Standardized Performance Measures for the National Public Health Improvement Initiative (NPHII):

Year Three

Objective Three

June 29, 2012

Centers for Disease Control and Prevention
Office for State, Tribal, Local and Territorial Support

OSTLTS
Office for State, Tribal, Local and Territorial Support

Contents

Technical assistance on performance measure identification and development is available. Please contact your NPHII Performance Officer and they will ensure that your needs are met.

Purpose

The National Public Health Improvement Initiative (NPHII) funds are designed to support grantees' adoption and institutionalization of cross cutting performance management and quality improvement methods and approaches to improve accountability, efficiency, and effectiveness of their public health programs and services. CDC's Office for State, Tribal, Local, and Territorial Support (OSTLTS), in turn, is expected to show advancements in efficiency and effectiveness for the entire Initiative. To assist OSTLTS in documenting results related to improved efficiencies and effectiveness of programs as a whole, a standard set of performance measures was developed. The purposes of standardizing performance measures for Year Three are to:

- Provide additional clarity on how to operationalize key outcomes associated with efficiency and effectiveness
- Ensure consistent measurement of these key outcomes
- Facilitate analysis and reporting of NPHII achievements in aggregate by CDC in order to demonstrate the impact of NPHII to key stakeholders

Additionally, the collection and reporting of data on standardized performance measures that align with your performance and quality improvement initiatives will enable individual grantees and OSTLTS to:

- monitor, for *accountability* purposes, the extent to which quantifiable progress is being made with respect to key outcomes associated with efficiency and effectiveness;
- support *performance improvement* at the grantee level; and
- assist CDC with the identification of areas for *technical assistance*.

Focus on Objective Three: Measuring Efficiency and Effectiveness

The NPHII Year Three continuation guidance includes activities associated with four objectives. As presented in the project plan, these objectives are:

- Objective 1: Implementation of relevant and essential activities to accelerate the agency's accreditation readiness
- Objective 2: Complete an organizational self-assessment to identify gaps in meeting and/or conformity with the national Public Health Accreditation Board standards
- Objective 3: Identification and implementation of two or more performance improvement (PI) or quality improvement (QI) initiatives within the applicant's agency
- Objective 4: Continue performance management activities.

The standardized measures developed for Year Three focus *solely on Objective 3*. This performance measure guidance provides a comprehensive approach to measuring outcomes associated with improved efficiencies and / or effectiveness resulting from the two or more PI/QI initiatives required under this objective.

In recognition that each PI/QI initiative is unique to the needs and context of each jurisdiction, the standardized performance measures included in this document are generic measures that address each of the key outcomes associated with efficiency and effectiveness. Your organization will be able *to tailor the measures to your work* by inserting the specifics related to the program / service / process that is the focus of the identified PI/QI initiative. Additional guidance to this effect is presented with each measure.

Performance measures have *not* been developed for the Objectives 1, 2, and 4 because the results associated with these objectives focus more on the production of outputs (e.g, completion of plans, development of performance management systems), rather than achieving specific outcomes. Instead, data demonstrating successful completion of activities under these other objectives will be collected through interim and annual progress reports and/or the NPHII annual assessment.

Identification of PI/QI Outcomes: How Do I Know Which One(s) to Select?

As stated in the previous section, this document contains specific guidance on how to measure key outcomes associated with efficiency and effectiveness. Per the continuation guidance, each grantee is expected to conduct two or more PI/QI initiatives. The following steps are intended to

help you determine which outcomes to identify and therefore which measures to develop *for each PI/QI initiative.*

1. Determine what you hope to achieve if the PI/QI initiative is successful. What category of intended outcomes do you hope will result from the initiative:
    a. Increased efficiency of a program or service or process?
    b. Improved effectiveness of a program or service or process?
    c. Both?
2. Based on your answer to the first question, identify the specific outcome(s) you intend to achieve. Specific outcomes associated with efficiency and effectiveness include:

Efficiency	Effectiveness
• Time saved Potential shorter-term outcomes associated with saving time include: ○ Reduced number of steps ○ Reduced number of staff hours ○ Other • Money saved Potential shorter-term outcomes associated with saving money include: ○ Reduced number of steps ○ Reduced number of staff hours ○ Other	• Increased customer satisfaction • Increased reach • Quality enhancement of services or data systems • Funds leveraged • Increased preventive behaviors • Decreased incidence/prevalence • Other

3. Limit the number of outcomes to *no more than three*. Keep in mind that your PI/QI initiative may have one primary purpose (e.g., to reduce clinic wait time), and secondary or tertiary benefits from the same initiative (e.g., improved customer satisfaction and reach due to the reduced wait time).
4. Consider the following criteria when deciding upon the outcome(s) for your initiative:
    a. Is the outcome relevant? Does it make sense given the problem you are trying to address?
    b. Is the outcome achievable given available resources?
    c. Is the outcome achievable in the given time period (Year Three)?
    d. Is the outcome measurable? Are data sources available?
5. If your PI/QI initiative is focused on achieving outcomes associated with efficiency or effectiveness that are not captured in this document and the project plan, select "other"

and specify the intended outcome. In this instance, please work with your NPHII performance officer to identify support in developing an appropriate measure for that initiative.

