HSAG HEALTH SERVICES ADVISORY GROUP *Draft Copy for Review*

Department of Human Services Med-QUEST Division
2005–2006 Hawaii Performance Improvement Projects (PIPs) Policy

Purpose: To provide direction to the QUEST plans and the CAMHD regarding implementation of Performance Improvement Projects.

Policy:

1. The QUEST plans and the CAMHD will comply with the Code of Federal Regulations (42 CFR 423.240) and Centers for Medicare & Medicaid Services (CMS) protocol, "Validating Performance Improvement Projects, (VPIP)" which require that PIPs be designed to achieve significant improvement, sustained over time, in clinical and nonclinical areas that are expected to have a favorable effect on health outcomes and member satisfaction.

2. QUEST plans and the CAMHD will conduct two PIPs each fiscal year (Attachment B: CMS Protocol: Conducting Performance Improvement Projects) both of which must be approved in advance by the Med-QUEST Division (MQD).

3. PIPs, conducted on a state fiscal-year basis, shall focus on clinical and/or nonclinical areas.

    a. Clinical PIPs: In most cases, a baseline measurement and intervention will be completed by the end of the first year; at least two re-measurements and the data analysis will be completed by the end of the second year.

    b. Nonclinical PIPs: In most cases, a baseline measurement, intervention and first re-measurement will be completed by the end of the first year; at least one additional re-measurement and the data analysis will be completed by the end of the second year.

4. The EQRO will validate each PIP in consultation with the QUEST plans, the CAMHD and Med-QUEST using the CMS VPIP protocol criteria.

    a. Initial review will involve assessment of the PIP using the "HSAG PIP Validation Tool." The EQRO will validate the PIP process using this format.

        i. QUEST plans, and the CAMHD will utilize the "HSAG PIP Documentation Tool" form throughout the PIP process.

        ii. A minimum completion of Activities 1-3 and a PIP timeline are required for review and validation by the EQRO. Activity 1-3 must be completed on the PIP Documentation Tool for all new PIPs and approved by MQD prior to implementation of the PIP.

b. Validation occurs annually and includes the following CMS protocol activities:

i. Assessment of the study methodology: The PIP will be assessed and scored to the level of completion.

ii. Validation of the PIP to the completed step. Any steps that have not been completed will be scored as Not Assessed and will not affect the final score.

iii. Evaluation of the overall validity and reliability of PIP results. The PIP will be validated and scored using the CMS protocol VPIP (May 1, 2002). This activity is conducted each time the PIP is validated using the following scoring system
   1. High Confidence/Confidence
   2. Low Confidence
   3. Not Credible

5. Reporting Requirements

a. The EQRO will submit a final report for each PIP submitted by the QUEST plans and the CAMHD for validation to MQD each April. The PIP validation report will also be included in the EQR Technical report submitted to CMS on June 30.

b. The following information relating to the PIPs will be reported to the MQD by the QUEST plans and the CAMHD by February 28 of each year.

i. The Annual Evaluation of the previous year's Quality Assurance/Quality Improvement Program (QA/IP) shall include HSAG's final PIP validation findings and, if applicable, the corrective actions completed. Additionally, the QUEST plans' and the CAMHD's Annual Evaluation shall also include the progress to date on each PIP scheduled for review by HSAG in the spring of the following year.

ii. The Annual Workplan submitted with the Annual QA/IP Description shall include the PIP-related activities and corresponding benchmark dates for the current year

PIP TIMELINE

PIP Task		
1. EQRO consultation with MQD, QUEST plans and the CAMHD to discuss PIP topics.	MQD/QUEST plans/ CAMHD/HSAG	July
2. QUEST plans and the CAMHD submit PIP documentation utilizing the PIP Documentation Tool to HSAG. Documentation includes Activity I through Activity III.	QUEST plans/CAMHD	August
3. HSAG validates the first three activities (Activity I through Activity III) and provides feedback to the QUEST plans and the CAMHD. The PIP must be approved by MQD prior to implementation.	HSAG/MQD	August - September
4. QUEST plans and the CAMHD implement PIPs.	QUEST plans /CAMHD	September - February
5. QUEST plans and the CAMHD submit PIP documentation to the completed step in the PIP Documentation Tool to HSAG. Documentation will be submitted for both the new and/or ongoing PIPs.	QUEST plans/ CAMHD	February
6. HSAG validates each PIP to the completed step and provides feedback to the QUEST plans and the CAMHD. The completed PIP validation tool is forwarded to MQD, QUEST plans and the CAMHD.	HSAG	February - March
7. HSAG completes PIP Validation reports and submits to MQD, the QUEST plans and the CAMHD.	HSAG	April
8. HSAG incorporates PIP Validation findings into EQR Technical Report.	HSAG	May - June
9. The QUEST plans' and the CAMHD's Annual QA/IP Evaluation Report submitted to MQD will include HSAG's final PIP validation findings, and if applicable, corrective actions completed. Additionally, the Annual QA/IP Evaluation will also include progress to date on each PIP scheduled for review by HSAG in the spring of the following year.	QUEST plans/ CAMHD	End of February
10. QUEST plans' and the CAMHD's Annual QA/IP Work Plan submitted to MQD will include the current year's PIP-related activities and corresponding benchmark dates (i.e. planned completion, re-measurement dates, date for decision about new and/or continuing PIP(s) for the following fiscal year, etc.)	QUEST plans/CAMHD	End of February

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State of Hawaii
Department of Human Services Med-QUEST Division
Performance Improvement Project (PIP)
Activities Timeline

