period was determined by the baseline information for each mental health center. The statistical test utilized for comparing the baseline with the first remeasurement was the χ^2 test for significant differences and phi (ϕ) to measure the strength of the association. Additionally, percentage differences between selected demographic groups from the baseline and first remeasurement are also presented.

Remeasurement 2:

The data analysis plan remained essentially the same as the previous remeasurement's: Data analysis involved determining the rate at which caregivers attended child/adolescent therapy sessions during the measurement period at each of the three mental health centers. To do this, individuals receiving an intake for child/adolescent therapy during each month from September 2008 through August 2009 were tracked for six months. The number of individuals that had at least two therapy/case management sessions that included primary caregiver involvement within a six month period was then divided by the total number of individuals presenting for treatment. The benchmark for the second remeasurement period

Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership

H. Activity VIIIa: Analyze data. Describe the data analysis process done in accordance with the data analysis plan and any ad hoc analyses (e.g., data mining) done on the selected clinical or nonclinical study indicators. Include the statistical analysis techniques used and *p* values.

was determined by the baseline information for each mental health center. The statistical test utilized for comparing the baseline with the first remeasurement was the χ^2 test for significant differences and phi (Φ) to measure the strength of the association. The only changes in the data analysis plan pertains to the omission of differences between selected demographic groups (this analysis is omitted during the 2nd remeasurement per a HSAG PIP review offered in August 2009) and the inclusion of telephone case management contacts.

Remeasurement 3:

The data analysis plan remained the same as the previous remeasurement's: Data analysis involved determining the rate at which caregivers attended child/adolescent therapy sessions during the measurement period at each of the three mental health centers. To do this, individuals receiving an intake for child/adolescent therapy during each month from September 2009 through August 2010 were tracked for six months. The number of individuals that had at least two therapy/case management sessions that included primary caregiver involvement within a six month period was then divided by the total number of individuals presenting for treatment. The benchmark for the second remeasurement period was determined by the baseline information for each mental health center. The statistical test utilized for comparing the baseline with the first remeasurement was the χ^2 test for significant differences and phi (Φ) to measure the strength of the association.

Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership

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

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

Baseline Measurement:

Baseline to Remeasurement 1:

Remeasurement 1 to Remeasurement 2:

The inclusion of case management contacts made by telephone caused changes in the numbers (and rates) of the first remeasurement. While this is to be expected, this planned change in the data analysis may have threatened the internal validity of the study. The change in the first remeasurement numbers and rates were fairly dramatic for Centennial MHC, resulting in higher numbers in the denominator (e.g., increasing the number of clients with two or more post-intake contacts) and lower numbers in the numerator. For Larimer and North Range MHCs, there was little variation in the first remeasurement numbers containing the telephone case management contacts vs. without the telephone case management contacts. Both Centers demonstrated a slightly smaller number in the denominator (e.g., a reduction of clients with two or more post-intake contacts) and a similar slight reduction in the numerator.

Another threat to internal validity of the study pertains to the Baseline to 2nd Remeasurement comparison. The baseline measurement does not contain case management contacts made by telephone. The direct comparison of the 2nd Remeasurement (which contains telephone case management contacts) to the Baseline rates may compromise the ability to determine if the intervention had an effect, particularly with Centennial Mental Health Center.

The chi-square analysis for Centennial and Larimer did not demonstrate any significant differences between Remeasurement 1 and 2. North Range's results were significantly different between Remeasurement 1 and 2; however this result was in the negative direction, indicating a significant reduction in rates. In all three cases, the 2nd Remeasurement rates were above the Baseline rates. Please refer to the specific results presented in Activity IX.

Remeasurement 2 to Remeasurement 3:

Since there was no change to the intervention or data analysis plan, threats to validity did not change from the previous remeasurement.

The results for this performance improvement project were mixed for the third remeasurement period. Larimer Center for Mental Health demonstrated a non-statistically significant improvement from the previous period, whereas Centennial Mental Health Center and North Range Behavioral Health demonstrated a statistically significant decrease. The rates for Centennial and North Range's did not meet the benchmark rate established at the outset of this performance improvement project. Please refer to the specific results presented in Activity IX.

Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership

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

Quantifiable Measure 1: The number of **Centennial Mental Health Center** individuals age 17 and under in which at least two therapy/case management sessions included caregiver involvement within the six month measurement period.