Selecting and Defining Performance Measures: How to Navigate this Document

This document describes in detail the Year Three, Objective Three standardized performance measures. The measures are divided into two main sections that represent the two categories of outcomes for your PI/QI initiatives:

1. Measures of Efficiency
2. Measures of Effectiveness

For each standardized performance measure in sections one and two, the following information is provided:

- What to measure: the specific measure being reported
- Measure definition: guidance on what is captured by this measure
- Measure reporting: specific information about what needs to be reported for this measure, such as baseline, target, and actual values
- Additional guidance: depending on the type of measure, this section will identify a numerator and denominator, a start and stop time, or criteria that need to be addressed to report on this measure
- Additional reported data: additional data that will be requested during interim and annual progress reporting on the measures to provide context to the measure data

Please refer to *Appendix A* for general tips on how to select measures and identify baseline and target values.

Reporting Schedule for Standardized Performance Measures:

As noted in the Year Three continuation guidance, the reporting of performance measures in association with your project plan is required. This will occur in stages per the table below.

Reporting Schedule		
When to Report	What to Report	How to Report
Year Three Continuation Guidance Application / Project Plan	Identified Measure Baseline value (where applicable as identified in this document) Target value (where applicable as identified in this document)	As a component of the Year Three project plan template
Interim Progress	Status update. If QI initiative is complete,	As a component of the

Report (IPR)	actual / calculated values should be reported (as identified in this document)	IPR
Annual Progress Report (APR)	Final measure data (actual / calculated values) if not already reported in IPR	As a component of the APR

Section 1: Measures of Efficiency

There are four efficiency-related outcomes that have been operationalized for NPHII Year Three. Of these four outcomes, two are considered primary or ultimate outcomes, and the other two are considered intermediate or short-term outcomes that represent progress made towards either of the primary outcomes:

Primary Efficiency Outcomes:

A. Time Saved
B. Money Saved

Intermediate Efficiency Outcomes:

C. Reduced steps in process
D. Reduced staff hours required

Specific guidance on how to measure each of these outcomes is provided on the following pages. For any PI/QI initiative focused on increasing efficiency, the primary or ultimate goals are to save time (1A) and/or save money (1B). If one of your intentions is to improve efficiencies through your PI/QI initiative, you are strongly encouraged to focus on either or both of these outcomes when constructing your initiative(s) and identifying your measures.

Reducing steps (1C) or staff hours (1D) required to complete a process are often the means to achieving reductions in time or cost. These measures may serve as intermediate or short-term measures related to the primary outcomes of "time saved" or "money saved." You may decide to capture data on these measures along with measure data for saving time and/or money. Alternatively, if you are unable to track time or cost data, these two intermediate outcomes may be more realistic and feasible for you to measure.

1A. Time saved

What to Measure	Time to complete a specific process / deliver a specific service
Measure Definition	Time from initiation to completion of a process or a service. The specific process or service is *to be identified and indicated during measure reporting by the grantee* to ensure a grantee priority area is addressed by the QI effort. Specific activity or event that starts and ends the process / service delivery must be identified to calculate time. Examples of time measures include but are not limited to: • Time to award contracts • Wait time for clinic services • Time to process a bill • Time to provide permits / vital records (e.g., time saved through movement to electronic systems)
Measure Reporting	The following four data points will be reported for the measure. Time increment used (e.g., hours or days) must be reported along with the time value. Guidance for calculating time is found below. 1. Baseline value: Current time recorded for identified process/service at the time of measure identification and submission 2. Target value: Desired time to complete the process / deliver the service following completion of QI cycle(s). 3. Actual value: Recorded time following completion of QI cycle(s). This may be the same as, longer, or shorter than the target value depending on the outcome of the QI cycle(s). 4. Time saved: The difference between the times recorded after implementation of the QI cycle(s) and before. In other words: actual value – baseline value.
Additional Guidance: Calculating Time	For the baseline, target, and actual values, the time to complete the process or deliver the service must be determined using the same start and stop times to ensure that the times reported represent the same, completed process or service. Calculate the time as follows: Start time: Date and time that given process or service delivery event begins. This would represent the step / task / encounter that is determined to initiate the process. Stop time: Date and time that given process or service delivery event ends. This would represent the step / task / encounter that is determined

