State of Nevada

Division of Health Care Financing and Policy

2007–2008 PIP Validation Report

Lead Screening in Children

for

Health Plan of Nevada

Revised
September 2008

HSAG HEALTH SERVICES ADVISORY GROUP

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

HSAG HEALTH SERVICES ADVISORY GROUP

CONTENTS

for **Health Plan of Nevada**

1. Executive Summary 1-1

Overview 1-1
Summary of Validation Protocols 1-2
Summary of Validation Findings 1-3
Conclusions and Recommendations 1-5
Strengths 1-5
Opportunities for Improvement 1-5
Study Design 1-5

2. Validation Methodology 2-1

Scoring Methodology 2-1

3. Validation and Findings 3-1

Performance Improvement Project Validation Tool 3-1

Appendices

Introduction ..... Appendices Cover Page

Appendix A: CMS Rationale by Activity A-1

Appendix B: Definitions and Explanations by Activity B-1

Appendix C: Scoring Methodology Examples C-1

Appendix D: Health Plan of Nevada's Submitted Study: *Lead Screening in Children* D-1

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Overview

The Balanced Budget Act of 1997, Public Law 105-33 (BBA), requires that states contract with an external quality review organization (EQRO) to conduct an annual evaluation of their health maintenance organizations (**HMO**s) to determine the **HMO**s' compliance with quality management program contractual standards. The U.S. Department of Health and Human Services (DHHS) Centers for Medicare & Medicaid Services (CMS) regulates requirements and procedures for external quality review (EQR).

According to the BBA, the quality of health care delivered to Medicaid recipients enrolled in **HMO**s must be tracked, analyzed, and reported annually. Oversight activities of the EQRO focus on evaluating quality outcomes and the timeliness of, and access to, care and services provided to Medicaid and State Child Health Insurance Program (SCHIP) recipients.

The State of Nevada, Department of Health and Human Services, Division of Health Care Financing and Policy (DHCFP) is required to validate performance improvement projects (PIPs) as one of the mandatory EQR activities under the BBA. To meet this validation requirement, DHCFP contracted with Health Services Advisory Group, Inc. (HSAG) as an EQRO. HSAG is required by the BBA to assess each HMO's "strengths and weaknesses with respect to the quality, timeliness, and access to health care services furnished to Medicaid recipients" (42 CFR 438.364 [a] [2]).

This report summarizes the review conducted by HSAG of the ***Lead Screening in Children*** PIP submitted by **Health Plan of Nevada (HPN)**. The PIP evaluation was based on CMS guidelines as outlined in the CMS publication, *Validating Performance Improvement Project: A Protocol for Use in Conducting Medicaid External Quality Review Activities*, Final Protocol, Version 1.0, May 1, 2002 (CMS PIP Protocol).

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

The primary objective of PIP validation is to determine compliance with requirements set forth in 42 CFR 438.240 (b)(1) and 42 CFR 438.240 (d)(1)(1-4), including:

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

The PIP Summary Form was developed by HSAG in collaboration with DHCFP to be consistent with CMS' established protocols for conducting PIPs and to assist **HMO**s in meeting compliance

requirements. The **HMO**s were provided with the PIP Summary Form to complete and submit to HSAG for review. The PIP Summary Form assisted the **HMO**s in documenting the processes undertaken when conducting the study.

There are 10 activities in the validation of an **HMO**'s PIP. Each activity consists of elements necessary for the successful completion of a valid PIP. Some of the elements are critical elements and must be *Met* to produce an accurate and reliable PIP. Given the importance of critical elements, any critical element that receives a *Not Met* score results in a *Not Met* validation status.

The **HMO**s had an opportunity to resubmit a revised PIP Summary Form and additional information in response to any points of clarification, *Partially Met* or *Not Met* evaluation scores, regardless of whether the evaluation element is critical or noncritical. The resubmitted documents were due to HSAG within three weeks of the date of written notification. Once the re-review process had been completed, the PIP scores were considered final.

Summary of Validation Protocols

Using a PIP Validation Tool, HSAG assessed each component of **HPN**'s PIP based on CMS Protocol activities. The methodology required that the following 10 activities be reviewed:

- Activity I. Appropriate Study Topic
- Activity II. Clearly Defined, Answerable Study Question
- Activity III. Clearly Defined Study Indicator(s)
- Activity IV. Correctly Identified Study Population
- Activity V. Valid Sampling Techniques (if sampling was used)
- Activity VI. Accurate/Complete Data Collection
- Activity VII. Appropriate Improvement Strategies
- Activity VIII. Sufficient Data Analysis and Interpretation
- Activity IX. Real Improvement Achieved
- Activity X. Sustained Improvement Achieved

Activities V through X were not assessed for **HPN**'s PIP during this validation cycle because the study had not progressed beyond Activity IV.

Summary of Validation Findings

The following highlights the overall validation results for the **HPN** PIP:

- The total number of all PIP elements (including critical elements) that were evaluated equaled 18. Of this number:
  - 17 evaluation elements were *Met*.
  - 0 evaluation elements were *Partially Met*.
  - 0 evaluation elements were *Not Met*.
  - 1 evaluation element was *Not Applicable (NA)*.

- The total number of all critical elements that were evaluated equaled 7. Of this number:
  - 7 critical elements were *Met*.
  - 0 critical elements were *Partially Met.*
  - 0 critical elements were *Not Met*.
  - 0 critical elements were *NA*.

Table 1–1 and Table 1–2 show **HPN**'s scores based on HSAG's PIP evaluation. For additional details, please refer to the 2007–2008 PIP Validation Tool in Section 3 of this report.

Table 1–1—2007–2008 PIP Validation Report Scores *for* Lead Screening in Children *for* Health Plan of Nevada

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. Appropriate Study Topic	6	6	0	0	0	1	1	0	0	0
II. Clearly Defined, Answerable Study Question	2	2	0	0	0	1	1	0	0	0
III. Clearly Defined Study Indicator(s)	7	6	0	0	1	3	3	0	0	0
IV. Correctly Identified Study Population	3	3	0	0	0	2	2	0	0	0
V. Valid Sampling Techniques	6	Not Assessed				1	Not Assessed			
VI. Accurate/Complete Data Collection	11	Not Assessed				1	Not Assessed			
VII. Appropriate Improvement Strategies	4	Not Assessed				No Critical Elements				
VIII. Sufficient Data Analysis and Interpretation	9	Not Assessed				2				
IX. Real Improvement Achieved	4	Not Assessed				No Critical Elements				
X. Sustained Improvement Achieved	1	Not Assessed				No Critical Elements				
Totals for All Activities	**53**	**17**	**0**	**0**	**1**	**11**	**7**	**0**	**0**	**0**

Table 1–2—2007–2008 PIP Validation Report Overall Score *for* Lead Screening in Children *for* Health Plan of Nevada

Percentage Score of Evaluation Elements Met*	**100%**
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.