Activities	2005 JUL	AUG	SEP	OCT	NOV	DEC	2006 JAN	FEB	MAR	APR	MAY	JUN
PIP – Ongoing for FY 2005-2006 – Data Collection Year 2004												
PIP Activities – Remeasurement	◄	—	—	—	—	—	—	►				
QUEST Plans and the CAMHD submit PIP Documentation								◄	►			
HSAG validates each PIP to the completed step and provides feedback to the QUEST plans and the CAMHD.								◄	►			
Final PIP Validation Report to QUEST Plans and the CAMHD									◄	—	►	
Incorporate PIP Validation Findings into EQR Report											◄	►
PIP Consultation with HSAG/MQD	◄	►										
Initial PIP Validation Documentation due to HSAG – First Three Activities and Timeline		◄	►									
HSAG validates the first three activities (Activity I through Activity III) and provides feedback to the QUEST plans and the CAMHD.			◄	►								
Implementation of PIP			◄	—	—	—	—	►				
QUEST Plans and the CAMHD Submit PIP documentation to the completed step in the PIP Documentation Tool to HSAG. Documentation will be submitted for both the new and/or ongoing PIPs								◄	►			

State of Hawaii
Department of Human Services Med-QUEST Division
Performance Improvement Project (PIP)
Activities Timeline

Activities	2005 JUL	AUG	SEP	OCT	NOV	DEC	2006 JAN	FEB	MAR	APR	MAY	JUN
HSAG validates each PIP to the completed step and provides feedback to the QUEST plans and the CAMHD. the CAMHD.								↔				
Final PIP Validation Report to QUEST Plans and the CAMHD										↔		
Incorporate PIP Validation Findings into EQR Report											↔	
Select PIP Topics for next Contract Year												↔
Annual QA/IP Activities - Inclusion of PIP Activities												
QA/IP Program Description and Work Plan								↔				
Annual QA/IP Program Evaluation								↔				

Definitions and Explanations

This document was developed by HSAG as a resource to assist managed care organizations (MCOs) or behavioral health organizations (BHOs) (also called health plans [HP] herein) in understanding the broad concepts in each activity related to Performance Improvement Projects (PIPs). The specific concept is delineated in the left column, and the explanations and examples are provided in the right column.

Definitions and Explanations	
Activity I. Appropriate Study Topic	
Broad Spectrum of Care	• For 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. • For nonclinical areas: Continuity or coordination of care addressed in a manner in which care is provided from multiple providers and across multiple episodes of care, e.g., disease- or condition-specific.
Eligible Population	• May be defined as those members who meet the study topic parameters. • Background rationale and/or documentation to support why the topic was chosen. Indicate if the topic was State-mandated. • Example: Previous study results and/or baseline data analysis.
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 Step One: Choose the Selected Study Topic in the PIP Tool.
Activity II. Clearly Defined, Answerable Study Question	
Study Question/Hypothesis	• 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 outreach immunization education increase the rates of immunizations for children 0–2 years of age? 2. Does increasing flu immunizations for members 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?

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 percentage of enrolled members who were 12–21 years of age who had at least one comprehensive well-care visit with a primary care practitioner or an OB/GYN 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 (AAP) and American Diabetes Association (ADA).
Activity IV. Correctly Identified Study Population	
Eligible Population	◆ Refers to those members who are included in the study. ◆ Includes: Age, conditions, enrollment criteria, measurement periods. ◆ Example: The eligible population includes all children between the ages of 0–2 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, assume that a maximum sample size is needed to establish a statistically valid baseline for the study. HSAG will review whether the MCO/BHO defined the impact the topic has on the population or the number of eligible members in the population.
Sample Size	◆ Provide the size of the sample to be used.
Representative Sample	◆ Refers to the sample resembling the entire population.
Confidence Level	◆ Statistical confidence is a numerical statement of the probable degree of certainty or accuracy of an estimate, e.g., 95 percent level of confidence with a 5 percent margin of error.

HEDIS® is a registered trademark of the National Committee for Quality Assurance (NCQA).

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., description of numerator/denominator, lab values.
Inter-rater Reliability (IRR)	◆ The HSAG review team is evaluating if there is a tool, policy, and/or process in place to verify the accuracy of the data abstracted. Is there an "over-read" (inter-rater reliability) process of a minimum percentage review? ◆ 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 is looking for the MCO/BHO to describe the process it utilized in data collection. What are the criteria (e.g., what CPT and/or source codes were used)?
Data Completeness	◆ Provide information on how accurate the data are. ◆ HSAG review team looks for a statement regarding how data completeness was determined. ◆ Example: Was there a claim/encounter run-out period to assure completeness of data?
Activity VII. Appropriate Improvement Strategies	
Causes and Barriers	◆ It is expected that interventions associated with improvement of quality indicators will be system interventions. ◆ Interventions for improvement identified through evaluation or barrier analysis. If there was no improvement, what problem-solving processes were put into place to identify possible causes and proposed changes to implement solutions?
Standardized	◆ If the interventions have resulted in successful outcomes, then the interventions continue and the MCO/BHO monitors to assure the outcomes remain. ◆ Examples: If an intervention is the utilization of practice guidelines, then the MCO/BHO continues to use them; if mailers are a successful intervention, then the MCO/BHO continues the mailings and monitors outcomes.

Definitions and Explanations	
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 hypothesis 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 the study results? ◆ Example: Change in record extraction (e.g., hired a vendor, changes in HEDIS methodology).
Presentation of the Data Analysis	◆ Results should be presented in tables or graphs with measurement periods, results, and benchmarks clearly identified.
Identifies Initial and Remeasurement of Study Indicators	◆ Clearly identify in the report which measurement period the indicator results reflect.
Statistical Differences Between Initial and Remeasurement Periods	◆ The HSAG review team looks for evidence of a statistical test (e.g., t-test, chi square).
Identify the Extent to Which the Study Was Successful	◆ The HSAG review team is looking for improvement over several measurement periods. ◆ Both interpretation and analysis should be based on continuous improvement philosophies such that the MCO/BHO documents the data results and what follow-up steps will be taken for improvement.
Activity IX. Real Improvement Achieved	
Remeasurement Methodology Is the Same as Baseline	◆ The HSAG review team is looking to see that the study methodology remained the same for the entire study.
Documented Improvement in Processes or Outcomes of Care	◆ The study report should document how interventions were successful in impacting the system processes or outcomes. ◆ Examples: Change in data collection, rate increase or decrease demonstrated in graphs/tables.
Activity X. Sustained Improvement Achieved	
Sustained Improvement	◆ The HSAG review team is looking 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.

