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Work Book: Improving the Quality of Home and Community-based Services and Supports

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Work Book

Work Book

Improving the Quality of Home and Community Based Services and Supports

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CMS
CENTERS for MEDICARE & MEDICAID SERVICES

Centers for Medicare & Medicaid Services
Center for Medicaid and State Operations

MUSKIE
SCHOOL

Prepared by
The Edmund S. Muskie School of Public Service
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Blank worksheets and highlights from quality improvement initiatives in seven states are included in a Supplement. Upon final approval by CMS, the Work Book and Supplement will be available electronically. To receive any future updates to the Work Book and Supplement, please register via e-mail at maureenb@usm.maine.edu.

Acknowledgments

The experience of federal and state policy-makers shaped the design of this Work Book. In particular, the authors would like to thank Deborah Larwood and Susie Bosstick from the Center for Medicaid and State Operations at The Centers for Medicare & Medicaid Services for conceiving the idea of a Work Book and funding its development.

Eight states participated in interviews that provided firsthand observations of the challenges and approaches to improving the quality of home and community based services and support. The states and the lead contacts included: Todd Coffey, Colorado; Chris Gianopoulos, Maine; Judy Webb, Michigan; Katherine Finlayson, Minnesota; Karen Kimball, New Hampshire; Jayne Van Bramer, New York; Nancy Thaler, Pennsylvania; and Monica Deignan, Wisconsin.

The authors would also like to thank Beth Jackson of The MEDSTAT Group for sharing knowledge she gained working on CMS initiatives related to home and community based services and support. Colleagues at the Muskie School of Public Service, Louise Olsen, Arta Haxha and Hilary Skillings, gave cheerfully of their time in reviewing and preparing the document. Finally, the authors would like to extend their appreciation to Christine Richards for her editing and design of the final product.

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Key Questions

Compliance Versus Quality Improvement

	COMPLIANCE	QUALITY IMPROVEMENT
Focus	*What is required?*	*What are the desired consumer outcomes?*
Response to Program Features: Administration Contract requirements Quality management Complaint system Documentation Payment	*Are program features in place?*	*What services and supports contribute to desired consumer outcomes?* *What are the barriers to achieving desired outcomes?* *What actions can be taken to overcome those barriers?*
Response to Service Delivery: Plan of care Care management Consumer education Service provision Referrals / Follow-up Training	*Are program features working as planned?*	
Response to Consumer Outcomes: Quality of Life Functional Independence Health and Wellness		*How are consumer outcomes measured?* *Does the program improve consumer outcomes?*

What is the purpose of the Work Book?

The Work Book is a tool for states to improve the quality of home and community based programs and supports (HCBS) programs. It is intended to be used in three ways:

- To understand the components of a quality improvement process for HCBS programs;
- To guide the design and implementation of a quality improvement project; and
- To document and monitor progress of a state's quality improvement activities.

What is the difference between compliance and quality improvement for HCBS programs?

Compliance focuses on whether HCBS programs are organized and operate in accordance with the requirements of a federal waiver, state licensure, certification, or contract. Although requirements do not guarantee that quality of care will be delivered, they establish the conditions that are thought to contribute to the probability of good care (e.g., trained staff, policies and procedures).

Quality improvement activities go beyond minimal requirements and measure the impact of HCBS programs on the quality of life, functional independence and health of consumers. Quality improvement activities tend to be more collaborative in nature. Enhancing quality requires a team effort to understand why problems are occurring and find solutions to those problems.

The “**HCFA Protocol**” was developed for the Centers for Medicare & Medicaid Services (CMS) to assess a state’s compliance with federal assurances as part of HCBS waiver approval. For each of the six assurances[2], the Protocol defines standards as well as methods to review how the standards have been operationalized. For many of the assurances, quality enhancing activities are defined. These activities are not required as a condition of the waiver but represent areas where states are encouraged to develop capacity.

Who is the audience for the Work Book?

The Work Book has been prepared for state HCBS program administrators, their staff and contractors, and other state agencies responsible for quality oversight. Secondary audiences include providers of care, federal oversight agencies, and others who want to better understand the challenges and opportunities of applying state-of-the-art quality management techniques to their programs.

How does the Work Book differ from

The HCFA Regional Office Protocol for Conducting Full Reviews of State Medicaid Home and Community based Services Waiver Programs[1]*?*

The Work Book differs in two primary ways from the *HCFA Protocol*:

- The Work Book describes a quality improvement system for all HCBS programs, not just those approved under federal waiver authority;
- The focus of the Work Book is on quality improvement, not compliance with requirements.

A state should consider the *HCFA Protocol* as the foundation for its quality oversight program. The protocol establishes core program requirements. The goal of the Work Book is to look beyond program requirements toward outcomes of care.

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[1] U.S. Department of Health and Human Services Health Care Financing Administration, *HCFA Regional Office Protocol for Conducting Full Reviews of State Medicaid Home and Community based Services Waiver Program*, Version 1.2, December 20, 2000.

[2] The six assurances include: for the health and welfare of waiver participants; for plans of care responsive to waiver participant needs; that only qualified providers serve waiver participants; that the state conducts level of care need determination consistent with the need of institutionalization; that the state Medicaid Agency retains administrative authority over the waiver program; and that the state provides financial accountability for the waiver.

The ***Guide for States*** was designed by The American Public Human Services Association as a companion to the *HCFA Protocol*. The Guide identifies mandatory components of the *HCFA Protocol* and specifies voluntary activities that states can do to enhance quality. The *Guide for States* lays out components of a quality assurance program, with emphasis given to defining and using standardized measurements for assessing performance. The Guide provides examples of tools used by different states to support their improvement initiatives.

The ***Quality Matrix*** creates a conceptual framework for envisioning the desired outcomes of HCBS programs. Seven domains are defined, each with a series of sub-domains that include activities or policies in support of positive outcomes. The Quality Matrix and Framework is not regulatory but is intended to provide common language to states and their contractors when addressing expectations for the HCBS federal waiver program. The seven domains of quality identified in the Quality Matrix and Framework include: participant access, participant-centered service planning and delivery, provider capabilities, participant safeguards, participant rights and responsibilities, participant outcomes and satisfaction, and system performance.

A Guide for States: Quality Assurance in Home and Community Based Waiver Programs[3]?

The Work Book builds on and elaborates the *Guide for States* by:

- providing a more detailed approach to designing and implementing a quality improvement project.
- illustrating how general advancements in the field of quality improvement techniques can be applied to HCBS programs.
- including tools and worksheets for states to document and tailor oversight systems to their unique needs.

The *Guide for States* remains an important reference for states in assessing whether they are fulfilling the terms of their federal waivers. Compliance with program requirements is an important underpinning of a quality improvement system.

The Quality Matrix and Framework: Quality in Home and Community based Services?[4]

The Work Book differs from the *Quality Matrix and Framework* in three ways by:

- focusing on how the domains of outcomes and satisfaction, and system performance can be translated into tangible activities and measurements.
- describing systematic approaches for collecting and analyzing data.

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[3] National Association of State Medicaid Directors, *Quality Assurance in Home and Community based Services Waiver Programs: A Guide for States*, December 2001.

[4] Memo from the Director, Disabled and Elderly Health Programs Group, Center for Medicaid and State Operations, CMS, *Quality in Home and Community-Based Services: The Quality Matrix and Framework*, August 29, 2002.

- illustrating a process for setting priorities and designing interventions to address problem areas.

The *Quality Matrix and Framework* establishes what is important to measure; the Work Book provides tools and methods for how to measure and what to do with the findings.

How was the Work Book developed?

CMS contracted with the Muskie School of Public Service to develop the Work Book. Muskie School staff interviewed state HCBS program staff to understand the issues of developing a quality improvement approach for HCBS programs. Many of the tools and ideas gained from these interviews are reflected in the Work Book. The Work Book also borrows heavily from quality improvement concepts applied in other settings of care that are easily adapted to HCBS programs.

How is the Work Book organized?

Each of the following chapters is devoted to a component of the quality improvement process. Each chapter includes:

- ***Tasks*** for completing the quality improvement process
- ***Sidebars*** that provide further details or prompts to complete a task.

At the close of each chapter, a case example from the fictional "Any State USA" demonstrates how a state can apply the lessons of the chapter. The case example is followed by worksheets documenting the quality improvement activities of "Any State USA." Blank worksheets and highlights from quality improvement initiatives in seven states are included in a Supplement. The Work Book and Supplement will be available electronically upon final approval by CMS. Future updates of the Work Book and Supplement can be obtained by registering via e-mail at maureenb@usm.maine.edu.

CHAPTER 1
Getting Started

Summary

This chapter describes the basic elements of designing an organizational structure for a state-based quality improvement function for HCBS programs.

Tasks:

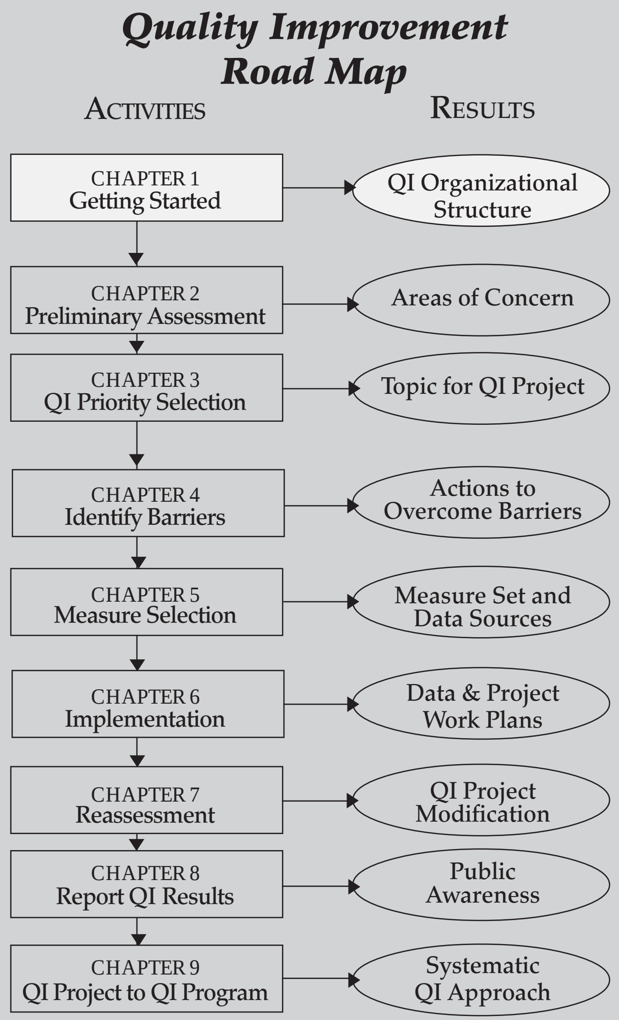
1.1 Review the road map to quality improvement.
1.2 Define the scope of the quality improvement function.
1.3 Form a Quality Improvement (QI) Team.
1.4 Engage stakeholders in the quality improvement process.
1.5 Design an organizational structure for your quality improvement activities.