Conclusions and Recommendations

The final validation finding of **HPN's** PIP showed a *Met* validation status, an overall score of 100 percent, and a critical element score of 100 percent. Based on the validation of this PIP, HSAG's assessment determined high confidence in the reported results.

Strengths

The two Medicaid HMOs in Nevada are collaborating on the important topic of this study—***Lead Screening in Children.*** The study topic, study question, study indicators, and study population were developed as part of the collaborative process. In Activity I, plan-specific information was provided by each health plan.

Opportunities for Improvement

Opportunities for improvement are determined based on those evaluation elements that receive a *Partially Met* or a *Not Met* score, indicating that those elements are not in compliance with CMS Protocols. Points of clarification are also included 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.

As the study progresses, **HPN** should address all points of clarification as noted in the discussion that follows.

Study Design

Activity II: Clearly Defined, Answerable Study Question

- For clarity, the HSAG PIP Review Team recommended that **HPN** remove the following clause from the beginning of the study question: "Assuming the baseline lead screening rate does not meet national and regional goals..."

Activity IV: Correctly Identified Study Population

- **HPN** noted that for Study Indicator 2, recipient race and ethnicity would be captured. In future submissions of the PIP, **HPN** should specify that capturing race and ethnicity is an optional component for the collaborative study and is not part of the formal submission.

Scoring Methodology

Below is the scoring methodology HSAG uses to evaluate the PIPs conducted by the HMO to determine if the PIP is valid and to rate the percent of compliance with CMS' Protocol for conducting PIPs.

Each PIP activity consists of the critical and noncritical evaluation elements necessary for successful completion of a valid PIP. Each evaluation element is scored as *Met*, *Partially Met*, *Not Met*, or *Not Applicable*. In the PIP Validation Tool (see Section 3) a "C" in the column to the left of the element indicates it is a critical element. Critical elements are defined by HSAG as those that 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 could not be answered, then the critical element was scored as *Not Met* and the PIP was not valid.

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

	Evaluation Elements	Scoring
C	1. Study indicators are well-defined, objective, and measurable.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA

Each evaluation element is scored as noted above, and a table is created that totals all scores (critical and noncritical elements). From this table, percentage scores and a validation status are calculated. The percentage scores are calculated by dividing the total number of elements that were *Met* by the sum of the total number of elements that were *Met*, *Partially Met*, or *Not Met*. The percentage 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*. The validation status score is based on the percentage score and whether or not critical elements were *Met*, *Partially Met*, or *Not Met* (see scoring table on Page 2-2 for more details).

Due to the importance of critical elements, any critical element that is 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 but will affect the overall percentage score (the percentage of the PIP's compliance with CMS' Protocol).

HSAG will provide technical assistance to aid the HMO in understanding CMS' Protocol and making necessary revisions to the PIP, after which the HMO has an opportunity to submit a revised PIP Summary Form that includes additional information to address any critical and noncritical areas scored as *Partially Met* or *Not Met*.

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

Met	(1) All critical elements were *Met* **and** (2) 80 percent to 100 percent of all elements were *Met* across all activities.
Partially Met	(1) All critical elements were *Met* **and** 60 percent to 79 percent of all elements were *Met* across all activities **or** (2) One or more critical element(s) were *Partially Met* and the percentage score for all elements across all activities was 60 percent or above.
Not Met	(1) All critical elements were *Met* **and** < 60 percent of all elements were *Met* across all activities **or** (2) One or more critical element(s) were *Not Met*.
Not Applicable (NA)	*Not Applicable* elements (including critical elements) were removed from all scoring.

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

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

* The percentage score 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.

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

Section 3: Nevada 2007-2008 PIP Validation Tool: Lead Screening in Children for Health Plan of Nevada

DEMOGRAPHIC INFORMATION			
Health Plan Name:	Health Plan of Nevada		
Study Leader Name:	Deborah Wheeler	Title:	Director, Quality Improvement
Phone Number:	(702) 242-7254	E-mail Address:	dwheeler@sierrahelath.com
Name of Project/Study:	Lead Screening in Children		
Type of Study:	Clinical ☐ Collaborative	☐ HEDIS	
Date of Study:	1/1/2007 to 12/31/2007		
Type of Delivery System:	HMO	Number of Medicaid Recipients in HMO: Number of Medicaid Recipients in Study:	
Year 1 Validation:	Initial Submission	Submission Date: 3/1/2008	Validation Date:
Results:	Baseline	Steps Completed:	

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EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
I.	**Appropriate Study Topic: Topics selected for the study should reflect the Medicaid enrollment in terms of demographic characteristics, prevalence of disease, and the potential consequences (risks) of the disease. Topics could also address the need for a specific service. The goal of the project should be to improve processes and outcomes of health care. The topic may be specified by the State Medicaid agency or on the basis of Medicaid recipient input.**		
	1. Reflects high-volume or high-risk conditions (or was selected by the State). NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	This study topic is a Nevada Medicaid collaborative PIP. Health Plan of Nevada (HPN) provided information as to the impact of lead poisoning on children. Included in the documentation was information that stated that high blood lead levels can cause serious health effects, including seizures, coma, and death. Several resources were cited in the documentation to support the relevance of the study topic to the HPN Medicaid and Nevada Medicaid population. HPN provided specific national and plan data that supported the selection of the collaborative PIP topic.

* "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.

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EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
I.	**Appropriate Study Topic: Topics selected for the study should reflect the Medicaid enrollment in terms of demographic characteristics, prevalence of disease, and the potential consequences (risks) of the disease. Topics could also address the need for a specific service. The goal of the project should be to improve processes and outcomes of health care. The topic may be specified by the State Medicaid agency or on the basis of Medicaid recipient input.**		
	2. Is selected following collection and analysis of data (or was selected by the State). NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study topic was selected for the collaborative PIP topic because blood lead testing is necessary to identify elevated blood levels early and initiate interventions. HPN has been conducting ongoing quarterly data analysis. HPN has noted steady increases in the numbers of children tested each quarter; however, the screening rates were 1.75 percent, 2.20 percent, and 4.42 percent for TANF, CHAP, and Nevada Check Up, respectively. HPN pointed out that the current reported screening rates are not exact specifications used for the HEDIS Lead Screening in Children indicators. HPN indicated its results show an opportunity for improvement.
	3. Addresses a broad spectrum of care and services (or was selected by the State). The score for this element will be Met or Not Met.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study topic addressed a broad spectrum of care and services.
	4. Includes all eligible populations that meet the study criteria. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	All eligible children who met the study criteria were included in the study.
	5. Does not exclude recipients with special health care needs. The score for this element will be Met or Not Met.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study included all children, including those with special health care needs.