Overview

Using the PIP validation tool shown in the appendix, HSAG assessed each component of **QUEST Plan's** PIP, based on the following CMS protocol activities. The methodology requires that 10 activities be reviewed.

10 activities were assessed for **QUEST Plan's** PIP for PIP Topic:

- 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

Scoring Methodology

Each activity consisted of elements necessary for the successful completion of a valid PIP. The elements within each activity were scored by the reviewer as *Met*, *Partially Met*, *Not Met*, or *Not Applicable* (*NA*). Some of the elements were designated "critical" elements (marked with a "C" in the PIP evaluation tool), which had to be *Met* to produce an accurate and reliable PIP. For example, for Activity II of the PIP evaluation tool, if the study question or hypothesis could not be answered or proven, then the critical question was scored as *Not Met,* and the PIP was not valid.

The PIP was scored as follows:

Met	(1) All critical elements were *Met*, **and** (2) 80%–100% of all elements were *Met* across all activities.
Partially Met	(1) All critical elements were *Met,* but less than 80% of all elements were *Met* across all activities; **or** (2) One or more critical elements was *Partially Met*.
Not Met	One or more critical elements was *Not Met*.
Not Applicable (NA)	*Not Applicable* elements (including critical elements) were removed from all scoring.

Given the importance of critical elements to this methodology, any critical element that receives a *Not Met* status will result in a zero score, and requires immediate revisions and resubmission of the PIP. In addition, HSAG technical assistance can be provided at the direction of the Hawaii Department of Human Services, Med-QUEST Division (the Department). Future submissions should address and include documentation for all non-critical elements that were *Partially Met* and *Not Met.*

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 score was zero. In addition, the methodology addressed the potential situation in which all critical elements were *Met*; however, suboptimal performance was observed in the noncritical elements. The final outcome would be a *Partially Met* status, requiring additional documentation and/or HSAG technical assistance at the direction of the Department to be submitted by the MCOs/PIHPs.

The score for the MCOs/PIHPs was calculated as the percentage 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 MCOs/PIHPs receives an overall *Met* status, indicating the PIP is valid. The score for the MCOs/PIHPs is calculated as 43/45 = 95.6 percent. No further action is required.

Example 2: *Met* = 52, *Partially Met* = 0, *Not Met* = 1, *NA* = 0, and one critical element was *Not Met*. The MCOs/PIHPs receives an overall *Not Met* status and the PIP is not valid. The score is calculated as zero. The MCOs/PIHPs will need to revise the PIP and resubmit, or send in appropriate information to resolve the issue with the critical element.

Example 3: *Met* = 43, *Partially Met* = 1, *Not Met* = 1, *NA* = 8, and one critical element was *Partially Met*. The MCOs/PIHPs receives an overall *Partially Met* status, indicating the PIP is valid. The score for the MCOs/PIHPs is calculated as 43/45 = 95.6 percent. The MCOs/PIHPs will need to send in appropriate information to resolve the 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 MCOs/PIHPs receives an overall *Partially Met* status, indicating the PIP is valid. The score for the MCOs/PIHPs is calculated as 38/53 = 71.7 percent. The MCOs/PIHPs will need to send in appropriate information to resolve the issues with the *Partially Met* elements and the four elements that were *Not Met*.

Example 5: *Met* = 38, *Partially Met* = 11, *Not Met* = 4, *NA* = 0, and one critical element was *Partially Met*. The MCOs/PIHPs receives an overall *Partially Met* status, indicating the PIP is valid. The score for the MCOs/PIHPs is calculated as 38/53 = 71.7 percent. The MCOs/PIHPs will need to send in appropriate information to resolve the issues with the one *Partially Met* critical element, the other *Partially Met* elements, and the four elements that were *Not Met*.

Hawaii Department of Human Services, Med-QUEST Division
Performance Improvement Project (PIP) Tool
for <QUEST Plan Name>

DEMOGRAPHIC INFORMATION	
QUEST Name and ID: _____	
Study Leader Name: _____ Title: _____	
Telephone Number: _____ Email Address: _____	
Name of Project/Study: _____	
Type of Study: ☐ Clinical ☐ Non-clinical	
Date of Study Period: From _____ to _____	
_____ Number of QUEST Recipients served by QUEST Plan _____ Number of QUEST Recipients in Project/Study	

DEMOGRAPHIC INFORMATION
Performance Improvement Project (PIP) Name: <PIP Study Name>
Activity I: Select the Study Topic(s)
A. Activity One: Choose the Selected Study Topic. Topics selected for study should reflect the Medicaid enrollment in terms of demographic characteristics, prevalence of disease, and the potential consequences (risks) of the disease. Topics could also address the need for a specific non-clinical service. The goal of the project should be to improve processes and outcomes of health care for the full affected population. The topic may be specified by the State Medicaid agency or on the basis of Medicaid enrollee input.
Study Topic:
B. Activity Two: The Study Question. Stating the question(s) helps maintain the focus of the PIP and sets the framework for data collection, analysis, and interpretation.
Study Question:

DEMOGRAPHIC INFORMATION

C. Activity Three: Selected Study Indicators. A study indicator is a quantitative or qualitative characteristic or variable that reflects a discrete event (e.g., rates of hospital readmissions within 30 or 90 days), or a status (e.g., percent of consumers reporting that they actively participate in treatment planning) that is to be measured. The selected indicators should be appropriate for the study topic and question as well as track performance or improvement over time. The indicators should be objective, clearly and unambiguously defined, and based on current clinical knowledge or health services research.