Case Example

Worksheet 1.1	QI Team
Worksheet 1.2	QI Committee

Resources

Supplement Blank Worksheets



Getting Started

This chapter begins with an overview of the quality improvement process. Three major areas are addressed:

- the scope of the quality improvement function;
- designation of lead staff to serve on the QI Team; and
- the establishment of a formal structure to advise the state on its quality improvement activities for HCBS programs.

The need to bring many different perspectives into the process is emphasized. Compliance tends to be the domain of the state and is usually a closed, confidential exchange between the state and its regulated providers. Quality improvement, on the other hand, thrives on the involvement of many stakeholders and is open in its orientation.

Task 1.1 – Review the road map to quality improvement.

Part of getting started is becoming familiar with the quality improvement process and the activities that go into designing an effective QI Project to improve consumer outcomes. The following chapters outline each activity in detail.

Not all states will start with Chapter 1. If your state has already defined areas of concern, you may want to jump to Chapter 3 to set priorities. However you decide to proceed, you are encouraged to document your efforts and findings, using the worksheets.

Scope of QI Function

Separate or centralized QI function?
- Are there existing working relationships to build upon across HCBS programs?
- Do the HCBS programs share common populations, policies, and goals?
- Do the programs have similar external stakeholders?

Discrete function or one combined with compliance activities?
- Can the same staff perform both functions?
- Can workloads be reallocated to create a primary quality improvement staff position?
- Is training necessary to build staff skills in quality improvement?
- How can conflicting roles be minimized?

In-House or Delegation?
- What quality improvement activities are included in contracts with other administrative agencies or providers?
- How clearly are the state's expectations specified in the contract?
- How does the state participate in and assess the effectiveness of QI activities that are delegated?

Task 1.2 – Define the scope of the quality improvement function.

There are many different ways to organize a state-based quality improvement function for HCBS programs. Select a method that makes sense given your resources, staff expertise and organizational structure. We suggest you bring together the directors of units or agencies with responsibility for administering HCBS programs in your state to address the scope of your QI function. Three issues are important to consider:

- *Separate or centralized function?* A state may have multiple HCBS programs for different populations or may administer its programs as part of a broader long term care delivery system. An early question to address is whether the quality improvement function should be organized within a specific program or designed as part of a centralized activity for multiple programs and/or long term care services.

- *Discrete function or combined with compliance activities?* What is the relationship of the quality improvement function to compliance activities? Although a state may not have the luxury of dedicated staff for each of these functions, there are trade-offs that should be considered before final decisions are made.

- *Delegation of quality improvement activities?* Many states contract with a single point of entry system or another administrative body to oversee core functions such as consumer assessments and care coordination. Some states require quality improvement as part of these contracts. Although these tasks may be delegated, the state retains ultimate responsibility for the quality of its services. For this reason, the Work Book advocates the design of a state-based quality improvement function. The Work

Skills for the QI Team

- Good facilitation and decision-making skills
- Credibility within and across state agencies
- Credibility with consumer and provider communities
- Knowledge of quality improvement interventions
- Quality measurement and data analysis skills

Where to look for QI consultants:

Quality Improvement Organizations (QIOs): Each state has a QIO (formerly known as Peer Review Organization) that contracts with Medicare to monitor and improve care. In addition, QIOs conduct quality review and data analyses with state Medicaid agencies, local health providers and private organizations.

Consultants working with other state initiatives: State Medicaid agencies, health departments and commissions already may have consultants under contract who have expertise valuable to HCBS programs.

University-based health services research programs: Most state universities have research units with statistical, survey administration and analytical expertise that parallels your quality improvement functions.

Book can be helpful in sorting out which quality improvement activities can be delegated and which should be handled by the state.

Task 1.3 – Form internal QI Team

The QI Team includes assigned staff from HCBS unit(s), staff from other state units / agencies, and consultants. How a state develops its team and combines the skills useful in quality improvement will depend on existing staff capacity, resources to hire new staff, and the use of consultants. Think broadly about available expertise in your state, and how you may tap into that expertise.

Some factors to consider when forming your QI Team include:

- *Dedicated QI Staff*: Depending on the scope of the quality improvement function, it may or may not be viable to have one or more staff persons dedicated to quality improvement.

- *Use of QI Staff from other units/agencies*. Expertise in quality improvement may be found in state Medicaid agencies, health departments or long term care bureaus. Think about where the needed expertise can be found and how working relationships with these units can be formalized.

- *Use of consultants*. There will be times in the quality improvement process when specific expertise will be needed that only a hired consultant can provide. Early on, acquaint yourself with existing contracts that could be expanded to include quality improvement-related activities.

STATE POLICY-MAKERS

Departments/Agencies	Kinds of Expertise
State Licensure	provider licensure requirements; provider shortage areas; provider on site survey team process.
State Medicaid Agency	knowledge of federal waiver policy, medical / pharmacy claims data, and eligibility and assessment data; analytic capacity; access to external consultants.
Health Department	clinical expertise; experience in epidemiology, statistics, population-based measurement, and vital statistics data; responsible for public health consumer-based surveys.
Mental Health & Substance Abuse	population expertise; knowledge of co-morbidities; linkages to provider community; understanding of consumer perspectives.
Rehabilitation	program knowledge; application of functional assessments; linkages to provider community; employment and educational resources.
County agencies	hands-on experience; programmatic expertise.

See Page 13 for External Stakeholders

Your QI Team may include part-time positions or dedicated staff. To proceed, it is important that your team take responsibility for managing the quality improvement process as outlined in the following chapters. Over time, your staff needs are likely to change and you can enhance the expertise available to you.

Task 1.4 – Establish a QI Committee and define its mission.

The use of a QI Committee is recommended to guide the QI Team. A state may have an existing committee or stakeholder group that can be convened to serve in this capacity.

The QI Committee should include a mix in membership that provides broad representation of perspectives and experience. Generally, a QI Committee will be composed of:

- *State policy-makers* with expertise in populations served by the HCBS program or whose authority may be required to implement needed improvements.
- *External stakeholders* that include consumers and their caregivers, contractors, providers, and state legislators.

The process a state uses in establishing a QI Committee sends a signal about the value it places on the role of the Committee. Members can be appointed or a nominating process can be used to seek broader-based participation in the process.

As conceived in this Work Book, the principal mission of the QI Committee is to guide the quality assessment and improvement process. Before inviting persons to serve on a QI Committee, define the committee's mission and level of involvement in the process. The chapters of the Work Book have been designed as potential agendas for your Committee. The QI Team will be doing most of the work, so

EXTERNAL STAKEHOLDERS

Stakeholder Group	Potential Candidates
Consumers	Program participants, members of Medicaid Advisory Committee or Long Term Care Committee.
Caregivers / Parents / Guardians	Informal and licensed caregivers.
Advocates	Ombudsman programs, consumer advocacy organizations.
Providers	HCBS contract and referral providers.
State legislators	Members serving on Health Committees, Commissions.

See Page 12 for State Policy-makers

Things to Consider When Establishing a QI Committee

- What accommodations are needed to promote full consumer and caregiver participation (transport, interpreters, accessibility, advance training, stipend)?
- How should members be recruited (volunteers, nomination, appointment)?
- Is the mix of members representative of the scope of services addressed under the quality improvement function?
- Is the quality improvement process protected from partisan interest or other biases?
- How will conflicts of interest be addressed in decision-making?

☐ **Involving Consumers on Boards** – see web site: www.medicareed.org/pdfs/papers87.pdf

consider meeting with the committee quarterly so that you have adequate time to prepare meeting materials.

Initially, you may decide to have an informal group of stakeholders convene to initiate the quality improvement process. While this may be a good way to “jump start” your quality improvement activity, over time it will be important to stabilize the QI Committee’s membership and formalize its role.

Case Example

“Any State USA” has had federal waivers for persons with physical disabilities and persons 60 years and older since 1990. The programs are administered by the state’s Bureau of Long Term Care which is located within the Department of Human Services, the same department that houses the state Medicaid agency and the Bureau of Health.

A reporter from “Any State USA News” recently published an article on the vulnerability of persons receiving long term care services in their homes. The Commissioner, alarmed by the negative publicity, met with the Director of Long Term Care to discuss the quality of home and community based services and what was being done to improve consumer outcomes. The Director acknowledged that staff resources had been largely devoted to compliance activities and that little was known about the actual outcomes of care. The Commissioner requested that a quality improvement process be put into place and that a report be prepared in 3 months specifying a priority initiative that the Bureau would undertake to improve outcomes.

Worksheet 1.1 - QI Team

The Director of Long Term Care, returning to her office, assigned the Bureau's quality manager to lead a QI Team. Two nurse reviewers were asked to serve on the QI Team for their working knowledge of the program and insights into potential quality concerns. The quality improvement manager from Medicaid and survey staff from the Bureau of Licensing and Certification were recruited to join the QI Team as well. Knowing that a similar process recently occurred within the Department of Mental Health, their quality improvement director was invited to serve as a resource to the QI Team. To help "jump start" the initiative, the Medicaid director suggested that staff from the Quality Improvement Organization, which was under contract to conduct an independent assessment of the state's managed care program, be brought into the process. Worksheet 1.1 lists the members of the QI Team, their positions and organizational affiliations.