	to complete the process. Time to complete process or deliver service: The time elapsed from the data/time that the process starts (start time) until the date/time that the process ends (stop time) represents the time to complete the process / deliver the service and this is what will be reported.
Additional Reported Data	In addition to the data reported for the measure itself (baseline, target, actual value, and calculated time saved), additional data will be collected to provide context for those numbers. These data are: 1. Process or service being addressed by QI cycle(s) 2. Step or activity that initiates the process/service (used for start time) 3. Step or activity that completes the process / service (used for stop time) 4. Number of QI cycles implemented to achieve reported actual time 5. Lessons learned (text)

1B. Money saved

What to Measure	Cost to complete a specific process or deliver a specific service
Measure Definition	The cost of completing a process or delivering a service. The specific process or service is *to be identified and indicated during measure reporting by the grantee* to ensure a grantee priority area is addressed by the QI effort. Examples of measures include but are not limited to: • Increased revenue due to billable services • Reduction in the cost of service delivery • Reduction in the cost of process implementation
Measure Reporting	The following four data points will be reported for the measure. Basic guidance for calculating cost is found below. 1. Baseline value: Current cost of completing process or delivering identified service at the time of measure identification and submission 2. Target value: Desired cost for completing the process / delivering the service following completion of QI cycle(s). 3. Actual value: Recorded cost following completion of QI cycle(s). This may be the same as, less than, or more than the target value depending on the outcome of the QI cycle(s). 4. Money saved: The difference between the costs recorded after implementation of the QI cycle(s) and before. In other words: actual value – baseline value. The value reported will depend on the method selected to conduct cost analysis described below. Options for reporting money saved include but are not limited to: a. Difference in one categorical cost area (e.g., administrative only, supplies only etc.) b. Difference in total program costs represented by several categories of cost (including a combination of personnel, supplies, operation costs, etc.) c. Return-on-investment of programmatic costs
Additional Guidance: **Calculating Cost**	The financial benefits of a quality improvement initiative can be calculated by comparing the baseline costs of a process or service to the costs once redundancies/inefficiencies in the process (e.g., unnecessary steps) have been removed or minimized. Cost data can be calculated using any one or a combination of tools that vary in terms of their complexity. Below are three approaches / tools from which you may select depending on the outcome you are trying to achieve and the level of expertise available to you in the area of costing and return on

	investment: 1. Calculating Health Intervention Costs: Worksheets to calculate programmatic costs, and money saved only (Please look at table 5.5 http://www.hsph.harvard.edu/ihsg/publications/pdf/No-5.PDF.) Users enter recurrent and one-time costs for personnel, supplies, pharmaceuticals, equipment and/or vehicle operation and maintenance, administration, and training and promotional materials. Examples of unit costs required and sources of cost information are also provided. 2. Budget Impact Analysis (BIA): Analysis of the costs accrued by the agency for a program over a short period (often 1 to 3 years) including the effect of any offsetting savings. BIA involves a comparison between the current state of care (baseline) and an alternative scenario as a result of an intervention or QI initiative. In other words, it assists with understanding the impact of a QI initiative on your budget for a given process or service, to allow you to calculate money saved through the initiative. More dynamic system changes will require complex modeling guided by recommendations of the Task Force for Good Research Practice (http://www.ispor.org/workpaper/research_practices/Principles_of_Good_Research_Practices-Budges_Impact_Analysis.pdf). 3. Return-On-Investment (ROI) of Quality Improvement Initiatives: A tool developed by the North Carolina Institute of Public Health to assess the return-on-investment of quality improvement initiatives is available at the following link: http://www.ncpublichealthquality.org/ctr/index.php?option=com_content&view=article&id=222&Itemid=62. This tool uses a case study approach to guide you through development of an AIM statement, defining baseline measures, describing benefits and outcomes, and calculating financial benefits. Return on investment is then calculated as: ROI = (Total Benefits-Total Costs)/Total Costs
Additional Reported Data	In addition the data reported for the measure itself (baseline, target, actual value, and calculated money saved), additional data will be collected to provide context for those numbers. These data are: 1. Process or service being addressed by QI cycle(s) 2. Number of QI cycles implemented to achieve reported costs 3. Method selected to conduct cost-analysis (ROI, Budget impact analysis, other-specify) 4. Specific types of cost and other related data used in calculations