Study Indicator #1:	
Numerator:	
Denominator:	
First Measurement Period Dates:	
Benchmark:	
Source of Benchmark:	
Baseline Goal:	
Study Indicator #2:	
Numerator:	
Denominator:	
First Measurement Period Dates:	
Benchmark:	
Source of Benchmark:	
Baseline Goal:	
Study Indicator #3:	
Numerator:	
Denominator:	
First Measurement Period Dates:	
Benchmark:	
Source of Benchmark:	
Baseline Goal:	

DEMOGRAPHIC INFORMATION

D. Activity 4: Identified Study Population. The study population should be clearly defined to represent the entire population to which the PIP study question and indicators apply. The length of recipient enrollment should be considered and defined. All selection criteria should be listed here. Once the population is identified, a decision must be made whether to review data for the entire population or a sample of that population.

Identified Study Population:

E. Activity 5: Sampling Methods. If sampling is to be used to select members of the study, proper sampling techniques are necessary to provide valid and reliable information on the quality of care provided. The true prevalence or incidence rate for the event in the population may not be known for the first time a topic is studied. In this case, an estimate should be used and the basis for that estimate indicated.

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

DEMOGRAPHIC INFORMATION

F. Activity 6: Data Collection Procedures. Data collection must ensure that the data collected on the PIP indicators are valid and reliable. Validity is an indication of the accuracy of the information obtained. Reliability is an indication of the repeatability or reproducibility of a measurement.

Data Sources

[ ] Hybrid (medical/treatment records and administrative)

[ ] Medical/treatment record abstraction
- Record Type
  - [ ] Outpatient
  - [ ] Inpatient
  - [ ] Other _____
- Other Requirements
  - [ ] Data collection tool attached
  - [ ] Data collection instructions attached
  - [ ] Summary of data collection training attached
  - [ ] IRR process and results attached

[ ] Other data

Description of Data Collection Staff

[ ] 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 _____

DEMOGRAPHIC INFORMATION

F. Activity 6a: Data Collection Cycle.	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 6b. Data Analysis Plan and Other Pertinent Methodological Features

DEMOGRAPHIC INFORMATION

G. Activity 7. Improvement Strategies. Real, sustained improvements in care result from a continuous cycle of measuring and analyzing performance, and developing and implementing system-wide improvements in care. Describe interventions designed to change behavior at an institutional, practitioner, or beneficiary level.

Describe interventions.

Baseline to Remeasurement 1

Remeasurement 1 to Remeasurement 2

Remeasurement 2 to Remeasurement 3

Performance Improvement Project (PIP) Name: <PIP Study Name>

H. Activity 8A. Data analysis: Describe the data analysis process in accordance with the analysis plan and any ad-hoc analysis done on the selected clinical or non-clinical study indicators. Include the statistical analysis techniques utilized and *p* values.

Baseline Measurement

Remeasurement 1

Remeasurement 2

Remeasurement 3

Performance Improvement Project (PIP) Name: <PIP Study Name>

H. Activity 8B. Interpretation of study results: Describe the results of the statistical analysis, interpret the findings, and discuss the successfulness of the study and indicate follow-up activities. Also, identify any factors that could influence the measurement or validity of the findings.

Baseline Measurement

Remeasurement 1

Remeasurement 2

Remeasurement 3

Performance Improvement Project (PIP) Name: <PIP Study Name>						
I. Activity 9. Study Results Summary and Improvement: List study results and describe any meaningful change in performance observed during the time period of analysis.						
#1 Quantifiable Measure:						
Time Period Measurement Covers	**Baseline Project Indicator Measurement**	**Numerator**	**Denominator**	**Rate or Results**	**Industry Benchmark**	**Statistical Test and Significance***
	Baseline:					
	Remeasurement 1:					
	Remeasurement 2:					
	Remeasurement 3:					
	Remeasurement 4:					
	Remeasurement 5:					
#2 Quantifiable Measure:						
Time Period Measurement Covers	**Baseline Project Indicator Measurement**	**Numerator**	**Denominator**	**Rate or Results**	**Industry Benchmark**	**Statistical Test and Significance***
	Baseline:					
	Remeasurement 1:					
	Remeasurement 2:					
	Remeasurement 3:					
	Remeasurement 4:					
	Remeasurement 5:					

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

Performance Improvement Project (PIP) Name: <PIP Study Name>
J. Activity 10. Sustained improvement: Describe any demonstrated improvement through repeated measurements over comparable time periods. Discuss any random year-to-year variation, population changes, and sampling error that may have occurred during the remeasurement process.