Worksheet 1.2 - QI Committee

A major concern identified in the newspaper article was the lack of consumer voice in the activities of the Bureau and that providers were too frequently blamed for problems without adequate support from the state. To better understand the perspectives of these groups, and to engage them in the quality improvement process, a QI Committee was formed. A letter was sent from the Director of Long Term Care soliciting nominations from consumers who were receiving Waiver services, advocacy groups, the state's Long Term Care Ombudsman Program, participating provider agencies, the Health and Human Services Legislative Committee and the Bureaus of Health, Medicaid, Department of Mental Health, and the Department of Rehabilitation. A draft mission statement was prepared and attached to the solicitation letter.

Twenty nominations were received. The Director of Long Term Care met with the QI Team to assure geographic representation and a fair mix of consumer and provider representatives. Twelve people were invited to serve on the committee. Worksheet 1.2 lists the members of the QI Committee, its mission and the internal and external resources for the committee.

WORKSHEET 1.1 QI Team

CASE EXAMPLE

CHAIRPERSON: Mary Jones
POSITION: Quality Manager, Bureau of Long Term Care

QI TEAM (e.g., staff from HCBS Program Unit and other Departments)

Name	Position	Department
Ann Smith	Manager, Quality Assurance	Medicaid
George Scott	Surveyor	Bureau of Licensing & Certification
Sam Lear	Nurse reviewer	Bureau of Long Term Care
Judy Wilbert	Nurse reviewer	Bureau of Long Term Care

INTERNAL RESOURCES/ADVISORS

John Brown	Quality Improvement Director	Department of Mental Health

EXPERT ADVISORS /Contractors (name, position, department):

Michael Lacasse	Staff	Quality Improvement Organization of “Any State USA”

See Supplement for blank Worksheets

WORKSHEET 1.2 QI Committee

CASE
EXAMPLE

CHAIRPERSON: Julia Fisk
POSITION: Director, Bureau of Long Term Care

QI COMMITTEE - MISSION STATEMENT (include populations, scope, etc)

To provide guidance and recommendations on the assessment of quality in home and community based services and supports for adults over the age of 60 and to identify opportunities for improving the outcomes of consumers served under the waiver program.

MEMBERS OF QI COMMITTEE (e.g., external stakeholders, consumers, parents, etc.)

Name	***Position***	***Department***
Ellen Richards	Consumer	
Linda Jones	Consumer	
Maureen Siegal	Consumer	
Steven Thompson	Consumer	
Laura Nichols	Staff	AARP
John Jakes	Staff	Long Term Care Ombudsman Program
Susan Lake	Director	Area Agency on Aging
John Brown	Staff	Home Health Agency
Laura Hope	Personal Care Assistant	
David Blake	Director	City Health Department
Kelly Smith	Legislator	
Lucy Wales	Manager	"Any State USA" Home Care Association

INTERNAL RESOURCES/ADVISORS (name, position, department):

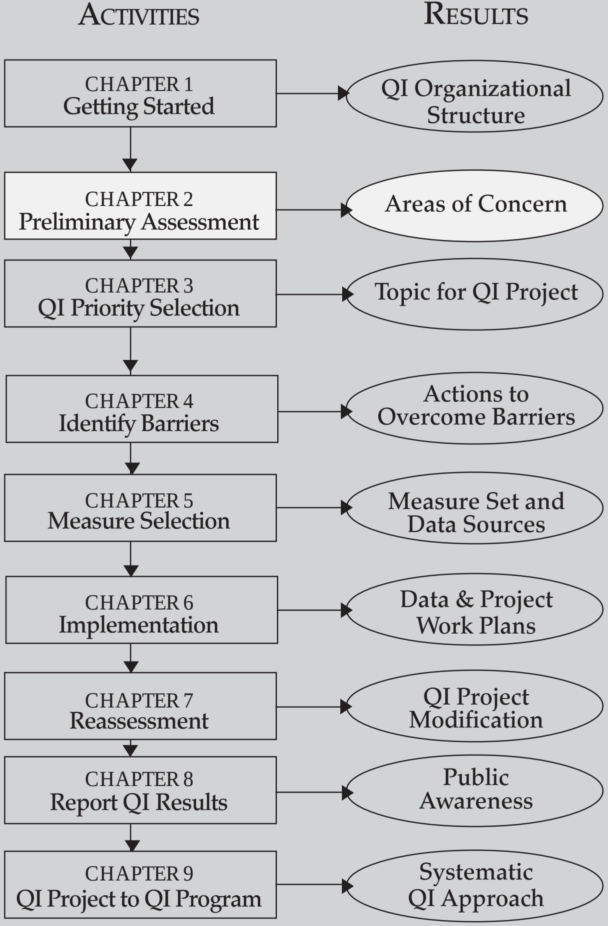
Elise Grant	Medical Director	Dept. of Human Services
Joe Marks	Staff	Bureau of Health

See Supplement for blank Worksheets

Chapter 2

Conduct Preliminary Assessment

Quality Improvement Road Map



Summary

This chapter discusses a process for collecting and examining information about the quality of HCBS programs.

Tasks

2.1 Gather available data on HCBS quality.
2.2 Brainstorm what is known about quality concerns.
2.3 Identify data gaps to support your conclusions.
2.4 Develop final list of concerns.

Case Example

Worksheet 2.1	Preliminary Assessment

Resources

Appendix A	Brainstorming Techniques
Supplement	Blank Worksheets

Conduct Preliminary Assessment

This is the time to pull together your knowledge about how well your HCBS program is working. *You probably know more than you think about the outcomes for your consumers.*

Some states may have ready access to information that documents consumer quality of life, functional independence, health, and wellness. Other states may not have data to validate their “hunches” about how the program is working. The preliminary assessment is an opportunity to sort out what is known or suspected about consumer outcomes and to brainstorm areas of concern.

Task 2.1 - Gather available information.

States will be in very different places with respect to information that is readily available. Following are some of the obvious places to look for data.

- *Consumer survey data:* There are satisfaction and other survey tools that may be used by your HCBS program or administered by other departments that have relevance to HCBS quality issues. These include surveys as well as findings from focus groups, personal interviews and response cards that may be periodically used.
- *HCBS program data:* Analyzing your own program data can reveal patterns and trends that may suggest quality issues.
  - Enrollment and disenrollment data
  - Complaints
  - HCFA 372 form
  - Incident reports

▪ The MEDSTAT Group, under contract with CMS, recently produced two Participant Experience Surveys and User Guides for the elderly and disabled and persons with mental retardation/developmental disabilities. To receive any future updates to the User Guides or the Participant Experience Surveys, please register via e-mail at sara.galantowicz@medstat.com.

Consumer Surveys	**Developer**	**Purpose**
Consumer Experience Survey (MR / DD and Elderly / Disabled)	The MEDSTAT Group under contract with CMS (*see Page 19 for more information*)	For use by states to generate information on Medicaid HCBS participants
Home Care Satisfaction Survey	Scott Miyake Geron, Boston University	Designed to measure the satisfaction of homemaker service, home health aide service, case management, home delivered meal service, and grocery service.
Consumer Assessment of Health Plan Satisfaction (CAHPS) Survey	Agency for Health Research and Quality (AHRQ)	Assesses primary health care experience of Medicare Satisfaction (CAHPS) Survey and Medicaid beneficiaries served by managed care plans or fee-for-service systems. Future versions are being developed for nursing home residents and hospital inpatients.
Core Indicators Project Consumer Survey	National Association of State Directors of Developmental Disabilities and the Human Services Research Institute	Collects information directly from people with developmental disabilities and their families and advocates
Behavioral Risk Factor Surveillance System Survey	Centers for Disease Control	Surveys are conducted in all states to monitor state-level prevalence of the major behavioral risks among adults associated with premature morbidity and mortality. Results from standard core questions are compared across states.

- *Chart reviews:* Many states periodically review consumer charts and records to determine whether providers are meeting needs defined in care plans. This data is helpful in identifying areas of concern or areas requiring further analyses or follow-up.
- *Assessment data*: Most HCBS programs conduct assessments as a condition for determining program eligibility. Assessments are typically repeated periodically and provide a useful, standardized measure for evaluating the effects of HCBS programs on consumer health and functional status.
- *Medical and pharmacy claims data*: State Medicaid agencies maintain electronic information systems on all services (including HCBS) provided to Medicaid beneficiaries. Claims data, when linked to Medicaid eligibility data, can identify trends in the use of services provided to consumers of HCBS.
- *Vital Statistics* are maintained by Health Departments and include information on mortality and morbidity rates as well as health behavior risk patterns.

Use this opportunity to gather the information that you have within your program and to reach out to other state agencies and departments regarding information they may have on your HCBS program participants.

Task 2.2 – Organize your data.

Organize your findings into a framework that reveals what is currently known about your program.

Group your data according to the following:

- consumer quality of life (access to care, choices / control, respect / dignity, community integration / inclusion)

Organize Your Data

- Quality of Life
- Consumer Functional Independence
- Consumer Health and Wellness

- consumer functional independence (participation in activities of daily living, cognitive impairments)
- consumer health and wellness (health status and clinical conditions)

List your areas of concern under the appropriate category and identify the source for each finding. For example, survey findings may indicate that a high percentage of consumers feel isolated (consumer quality of life). Pharmacy data may tell you that there is a high level of poly-pharmacy or use of inappropriate medications for persons with particular conditions (consumer health). Another area of concern may be the high number of consumers with complex mental health and physical health conditions (consumer functional independence).

Brainstorming Techniques – See Appendix A

Task 2.3 - Brainstorm these and other areas of concerns with the QI Committee

It is time to convene your QI Committee. Share what you have collected under Task 2.2. Ask the QI Committee to brainstorm potential quality problems that may not have been identified. Some questions to use when brainstorming with your QI Committee may include:

- *Consumer Quality of Life*
  - Are consumers supported in ways that promote informed choices?
  - Are consumers satisfied with their workers? Are workers skilled, kind, on time?
  - Do consumers have choice of providers in all areas of the state?
  - What services are the hardest to schedule?