* "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.

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EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
I.	**Appropriate Study Topic: Topics selected for the study should reflect the Medicaid enrollment in terms of demographic characteristics, prevalence of disease, and the potential consequences (risks) of the disease. Topics could also address the need for a specific service. The goal of the project should be to improve processes and outcomes of health care. The topic may be specified by the State Medicaid agency or on the basis of Medicaid recipient input.**		
C*	6. Has the potential to affect recipient health, functional status, or satisfaction. The score for this element will be Met or Not Met.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study topic was selected for the collaborative PIP and had the potential to affect child health and functional status.

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.

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EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
II.	**Clearly Defined, Answerable Study Question: Stating the study question(s) helps maintain the focus of the PIP and sets the framework for data collection, analysis, and interpretation.**		
	1. States the problem to be studied in simple terms. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study question stated the problem to be studied in simple terms and was developed for the collaborative PIP. Point of clarification: For future submissions, please remove the following clause found at the beginning of the study question: "assuming the baseline lead screening rate does not meet national and regional goals."
C*	2. Is answerable. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study question was answerable, based on the study indicators and study population selected.

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	1	1	0	0	0

* "C" in this column denotes a critical evaluation element.
** Total Evaluation Elements includes critical elements.
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	EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
III.	**Clearly Defined Study Indicator(s): A study indicator is a quantitative or qualitative characteristic or variable that reflects a discrete event (e.g., an older adult has not received a flu shot in the last 12 months), or a status (e.g., a recipient'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.**		
C*	1. Are well-defined, objective, and measurable. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study indicators were based on the HEDIS 2008 Technical Specifications and were well-defined, objective, and measurable.
	2. Are based on current, evidence-based practice guidelines, pertinent peer review literature, or consensus expert panels.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study indicators were based on practice guidelines used in the development of HEDIS specifications.
C*	3. Allow for the study question to be answered. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study indicators allowed for the study question to be answered.
	4. Measure changes (outcomes) in health or functional status, recipient satisfaction, or valid process alternatives. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study indicators measured changes in health status and process alternatives.
C*	5. Have available data that can be collected on each indicator. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	Data were available to be collected for the study indicators.
	6. Are nationally recognized measures such as HEDIS specifications, when appropriate. The scoring for this element will be Met or NA.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study indicators were nationally recognized HEDIS measures based on the HEDIS 2008 Technical Specifications.
	7. Includes the basis on which the indicator(s) was adopted, if internally developed.	☐ Met ☐ Partially Met ☐ Not Met ☑ NA	The study indicators were not internally developed.

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.

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EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
IV.	**Correctly Identified Study Population: The selected topic should represent the entire eligible Medicaid enrollment population with systemwide measurement and improvement efforts to which the PIP study indicators apply.**		
C*	1. Is accurately and completely defined. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study population was accurately and completely defined. Point of clarification: HPN noted in Study Indicator 2 that recipient race and ethnicity would be captured. It should be noted in future submissions that the capturing of race and ethnicity is an optional component for the collaborative study and not a part of the formal submission for HSAG's review and evaluation.
	2. Includes requirements for the length of a recipient's enrollment in the HMO.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The enrollment requirements were based on the HEDIS 2008 Technical Specifications. The child had to be continuously enrolled for 12 months prior to the child's second birthday. The child could not have more than one gap in enrollment of up to 45 days during the 12 months prior to the child's second birthday.
C*	3. Captures all recipients to whom the study question applies. NA is not applicable to this element for scoring.	☑ Met ☐ Partially Met ☐ Not Met ☐ NA	The study captured all children to whom the study question 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.

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EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
V.	**Valid Sampling Techniques: (This activity will only be scored if sampling was used.) If sampling is to be used to select recipients for 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.**		
	1. Consider and specify the true or estimated frequency of occurrence.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of sampling techniques for this year's validation.
	2. Identify the sample size.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of sampling techniques for this year's validation.
	3. Specify the confidence level.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of sampling techniques for this year's validation.
	4. Specify the acceptable margin of error.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of sampling techniques for this year's validation.
C*	5. Ensure a representative sample of the eligible population.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of sampling techniques for this year's validation.
	6. Are in accordance with generally accepted principles of research design and statistical analysis.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of sampling techniques for this year's validation.

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	0	1	0	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.

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EVALUATION ELEMENTS			SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation				
VI.	**Accurate/Complete Data Collection: Data collection must ensure that the data collected on the PIP indicators are valid and reliable. Validity is an indication of the accuracy of the information obtained. Reliability is an indication of the repeatability or reproducibility of a measurement.**			
	1.	The identification of data elements to be collected. NA is not applicable to this element for scoring.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of data collection for this year's validation.
	2.	The identification of specified sources of data. NA is not applicable to this element for scoring.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of data collection for this year's validation.
	3.	A defined and systematic process for collecting baseline and remeasurement data. NA is not applicable to this element for scoring.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of data collection for this year's validation.
	4.	A timeline for the collection of baseline and remeasurement data. NA is not applicable to this element for scoring.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of data collection for this year's validation.
	5.	Qualified staff and personnel to abstract manual data.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of data collection for this year's validation.
C*	6.	A manual data collection tool that ensures consistent and accurate collection of data according to indicator specifications.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of data collection for this year's validation.
	7.	A manual data collection tool that supports interrater reliability.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of data collection for this year's validation.
	8.	Clear and concise written instructions for completing the manual data collection tool.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of data collection for this year's validation.
	9.	An overview of the study in written instructions.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of data collection for this year's validation.

* "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.

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EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
VI.	**Accurate/Complete Data Collection: Data collection must ensure that the data collected on the PIP indicators are valid and reliable. Validity is an indication of the accuracy of the information obtained. Reliability is an indication of the repeatability or reproducibility of a measurement.**		
	10. Administrative data collection algorithms/flow charts that show activities in the production of indicators.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of data collection for this year's validation.
	11. An estimated degree of administrative data completeness. Met = 80 - 100% Partially Met = 50 - 79% Not Met = <50% or not provided	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of data collection for this year's validation.

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	0	0	0	0	1	0	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.

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EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
VII.	**Appropriate Improvement Strategies: Real, sustained improvements in care result from a continuous cycle of measuring and analyzing performance, and developing and implementing systemwide improvements in care. Interventions are designed to change behavior at an institutional, practitioner, or recipient level.**		
	1. Related to causes/barriers identified through data analysis and quality improvement processes. NA is not applicable to this element for scoring.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of developing and implementing improvement strategies for this year's validation.
	2. System changes that are likely to induce permanent change.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of developing and implementing improvement strategies for this year's validation.
	3. Revised if the original interventions were not successful.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of developing and implementing improvement strategies for this year's validation.
	4. Standardized and monitored if interventions were successful.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of developing and implementing improvement strategies for this year's validation.