	5. How cost savings are to be / were leveraged by being reprogrammed or redirected to meet other needs (if applicable)

1C. Reduce steps in process

What to Measure	Number of steps required to complete specific process or service
Measure Definition	Number of discrete steps or tasks necessary to complete a given process or service delivery. The specific process or service is *to be identified and indicated during measure reporting by the grantee* to ensure a grantee priority area is addressed by the QI effort.
Measure Reporting	The following four data points will be reported for the measure. Basic guidance for calculating number of steps is found below. 1. Baseline value: Current number of steps required to complete the identified process or deliver the identified service at the time of measure identification and submission 2. Target value: Desired number of steps required to complete the process / deliver the service following completion of QI cycle(s). 3. Actual value: Recorded number of steps following completion of QI cycle(s). This may be the same as, less than, or more than the target value depending on the outcome of the QI cycle(s). 4. Reduction in the steps: The difference between the number of steps recorded after implementation of the QI cycle(s) and before. In other words: actual value – baseline value.
Additional Guidance: **Reducing the number of steps**	• Determine the activities and sequence of activities required to complete a process or deliver a service. This can be accomplished using a variety of QI approaches such as process mapping or flow charting. This number will serve as your baseline value. • Identify steps that are not necessary to the successful completion of the process / delivery of the service, that may be redundant or do not add value to the process. • Eliminate these unnecessary steps and implement new process flow. Repeat until the most efficient process has been identified. The number of steps implemented here will serve as your actual value.
Additional Reported Data	In addition to the data reported for the measure itself (baseline, target, actual value, and calculated reduction in number of steps), additional

	data will be collected to provide context for those numbers. These data are: 1. Process or service being addressed by QI cycle(s) 2. Number of QI cycles implemented to achieve actual number of steps 3. Lessons learned (text)

1D. Reduce staff hours required

What to Measure	Number of staff hours required to complete a specific process or deliver a specific service
Measure Definition	Number of staff hours required to complete a process or deliver a service may represent the hours contributed by one or more staff persons to the process / service delivery. The specific process or service is *to be identified and indicated during measure reporting by the grantee* to ensure a grantee priority area is addressed by the QI effort.
Measure Reporting	The following four data points will be reported for the measure. Basic guidance for calculating number of hours is found below. 1. Baseline value: Current number of staff hours required to complete the identified process or deliver identified service at the time of measure identification and submission 2. Target value: Desired number of staff hours required to complete the process / deliver the service following completion of QI cycle(s). 3. Actual value: Recorded number of staff hours following completion of QI cycle(s). This may be the same as, less than, or more than the target value depending on the outcome of the QI cycle(s). 4. Reduction in staff hours: The difference between the number of staff hours recorded after the QI cycle(s) and before. In other words: actual value – baseline value.
Additional Guidance: **Calculating staff hours**	• Identify all staff members associated with the identified process. Provide each staff member with a time diary to catalogue number of hours dedicated to the completion of the process. Time diaries consist of a simple spreadsheet in which staff members record their daily activities and start times for each activity. The end-time for a particular activity is considered to be the start time for the next activity. • Compile time diaries and add times across all staff persons to identify the total number of staff hours required for the process completion /service delivery. This number will serve as your baseline value. • Identify how the process or service delivery may be improved to require less time on the part of involved staff. This may mean having fewer staff persons engaged in the process or having the

	process require less time per staff person. • Implement the new process flow and repeat until the most efficient process has been identified. Use the same template of the time diaries to track time allotted to the process and sum up as done for the baseline value. The calculated number of staff hours required after implementation of one or more QI cycles will serve as your actual value.
Additional Reported Data	In addition to the data reported for the measure itself (baseline, target, actual value, and calculated reduction in staff hours), additional data will be collected to provide context for those numbers. These data are: 1. Process or service being addressed by QI cycle(s) 2. Number of QI cycles implemented to achieve reported staff hours 3. Lessons learned (text)

Section 2: Measures of Effectiveness

There are six effectiveness-related outcomes that have been operationalized for NPHII Year Three:

A. Increased customer satisfaction
B. Increased reach
C. Quality enhancement
D. Leveraged funds
E. Increased preventive behaviors
F. Decreased incidence/prevalence of disease

The last two outcomes (increase preventive behaviors and decrease incidence/prevalence of disease) are considered long-term outcomes, and are less likely to be realized as a consequence of the activities proposed for this year. To capture developments in increasing preventive behaviors, we have provided indicators that measure progress made towards achieving more distal health outcomes and behavioral changes through increased knowledge, acceptability, and/or motivation to engage in preventive behaviors. You may use either of these measures if you think that you can track such outcomes as a result of your PI/QI initiatives. If these outcomes are too distal for the work you are doing, please refer to the other measures of effectiveness (increased customer satisfaction, increased reach, quality enhancement of services, systems, or processes, and/or funds leveraged) when constructing your PI/QI projects and identifying your measures.