Time Period Measurement Covers	Baseline Project Indicator Measurement	Numerator	Denominator	Rate or Results	Industry Benchmark	Statistical Test Significance and <i>p</i> value
September 1, 2006 -- August 31, 2007	Baseline:	40	66	60.6%	N/A	n/a
September 1, 2007 -- August 31, 2008	Remeasurement 1a	54	63	85.7%	60.6%	$\chi^2 (df = 1) = 10.28, p < .001, \Phi = .28, p < .001$
September 1, 2007 -- August 31, 2008	Remeasurement 1b	56	89	62.9%		
September 1, 2008 -- August 31, 2009	Remeasurement 2	39	59	66.1%	60.6%	$\chi^2 (df = 1) = 0.16, p < .69$
September 1, 2009 -- August 31, 2010	Remeasurement 3	24	56	42.9%	60.6%	$\chi^2 (df = 1) = 6.27, \Phi = .23, p < .02$

Describe any demonstration of meaningful change in performance observed from baseline and each measurement period (e.g., baseline to Remeasurement 1 and Remeasurement 1 to Remeasurement 2): The first remeasurement results for Centennial Mental Health Center indicate that there was statistically significant improvement from baseline in the number of therapy sessions that involved caregivers two or more times. While these results were highly significant, the measure of association (phi) was in the low range (though also highly significant). This may indicate that the effect of the interventions on the outcome might be low.

Update 11/2009: The data analysis plan changed from the first to second remeasurement. The data for remeasurement 1 was recalculated to include telephone case management contacts; however, this also caused variability in the numbers and rates. Both sets of analyses are presented: Remeasurement 1a is the original calculation (not including case management telephone contacts) and Remeasurement 1b is the updated calculation (including case management contacts). While the 2nd remeasurement rate is above the baseline, there is not a significant difference between remeasurement 1b and remeasurement 2. The effect size was small to moderate.

Update 11/2010: The data analysis plan was the same from the previous remeasurement period and includes telephone case management contacts. The 3rd remeasurement rate is below the baseline, and there is a significant difference between remeasurement 2 and remeasurement 3 in an adverse direction. Effect sizes are not reported since there is no detected significant difference.

Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership

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

Quantifiable Measure 2: The number of Larimer Center for Mental Health individuals age 17 and under in which at least two therapy/case management sessions included caregiver involvement within the six month measurement period.

Time Period Measurement Covers	Baseline Project Indicator Measurement	Numerator	Denominator	Rate or Results	Industry Benchmark	Statistical Test Significance and <i>p</i> value
September 1, 2006 -- August 31, 2007	Baseline:	131	192	68.2%	N/A	n/a
September 1, 2007 -- August 31, 2008	Remeasurement 1a	154	170	90.6%	68.2%	$\chi^2 (df = 1) = 26.92, p < .001, \Phi = .27, p < .001$
September 1, 2007 -- August 31, 2008	Remeasurement 1b	142	159	89.3%		
September 1, 2008 -- August 31, 2009	Remeasurement 2	155	183	84.7%	68.2%	$\chi^2 (df = 1) = 1.6, p < .21$
September 1, 2009 -- August 31, 2010	Remeasurement 3	116	130	89.2%	68.2%	$\chi^2 (df = 1) = 1.34, p < .25$

Describe any demonstration of meaningful change in performance observed from Baseline and each measurement period (e.g., Baseline to Remeasurement 1 and Remeasurement 1 to Remeasurement 2): The first remeasurement results for Larimer Center for Mental Health indicate that there was statistically significant improvement from baseline in the number of therapy sessions that involved caregivers two or more times. While these results were highly significant, the measure of association (*phi*) was in the low range (though also highly significant). This may indicate that the effect of the interventions on the outcome might be low.

Update 11/2009: The data analysis plan changed from the first to second remeasurement. The data for remeasurement 1 was recalculated to include telephone case management contacts; however, this also caused variability in the numbers and rates. Both sets of analyses are presented: Remeasurement 1a is the original calculation (not including case management telephone contacts) and Remeasurement 1b is the updated calculation (including case management contacts). While the 2nd remeasurement rate is above the baseline, the data there is not a significant difference between remeasurement 1b and remeasurement 2. Effect sizes are not reported since there is no detected significant difference.

Update 11/2010: The data analysis plan was the same from the previous remeasurement period and includes telephone case management contacts. The 3rd remeasurement rate is above the baseline, but there is no significant difference between remeasurement 2 and remeasurement 3. Effect sizes are not reported since there is no detected significant difference.

Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership

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

Quantifiable Measure 3: The number of **North Range Behavioral Health** individuals age 17 and under in which at least two therapy/case management sessions included caregiver involvement within the six month measurement period.