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	0	0	0	0	0	0	0	0	0

** Total Evaluation Elements includes critical elements.

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

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EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
VIII.	**Sufficient Data Analysis and Interpretation: Describe the data analysis process for the selected clinical or nonclinical study indicators. Include the statistical analysis techniques used.**		
C*	1. Is conducted according to the data analysis plan in the study design. NA is not applicable to this element for scoring.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of data analysis and interpretation for this year's validation.
C*	2. Allows for the generalization of results to the study population if a sample was selected. If no sampling was performed, this element is scored NA.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of data analysis and interpretation for this year's validation.
	3. Identifies factors that threaten the internal or external validity of the findings.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of data analysis and interpretation for this year's validation.
	4. Includes an interpretation of findings.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of data analysis and interpretation for this year's validation.
	5. Is presented in a way that provides accurate, clear, and easily understood information.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of data analysis and interpretation for this year's validation.
	6. Identifies initial measurement and remeasurement of study indicators.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of data analysis and interpretation for this year's validation.
	7. Identifies statistical differences between initial measurement and remeasurement.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of data analysis and interpretation for this year's validation.
	8. Identifies factors that affect the ability to compare initial measurement with remeasurement.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of data analysis and interpretation for this year's validation.
	9. Includes interpretation of the extent to which the study was successful.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of data analysis and interpretation for this year's validation.

* "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.

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EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation		

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	0	0	0	0	2	0	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.

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EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
IX.	**Real Improvement Achieved: Describe any meaningful change in performance observed and demonstrated during baseline measurement. Discuss any random year-to-year variation, population changes, and sampling error that may have occurred during the measurement process.**		
	1. Remeasurement methodology is the same as baseline methodology.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of assessing for real improvement for this year's validation.
	2. There is documented improvement in processes or outcomes of care.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of assessing for real improvement for this year's validation.
	3. The improvement appears to be the result of the planned intervention(s).	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of assessing for real improvement for this year's validation.
	4. There is statistical evidence that observed improvement is true improvement.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. The PIP had not progressed to the point of assessing for real improvement for this year's validation.

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	0	0	0	0	0	0	0	0	0

** Total Evaluation Elements includes critical elements.

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

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EVALUATION ELEMENTS		SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation			
X.	**Sustained Improvement Achieved: Describe any demonstrated improvement through repeated measurements over comparable time periods. Discuss any random year-to-year variation, population changes, and sampling error that may have occurred during the remeasurement process.**		
	1. Repeated measurements over comparable time periods demonstrate sustained improvement or that a decline in improvement is not statistically significant.	☐ Met ☐ Partially Met ☐ Not Met ☐ NA	Not assessed. Sustained improvement cannot be assessed until the study has had a baseline and a minimum of two annual remeasurement periods of data.

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	0	0	0	0	0	0	0	0

** Total Evaluation Elements includes critical elements.

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

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**Table 3-1—2007-2008 PIP Validation Report Scores:
Lead Screening in Children
for Health Plan of Nevada**

	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.	Appropriate Study Topic	6	6	0	0	0	1	1	0	0	0
II.	Clearly Defined, Answerable Study Question	2	2	0	0	0	1	1	0	0	0
III.	Clearly Defined Study Indicator(s)	7	6	0	0	1	3	3	0	0	0
IV.	Correctly Identified Study Population	3	3	0	0	0	2	2	0	0	0
V.	Valid Sampling Techniques	6		Not Assessed			1	Not Assessed			
VI.	Accurate/Complete Data Collection	11		Not Assessed			1	Not Assessed			
VII.	Appropriate Improvement Strategies	4		Not Assessed			0	No Critical Elements			
VIII.	Sufficient Data Analysis and Interpretation	9		Not Assessed			2	Not Assessed			
IX.	Real Improvement Achieved	4		Not Assessed			0	No Critical Elements			
X.	Sustained Improvement Achieved	1		Not Assessed			0	No Critical Elements			
Totals for All Steps		**53**	**17**	**0**	**0**	**1**	**11**	**7**	**0**	**0**	**0**

**Table 3-2—2007-2008 PIP Validation Report Overall Scores:
Lead Screening in Children
for Health Plan of Nevada**

Percentage Score of Evaluation Elements Met*	**100%**
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.

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EVALUATION OF THE OVERALL VALIDITY AND RELIABILITY OF PIP RESULTS
HSAG assessed the implications of the study's findings on the likely validity and reliability of the results based on CMS Validating Protocols. HSAG also assessed whether the State should have confidence in the reported PIP findings.
****Met*** **= Confidence/high confidence in reported PIP results** *****Partially Met*** **= Low confidence in reported PIP results** ******Not Met*** **= Reported PIP results not credible**
Summary of Aggregate Validation Findings ***** [X] ***Met*** ****** [ ] ***Partially Met*** ******* [ ] ***Not Met***
Summary statement on the validation findings: Steps I through IV were assessed for this PIP Validation Report. Based on the validation of this PIP, HSAG's assessment determined high confidence in the results.

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Introduction

The appendices consist of the documentation that supported the validation process conducted by HSAG using the CMS Protocol for validating PIPs. Appendix A provides the CMS rationale in reviewing each activity, Appendix B is a resource to help health plans understand the broad concepts in each activity, Appendix C provides examples for the application of the scoring methodology, and Appendix D is the study submitted to HSAG for review.

This section contains these appendices:

- Appendix A: CMS Rationale by Activity
- Appendix B: Definitions and Explanations by Activity
- Appendix C: Scoring Methodology Examples
- Appendix D: **Health Plan of Nevada**'s Submitted Study: ***Lead Screening in Children***

CMS Rationale

Activity I. Appropriate Study Topic

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

Activity II. Clearly Defined, Answerable Study Question

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

Activity III. Clearly Defined Study Indicator(s)

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

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

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

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

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

Activity IV. Correctly Identified Study Population

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

Activity V. Valid Sampling Techniques

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

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

Activity VI. Accurate/Complete Data Collection

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

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

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

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

Activity VII. Appropriate Improvement Strategies

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

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

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

Activity VIII. Sufficient Data Analysis and Interpretation

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

Activity IX. Real Improvement Achieved

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

Activity X. Sustained Improvement Achieved

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

Appendix B. Definitions and Explanations by Activity for Health Plan of Nevada

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

Concepts	Definitions and Explanations
Activity I. Appropriate Study Topic	
Broad spectrum of care	◆ Clinical focus areas: Includes prevention and care of acute and chronic conditions and high-volume/high-risk services. High-risk procedures may also be targeted (e.g., care received from specialized centers). ◆ Nonclinical areas: Continuity or coordination of care provided from multiple providers and across multiple episodes of care (e.g., disease-specific or condition-specific care).
Eligible population	◆ May be defined as those recipients who meet the study population parameters.
Selected by the State	◆ If the study topic was selected by the State Medicaid agency, this information is included as part of the description under Activity One: "Choose the Selected Study Topic" in the PIP Summary Form.
Activity II. Clearly Defined, Answerable Study Question	
Study question	◆ The question(s) directs and maintains the focus of the PIP and sets the framework for data collection, analysis, and interpretation. The question(s) must be measurable and clearly defined. ◆ Examples: 1. Does educational outreach about immunizations increase the rates of immunizations for children 0–2 years of age? 2. Does increasing influenza immunizations for recipients with chronic asthma impact overall health status? 3. Will increased planning and attention to follow-up after inpatient discharge improve the rate of mental health follow-up services?