2A. Increase customer satisfaction

What to Measure	Percentage of customers satisfied or extremely satisfied with specific service or process
Measure Definition	Percentage of customers that represent a defined target population satisfied with a process or service. The target population may be external (e.g., clinic clients) or internal (e.g., staff engaged in a process or delivery of a service) depending upon the specific process or service *identified and indicated during measure reporting by the grantee*.
Measure Reporting	The following four data points will be reported for the measure. Basic guidance for calculating customer satisfaction is found below. 1. Baseline value: Percentage of customers reporting satisfaction or extreme satisfaction with a process or delivery of identified service at the time of measure identification and submission 2. Target value: Percentage of customers reporting satisfaction or extreme satisfaction with the process / service following completion of QI cycle(s). 3. Actual value: Percentage of customers reporting satisfaction or extreme satisfaction following completion of QI cycle(s). This may be the same as, less than, or more than the target value depending on the outcome of the QI cycle(s). 4. Improved customer satisfaction: The difference between the percentages of customers reporting satisfaction or extreme satisfaction recorded after the QI cycle(s) and before. In other words: actual value – baseline value.
Additional Guidance: **Assessing customer satisfaction**	Identify your target population: For improvements in service delivery, the target population includes patients/customers using the services. For internal process improvements, the target population includes staff members who are directly affected by the process. Develop the customer satisfaction survey: Identify domains and items of the customer satisfaction surveys that are specific to the identified process or service delivery. Likert scales for satisfaction are a fairly straightforward way to track change over time, and a five-point scale is often employed (Extremely satisfied – Satisfied – Neutral – Dissatisfied – Extremely dissatisfied). Surveys should be incorporated into the process with an effort to maximize response rate. *Examples of customer satisfaction questions* Please rate your level of satisfaction in the following areas: Quality of the service you received

	☐ Extremely satisfied ☐ Satisfied ☐ Neutral ☐ Dissatisfied ☐ Extremely dissatisfied Educational Material ☐ Extremely satisfied ☐ Satisfied ☐ Neutral ☐ Dissatisfied ☐ Extremely dissatisfied Timeliness of the service ☐ Extremely satisfied ☐ Satisfied ☐ Neutral ☐ Dissatisfied ☐ Extremely dissatisfied Determine how to administer the survey: The complete population or a representative sample of the target population will be invited to take the survey (paper-based or web-based) before the QI process is implemented (baseline value) and then at the end of Year Three (actual value). The same tool must be used at baseline and at follow-up to ensure comparability of the results. Reporting on Satisfaction: The percentage of satisfied customers is calculated such that: Numerator: Number of customers that report being satisfied or extremely satisfied with the process/service Denominator: Total number of customers that responded to the survey
Additional Reported Data	In addition to data reported for the measure itself (baseline, target, actual value, and calculated change in customer satisfaction), additional data will be collected to provide context for those numbers. These data are: 1. Process or service being addressed by QI cycle(s)

	2. Number of QI cycles implemented to achieve reported actual value 3. Target population description (internal staff, clinic customers, etc.) 4. Target population: total number (number of staff involved in process / service or number of clients served) 5. Target population: number that were asked to complete the survey 6. Response rate: number of people who responded to the surveys divided by the number of people who were asked to take the survey 7. Lessons learned (text)

2B. Increase reach

What to Measure	Percentage of target population that has been offered, received or completed a specific public health service or program
Measure Definition	Percentage of individuals in an identified target population that are offered or receive a given service. The specific process or service is *to be identified and indicated during measure reporting by the grantee* to ensure a grantee priority area is addressed by the QI effort. In the case of this measure, reach can be defined in three different ways: - Number of individuals in a target population *offered* services - Number of individuals in a target population *receiving* at least one instance of an identified service - Number of individuals in a target population *receiving a complete service package* (e.g., number of individuals attending *all* prenatal visits or *all* immunizations)
Measure Reporting	The following four data points will be reported for the measure. The data points vary slightly depending on the type of reach being calculated and reported. Basic guidance for calculating reach is found below. *Individuals offered services* 1. Baseline value: Percentage of individuals in a target population that have been offered the identified service at the time of measure identification and submission 2. Target value: Desired percentage of individuals in a target population that should be offered the identified service following completion of the QI cycle(s). 3. Actual value: Recorded percentage of individuals in a target population offered the identified service following completion of QI cycle(s). This may be the same as, less than, or more than the target value depending on the outcome of the QI cycle(s). 4. Increase in number of people served: The difference between the percentages of individuals in a target population offered the service recorded after the QI cycle(s) and before. In other words: actual value – baseline value. *Individuals served* 1. Baseline value: Percentage of individuals in a target population that have received the identified service at the time of measure