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Hawaii Department of Human Services, Med-QUEST Division
2005–2006 PIP Validation Tool
for <QUEST Plan Name>

DEMOGRAPHIC INFORMATION	
QUEST Plan Name or ID: _____	
Study Leader Name: _____	
Telephone Number: _____	
Name of Project/Study: _____	
Type of Study: ☐ Clinical ☐ Nonclinical	
Date of Study Period: From _____ to _____	
Type of Delivery System – check all that apply: ☐ Staff Model ☐ QUEST Plan ☐ Network ☐ PHP ☐ Direct IPA ☐ MCCN ☐ IPA Organization	_____ Number of QUEST Recipients in QUEST Plan _____ Number of QUEST Recipients in Study
Number of QUEST Primary Care Physicians _____	
Number of QUEST Plan Specialty Physicians _____	
Number of Physicians in Study (if applicable) _____	

Hawaii Department of Human Services, Med-QUEST Division
2005–2006 PIP Validation Tool
for <QUEST Plan Name>

ACTIVITIES		EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation				
I. Appropriate Study Topic		**The 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 enrollee input.
	—	1. Reflects high-volume or high-risk conditions (or was selected by the State).	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	2. Is selected following collection and analysis of data (or was selected by the State).	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	3. Addresses a broad spectrum of care and services (or was selected by the State).	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	4. Includes all eligible populations that meet the study criteria.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	

Hawaii Department of Human Services, Med-QUEST Division
2005–2006 PIP Validation Tool
for <QUEST Plan Name>

ACTIVITIES		EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation				
I. Appropriate Study Topic		**The 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 enrollee input.
	—	5. Does not exclude members with special health care needs.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	C*	6. Has the potential to affect member health, functional status, or satisfaction	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
Totals for Activity I	1**		__ Met __ Partially Met __ Not Met __ N/A	

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

** This number tallies the total number of *critical* evaluation elements for this review activity.

Hawaii Department of Human Services, Med-QUEST Division
2005–2006 PIP Validation Tool
for <QUEST Plan Name>

ACTIVITIES		EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation				
II. Clearly Defined, Answerable Study Question		**The written study question or hypothesis:**		Stating the 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.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	C*	2. Is answerable/provable.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
Totals for Activity II	1**		__ Met __ Partially Met __ Not Met __ N/A	

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

** This number tallies the total number of *critical* evaluation elements for this review activity.

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ACTIVITIES		EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation				
III. Clearly Defined Study Indicator(s)		**Study indicators:**		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 twelve months) or a status (e.g., a member'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.
	C*	1. Are well defined, objective, and measurable.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	2. Are based on practice guidelines, with sources identified.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	C*	3. Allow for the study question/hypothesis to be answered or proven.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	4. Measure changes (outcomes) in health or functional status, member satisfaction, or valid process alternatives.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	C*	5. Have available data that can be collected on each indicator.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	

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ACTIVITIES		EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation				
III. Clearly Defined Study Indicator(s)		**Study indicators:**		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 twelve months) or a status (e.g., a member'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.
	—	6. Are nationally recognized measures such as HEDIS, when appropriate.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	7. Include the basis on which each indicator was adopted, if internally developed.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
Totals for Activity III	3**		__ Met __ Partially Met __ Not Met __ N/A	

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

** This number tallies the total number of *critical* evaluation elements for this review activity.

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ACTIVITIES		EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation				
IV. Correctly Identified Study Population		**The method for identifying the eligible population:**		The selected topic should represent the entire eligible Medicaid-enrolled population, with system-wide measurement and improvement efforts to which the PIP study indicators apply.
	C*	1. Is accurately and completely defined.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	2. Includes requirements for the length of a member's enrollment in the QUEST Plan.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	C*	3. Captures all members to whom the study question applies.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
Totals for Activity IV	2**		__ Met __ Partially Met __ Not Met __ N/A	

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

** This number tallies the total number of *critical* evaluation elements for this review activity.

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ACTIVITIES		EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation				
V. Valid Sampling Techniques		**Sampling techniques:**		If sampling is to be used to select members 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.
	—	1. Consider and specify the true or estimated frequency of occurrence (or the number of eligible members in the population).	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
		2. Identify the sample size (or use the entire population).	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	3. Specify the confidence interval to be used (or use the entire population).	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	4. Specify the acceptable margin of error (or use the entire population).	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	C*	5. Ensure a representative sample of the eligible population.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	6. Are in accordance with generally accepted principles of research design and statistical analysis.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
Totals for Activity V	1**		__ Met __ Partially Met __ Not Met __ N/A	

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

** This number tallies the total number of *critical* evaluation elements for this review activity.

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ACTIVITIES		EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation				
VI. Accurate/ Complete Data Collection		**The data collection techniques provide for the following:**		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. Clearly defined data elements to be collected.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	2. Clearly identified sources of data.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	3. A clearly defined and systematic process for collecting data that includes how baseline and remeasurement data will be collected.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	4. A timeline for the collection of baseline and remeasurement data.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	5. Qualified staff and personnel to collect manual data.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	C*	6. A manual data collection tool that ensures consistent and accurate collection of data according to indicator specifications.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	7. A manual data collection tool that supports inter-rater reliability.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	8. Clear and concise written instructions for completing the manual data collection tool.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	9. An overview of the study in written instructions.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	

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ACTIVITIES		EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation				
VI. Accurate/ Complete Data Collection		**The data collection techniques provide for the following:**		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. Automated data collection algorithms that show steps in the production of indicators.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	11. An estimated degree of automated data completeness between:	☐Met 100%–80% ☐ Partially Met 79%–50% ☐ Not Met <50% (or not provided) ☐ N/A	
Totals for Activity VI	1**		Met Partially Met Not Met N/A	

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

** This number tallies the total number of *critical* evaluation elements for this review activity.

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ACTIVITIES		EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation				
VII. Appropriate Improvement Strategies		**Planned/implemented strategies for improvement are:**		Real, sustained improvements in care result from a continuous cycle of measuring and analyzing performance, and developing and implementing system-wide improvements in care. Describe interventions designed to change behavior at an institutional, practitioner, or beneficiary level.
	—	1. Related to causes/barriers identified through data analysis and QI processes.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	2. System changes that are likely to induce permanent change.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	3. Revised if original interventions are not successful.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	4. Standardized and monitored if interventions are successful.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
Totals for Activity VII	0*		__ Met __ Partially Met __ Not Met __ N/A	

* This number tallies the total number of *critical* evaluation elements for this review activity.