Concepts	Definitions and Explanations
Activity III. Clearly Defined Study Indicator(s)	
Study indicator	◆ A quantitative or qualitative characteristic reflecting a discrete event or status that is to be measured. Indicators are used to track performance and improvement over time. ◆ Example: The percent of enrolled recipients who were 12–21 years of age who had at least one comprehensive well-care visit with a primary care practitioner or an obstetrician-gynecologist during the measurement year.
Sources identified	◆ Documentation/background information that supports the rationale for the study topic, study question, and indicators. ◆ Examples: HEDIS measures, medical community practice guidelines, evidence-based practices, or provider agreements. ◆ Practice guideline examples: American Academy of Pediatrics or American Diabetes Association.
Activity IV. Correctly Identified Study Population	
Eligible population	◆ Refers to recipients who are included in the study. ◆ Includes age, health conditions, enrollment criteria, and measurement periods. ◆ Example: The eligible population includes all children 0–2 years of age as of December 31 of the measurement period, with continuous enrollment and no more than one gap of 30 days or less in enrollment.
Activity V. Valid Sampling Techniques	
True or estimated frequency of occurrence	◆ This may not be known the first time a topic is studied. In this case, the HMO should assume the need for a maximum sample size to establish a statistically valid baseline for the study. HSAG will review whether the HMO defined the impact the topic has on the population or the number of eligible recipients in the population.
Sample size	◆ Indicates the size of the sample to be used.
Representative sample	◆ Refers to the sample reflecting the entire population.
Confidence level	◆ Statistical confidence is a numerical statement of the probable degree of certainty or accuracy of an estimate (e.g., a 95 percent level of confidence with a 5 percent margin of error).

Concepts	Definitions and Explanations
Activity VI. Accurate/Complete Data Collection	
Data elements	◆ Identification of data elements includes unambiguous definitions of data that will be collected (e.g., numerator/denominator, laboratory values).
Interrater reliability (IRR)	◆ The HSAG review team evaluates if there is a tool, policy, and/or process in place to verify the accuracy of the data abstracted. Is there an over-read (IRR) process for the review of a minimum percentage of records? ◆ Examples: A policy that includes how IRR is tested, documentation of training, and instruments and tools utilized.
Algorithms	◆ The development of any systematic process that consists of an ordered sequence of steps. Each step depends on the outcome of the previous step. ◆ The HSAG review team expects the HMO to describe the process it used in data collection. What are the criteria (e.g., what Current Procedural Terminology (CPT) and/or source codes were used)?
Data completeness	◆ For the purposes of PIP scoring, data completeness refers to the degree of complete administrative data (e.g., encounter data or claims data). HMOs that compensate their providers on a fee-for-service basis require a submission of claims for reimbursement. However, providers generally have several months before they must submit the claim for reimbursement, and processing claims by the health plan may take several additional months, creating a claims lag. Providers paid on a capitated or salaried basis do not need to submit a claim to be paid, but should provide encounter data for the visit. In this type of arrangement, some encounter data may not be submitted. ◆ PIPs that use administrative data need to ensure their data has a high degree of completeness prior to its use. Evidence of data completeness levels may include claim processing lag reports, trending of provider submission rates, policies and procedures regarding timeliness requirements for claims and encounter data submission, encounter data submission studies, and comparison reports of claims/encounter data versus medical record review. Discussion in the PIP should focus on evidence at the time the data was collected for use in identifying the population, sampling, and/or calculation of the study indicators. Statements such as, "Data completeness at the time of the data pull was estimated to be 97.8 percent based on claims lag reports (see attached Incurred But Not Reported report)," along with the attachment mentioned, usually (but not always) are sufficient evidence to demonstrate data completeness.

Concepts	Definitions and Explanations
Activity VII. Appropriate Improvement Strategies	
Causes and barriers	◆ Interventions for improvement are identified through evaluation or barrier analysis. If there is no improvement, what problem-solving processes are put in place to identify possible causes and proposed changes to implement solutions? ◆ It is expected that interventions associated with improvement of quality indicators will be system interventions.
Standardized	◆ If the interventions have resulted in successful outcomes, the interventions should continue and the HMO should monitor them to ensure that the outcomes remain. ◆ Examples: If an intervention is the use of practice guidelines, then the HMOs continue to use them. If mailers are a successful intervention, then the HMOs continue the mailings and monitor outcomes.
Activity VIII. Sufficient Data Analysis and Interpretation	
Analysis plan	◆ Each study should have a plan for how data analysis will occur. ◆ The HSAG review team will ensure that this plan was followed.
Generalization to the study population	◆ Study results can be applied to the general population with the premise that comparable results will occur.
Factors that threaten internal and external validity	◆ Did the analysis identify any factors (internal or external) that would threaten the validity of study results? ◆ Example: A change in record extraction (e.g., a vendor was hired or there were changes in HEDIS methodology).
Presentation of data analysis	◆ Results should be presented in tables or graphs with measurement periods, results, and benchmarks clearly identified.
Identification of initial measurement and remeasurement of study indicators	◆ Clearly identify in the report which measurement period the indicator results reflect.
Statistical differences between initial measurement and remeasurement periods	◆ The HSAG review team looks for evidence of a statistical test (e.g., a *t* test or a Chi square test).
Identification of the extent to which the study was successful	◆ The HSAG review team looks for improvement over several measurement periods. ◆ Both interpretation and analysis should be based on continuous improvement philosophies, with the HMO documenting data results and the follow-up steps that will be taken for improvement.

Concepts	Definitions and Explanations
Activity IX. Real Improvement Achieved	
Remeasurement methodology is the same as baseline	◆ The HSAG review team looks to see that the study methodology remains the same for the entire study.
Documented improvement in processes or outcomes of care	◆ The study should document how interventions were successful in impacting system processes or outcomes. ◆ Examples: A change in data collection or a rate increase or decrease demonstrated in graphs/tables.
Activity X. Sustained Improvement Achieved	
Sustained improvement	◆ The HSAG review team looks to see if study improvements have been sustained over the course of the study. This needs to be demonstrated over a period of several (more than two) remeasurement periods.