Time Period Measurement Covers	Baseline Project Indicator Measurement	Numerator	Denominator	Rate or Results	Industry Benchmark	Statistical Test Significance and <i>p</i> value
September 1, 2006 -- August 31, 2007	Baseline:	94	172	54.7%	N/A	n/a
September 1, 2007 -- August 31, 2008	Remeasurement 1a	111	144	77.1%	54.7%	$\chi^2 (df = 1) = 17.31, p < .001, \Phi = .23, p < .001$
September 1, 2007 -- August 31, 2008	Remeasurement 1b	101	134	75.4%		
September 1, 2008 -- August 31, 2009	Remeasurement 2	116	183	63.4%	54.7%	$\chi^2 (df = 1) = 5.15, p < .03, \Phi = .13, p < .02$
September 1, 2009 -- August 31, 2010	Remeasurement 3	93	215	43.2%	54.7%	$\chi^2 (df = 1) = 16.07, \Phi = .20, p < .001$

Describe any demonstration of meaningful change in performance observed from Baseline and each measurement period (e.g., Baseline to Remeasurement 1 and Remeasurement 1 to Remeasurement 2): The first remeasurement results for North Range Behavioral Health indicate that there was statistically significant improvement from baseline in the number of therapy sessions that involved caregivers two or more times. While these results were highly significant, the measure of association (*phi*) was in the low range (though also highly significant). This may indicate that the effect of the interventions on the outcome might be low.

Update 11/2009: The data analysis plan changed from the first to second remeasurement. The data for remeasurement 1 was recalculated to include telephone case management contacts; however, this also caused variability in the numbers and rates. Both sets of analyses are presented: Remeasurement 1a is the original calculation (not including case management telephone contacts) and Remeasurement 1b is the updated calculation (including case management contacts). The 2nd remeasurement rate is above the baseline and represents a significant change from the 1st remeasurement; however, this change is in the negative direction. The effect size for this change is small.

Update 11/2010: The data analysis plan was the same from the previous remeasurement period and includes telephone case management contacts. The 3rd remeasurement rate is below the baseline, and there is a significant difference between remeasurement 2 and remeasurement 3 in an adverse direction. The effect size was small to moderate.

Appendix A: Colorado FY 2010–2011 PIP Summary Form:
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for Northeast Behavioral Health Partnership

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

Sustained improvement:

The results of the study thus far indicate that increasing the focus on the importance of caregiver involvement in child/adolescent therapy may have had an effect on increasing caregiver participation. While the changes within each mental health center were variable from remeasurement to remeasurement, in most cases the rates were above the baseline rate. Despite the idea that the internal validity of the study may have been affected by the planned change in the study analysis plan (e.g., the inclusion of telephone case management contacts), the rates continue to show improvement from the baseline rates.

Of concern is the significant reduction in North Range's rates from Remeasurement 1 to Remeasurement 2 and the negative impact that the inclusion of telephone case management contacts had on Centennial's rates. These issues are being investigated (via causal-barrier analysis) to determine if there are systemic issues that may be interfering with the process or if they are due to random year-to-year variation. The submission of the 3rd Remeasurement results will detail the findings of the causal-barrier analysis.

The 3rd Remeasurement results will also detail how the interventions were revised to address the issues uncovered via the causal-barrier analysis.

Update 11/2010

A causal-barrier analysis (conducted via focus groups with the providers) that was conducted during the 3rd remeasurement indicated that providers understood the nature of the performance improvement project, but that there was a breakdown in the understanding of how to properly identify a family member or caregiver and how to correctly document caregiver involvement.

One of the primary interventions for this PIP was for NBHP's three provider mental health center's to arrive at a common and inclusive understanding of what could be construed as a family member or caregiver. All three of the centers agreed to a very inclusive definition of family and caregivers, which included foster parents and extended family members (e.g., grandparents, aunts, uncles, non-married partners); however, the focus groups indicated that the updated definition of family and caregiver was not being strictly adhered to. For example, several providers stated that they were not appropriately coding foster parent involvement in treatment as family or caregiver involvement.

Additionally, treatment providers were unclear about what exactly constituted family or caregiver involvement during an individual therapy session. For example, most providers stated that they routinely bring the adult family member or caregiver back to their office at the end of the individual therapy session. While they would document this occurrence in the text of the medical record, they would not utilize the EMR codes designed to facilitate easy documentation of family or caregiver involvement. Moreover, when the provider did not use the EMR codes specifically designed to document family/caregiver involvement, the data extraction process for this PIP would not capture these instances in which there was involvement.

The causal-barrier analysis was conducted during the 3rd remeasurement period and therefore would not have had a substantial impact on the improvement rates of this PIP. Though overwhelming anecdotal evidence suggests that family and caregivers are being involved at an extremely high rate, the bottom line is that the anecdotal evidence does not match in the data collected from the EMR.

Appendix A: **Colorado FY 2010–2011 PIP Summary Form:**
Therapy With Children and Adolescents: Increasing Caregiver Involvement
for **Northeast Behavioral Health Partnership**

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

With the exception of Larimer Center for Mental Health, the 3rd remeasurement results remain concerning since the results for Centennial and North Range fell below the benchmark rate. While it is extremely likely that family and caregivers are being involved in the treatment process for children and adolescents, there is no easy way to substantiate this claim without conducting a chart audit. As such, it is recommended that this PIP be continued for a 4th remeasurement cycle.