	identification and submission 2. Target value: Desired percentage of individuals in a target population that should receive the identified service following completion of QI cycle(s). 3. Actual value: Recorded percentage of individuals in a target population that have received the identified service following completion of QI cycle(s). This may be the same as, less than, or more than the target value depending on the outcome of the QI cycle(s). 4. Increase in number of people served: The difference between the percentages of individuals in a target population served recorded after the QI cycle(s) and before. In other words: actual value – baseline value. *Individuals receiving complete service package* 1. Baseline value: Current percentage of individuals in a target population that receive / attend all required components of a service or program at the time of measure identification and submission 2. Target value: Desired percentage of individuals in a target population that should receive / attend all required components of a service or program following completion of QI cycle(s). 3. Actual value: Recorded percentage of individuals in a target population that receive / attend all required components of a service or program following completion of QI cycle(s). This may be the same as, less than, or more than the target value depending on the outcome of the QI cycle(s). 4. Increase in program completion: The difference between the percentages of individuals in a target population that receive / attend all required components of a service or program recorded after the QI cycle(s) and before. In other words: actual value – baseline value.
Additional Guidance: **Calculating reach**	The numerators and denominators for this measure will depend on what type of reach is to be achieved *Percentage of individuals offered the service* Numerator: Number of individuals in a given target population that have been offered services during a given timeframe Denominator: Number of individuals comprising the target population that are eligible for the identified service or program *Percentage of individuals served*

	Numerator: Number of individuals in a given target population that have received services during a given timeframe Denominator: Number of individuals comprising the target population that are eligible for the identified service or program *Percentage of individuals that receive <u>all</u> components of a service or program package (this measure would be most relevant to programs requiring follow-up or multiple visits)* Numerator: Number of individuals in a given target population who attend all sessions/receive all components of a service or program to successfully complete the program Denominator: Number of individuals comprising the target population that are eligible for the identified service or program
Additional Reported Data	In addition to the data reported for the measure itself (baseline, target, actual value, and calculated change in reach), additional data will be collected to provide context for those numbers. These data are: 1. Service or program being addressed by QI cycle(s) 2. Type of reach being reported (offer, receipt, or completion of service) 3. Target population 4. Number of QI cycles implemented to achieve increased reach 5. Lessons learned (text)

2C. Quality enhancement

What to Measure	Description of quality of specific service or system
Measure Definition	Improving the quality of the delivery of a given service or aspects of a data collection or health information system. The specific service or data system requiring quality enhancement is *to be identified and indicated during measure reporting by the grantee* to ensure a grantee priority area is addressed by the QI effort. The types of specific improvements intended to be captured by this measure are as follows: 1. For services, quality enhancement refers to specific modifications to the way in which the service is delivered in order to improve the consistency, fidelity, or other characteristics of the service itself. Examples include but are not limited to: a. Implementation of evidence-based practices or guidelines b. Introduction of checklists, protocols, or standardization of expectations across providers or staff 2. For data and health information systems, quality enhancement can be described in three broad categories: a. Improvement in the accuracy of the data collection system b. Improvement in or enhancement to the functionality of a data system such as improving data displays or reporting capacity c. Alignment of a data system with external standards or requirements **NOTE:** If quality enhancements yield timeliness or cost reductions, then grantees could also use the time measure or cost measure to account for these improvements.
Measure Reporting	The following three data points will be reported for this measure. Due to the varied ways that quality may be enhanced, reporting on this measure is qualitative. Basic guidance for reporting on quality enhancement is found below. 1. Baseline value: Qualitative description of the quality of the specific service or data system at the time of measure identification and submission, with specific attention to the gap or need targeted for enhancement. 2. Target value: Desired quality following enhancement to the