Scoring Methodology Examples

The score for the HMO was calculated as the percent of elements across all activities that received a *Met* status. The following five examples demonstrate how the scoring was applied.

Example 1:

Met = 43, *Partially Met* = 2, *Not Met* = 0, *NA* = 8, and all critical elements were *Met*. The HMO receives an overall *Met* status, indicating the PIP is valid. The score for the HMO is calculated as 43/45 = 95.6 percent. The percentage score of critical elements *Met* is calculated as 11/11 = 100 percent.

Example 2:

Met = 52, *Partially Met* = 0, *Not Met* = 1, *NA* = 0, and one critical element was *Not Met*. The HMO receives an overall *Not Met* validation status and the PIP is not valid. The scores are calculated as the percentage score of evaluation elements *Met* and the percentage score of critical elements *Met*.

Example 3:

Met = 43, *Partially Met* = 1, *Not Met* = 1, *NA* = 8, and one critical element was *Partially Met*. The HMO receives an overall *Partially Met* validation status, indicating the PIP is credible. The percentage score of evaluation elements *Met* for the HMO is calculated as 43/45 = 95.6 percent. The percentage score of critical elements *Met* is calculated as 10/11 = 91 percent. The HMO will need to send in appropriate information to resolve issues with the *Partially Met* critical element and the one element that was *Not Met*.

Example 4:

Met = 38, *Partially Met* = 11, *Not Met* = 4, *NA* = 0, and all the critical elements are *Met*. The HMO receives an overall *Partially Met* status, indicating the PIP is valid. The percentage score of evaluation elements *Met* for the HMO is calculated as 38/53 = 71.7 percent. The percentage score of critical elements *Met* is calculated as 11/11 = 100 percent. The HMO will need to send in appropriate information to resolve issues with the *Partially Met* elements and the four elements that were *Not Met*.

HSAG HEALTH SERVICES ADVISORY GROUP

Appendix D: PIP Summary Form: Lead Screening in Children *for* Health Plan of Nevada

DEMOGRAPHIC INFORMATION			
HMO Name or ID:	Health Plan of Nevada (in collaboration with Anthem Partnership Plan		
Study Leader Name:	Debbie Wheeler	Title: Director, Quality Improvement	
Telephone Number:	702-242-7254	E-Mail Address: dwheeler@sierrahealth.com	
Name of Project/Study:	***Lead Screening in Children (LSC)***		
Type of Study:	☒ Clinical	☐ Nonclinical	

_____ Number of Medicaid Recipients _____ Number of Medicaid Recipients in Study	**Section to be completed by HSAG** __X__ Year 1 Validation __X__ Initial Submission _____ Resubmission _____ Year 2 Validation _____ Initial Submission _____ Resubmission _____ Year 3 Validation _____ Initial Submission _____ Resubmission
	Section to be completed by HSAG __X__ Baseline Assessment _____ Remeasurement 1 _____ Remeasurement 2 _____ Remeasurement 3

Appendix D: PIP Summary Form: Lead Screening in Children *for* Health Plan of Nevada

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

Study topic:

Background: Impact of Lead Poisoning on children

High blood lead levels (BLLs), that is, greater than or equal to 70μg/dL, can cause serious health effects, including seizures, coma and death. BLLs as low as 10μg/dL have been associated with adverse effects on cognitive development, growth, and behavior among children aged 1 to 5 years.[1] In many cases, it takes years to reduce children's BLLs once levels are elevated.[2-4]

Children under five are at greater risk for elevated blood levels and toxicity because of increased hand to mouth activity, increased lead absorption from the gastrointestinal tract, and the greater vulnerability of a developing central nervous system. (Needleman H., Lead poisoning. Ann Rev Med. 2004: 55:209-222). Higher blood levels are correlated with minority race/ethnicity, urban residence, low income, low educational attainment, older housing, and recent immigration. (Centers for Disease Control and Prevention, Blood lead levels – United States, 1999-2002. MMWR. 2005; 54 (20): 513-516).

Significant associations between blood lead levels in the mother's bloodstream and developmental testing at two years of age have also been demonstrated but not at later ages. However, lead levels at two years of age were associated with the cognitive performance at 10 years of age. (Needleman H., Lead poisoning. Ann Rev Med. 2004: 55:209-222). To keep this issue in perspective, however, the impact of lead poisoning on behavioral and cognitive functioning must be addressed in relation to other factors, such as socioeconomic status, home and parenting environment, and genetics; lead exposure is estimated to be 1 to 4% of the variance observed in a child's cognitive ability measured through IQ testing. (Needleman H., Lead poisoning. Ann Rev Med. 2004: 55:209-222).

Even though the reduction of BLLs in the U.S. have been greatly reduced since 1970, mainly due to the implementation of federal and state regulations aimed at the control of lead exposure[5], some populations and geographic areas continue to be at disproportionately high risk for lead exposure.[6-8] During 1999-2002, 310,000 children had BLLs >10μg/dL, down from 1.7 million in the late 1980s.[9] The racial and ethnic

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disparities in lead poisoning have been greatly reduced but not entirely eliminated.[9] Although the elevated levels for children ages 1 to 5 have declined, the prevalence still varies among different communities and populations. (Centers for Disease Control and Prevention, Blood lead levels – United States, 1999-2002. MMWR. 2005; 54 (20): 513-516).

Relevance to the Medicaid Population

Children enrolled in Medicaid are at high risk for having elevated BLLs ($\geq$10μg/dL).[10] In 1998, an estimated 535,000 children enrolled in Medicaid had elevated BLLs, with a prevalence among children aged 1—5 years (9%) three times greater than that among young children not enrolled in Medicaid (3%). Medicaid enrollees accounted for 60% of children aged 1—5 years who had BLLs $\geq$10μg/dL and 83% of young children with levels $\geq$20μg/dL.[10, 11] Low screening rates have been documented among young children enrolled in Medicaid, with 81% of those aged 1—5 years and 79% of those aged 1—2 years not receiving a blood lead test.[10, 12]

Specific Relevance to the Health Plan of Nevada Medicaid Population

According to demographic data collected for the Childhood Immunization HEDIS 2007 indicator (which is the same denominator population that will be used for the Lead Screening indicator), 1,213 and 437 children two years old in the SmartChoice and Nevada Check Up populations, respectively were eligible for the denominator population as of December 31, 2006. Similar numbers of two year old children will be expected to be the study populations for HEDIS 2008.