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ACTIVITIES		EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation				
VIII. Sufficient Data Analysis and Interpretation		**The data analysis:**		Describe the data analysis process on the selected clinical or nonclinical study indicators. Include the statistical analysis techniques utilized.
	C*	1. Is conducted according to the data analysis plan in the study design.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	C*	2. Allows for generalization of the results to the study population if a sample was selected.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	3. Identifies factors that threaten internal or external validity of findings.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	4. Includes an interpretation of findings.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	5. Is presented in a way that provides accurate, clear, and easily understood information.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	6. Identifies initial measurement and remeasurement of study indicators.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	7. Identifies statistical differences between initial measurement and remeasurement.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	

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ACTIVITIES		EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation				
VIII. Sufficient Data Analysis and Interpretation		**The data analysis:**		Describe the data analysis process on the selected clinical or nonclinical study indicators. Include the statistical analysis techniques utilized.
	—	8. Identifies factors that affect ability to compare initial measurement with remeasurement.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	9. Includes the extent to which the study was successful.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
Totals for Activity VIII	2**		__ Met __ Partially Met __ Not Met __ N/A	

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

** This number tallies the total number of *critical* evaluation elements for this review activity.

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ACTIVITIES		EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation				
IX. Real Improvement Achieved		**There is evidence of "real" improvement based on the following:**		Describe any meaningful change in performance observed during baseline measurement that was demonstrated. Discuss any random year-to-year variation, population changes, and sampling error that may have occurred during the remeasurement process.
	—	1. Remeasurement methodology is the same as baseline methodology.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	2. There is documented improvement in processes or outcomes of care.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	3. The improvement appears to be the result of intervention(s).	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
	—	4. There is statistical evidence that observed improvement is true improvement.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
Totals for Activity IX	0*		__ Met __ Partially Met __ Not Met __ N/A	

* This number tallies the total number of *critical* evaluation elements for this review activity.

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ACTIVITIES		EVALUATION ELEMENTS	SCORING	COMMENTS
Performance Improvement Project/Health Care Study Evaluation				
X. Sustained Improvement Achieved		**There is evidence of sustained improvement based on the following:**		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 the decline in improvement is not statistically significant.	☐ Met ☐ Partially Met ☐ Not Met ☐ N/A	
Totals for Activity X	0*		__ Met __ Partially Met __ Not Met __ N/A	

* This number tallies the total number of *critical* evaluation elements for this review activity.

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Table A-1—2005–2006 Performance Improvement Project Scores for <PIP Topic> for <QUEST-Abbr-Ftr>							
Review Activity	Total Number of Evaluation Elements	Number of Evaluation Elements **Met**	Number of Evaluation Elements **Partially Met**	Number of Evaluation Elements **Not Met**	Number of Evaluation Elements **N/A**	Total Number of Critical Elements	Total Critical Elements **Met**
I. Appropriate Study Topic	6					1	
II. Clearly Defined, Answerable Study Question	2					1	
III. Clearly Defined Study Indicator(s)	7					3	
IV. Correctly Identified Study Population	3					2	
V. Valid Sampling Techniques	6					1	
VI. Accurate/Complete Data Collection	11					1	
VII. Appropriate Improvement Strategies	4					No Critical Elements	
VIII. Sufficient Data Analysis and Interpretation	9					2	
IX. Real Improvement Achieved	4					No Critical Elements	
X. Sustained Improvement Achieved	1					No Critical Elements	
Totals for All Activities	53					11	

Table A-2—2005–2006 Performance Improvement Project Overall Score for <PIP Topic> for <QUEST-Abbr-Ftr>	
Percentage Score*	
Validation Status	

* Percentage score is calculated by dividing the total *Met* by the sum of the total *Met, Partially Met*, and *Not Met*.
** One or more critical elements were *<Partially Met/Not Met>*.

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EVALUATION OF THE OVERALL VALIDITY AND RELIABILITY OF PIP/STUDY RESULTS
HSAG assessed the implications on the validity and reliability of the PIP findings and reviewed the study based on demonstrated confidence in the reported PIP findings. Identifying PIP design problems and determining when an accumulation of threats to validity and reliability reach a point at which PIP findings and are no longer credible are always judgment calls. (See CMS Protocol for Validating PIPs, Activity 3, page 21).
***Met* = High confidence/Confidence in reported PIP results** ****Partially Met* = Low confidence in reported PIP results** *****Not Met = Reported PIP results not credible**
Summary of Aggregate Validation Findings *☐ Met **☐ Partially Met ***☐ Not Met**
Summary statement of the validation findings:

Validation of Performance Improvement Projects (PIPs)
PIP Tool Completion Instructions

The PIP form has been developed by Health Services Advisory Group, Inc. (HSAG) to flow logically through the Balanced Budget Act (BBA) requirements for submission of a PIP. Below is each PIP form activity, which includes the criteria used by the HSAG review team to complete the validation process.