	service or data system following completion of QI cycle(s). 3. Actual value: Recorded status of the quality of the service or data system following completion of QI cycle(s). This may be the same as, less than, or more than the target value depending on the outcome of the QI cycle(s). **NOTE:** Although reporting on this measure is qualitative, where possible please include any relevant quantitative data in the description. For example, reporting rates of error and quantifiable data on consistency or accuracy is highly encouraged.
Additional Guidance: **Descriptions of quality enhancements**	Describing the quality of a service or data system, and enhancements to that quality, depends largely on the characteristics of the identified improvement opportunity. Examples of improvements to quality include but are not limited to: *Evidence-based practices or guidelines:* Improvement in service delivery by implementing evidence-based public health or clinical interventions or evidence-based business processes and management strategies. *Standardization of service delivery:* Increasing the consistency with which services are delivered by developing procedures, tools, or other mechanisms to assist service providers. Alternatively, enhancements could involve conducting regular fidelity assessments to ensure that services are delivered in a consistent manner. *System Accuracy*: Improvements to ensure that the correct data are entered into the correct fields. For example, improvements may result in reductions in error-rates/improved quality control of surveillance data. *Improved / enhanced system functionality:* Improvements that allow a system to expand functionality, or improvements to more readily use data displays/results for decision-making. Alternatively, enhancements could build upon existing functionality by improving user satisfaction or ease of use. *Alignment of a data system with external standards or requirements:* Updating a system to ensure that it meets national / state requirements or to better align it with other systems or standards (e.g., aligning a state reporting system with the Public Health Accreditation Board standards (Domain 1, Standards 1.2-1.4)).
Additional Reported Data	In addition the data reported for the measure itself, additional data will be collected to provide context for those numbers. These data are: 1. Specific service or data system being addressed

	2. Type of quality enhancement implemented (e.g., apply evidence-based practice, standardize service delivery, improve system accuracy) 3. Evidence / data / documentation used to inform quality enhancement 4. Lessons learned (text)

2D. Leverage funds

What to Measure	Dollar amount of funds leveraged through NPHII
Measure Definition	Dollar amount of supplemental external funding made available or accessible to your organization as a result of NPHII-sponsored activities. External funding may result from attention garnered due to the success, or effectiveness, of NPHII activities.
Measure Reporting	We do not anticipate that grantees will have clear expectations of exactly how many funds they intend to leverage over the course of the project period. Therefore, this measure does not require input of a target value. Likewise, baseline values are not relevant for this measure. Actual Value: dollar amount of non-NPHII related funding leveraged for the activity or service delivery.
Additional Guidance: **Calculating funds leveraged**	Record amount of non-NPHII related funding leveraged in Year Three
Additional Reported Data	In addition to the amount of leveraged funds, additional data will be collected to provide context for those numbers. These data are: 1. Description of the source of leveraged funds 2. Description of the NPHII-sponsored activity(ies) that resulted in the leveraged funds 3. Lessons learned (text)

2E. Increase preventive behaviors

What to Measure	Percentage of preventive behaviors or indicator of preventive behavior in a target population
Measure Definition	Outcome: Increase the rate of preventive behaviors/reduce risk of preventable risk factors. The specific preventive behavior is *to be identified and indicated during measure reporting by the grantee*. Grantees may prefer to report on actual behavior change if their QI initiative is expected to directly result in behavior changes, and they have systems in place to collect data on behavior change. Examples of preventive behaviors include but are not limited to: • Increase percentage of adults who engage in 30 minutes of physical activity 5 or more days a week • Reduce the percentage of adults who smoked at least 100 cigarettes in their lifetime, and are current smokers • Increase percentage of individuals who always use a seat belt while driving or riding in a car Intermediate Outcomes: Measurable characteristics or changes that represent achievement or progress towards behavioral outcomes. The associated measure will be based on a specific preventive behavior to be identified by the grantees. Grantees may prefer to report on these measures if the QI initiative affects an intermediate step in achieving behavior change by affecting one of the following areas: a. *Awareness or Knowledge* – increase awareness and/or knowledge about the need for behavioral change to improve health Example of survey questions: Q. Which of the following do you think increases a woman's chances of getting cancer of the breast? R. Increasing age, high-fat diet, low-fiber diet, smoking, family history, having multiple sex partners, none of these, don't know b. *Acceptability and Support* – increase acceptability and/or support of behavioral change to improve health Example of survey questions: Q. Smoking should not be allowed in any public place. Do you: R. Strongly Agree, Agree, Disagree, Strongly Disagree c. *Motivation to engage in preventive behaviors/ access public*