To further determine and prepare for the potential need for focused lead screening education that will be identified from the baseline data collection for this Performance Improvement Project, an ongoing quarterly data analysis is being conducted by HPN staff. This analysis, using internal health plan data, has identified the current lead screening rates (using the CPT procedure code of 83655) per quarter among two year old children in the separate TANF, CHAP, and Nevada Check Up populations. There have been steady increases in the numbers of children tested in each quarter; however, the screening rates were only 1.75%, 2.20%, and 4.42%, for TANF, CHAP and Nevada Check Up

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populations, respectively as of the 4th quarter, 2007. The current lead screening rates, though not similar to the exact specifications that will be used for the HEDIS Lead Screening in Children indicator, show an opportunity for improvement.

Identifying Populations for Lead Screening

In order to screen appropriately for lead poisoning, it is necessary to identify children who need environmental or medical intervention to reduce blood lead levels due to the fact that children with elevated BLLs in the 10 to 25μg/dL range do not routinely develop clinical symptoms. The Centers for Disease Control and Prevention (CDC) recommends that health care providers conduct blood lead screening in children, target populations with the greatest risk for lead exposure and comply with lead screening policies issued by Medicaid or state and local health departments.[13] The CDC's level of concern is for BLLs ≥10μg/dL.[13]

The approach supported by the American Academy of Pediatrics (AAP) is described in its 2005 Health Policy Statement. The AAP recommends that the management of children with elevated levels be determined by the level of concentration. The AAP states that children with blood lead levels of less than 10μg/dL are not considered to have excessive lead exposure. For children with concentrations of 10μg/dL or greater, their levels should be rechecked and further investigation may be warranted in a community where there are many children with such high levels. Children who have ever had a lead level of greater than 20μg/dL or 15μg/dL for more than 3 months should receive medical and environmental evaluation. (AAP Policy Statement, 2005)

Federal Medicaid policies through the Centers for Medicare & Medicaid Services require that all young children enrolled in Medicaid be screened with a blood lead test. Federal law requires states to screen children enrolled in Medicaid for elevated BLLs as part of preventive services provided through the Early Periodic Screening, Diagnosis, and Treatment (EPSDT) program.[14] Specifically, children must receive a blood lead screening test at ages 12 and 24 months, and all children aged 36—72 months who have not previously been screened must also receive a blood test.[15]

Appendix D: PIP Summary Form: Lead Screening in Children *for* Health Plan of Nevada

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

Reducing the risk for lead poisoning for children within the United States is essential to maintaining a strong public health infrastructure. Without appropriate screening and then treatment if necessary, increased threats of lead poisoning could continue to harm the community.

Goals of the Lead Screening Performance Improvement Project

The goal of this Performance Improvement Project is to improve the lead screening rates (and overall health) for children from birth to two years of age who are enrolled in the Medicaid and Nevada Check Up populations within the state of Nevada in order to prevent lead poisoning and to respond to the State Medicaid Agency's desire to make this a high priority. Health Plan of Nevada and Anthem Blue Cross Blue Shield Partnership Plan are collaborating to address this important topic.

The Performance Improvement Project (PIP) focuses on Medicaid and Nevada Check Up Plan enrollees from birth to two years of age, including children with special health care needs, who did and did not receive one or more Lead Screening tests before the age of two as described in the Health Care Effectiveness Data and Information Set (HEDIS)® 2008 specifications for Lead Screening in Children (LSC).

Selection of Data to be Used in the Study

The data selected for this study is the Healthcare Effectiveness Data and Information Set Lead Screening in Children indicator. This indicator reports the percentage of children two years of age who had one or more capillary or venous lead blood tests for lead poisoning by their second birthday. This indicator is based on a nationally standardized measurement set that has been used for many years by health plans across the country. Using this indicator for measurement ensures that the data collected is based on a standardized method and will make information comparable. Health Plan of Nevada and Anthem Blue Cross Blue Shield Partnership Plan will collect and report this indicator based on the hybrid methodology, which combines administrative and medical record data to make this strategy more effective.

Lead Screening in Children (LSC):

Need of Multi-faceted Strategies to Improve Lead Screening Rates

Appendix D: PIP Summary Form: Lead Screening in Children *for* Health Plan of Nevada

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Several studies have shown that multi-faceted quality improvement initiatives help to improve childhood lead screening rates. A multi-faceted initiative will involve member, provider, and community-based interventions. One example of such as successful multi-faceted health plan intervention that could be replicated within the state of Nevada includes a health plan in the Midwest that implemented a lead screening health plan member incentive program combined with education and chart reminders for the health plan's primary care providers to encourage the provision of timely lead screening. This intervention demonstrated a 48% improvement in the health plan's lead screening rate in a three year time period.

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[8] Kaufmann RB, Clouse TL, Olson DR, Matte TD. Elevated BLLs and blood lead screening among US children aged one to five years: 1988-1994. Pediatrics 2000;106:1-7.

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[11] US General Accounting Office. Lead poisoning: federal health care programs are not effectively reaching at-risk children. Washington, DC: US General Accounting Office, 1999; GAO publication no. GAO/HEHS-99-18.

[12] US General Accounting Office. Children's health: elevated blood lead levels in Medicaid and Hispanic children. Washington, DC: US General Accounting Office, 1998; GAO publication no. GAO/HEHS-98-169R.

[13] CDC. Preventing Lead Poisoning in Young Children. Atlanta: US Department of Health and Human Services; 2005.

[14] Title 42: The public health and welfare, Chapter 7: Social Security Act, Title XIX: Grants to states for medical assistance programs. 42 USCS § 1396d (1999).

[15] US Health Care Financing Administration. Part 5—early and periodic screening, diagnosis, and treatment (EPSDT). In: State Medicaid manual. Baltimore, MD: US Health Care Financing Administration; September 1998. HCFA publication no. 45-5. Section § 5123.2. Transmittal no. 12.

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: Assuming the baseline lead screening rate does not meet national and regional goals, will a coordinated health plan intervention strategy improve the rate of lead screening tests performed for children up to two years of age enrolled in the state of Nevada Medicaid and State Children's Health Insurance Programs? A coordinated health plan strategy is defined as focused interventions that address identified barriers that may contribute to the lead screening rates identified during the baseline and follow-up project periods.

Appendix D: PIP Summary Form: Lead Screening in Children *for* Health Plan of Nevada

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 twelve months), or a status (e.g., a recipient'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 (Medicaid)	**Describe the rationale for selection of the study indicator:** **Lead Screening in Children (LSC)**
Numerator	All eligible children in the Medicaid (SmartChoice) population who received at least one capillary or venous blood test on or before the child's second birthday. The capillary or blood test will be defined by the CPT procedure code of 83655.
Denominator	All children enrolled in Medicaid (SmartChoice) who turned two years of age during the measurement year and were enrolled for 12 months continuously prior to the child's second birthday. Continuous enrollment is defined as not having more than 1 gap in enrollment of up to 45 days during the 12 months prior to the child's second birthday. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the member may not have more than a 1 month gap in coverage (i.e., a member whose coverage lapses for 2 months (60 days) is not considered continuously enrolled).
First Measurement Period Dates	January 1, 2007 through December 31, 2007
Benchmark	To be determined once the baseline rate is collected and the Quality Compass Data base is made available by NCQA with national comparative benchmarks.
Source of Benchmark	Medicaid HEDIS® 2008 Quality Compass benchmarks.
Baseline Goal	To be determined once the baseline rate is collected and the Quality Compass Data base is made available by NCQA with national comparative benchmarks.