Performance Improvement Project (PIP)
Activity I: Select the Study Topic(s)
A. Activity One: Choose the Selected Study Topic. Topics selected for study should reflect the Medicaid enrollment in terms of demographic characteristics, prevalence of disease, and the potential consequences (risks) of the disease. Topics could also address the need for a specific service. The goal of the project should be to improve processes and outcomes of health care. The topic may be specified by the State Medicaid agency or on the basis of Medicaid consumer input.
Study Topic: Make sure that the responses address all evaluation elements below: **HSAG Evaluation Elements** 1. **Reflects high-volume or high-risk conditions (or was selected by the State).** 2. **Is selected following collection and analysis of data (or was selected by the State).** 3. **Addresses a broad spectrum of care and services (or was selected by the State).** 4. **Includes all eligible populations that meet the study criteria.** 5. **Does not exclude recipients with special health care needs.** 6. **Has the potential to affect recipient health, functional status, or satisfaction.**
Activity II: Clearly Defined, Answerable Study Question
B. Activity Two: The Study Question. Stating the question(s) helps maintain the focus of the PIP and sets the framework for data collection, analysis, and interpretation.
Study Question: Make sure that the responses address all evaluation elements below: **HSAG Evaluation Elements** 1. **States the problem to be studied in simple terms.** 2. **Is answerable/provable.**

Performance Improvement Project (PIP)
Activity III: Clearly Defined Study Indicator(s)
C. Activity Three: Selected Study Indicators. 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 twelve months), or a status (e.g., a consumer's blood pressure is/is not below a specified level) that is to be measured. The selected indicators should track performance or improvement over time. The indicators should be objective, clearly and unambiguously defined, and based on current clinical knowledge or health services research.
Make sure that the responses address all evaluation elements below: **HSAG Evaluation Elements** 1. **The study indicator(s) is well defined, objective, and measurable.** 2. **The study indicator(s) is based on practice guidelines, with sources identified.** 3. **The study indicator(s) allows for the study question/hypothesis to be answered or proven.** 4. **The study indicator(s) measures changes (outcomes) in health or functional status, recipient satisfaction, or valid process alternatives.** 5. **The study indicator(s) has available data that can be collected on each indicator.** 6. **The study indicator(s) is nationally recognized measures such as HEDIS®, when appropriate.** 7. **The study indicator(s) includes the basis on which each indicator was adopted, if internally developed.**

HEDIS® is a registered trademark of the National Committee for Quality Assurance (NCQA).

Performance Improvement Project (PIP)
Activity IV: Correctly Identified Study Population
D. Activity 4: Identified Study Population. The selected topic should represent the entire Medicaid enrolled population with system-wide measurement and improvement efforts to which the PIP 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.
Identified Study Population: Make sure that the responses address all evaluation elements below: **HSAG Evaluation Elements** 1. **The method for identifying the eligible population is accurately and completely defined.** 2. **The method for identifying the eligible population includes requirements for the length of a recipient's enrollment in the managed care plan.** 3. **The method for identifying the eligible population captures all recipients to whom the study question applies.**

Performance Improvement Project (PIP)
Activity V: Valid Sampling Techniques
E. Activity 5: Sampling Methods. If sampling is to be used to select members of the study, proper sampling techniques are necessary to provide valid and reliable information on the quality of care provided. The true prevalence or incidence rate for the event in the population may not be known for the first time a topic is studied.

Make sure that the responses address all evaluation elements below:

HSAG Evaluation Elements

1. **Consider and specify the true or estimated frequency of occurrence (or the number of eligible consumers in the population).**
2. **Identify the sample size (or use the entire population).**
3. **Specify the confidence interval to be used (or use the entire population).**
4. **Specify the acceptable margin of error (or use the entire population).**
5. **Ensure a representative sample of the eligible population.**
6. **Ensure that the sampling techniques are in accordance with generally accepted principles of research design and statistical analysis.**

Performance Improvement Project (PIP)

Activity VI: Accurate/Complete Data Collection

F. Activity 6: Data Collection Procedures. Data collection must ensure that the data collected on the PIP indicators are valid and reliable. Validity is an indication of the accuracy of the information obtained. Reliability is an indication of the repeatability or reproducibility of a measurement.

Make sure that the responses address all evaluation elements below:

HSAG Evaluation Elements

1. **The data collection techniques provide clearly defined data elements to be collected.**
2. **The data collection techniques clearly specified sources of data.**
3. **The data collection techniques provide for a clearly defined and systematic process for collecting data that includes how baseline and remeasurement data will be collected.**
4. **The data collection techniques provide for a timeline for the collection of baseline and remeasurement data.**
5. **The data collection techniques provide for qualified staff and personnel to collect manual data.**
6. **A manual data collection tool that ensures consistent and accurate collection of data according to indicator specifications.**
7. **A manual data collection tool that supports inter-rater reliability.**
8. **Clear and concise written instructions for completing the manual data collection tool.**
9. **An overview of the study in written instructions.**
10. **Automated data collection algorithms that show steps in the production of indicators.**
11. **An estimated degree of automated data completeness.**

Performance Improvement Project (PIP)
Activity VII: Appropriate Improvement Strategies
G. Activity 7. Improvement Strategies. Real, sustained improvements in care result from a continuous cycle of measuring and analyzing performance, and developing and implementing system-wide improvements in care. Describe interventions designed to change behavior at an institutional, practitioner, or beneficiary level.

Make sure that the responses address all evaluation elements below:

HSAG Evaluation Elements

1. **Planned/implemented strategies for improvement are related to causes/barriers identified through data analysis and quality improvement (QI) processes.**
2. **Planned/implemented strategies for improvement are system changes that are likely to induce permanent change.**
3. **Planned/implemented strategies for improvement are revised if original interventions are not successful.**
4. **Planned/implemented strategies for improvement are standardized and monitored if interventions are successful.**

Performance Improvement Project (PIP) Name: ***Enter Title of PIP***
Activity VIII: Sufficient Data Analysis and Interpretation
H. Activity 8. Data analysis and interpretation of study results: Describe the data analysis process on the selected clinical or non-clinical study indicators. Include the statistical analysis techniques utilized.