	health services – increase in motivation to access services as a proxy for behavioral change Example of survey questions: Q. How likely is it that you will seek counseling and testing for HIV? R. Very likely, likely, somewhat unlikely, unlikely
Measure Reporting	The following four data points will be reported for the measure. Basic guidance for reporting on the rate of preventive behaviors is found below: 1. Baseline value: Percentage of individuals demonstrating preventive behaviors or intermediate outcomes at the time of measure identification and submission 2. Target value: Desired percentage of individuals demonstrating preventive behaviors or intermediate outcomes following completion of QI cycle(s). 3. Actual value: Recorded percentage of individuals demonstrating preventive behaviors or intermediate outcomes following completion of QI cycle(s). This may be the same as, less than, or more than the target value depending on the outcome of the QI cycle(s). 4. Increase in preventive behavior: The difference between the percentages of individuals demonstrating the preventive behaviors or intermediate outcomes after the QI cycle(s) and before. In other words: actual value – baseline value.
Additional Guidance: **Calculating percentage of preventive behavior**	*Percentage of individuals demonstrating preventive behavior* Numerator: Number of patients/customers practicing preventive behavior Denominator: Number of patients/customers at risk in population *Percentage of individuals demonstrating knowledge, acceptability or motivation to engage in preventive behavior (intermediate outcomes)* Numerator: Number of patients/customers who aware or knowledgeable about health risks, supportive of healthy behaviors, or motivated to engage in preventive behaviors Denominator: Number of patients/customers at risk
Additional Reported Data	In addition to the actual measure data, additional data will be collected to provide context for those numbers. These data are:

	1. Service or program being addressed by QI cycle(s) 2. Target population 3. Number of QI cycles implemented to achieve results 4. Evidence / data / documentation used to inform initiatives to address preventive behavior such as the Community Guide, evaluation data, pilot study, etc. 5. Lessons learned (text)

2F. Decrease incidence/prevalence of disease

Decrease incidence of disease	Percentage of individuals with disease in target population (can be incidence or prevalence)
Measure Definition	Decrease incidence or prevalence of disease.
Measure Reporting	The following four data points will be reported for the measure. Basic guidance for reporting on the rate of preventive behaviors is found below. 1. Baseline value: Incidence or prevalence of specific health condition at the time of measure identification and submission 2. Target value: Desired incidence or prevalence following completion of QI cycle(s). 3. Actual value: Recorded incidence or prevalence following completion of QI cycle(s). This may be the same as, less than, or more than the target value depending on the outcome of the QI cycle(s). 4. Progress on implementation: The difference between the incidence or prevalence after the QI cycle(s) and before. In other words: actual value – baseline value.
Additional Guidance: **Calculating incidence and prevalence**	*Incidence (for a given time period)* Numerator: Number of new cases of disease Denominator: Number of individuals comprising the target population *Prevalence* Numerator: Total number of cases Denominator: Number of individuals comprising the target population These measures can be calculated using internal surveillance data, or using data that is publicly available at the local or state level such as: • Trust for America's Health - http://healthyamericans.org/ • America's Health Rankings - http://www.americashealthrankings.org/ • County Health Rankings & Roadmaps - http://www.countyhealthrankings.org/#app/ • Community Health Status Indicators - http://www.communityhealth.hhs.gov/homepage.aspx?j=1

	• The Commonwealth Fund - http://www.commonwealthfund.org/Maps-and-Data/State-Data-Center/State-Scorecard.aspx
Additional Reported Data	In addition to the actual measure values, additional data will be collected to provide context for those numbers. These data are: 1. Health condition / disease being addressed 2. Target population 3. Lessons learned (text) 4. Evidence / data / documentation used to inform initiative to decrease incidence/prevalence such as the Community Guide, evaluation data, pilot study etc.

Appendix A: Tips on selecting measures, baselines, and targets

General tips on how to select measures

- Use your project's logic model (if you have one) or project plan to identify the intended outcome(s) of the QI initiative you are implementing. This will help orient you to which of the measures you will report on for each QI initiative.
- Make sure that data are available to track progress on the identified measure(s). The measures represent a tool to indicate progress. Most of your resources and efforts should continue to be directed toward project activities, rather than being used to collect and report data.
- Ensure that the measures / outcomes identified are meaningful. Data should be used not only for reporting to CDC but also to inform your decisions about project success and/or next steps.

Tips for identifying baseline values

- The baseline value should refer to a period as close as possible to the beginning of this project period in order to demonstrate progress over the continuation funding year. It is important that the baseline value reflect the current value (time, cost, number of steps, reach, etc.) associated with the process or service so that change through the QI initiative can be meaningfully and accurately assessed.
- A baseline value may already be available through recent data from your agency/program. Baseline values may also be available by benchmarking your efforts against similar work.
- If a baseline value is not already available, grantees should collect the information necessary to establish the baseline. This may require a brief, intensive data collection period (e.g., repeated snapshots over a period of several weeks).

Tips for identifying target values

- The target should represent what you aim to achieve through your QI initiative. If your process worked optimally or the service were provided in a way that was as efficient or effective as possible given the improvements you are intending to make, what would the value look like (e.g., how long would it take, how much would it cost, how many individuals would be reached, etc.)? This value would be your target.
- Grantees are requested to identify the target for each measure. Targets should be realistic and achievable, yet represent substantial improvements over baseline values.