Appendix D: PIP Summary Form: Lead Screening in Children *for* Health Plan of Nevada

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 twelve months), or a status (e.g., a recipient'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 (Check Up)	Describe the rationale for selection of the study indicator: Lead Screening in Children (LSC)
Numerator	All eligible children in the Nevada Check Up population who received at least one capillary or venous blood test on or before the child's second birthday. The capillary or blood test will be defined by the CPT procedure code of 83655.
Denominator	All children enrolled in Nevada Check Up who turned two years of age during the measurement year and were enrolled for 12 months continuously prior to the child's second birthday. Continuous enrollment is defined as not having more than 1 gap in enrollment of up to 45 days during the 12 months prior to the child's second birthday. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the member may not have more than a 1 month gap in coverage (i.e., a member whose coverage lapses for 2 months (60 days) is not considered continuously enrolled). The member's race and ethnicity will be captured in order to report this study indicator by race and ethnicity category.
First Measurement Period Dates	January 1, 2007 through December 31, 2007
Benchmark	To be determined once the baseline rate is collected and the Quality Compass Data base is made available by NCQA with national comparative benchmarks.
Source of Benchmark	Medicaid HEDIS® 2008 Quality Compass benchmarks.
Baseline Goal	To be determined once the baseline rate is collected and the Quality Compass Data base is made available by NCQA with national comparative benchmarks.

Use this area for the provision of additional information:

- The hybrid methodology will be used to collect the two study indicators. If the numerator was determined to be compliant using administrative data, there is no need to capture information from the medical record. If the numerator was determined to be non-compliant using administrative data, the documentation captured in the medical record must include a note indicating the date the test was performed and the result or finding (i.e., the actual blood lead level).

- Additional analysis will be conducted to identify potential disparities in lead screening rates among different racial and ethnic groups. The member's race and ethnicity will therefore be captured in order to report this study indicator by race and ethnicity category.

D. Activity IV: Use a representative and generalizable study population. The selected topic should represent the entire Medicaid enrolled population, with system wide measurement and improvement efforts to which the study indicators apply. Once the population is identified, a decision must be made whether to review data for the entire population or a sample of that population. The length of a recipient's enrollment needs to be defined in order to meet the study population criteria.

Study population:

All children who turned two years of age during the measurement year and enrolled for 12 months continuously prior to the child's second birthday based on HEDIS® 2008 criteria will comprise the study population that will be focus of systematic measurement and improvement efforts.

Based on the HEDIS 2008 criteria, continuous enrollment is defined as not having more than 1 gap in enrollment of up to 45 days during the 12 months prior to the child's second birthday. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the member may not have more than a 1 month gap in coverage (i.e., a member whose coverage lapses for 2 months (60 days) is not considered continuously enrolled).

Once the larger population has been identified, a valid and reliable sample of the study population will be selected for targeted medical record review.

Appendix D: PIP Summary Form: Lead Screening in Children *for* Health Plan of Nevada

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

Measure	Sample Error and Confidence Level	Sample Size	Population	Method for Determining Size (*describe*)	Sampling Method (*describe*)

Appendix D: PIP Summary Form: Lead Screening in Children *for* Health Plan of Nevada

F. Activity VIa: Use valid and reliable data collection procedures. Data collection must ensure that the 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
[ ] Electronic Medical Records

[ ] Other data

_____
_____
_____
_____

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

_____
_____
_____

[ ] 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 _____

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

F. Activity VIc. Data analysis plan, timeline, and other pertinent methodological features. Complete only if needed.

Estimated percentage degree of administrative data completeness: _____ percent.

Supporting documentation:

_____
_____
_____

Appendix D: PIP Summary Form: Lead Screening in Children *for* Health Plan of Nevada

G. Activity VIIa: Include 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

G. Activity VIIb: Implement intervention and improvement strategies. Real, sustained improvements in care result from a continuous cycle of measuring and analyzing performance, and developing and implementing systemwide improvements in care. Describe interventions designed to change behavior at an institutional, practitioner, or recipient level.
Describe interventions: **Baseline to Remeasurement 1:** **Remeasurement 1 to Remeasurement 2:** **Remeasurement 2 to Remeasurement 3:**

H. Activity VIIIa. Data analysis: Describe the data analysis process in accordance with the analysis plan and any ad hoc analysis done on the selected clinical or nonclinical study indicators. Include the statistical analysis techniques used and *p* values.
Data analysis process: **Baseline Measurement:** **Baseline to Remeasurement 1:** **Remeasurement 1 to Remeasurement 2:** **Remeasurement 2 to Remeasurement 3:**

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

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

Baseline Measurement:

Baseline to Remeasurement 1:

Remeasurement 1 to Remeasurement 2:

Remeasurement 2 to Remeasurement 3:

HSAG HEALTH SERVICES ADVISORY GROUP

Appendix D: PIP Summary Form: Lead Screening in Children *for* Health Plan of Nevada

I. Activity IX: Report improvement. Describe any meaningful change in performance observed and demonstrated during baseline measurement.

Quantifiable Measure No. 1:

Time Period Measurement Covers	Baseline Project Indicator Measurement	Numerator	Denominator	Rate or Results	Industry Benchmark	Statistical Test and Significance* Test statistic and *p*-value
	Baseline:					
	Remeasurement 1					
	Remeasurement 2					
	Remeasurement 3					
	Remeasurement 4					
	Remeasurement 5					

Quantifiable Measure No. 2:

Time Period Measurement Covers	Baseline Project Indicator Measurement	Numerator	Denominator	Rate or Results	Industry Benchmark	Statistical Test and Significance* Test statistic and *p*-value
	Baseline:					
	Remeasurement 1					
	Remeasurement 2					
	Remeasurement 3					
	Remeasurement 4					
	Remeasurement 5					

Quantifiable Measure No. 3:

Time Period Measurement Covers	Baseline Project Indicator Measurement	Numerator	Denominator	Rate or Results	Industry Benchmark	Statistical Test and Significance* Test statistic and *p*-value
	Baseline:					
	Remeasurement 1					
	Remeasurement 2					
	Remeasurement 3					
	Remeasurement 4					
	Remeasurement 5					

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

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