  - What complaints do consumers report about provider experience and satisfaction?
  - Are consumers able to get the services they need, when they need them or is there a waiting list for services?

- *Consumer Functional Independence*
  - Are tools for assessing the functional status of consumers reliable?
  - Are consumers able to maintain their highest practical functioning?
  - Are mental health services available to meet the needs of consumers?
  - How well is the care of consumers with physical, medical and mental health needs being coordinated?

- *Consumer Health and Wellness*
  - Do consumers have a regular source of medical care?
  - Are there avoidable emergency room visits?
    Avoidable hospital admissions?
  - Are medications tracked?
    Do consumers have adverse reactions?
  - Are consumers offered self-help skills to manage their conditions?
  - Are HCBS coordinated with a consumer's primary care provider?
  - Do consumers get necessary preventive services?
  - What complaints do consumers report about their health?

Revise your areas of concerns following the brainstorming session.

Task 2.4 – Identify data gaps.

As you develop your list of concerns, identify existing data sources. Also identify where there is a gap in data or where you are unclear about where to go for data to document a concern. As part of this process, you may identify the need to collect additional data through surveys or other assessment instruments. One area of concern, for example, may be the lack of consistent and routinely available data on consumer satisfaction and experience with services. You may want to develop a data collection plan that parallels your quality improvement activities in this area (see Chapter 6).

Case Example

Worksheet 2.1 - Preliminary Assessment
The QI Team has assembled preliminary information and data from a variety of sources. Sources include information from a consumer satisfaction survey (which the Bureau recently used to survey a sample of its consumers), case record reviews by the nurse reviewers, public health reports, complaint logs, Medicaid claims data, and assessment data from the state's assessment database. The QI Team met to review the preliminary information and to discuss how the HCBS programs is impacting the lives of consumers. The QI Team identified some potential problem areas.

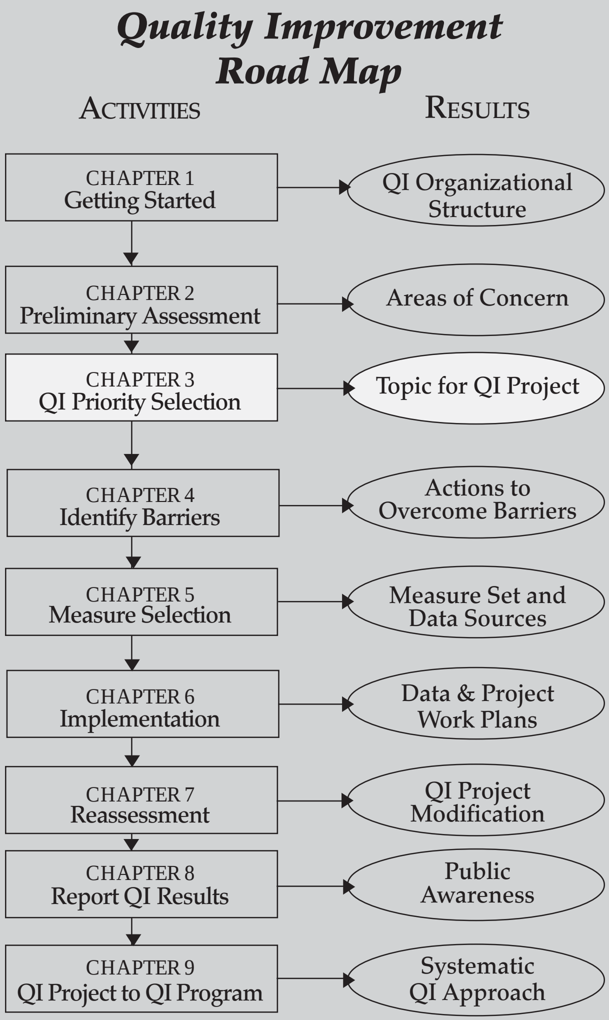
The QI Team presented the preliminary assessment to the QI Committee. The committee reviewed the list, brainstormed other concerns and added some additional areas of concern. Comments were solicited that provided additional information about the problem, data sources and data gaps. The areas of concern and data sources are listed on Worksheet 2.1.

WORKSHEET 2.1 Preliminary Assessment

	Results of Brainstorming	*QI Committee and Team Identify Possible Data Sources*	*QI Committee and Team identify data or information that is known or missing.*
DOMAIN	**AREA OF CONCERN**	**DATA SOURCE**	**COMMENT**
Quality of Life (Access to care, choice/control, repect/dignity, community integration/inclusion)	Workers do not show up when expected.	Consumer Satisfaction Survey	Survey of a sample of 30% of consumers in the Waiver Program.
	There is a lag time between authorization of plan of care and service initiation.	Case Manager notes/reports on unstaffed plans of care	Known personal care assistant labor shortage in County ABC.
	Consumer complaints have increased	Complaint log	New information recently given to consumers about who to call when they have a problem. New automated log system implemented. No analysis of patterns or trends completed to date.
Functional Independence	Falls among the elderly are the leading cause of injury hospitalizations.	Public health data. Report on public health indicators published.	Statewide survey of a sample of the population (not just people served by public programs).
	People have difficulty maintaining independence in their home because of inability to get environmental modifications. (e.g., ramps, etc.)	Meeting with Disability Advocacy Group; article in local paper	Article in the paper highlighted the case of an individual who wanted to move out of a nursing home and couldn't find housing with accommodations.
	People in wheelchairs have pressure ulcers	Case record reviews	Reviewers thought this was more than an isolated problem.
Health and Wellness	People in the age group 55-64 have a low rate of influenza vaccinations.	Behavioral Risk Factor Survey. Information available on website.	Information available by age group and year.
	People with disabilities have low use of preventive services (e.g. mammograms)	Medicaid claims data	Data compares rate of mammographies for general Medicaid population versus participants on Disability Waiver Programs.
	People are not complying with their medication regimes.	Assessment Data	High percentage of people in the community have medication monitoring in plans of care. May be related to cognitive impairment and/or mental illness.

See Supplement for blank Worksheets

CHAPTER 3
Select Topic for QI Project



Summary

This chapter describes a process for identifying quality improvement priorities and selecting a topic for a QI Project.

Tasks:

3.1 Identify criteria for selecting a QI Project topic.
3.2 Select your topic for a QI Project.
3.3 Establish a QI Project Work Group.
3.4 Identify desired consumer outcomes for your QI Project.

Case Example

Worksheet 3.1	QI Priority Selection
Worksheet 3.2	QI Project Work Group

Resources

Appendix B	Priority-Setting Techniques
Supplement	Blank Worksheets

Select topic for QI Project

The previous chapter ended with the generation of a list of concerns about consumer outcomes. Now you must pare down the list to a single high priority which will become the topic of your QI Project. One of the frequent mistakes in quality improvement is tackling too many problems at once.

First, it is useful to review the basic philosophy behind a QI Project:

- *Opportunity for learning*. A QI Project is intended to focus on areas where there are persistent problems for which there is not a full understanding of root causes or best solutions. This is the time to develop innovative strategies and learn how to improve your program, systems of care, and ultimately consumer outcomes.
- *Collaborative not punitive*. An important aspect of a QI Project is that it involves the many stakeholders whose experience and expertise is essential to understanding the full scope of the problem and possible strategies to improve. The attitude you bring into this process will be critical in eliciting the open and frank discussion that contributes to a full understanding of the problem. The QI Project is not an exercise in finding fault with an individual provider or agency but rather in learning how *system* failures affect providers, caregivers and consumers.
- *Time limited*. The duration of a QI Project is limited – usually a year. Complex QI Projects requiring major data collection and analysis may require more time. Within the scope of the QI Project, it is expected that baseline data will be collected, an intervention designed and implemented, and re-measurement to occur. After re-measurement, decisions are made about whether an intervention should be continued and how often re-measurement should be conducted to assess its continued effectiveness in meeting your goals.

Criteria for Selecting QI Priorities

High prevalence	Improvement would affect many consumers.
High relevance	The HCBS program can influence consumer outcomes in this area.
High impact	Significant improvements in consumer outcomes are likely.
Available guidance	Improvement strategies have been tested and documented.
High probability of success	An intervention is very likely to work in improving the outcome.
Low cost	Improvements will not require significant resources or dollars.
Project duration	Limited time to implement and achieve anticipated results.
Measurable	There are data sources that can measure changes in the area.

☐ **Priority-Setting Techniques** – See Appendix B

Task 3.1 – Identify criteria for selecting priorities.

What factors should be considered when determining what problems to tackle first? The QI Committee should consider criteria relevant to the state's situation. For example, if you have not implemented a QI Project in the past, it may be important to select a project where the probability of success is the greatest and the turnaround time for achieving results is relatively short. States with more experience in designing and implementing QI Projects may opt for those that will have high impact, despite significant costs and lengthy project durations.

Task 3.2 – Select topic for QI Project.

The next task is to apply the priority setting criteria to your list of concerns. Given the significance of this activity in directing your future work, it should involve the QI Committee.

Follow a simple process for finding the highest priority on the list.

1. List your final areas of concern on a flip chart.
2. Give each QI Committee member a number of stickers equal to approximately half the number of items on the list (e.g., 10 stickers to each member for a 20-item list).
3. Have members place their stickers next to the items they believe have high priority.
4. Select the top 4-6 items that received the most votes. Discuss and prioritize these items relative to each other.
5. If you cannot select the single highest priority, repeat the voting process on the 4-6 top items with each member receiving only 2-3 stickers or votes. Repeat as necessary until each member receives only one vote (sticker).

CONVERTING PROBLEM STATEMENTS INTO DESIRED CONSUMER OUTCOMES

Priority Problem Area	Desired Consumer Outcome
Adverse drug reactions	Consumers' medications positively influence their health, functioning and wellbeing.
Isolation	Consumers have the opportunity to access social, educational, cultural and recreational activities.
Lack of consumer choice	Consumers have information and opportunities to make choices.