Make sure that the responses address all evaluation elements below:

HSAG Evaluation Elements

1. **The data analysis is conducted according to the data analysis plan in the study design.**
2. **The data analysis allows for generalization of the results to the study population if a sample was selected.**
3. **The data analysis identifies factors that threaten internal or external validity of findings.**
4. **The data analysis includes an interpretation of findings.**
5. **The data analysis is presented in a way that provides accurate, clear, and easily understood information.**
6. **The data analysis identifies initial measurement and remeasurement of study indicators.**
7. **The data analysis identifies statistical differences between initial measurement and remeasurement.**
8. **The data analysis identifies factors that affect the ability to compare initial measurement with remeasurement.**
9. **The data analysis includes the extent to which the study was successful.**

Performance Improvement Project (PIP) Name: ***Enter Title of PIP***
Activity IX: Real Improvement Achieved
I. Activity 9. Reported Improvement: Describe any meaningful change in performance observed during baseline measurement that was demonstrated.
Make sure that the responses address all evaluation elements below: **HSAG Evaluation Elements** **1. Remeasurement methodology is the same as baseline methodology.** **2. There is documented improvement in processes or outcomes of care.** **3. The improvement appears to be the result of intervention(s).** **4. There is statistical evidence that observed improvement is true improvement.**

Performance Improvement Project (PIP) Name: ***Enter Title of PIP***
Activity X: Sustained Improvement Achieved
J. Activity 10. Sustained improvement: Describe any demonstrated improvement through repeated measurements over comparable time periods. Discuss any random year-to-year variation, population changes, and sampling error that may have occurred during the remeasurement process.
Make sure that the responses address all evaluation elements below: **HSAG Evaluation Elements** 1. **Repeated measurements over comparable time periods demonstrate sustained improvement, or the decline in improvement, or the decline in improvement is not statistically significant.**

Scoring Methodology Examples for Med-QUEST

The score for the QUEST Plan Name was calculated as the percentage of elements across all steps that received a *Met* status. The following five examples demonstrate how the scoring was applied.

Example Findings	Validation Status	Percent Score	Comments
Met = 43 All critical elements (CE) were *Met* Partially Met = 2 Not Met = 0 NA = 8	*Met*	43/45 95.6%	No further action is required.
Met = 52 One critical elements was *Not Met* Partially Met = 0 Not Met = 1 NA = 0	*Not Met*	51/52 0%	QUEST Plan Name should submit a revised PIP and any additional information necessary to resolve the unmet critical element.
Met = 43 One critical elements was *Partially Met* Partially Met = 1 Not Met = 1 NA = 8	*Partially Met*	43/45 95.6%	QUEST Plan Name should submit a revised PIP and any additional information necessary to resolve the *Partially Met* critical element and *Not Met* non-critical element.
Met = 38 All critical elements are *Met* Partially Met = 11 Not Met = 4 NA = 0	*Partially Met*	38/53 71.7%	QUEST Plan Name should submit a revised PIP and any additional information necessary to resolve the *Partially Met* and *Not Met* non-critical elements.
Met = 38 One critical element was *Partially Met* Partially Met = 11 Not Met = 4 NA = 0	*Partially Met*	38/53 71.7%	QUEST Plan Name should submit a revised PIP and any additional information necessary to resolve the *Partially Met* critical element, and *Partially Met* and *Not Met* non-critical elements.

HSAG
HEALTH SERVICES ADVISORY GROUP

Hawaii Department of Human Services, Med-QUEST Division
Key Steps for the Performance Improvement Project (PIP)
Data Analysis Plan

Key Steps	Due Date
Complete medical record (MR) review.	
Getting the Data Ready	
Perform quality checks on MR data ("clean the data").	
Create clean database of abstracted MR data.	
Combine administrative data with MR database (optional).	
Eliminate duplicate information – Perform second cleaning.	
Create final database for analysis.	
Conducting the Analysis	
Create and test programming logic/queries for study indicators.	
Calculate rates for study indicators.	
Compare rates, if possible (e.g., internal goals, baseline results, regional and/or national statistics).	
Conduct in-depth analysis for study indicators (e.g., consider comparing rates by clinics or providers to determine if a targeted intervention for a specific clinic could improve rates) and/or other data that was captured for the study.	
PIP Activities VI and VIII	
Activity VI - Discuss how the final database was created, including how data accuracy was maintained (e.g., inter-rater reliability for MR review, the validation of data during steps in the process to create the final database, medical record abstraction tool and instructions, and a flow diagram of the process).	
Activity VI- Discuss data completeness (e.g., may include IBNR report for study period showing administrative claims/encounters were 95% complete for time period, and that MR review was conducted so that data completeness not an issue).	
Activity VI - Discuss the timeline for the baseline data collection, intervention and remeasurement.	
Activity VI - Discuss the staff qualifications for data collection (e.g., used only Registered Nurses to abstract data, conducted ongoing inter-rater reliability).	
Activity VIII - Discuss any factors that occurred that may have affected the validity of the results, and what steps were taken to minimize the issue (e.g., changes in practice guidelines, or an abstractor had poor inter-rater reliability and therefore was retrained or replaced in order to complete the project). If there were no issues, then simply state there were no issues.	

Hawaii Department of Human Services, Med-QUEST Division
Key Steps for the Performance Improvement Project (PIP)
Data Analysis Plan

Activity VIII - Discuss statistical techniques used in the analysis, or that will be used following the remeasurement period (e.g., t-test, chi-square). Include how baseline results will be compared to remeasurement.	
Activity VIII - Interpret the findings and present them in a clear and easily understood manner. Include basic demographics, such as eligible population and final sample size, with a generalization of the results to the eligible population.	
Future Steps to Consider – PIP Activities VII though X	
Activity VII - Determine quality improvement strategies or interventions based on causes/barriers identified through the data analysis. The interventions should be system changes that are likely to induce permanent change.	
Activities VII & VIII - Follow analysis plan from baseline – include statistical testing results between baseline and remeasurement, with an interpretation of the findings (e.g., was the intervention successful, and if not how will the interventions be revised, or is more time needed to notice true change and why?)	
Activity IX – Discuss statistical improvement in rates between measurement periods.	