Proceed with the priority setting process until your highest priority is selected. This is the topic for your QI Project.

Task 3.3 – Establish QI Project Work Group.

Based on the topic of your QI Project, you may find it helpful to establish a small QI Project Work Group whose focus will be to provide input and advice on the design and implementation of the QI Project. This is an opportunity to recruit persons with specific expertise and experience in the topic area of your QI Project.

Task 3.4 – Identify desired consumer outcome(s) for QI Project.

The purpose of this task is to convert the topic of your QI Project into a positive statement of what you hope to achieve. Don't be afraid to express the desired outcome as a "grand vision" even though it may not be within your ability to achieve it in the short term. Think big. There will be a time later in the process when the vision is broken down into doable components.

Developing desired consumer outcomes helps clarify the ultimate goal of your QI Project. It also forces everyone to think in terms of the impact of the QI project on the consumer. In the end, the success of the QI Project will be determined by its impact at the consumer level.

Share the topic of your QI Project with other state agencies to identify whether others are working on the same or similar topic and / or have expertise or interest in helping to improve outcomes in this area.

Case Example

Worksheet 3.1 - QI Priority Selection
The QI Team has presented the list of 9 concerns to the QI Committee for priority-setting. Each QI Committee member was given 5 votes (or stickers) and asked to place the stickers next to the areas of concern they believe are of highest priority. After several iterations of voting, the area of concern—*workers don't show up when expected*— is chosen for the QI Project.

Once the committee selected the QI Project, it gave the project a name—The Worker Reliability Project. It also met to brainstorm the bigger vision for the project - the desired consumer outcome. After much discussion, the committee decided on the desired consumer outcome — "Program participants are satisfied with the availability and consistency of services." This will become the basis for identifying actions and defining consumer outcome measures as the work of the group progresses.

Worksheet 3.2 - QI Project Work Group
The QI Committee recommended that a worker reliability work group be established to design, implement and oversee the QI Project. Mary Jones assigns her assistant manager, Kevin Maurice, chair of the work group. Kevin is responsible for the annual consumer satisfaction survey and formerly worked at the statewide Referral and Information Agency. Kevin recruits six others to join the task force: Nancy Wells, analyst in the department's policy and data unit; Sam Lear, nurse reviewer; Judy Wilbert, nurse reviewer; John Thurston, director of the ABC County care management organization; Liz Scott, coordinator of information referral for statewide agency; Elise Platt, personal care attendant; and Jim Johnson, Bureau of Medicaid.

WORKSHEET 3.1 QI Priority Selection

CASE EXAMPLE

DOMAIN	AREA OF CONCERN	CRITERIA FOR SELECTION	NUMBER OF VOTES
Quality of Life (Access to care, choice / control, repect / dignity, community integration / inclusion)	Workers don't show up when expected.	High Prevalence High Relevance High Impact Probability of Success	12 *QI Project Selected*
	There is a lag time between authorization of plan of care and service initiation.	High Prevalence High Relevance High Impact	10
	Consumer complaints have increased	Hard to Measure	3
Functional Independence	Falls among the elderly is the leading cause of injury hospitalization.	High Prevalence High Relevance High Cost	8
	People have difficulty maintaining independence in their home because of inability to get environmental modifications (e.g., ramps, etc)	High Relevance High Impact High Probability of Success	7
	People in wheel chairs have a lot of pressure ulcers	Low Prevalence	5
Health and Wellness	People in the age group 55-65 have low rate of influenza vaccinations.	High Prevalence High Cost	3
	People with disabilities have low use of preventive services (e.g., mammograms)	Low Impact Long Project Duration	2
	People are not complying with their medications regime.	Hard to Measure	9

See Supplement for blank Worksheets

WORKSHEET 3.2 QI Project Work Group

CASE EXAMPLE

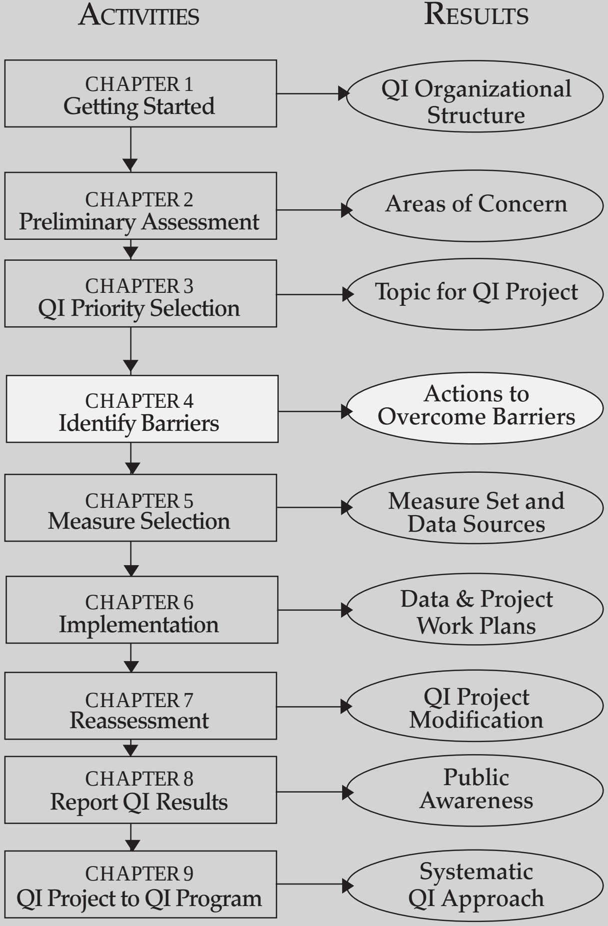
Chairperson: Kevin Maurice
Position: Assistant Quality Manager, Bureau of Long Term Care

NAME	POSITION	DEPARTMENT
Members (e.g., staff from HCBS Program Unit, other departments, providers in County ABC, others)		
Nancy Wells	Data Analyst	Policy and Data Unit
Sam Lear	Nurse Reviewer	Bureau of Long Term Care
Judy Wilbert	Nurse Reviewer	Bureau of Long Term Care
John Thurston	Director	ABC County, Care Management Organization and Referral Agency
Elise Platt	Personal Care Attendant	XYZ Agency
Internal Resources/Advisors		
John Brown	Quality Improvement Director	Department of Mental Health
Expert Advisors/Contractors		
Michael Lacasse	Staff	Quality Improvement, Organization of ABC

See Supplement for blank Worksheets

CHAPTER 4
Identify Barriers and Actions

Quality Improvement Road Map



Summary

This chapter identifies barriers to achieving a desired consumer outcome and actions that can be taken to overcome those barriers.

Tasks:

4.1 Identify barriers to achieving desired consumer outcomes.
4.2 Identify actions to overcome barriers.
4.3 Develop system outcomes.

Case Example

Worksheet 4.1	Barriers, Activities, Outcomes

Resources

Appendix A	Brainstorming Techniques
Appendix C	Web-Based Sources for Practice Guidelines
Appendix D	Published Literature on HCBS Programs
Supplement	Blank Worksheets

Identify Barriers and Actions

In this chapter, the QI Project Work Group reflects on barriers to achieving the desired consumer outcome and the actions that can be taken to overcome those barriers. The identification of actions becomes the foundation for your QI Project.

Task 4.1 – Identify barriers to achieving desired consumer outcome.

Convene the QI Project Work Group and others who have direct knowledge and experience with the HCBS program from different perspectives. Understanding what gets in the way of achieving a desired outcome is an essential first step to being able to design effective strategies to overcome those barriers.

Following is a generic process for thinking about different kinds of barriers. Depending on the desired consumer outcome you have selected for your QI Project, you may want to add other dimensions that should be considered.

- *Barriers related to specific at-risk populations:*
    - Is the desired outcome harder for some populations to achieve?
    - How do barriers differ for these populations?
    - Are there data or methods to identify at-risk populations?
- *Barriers related to geographic location:*
    - Are problems more prevalent in specific geographic regions?
    - Are there available data to identify these geographic regions?
- *Barriers related to providers:*
    - Are problems more prevalent for certain providers (individual providers, practices, types of providers, settings of care)?

- **Brainstorming Techniques** - See Appendix A

TYPES OF ACTION BY LEVEL OF RESPONSIBILITY

Level of Responsibility	Relevant Actions
State	• Policy changes • Licensure / certification • Contract enforcement • Interagency agreements • Consumer surveys
Sub-state administrative entity (county, contract organization)	• Provider scheduling • Plan of care development • Care coordination • Training • Provider oversight
Provider	• Attendance at training • Adherence to requirements • Use of practice guidelines • Communication among providers
Consumer	• Informed choice • Feedback and participation • Adherence to plans of care • Participation in self-help training

- *Policy/system barriers*:
  - Do the terms of provider contracts create barriers to achieving the desired outcome?
  - Do state procedures, policies, regulations or systems create barriers to achieving the desired outcome?
- *Resource barriers*:
  - Does the availability of resources impede the desired consumer outcome?
  - Who controls the resources?
- *Environmental barriers*:
  - Are there factors outside the control of the state or program which impede the desired consumer outcome?

Brainstorm barriers to achieving the desired consumer outcome with the QI Project Work Group. List the barriers in each of the above categories and others that may be relevant to the outcome.

Task 4.2 – Identify actions to overcome barriers

Barriers identified in Task 4.1 become the basis for developing an action plan for a QI Project. For each barrier, the QI Project Work Group should brainstorm ideas on what could be done to reduce or eliminate the barrier. Be creative in your thinking. As part of the brainstorming process, consider the level at which the action must be implemented. Overcoming barriers may require actions at multiple levels to be effective.

Do not be restricted by present practice or resources as you brainstorm ideas to overcome identified barriers. Later in the process, the viability of these ideas will be evaluated on the basis of cost, time and other requirements.

- **Web-Based Sources for Practice Guidelines -** See Appendix C
- **HCBS Published Literature -** See Appendix D

Several sources should be consulted to assist in the identification of appropriate actions to overcome barriers:

- *Best practice guidelines,* although more prevalent in the area of acute care, should be consulted to determine if there are professionally accepted approaches to achieving a specific outcome (see Appendix C).
- *Published literature, research and reports* may identify approaches used elsewhere to address a similar problem (see Appendix D).
- *Expert consensus*: Lacking evidence-based research, consult experts within your programs and state on specific problems and how to solve them. Don't assume, however, that only professionally trained workers can be experts. Workers of all levels, caregivers, parents, guardians and consumers may be your best experts on some issues.

Task 4.3 – Develop system outcomes for activities.

The actions identified in Task 4.2 are steps to achieving your desired consumer outcome. Whether and how quickly they are able to influence a consumer outcome is highly variable and depends in part on whether there is a strong causal relationship between the activity and the outcome. Even when there is a strong relationship, it may take years before some consumer outcomes are affected, especially those relating to health status. The success of an activity can be measured in two ways.

- By determining its direct impact on consumer quality of life, functional independence, health and wellness.

  This is called the desired consumer outcome.

CONSUMER OUTCOME
A result that directly benefits the individual and can be assessed by changes to a person's quality of life, functional independence, health and wellness.

SYSTEMS OUTCOME
System outcomes measure the way in which services are organized and delivered independent of its affect on the consumer.

- By determining whether an activity is working as intended often long before you know whether it makes a difference in consumer outcome.

  These are called system outcomes.

  For example, an activity may be proposed to develop a contingency plan in the event that a worker does not show up when scheduled. Ultimately, you hope that reducing breaks in coverage would improve a consumer's level of satisfaction or functional status (i.e., desired consumer outcome). In the meantime, however, your desired system outcome is to assure that all high-risk consumers have contingency plans that meet certain criteria with protocols for activation when workers don't show up.

For each or a combination of related activities, determine a system outcome describing the results you expect from the actions you have listed.

Case Example

Worksheet 4.1 - Barriers, Activities, Outcomes
The QI Committee identified the desired consumer outcome for this project:— "Program participants are satisfied with the availability and consistency of services." The Worker Reliability Work Group met to brainstorm barriers and identify activities to improve the reliability and consistency of services. The barriers identified include (1) the lack of consistency and viability of contingency plans, particularly for people at high-risk, when workers don't show up; and (2) the unavailability of emergency response systems, particularly in certain regions of the state and for certain groups. After brainstorming the barriers, the Work Group also identified the organizational level at which the

problem might be addressed. Activities to overcome the barriers were identified. For each activity or set of activities, the Work Group identified a set of system outcomes that are expected. System outcomes are outcomes that relate to the way in which services are organized and delivered. The Work Group also recommended that the project focus on high-risk elderly waiver participants in one region, County ABC.

WORKSHEET 4.1 Barriers, Activities, Outcomes

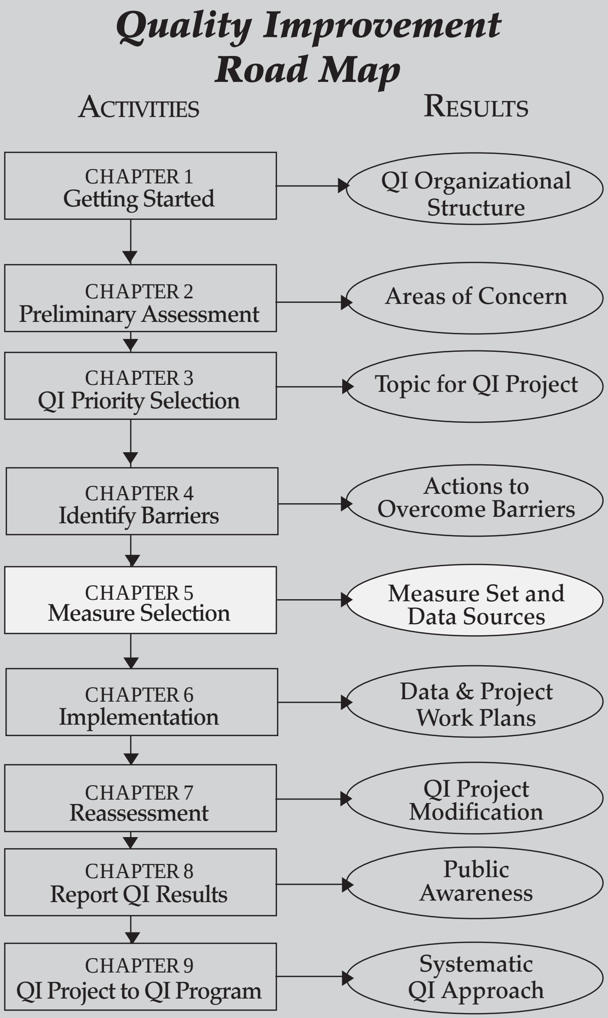
PROJECT TITLE:
DESIRED CONSUMER OUTCOME: Program participants are satisfied with the availability and consistency of services.

Brainstorm barriers to improving worker reliability.	*Identify at what level the barrier exists.*	*List possible actions to remove barriers.*	*Identify the desired system outcomes.*
BARRIERS	**LEVEL OF RESPONSIBILITY**	**ACTIVITIES**	**SYSTEM OUTCOMES**
Contingency Plans			
People don't have a realistic back-up plan for when a worker does not show up.	Consumer Provider State	• Develop criteria for identifying high-risk program participants. • Identify required components of back-up plan. • Develop protocols for activating back-up plan. • Assess effectiveness of back-up plan when activated. • Modify criteria and protocols as necessary.	All high-risk program participants will have a realistic back-up plan.
Emergency Response Systems			
Emergency response systems not available.	State	• Identify potential funding sources for ER systems. • Assess options for group purchase for program participants.	All high risk program participants will have an emergency response system, if appropriate.

See Supplement for blank Worksheets

CHAPTER 5

Define Measures and Data Sources



Summary

This chapter reviews the process of selecting and using measures to assess desired consumer and system outcomes.

Tasks:

5.1 Establish criteria for selecting measures.
5.2 Identify and select measures.
5.3 Identify data sources.
5.4 Define population.
5.5 Construct measures.
5.6 Establish benchmarks.

Case Example

Worksheet 5.1 Consumer Outcomes, Measures and Data Sources

Worksheet 5.2 System Outcomes, Measures and Data Sources

Worksheet 5.3 Construct Consumer Outcome Measures

Worksheet 5.4 Construct System Outcome Measures

Resources

Supplement Blank Worksheets

Define Measures and Data Sources

This chapter reviews the process of selecting and using measures to determine the status of your consumer and system outcomes.

Some states may have used measurement data to identify their QI Project. For these states, this chapter provides an opportunity to see whether new or additional measures are needed to fully capture the scope of their desired outcomes.

Other states may have based their selection of a QI Project on "hunches" or anecdotal evidence and now need to objectively evaluate performance. For these states, this chapter provides a basis for building a core HCBS measurement set, starting with measures relevant to the QI Project but adding new measures over time that address other areas of concern.

■ **HCBS Quality Indicator Database:**
For a list of quality measures by CMS domain, age, population or data source, go to http://quality_choices.muskie.usm.maine.edu/qualityindicators.

Task 5.1 – Establish criteria for selecting measures.

There are many quality measures or indicators in the private and public domains. Some of these have been developed specifically for HCBS while others relate to managed care environments or long term care. It is important to make certain that a measure is suited to your needs.

Whenever possible, use a measure that has been tested. Some established measures may contain comparative data you can use. You may find, however, that a limited range of measures have been tested within HCBS or your target population.

Potential criteria to consider when selecting measures are included here. It may not be possible for any one measure to meet all these criteria.

CRITERIA FOR SELECTING MEASURES

Criteria	***Questions to Consider***
Impact	• Does the measure capture your desired outcome? • Can the system address this issue or problem?
Scientific Soundness	• Has the measure been tested? • Is the measure a valid and reliable indicator of performance? • Does it measure what it is intended to measure? • Was the measure developed for the same population of interest to you? • Is there scientific evidence to support the measure? • Are there benchmarks for evaluating performance on the measure?
Feasibility	• Can the measure be consistently collected? • Are there specifications for collecting the data and calculating the measure? • Is permission required to use the data collection specifications? • How much will it cost to collect the data? • Can data collection be incorporated into an existing process?

- *Impact* – The measure should assess the result you intend to have. Sometimes it is not possible for any one measure to capture the full scope of your intended outcome; you may need to select several measures to do so.

- *Scientific Soundness* – Scientifically sound measures are tested for reliability and validity. Reliable measures provide consistent results when repeated in the same populations and settings. Valid measures capture meaningful aspects of care. Many available measures, particularly those published in established journals and used by other government agencies, have been tested and proven to be “scientifically sound.”

- *Feasibility* – The measure you select will be determined by the time and effort required, the cost involved, and whether it can be incorporated into existing processes. If data collection for certain measures is too time consuming or costly, it may be necessary to choose a different set of measures, at least at the beginning.

Task 5.2 – Identify and select measures.

Review existing measures and select those that capture some or all of the outcomes you want to achieve. Some outcomes may be represented by more than one measure.

Some measures have been developed for certain populations or conditions. If you have data sources or consumer surveys that are unique to your state, you may construct measures using these data sources. The list of references and web sites on page 42 is a good place to start for more information on the development and construction of specific measures.

RESOURCES FOR QUALITY MEASURES

AOA Performance Outcomes Measurement Project
http://www.gpra.net

Behavioral Risk Factor Surveillance System
http://www.cdc.gov/brfss/

CMS OASIS
Home Page http://www.cms.hhs.gov/oasis/default.asp

The Council on Quality and Leadership
http://www.accredcouncil.org/

HCBS Quality Indicator Database
http://qualitychoices.muskie.usm.maine.edu/qualityindicators

Mental Health Statistics Improvement Program
http://www.mhsip.org/index.htm

National Core Indicators Project
http://www.hsri.org/cip/core.html

National Committee for Quality Assurance
http://www.ncqa.org/Programs/HEDIS/

Quality Mall
http://www.qualitymall.org

You may pick a combination of measures: for some you may have the data you need, for others you may need to collect data. While it may be tempting to pick and choose elements from different measures, a data collection tool may not be valid if used only partially. It is best to check with the developers and sponsors to determine biases or problems that you may create if you do not use an instrument in its entirety.

Share your list of outcomes and related measures with the QI Project Work Group. Review it against the criteria from Task 5.1. Create a preliminary set of measures that address your desired consumer and system outcomes.

Task 5.3 – Identify Data Sources

For each measure included in your QI Project, identify the data sources you will need. Generally data will be available from the following sources:

- *Claims* – Medicaid claims and pharmacy claims are a comprehensive and uniform source of cost and utilization data. Claims data are useful in looking at trends for the populations of interest.

- *Eligibility or Assessment Data* – Most states assess people for “medical” eligibility and other services. This data may or may not be automated. It provides useful information on consumer functional independence and health status.

- *Consumer Surveys* – Consumer surveys are usually conducted on a sample of people. This information is helpful in capturing the consumer experience. CMS has recently completed a Participant Experience Survey for the elderly and disabled as well as persons with mental retardation and developmental disabilities that is available to states for use in their HCBS programs.

- *Programmatic Data* – Information from chart reviews and other record reviews can be systematically gathered.

DATA SOURCES FOR CONSUMER OUTCOME MEASURES

Data Source	***Examples of Measures***
Claims	
Medicaid claims	Rates of hospitalizations Use of emergency rooms Rates of avoidable hospitalizations Use of preventive health services
Pharmacy claims	Use of psychotropic medications Use of inappropriate medications e.g., the Beers list identifies noncompliance with medications (unfilled prescriptions) Adverse Drug Interactions
Eligibility/Assessment	
Assessment Data	Change in level of functioning Incidence of falls or accidents
Surveys	
Consumer survey/ interviews	People realize personal goals People are satisfied with workers Workers arrive on time
Programmatic Data	
Program records/ reports	Contract deficiencies by type Complaints Time between plan of care and service initiation
Chart Reviews	
	Medication compliance Potential adverse interactions between prescription and nonprescription medications Preventive health services (flu shots, dental, routine exams) Safety in the home

Task 5.4 – Define population.

The next task is to define a target population for tracking performance. When you developed your QI Project, you may have defined a target population; it is useful to review it now. Some of the common ways are:

- *Demographics* (e.g., older adults, people with physical disabilities, people with developmental disabilities)
- *Setting or program* (e.g., people receiving HCBS Waiver services, people in residential settings)
- *Geographic region* (e.g., people in certain regions (urban, rural) or in certain counties)
- *Provider* (e.g., providers of home health services, personal care attendant providers, providers for people with physical disabilities)
- *Condition* (e.g., people with diabetes, people using psychotropic medications)

- *Payor* (e.g., people who are dually eligible for Medicare and Medicaid, people receiving Medicaid)

Task 5.5 - Construct Measures

Once you have determined the population you are interested in, it is possible to define how each measure will be calculated.

Components of a Measure

Quality measures are constructed by specifying the following:

- *Numerator* — the number of people with certain conditions or specific answers to a question that are of interest (e.g., people who have had a flu vaccination, people who fell in the last month, people who report dissatisfaction with their workers).
- *Denominator* — total number of people in the population of interest (e.g., all older adults on the HCBS waiver; all people with physical disabilities in a particular region; all Medicaid beneficiaries with diabetes).
- *Time period* — (e.g., people who received HCBS during the year, claims data with a date of service beginning on or after a certain date, etc.)
- *Exclusions* — it is often necessary to exclude certain data in the construction of a measure. Some common reasons for excluding data are:
    - The answers given to the question were not clearly marked; it is difficult to determine what the respondent meant.

Types of Measures

Prevalence – a measure that captures all information at one point in time. ***Example:*** Percent of Medicaid beneficiaries who had a flu shot in the last 6 months.

Incidence – a measure that captures change in status over time. ***Example:*** Percent of people in nursing homes who developed an ulcer between the time of admission and after 3 months in the nursing home.

  - The data is not timely –for example mailed questionnaires that are returned late.

- *Risk Adjustments*— Researchers are increasingly interested in making sure that quality measures are adjusted for risk. Adjusting for risk minimizes the chance that differences observed between providers, for example, are due to factors other than the care provided by the agency.

Providers are particularly concerned that they not be "penalized" for caring for people who have higher health care needs when performance measures are developed. Many quality measures that have been recently developed include some way to adjust for risk.

Types of Measures

There are two types of measures:

- *Prevalence measures capture information at one point in time.*

  For example, percent of people who fell within the last 30 days in a nursing home is a prevalence measure. The numerator is the number of people who had a fall in the last 30 days. The denominator is total number of people in the nursing home.

- *Incidence measures capture change in status over time.*

  For example, the percent of people whose ability to walk declined from one assessment to the next, is an incident measure. The numerator is the number of people who were able to walk independently on a first assessment and needed assistance with walking at the time of the second assessment. The denominator is the number of people who were

Benchmarks

Under contract with the Association of Public Health Services Administration (APHSA), the National Committee for Quality Assurance maintains a database of measures documenting the performance of comprehensive managed care plans that enroll Medicaid beneficiaries.

In its third year, the project allows a state to benchmark its performance against national averages.

Current data reflect performance in 1999 of 167 managed care plans in 31 states and the Commonwealth of Puerto Rico.

http://www.cmwf.org/programs/quality/partridge_aphsa_hedis_1999.pdf

able to walk independently on their first assessment.

At this stage you may not have data to calculate the measure. Calculation will be discussed in Chapter 6, Task 6.1.

Task 5.6 – Establish benchmarks.

A benchmark is the standard against which performance is measured. Benchmarks may be absolute (e.g., Healthy People 2010 established that 90% of consumers should have a flu vaccine every year) or relative (e.g., performance is compared to the national average, or percent change since the last measurement period). Nationally recognized measures are valuable for comparing your findings to those of other programs, regions, states or the nation.

A reasonable approach to establishing benchmarks is to look for continued improvement over baseline. This avoids debates about whether the benchmark is arbitrary or irrelevant to your population. As your quality improvement efforts progress, you will be better able to determine the level of improvement that is reasonable for a given measure, population or program area.

Case Example

Worksheet 5.1 – Consumer Outcomes, Measures & Data Sources
The Worker Reliability Work Group met to review the desired consumer outcomes and system outcomes that have been identified. The measures and data sources for the outcomes are identified.

Consumer Outcome – The QI Committee had previously identified the desired consumer outcome: “Program participants are satisfied with

SURVEY QUESTIONS

Consumer Satisfaction Survey - "Any State USA"

Do you know who to call if the worker paid to help you does not show up?
- ☐ yes
- ☐ no
- ☐ unsure
- ☐ unclear response
- ☐ no response

Do the workers who help you show up when expected?
- ☐ yes
- ☐ no
- ☐ unsure
- ☐ unclear response
- ☐ no response

Participant Experience Survey E/D

Is there any special help that you need to get out of bed?
- ☐ needs help from another person
- ☐ does not need help from another person
- ☐ unclear response
- ☐ no response

Do you ever go without getting out of bed when you need to?
- ☐ yes
- ☐ no
- ☐ unsure
- ☐ unclear response
- ☐ no response

Is this because there is no one there to help you?
- ☐ yes
- ☐ no
- ☐ unsure
- ☐ unclear response
- ☐ no response

Is there any special help that you need to eat?
- ☐ needs help from another person
- ☐ does not need help from another person
- ☐ unclear response
- ☐ no response

Do you ever go without eating when you need to?
- ☐ yes
- ☐ no
- ☐ unsure
- ☐ unclear response
- ☐ no response

Is this because there is no one there to help you?
- ☐ yes
- ☐ no
- ☐ unsure
- ☐ unclear response
- ☐ no response

the availability and consistency of services." The Work Group reviewed a number of consumer survey instruments and found some that ask a number of questions related to the impact on consumers when workers do not show up. The Work Group decided to use these questions to develop baseline and ongoing measures about consumer experience with services.

Worksheet 5.2 - System Outcome Measures and Data Sources
System Outcomes – The Worker Reliability Work Group examined each of the actions that had been identified. For each action or set of actions, the Work Group identified one or more system outcomes. For this project, the system outcomes are: (1) all high risk program participants will have a realistic back-up plan and (2) all high risk program participants will have an emergency response system if appropriate. The Work Group decided to select and review provider records to develop baseline and follow-up information on the waiver participants who have a back-up plan and whose needs are met when a worker doesn't show up. Similarly, information on emergency response systems will be obtained from provider records.

Worksheet 5.3 - Construct Consumer Outcome Measures
After the Worker Reliability Work Group has identified the outcomes, measures and data sources for the QI Project, the manager of the data analysis unit met with his staff to discuss how to construct the actual measures including the target population for the QI Project, the size of the sample for data collection and the calculation of the consumer and system outcome measures. The Worker Reliability Work Group previously recommended that the QI Project be implemented in County ABC and focus on people who are at "high-risk" when a worker does not show up. The team leader consulted with a statistician from the Bureau of Health to determine the optimum sample size

for data collection. Together, the statistician and the team leader come up with the following estimates of the size of the target population:

Total HCBS elderly waiver participants in County ABC: 1000
Number of HCBS elderly waiver participants at high-risk (60%): 600

The QI Team decides to conduct a mail survey of all (N=600) of the high-risk elderly waiver participants in ABC County. It is estimated that 30% - 40% of people surveyed will respond.

The benchmarks for the consumer measures will be a comparison with baseline information.

Worksheet 5.4 - Construct System Outcome Measures

System Outcomes: System outcome measures will be collected by reviewing provider records. Because of the time and effort involved in this data collection effort, the Worker Reliability Work Group decided to select a 15% sample of records of high-risk participants (n=90) in ABC County to review their plans and the availability of emergency response systems.

The benchmarks for the system measures will be a comparison with baseline information.

WORKSHEET 5.1 Consumer Outcomes, Measures and Data Sources

CASE EXAMPLE

Project Title: Worker Reliability Project

CONSUMER OUTCOMES	MEASURES	DATA SOURCE	BENCHMARK
Program participants are satisfied with the availability and consistency of services	• Percent of high-risk program participants who report that they know who to call if a worker does not show up.	Consumer Satisfaction Survey	Comparison to baseline
	•Percent of high-risk program participants who report that workers show up when expected.	Consumer Satisfaction Survey	Comparison to baseline
	• Percent of high-risk program participants requiring help with transferring who report they are sometimes unable to get out of bed because there is no one there to help them.	Participant Experience Survey	Comparison to baseline
	• Percent of high-risk program participants requiring personal assistance with eating who report they are sometimes unable to eat because there is no one there to help them.	Participant Experience Survey	Comparison to baseline

See Supplement for blank Worksheets

WORKSHEET 5.2 System Outcomes, Measures and Data Sources

Project Title: Worker Reliability Project

ACTIONS	SYSTEM OUTCOMES	MEASURES	DATA SOURCE	BENCHMARK
BACK-UP PLANS				
Develop criteria for identifying high risk program participants Identify required components of back-up plan. Assess effectiveness of back-up plan when activated. Modify criteria and protocols as necessary.	All high-risk program participants will have a realistic back-up plan.	Percentage of high-risk program participants with a realistic back-up plan.	Provider records	Comparison to baseline
EMERGENCY RESPONSE SYSTEMS				
Identify potential funding sources for emergency response systems. Assess options for group purchase by program participants.	All high risk program participants will have an emergency response system, if appropriate	Percentage of program participants with emergency response systems.	Provider records	Comparison to baseline

Prepared By:

Date:

See Supplement for blank Worksheets

WORKSHEET 5.3 Construct Consumer Outcome Measures

Project Title: Worker Reliability Project
Population: High-Risk Elderly Waiver Participants in ABC County

Outcomes and Measures from Worksheet 5.1

Define Numerator and Denominator

Identify Data Sources & Sample Size

CONSUMER OUTCOMES	CONSUMER OUTCOME MEASURES	DEFINITION OF MEASURE	DATA SOURCE	SAMPLE
Program participants are satisfied with the availability and consistency of services	Percent of high-risk program participants in ABC County who report they know who to call if a worker does not show up.	Numerator: Number of high-risk program participants in ABC County who report they know who to call if a worker does not show up.* Denominator: All high-risk elderly waiver participants in ABC County.	"Any State USA" Consumer Satisfaction Survey	100% of all high-risk elderly waiver participants in ABC County
	Percent of high-risk program participants in ABC County who report that people who are paid to help show up when expected.	Numerator: Number of high-risk elderly waiver participants in ABC County who report that workers show up when expected.* Denominator: All high-risk elderly waiver participants in ABC County.*	"Any State USA" Consumer Satisfaction Survey	
	Percent of high-risk program participants requiring help with transferring who report they are sometimes unable to get out of bed because there is no one there to help them.	Numerator: Number of high-risk program participants in ABC County who report they need help getting out of bed and are unable to because no one is there to help (yes to PES question 9).* Denominator: All high-risk elderly waiver participants in ABC County who need help transferring (yes to PES question 7).*	Consumer Experience Survey	
	Percent of high-risk program participants requiring help with eating who report they are sometimes unable to eat because there is no one there to help them.	Numerator: Number of high-risk program participants in ABC County who report they need help eating and are unable to because no one is there to help (yes to PES question 12).* Denominator: All high-risk elderly waiver participants in ABC County who need help eating. *	Consumer Experience Survey	

See Supplement for blank Worksheets

* Do not include responses that are unsure, unclear, or no response.

WORKSHEET 5.4 Construct System Outcome Measures

Project Title: Worker Reliability Project
Population: High-Risk Elderly Waiver Participants in ABC County

Prepared By:
Date:

Outcomes and Measures from Worksheet 5.2

Define Numerator and Denominator

Identify Data Sources & Sample Size

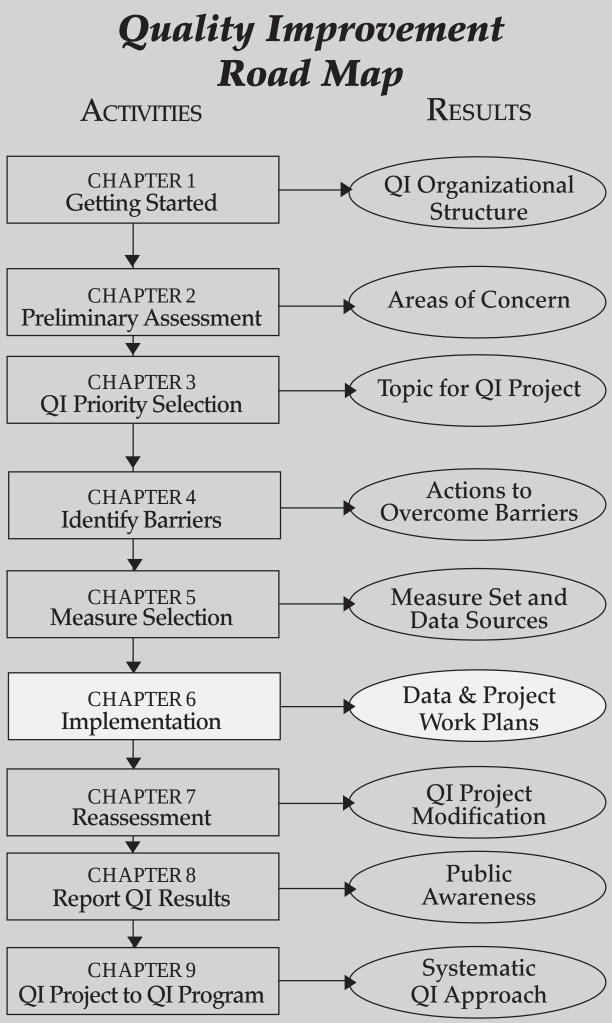
Specify Benchmarks

SYSTEM OUTCOMES	SYSTEM OUTCOME MEASURES	DEFINITION OF MEASURE	DATA SOURCE	SAMPLE
Back-up Plans				
All high-risk program participants will have a realistic back-up plan.	Percentage of high-risk program participants with a realistic back-up plan.	Numerator: Number of high-risk elderly waiver participants in ABC County with a realistic back-up plan in the sample. Denominator: Number of high-risk elderly waiver participants in ABC County in the sample.	Provider records	15% of all high-risk elderly waiver participants in ABC county
Emergency Response Systems				
All high-risk program participants will have an emergency response system	Percentage of high-risk program participants with emergency response systems.	Numerator: Number of high-risk elderly waiver participants in ABC County who have an emergency response system in the sample. Denominator: Number of high-risk elderly waiver participants in ABC County in the sample.	Provider records	15% of all high-risk elderly waiver participants in ABC County

See Supplement for blank Worksheets

CHAPTER 6

Develop Data and QI Work Plans



Summary

This chapter describes the design of data collection and project work plans to organize the tasks and time frames for collecting data, implementing a QI Project and disseminating its results.

Tasks:

6.1 Develop a data collection plan.
6.2 Develop a QI Project Work Plan.
6.3 Identify resource requirements and budget.
6.4 Initiate implementation of your QI Project.

Case Example

Worksheet 6.1 Data Collection Work Plan
Worksheet 6.2 QI Project Work Plan
Worksheet 6.3 QI Project Budget
Worksheet 6.4 QI Project Milestones

Resources

Appendix E Statistical Sampling
Supplement Blank Worksheets

Develop and Implement QI Work Plan

Throughout the previous chapters, you have been designing your QI Project. This chapter creates a framework for combining the elements of your QI Project into a consolidated QI Project Work Plan. The purpose of the work plan is to document the sequence in which tasks should be conducted, by whom, and over what period of time.

Task 6.1 – Develop data collection plan.

In Chapter 5, you identified the measures you want to use for your QI Project and the areas where data may not be available. The next task is to develop a plan for collecting the data that are needed to calculate selected measures. The data collection plan includes multiple steps. For each step, you will identify the task, the period during which the activity will be conducted, and the person or entity responsible for conducting the task.

- *Confirm data sources.* Data sources may include survey findings, claims, consumer charts, complaints, tracking logs, and interviews. Now is the time to confirm the source and availability of the data you need.
- *Assign lead person* to manage the data collection process.
- *Design Data Collection Instrument.* You may have already selected your data collection instruments when you identified your measures and data sources. If so, this step will involve obtaining permission to use existing data instruments, if necessary.

  If a data collection instrument (such as a survey or record abstraction protocol) does not already exist, you will need to develop one for each data source that you will be using. For each data source, identify the raw data elements that are needed to

Elements of Data Collection Plan

1. Confirm data availability.
    Are data available and accessible?
2. Assign lead staff to manage data collection.
    Who has the organizational skills and knowledge to manage the data collection process?
3. Design data collection instrument.
    What tools are needed to indicate and collect data specifications?
4. Determine population.
    Will data be collected on the entire target population or a sample?
5. Collect data.
    How will the collection of data be monitored to assure validity and consistency?
6. Construct measures.
    Are measures being calculated in accordance with specifications that allow comparability with national benchmarks?
7. Interpret measures.
    Are factors that may affect performance clearly documented?
8. Reassess performance.
    When should performance be reassessed to determine the impact of the QI Project?

calculate your measures. Think of how the data needs to be collected for calculation of the measure, including stratification by age categories, service or provider types, or geographic areas. Collect only data that will be used. If data will be entered into computer for computations, design the instrument to facilitate computer entry.

- *Define population.* In Task 5.4, you defined the population for which measures would be collected. You must now decide whether you will collect data for the entire target population or a sample of the population.
- *Entire Population*. Measures that exclusively rely on automated data sets, such as Medicaid claims data or enrollment data, are easily applied to an entire population.
- *Sample of Population.* Measures that rely on data from surveys, chart reviews or consumer assessment may be more realistically collected from a sample due to the high costs of retrieving information. Two questions are raised when collecting information from a sample: the size of the sample and the method for sampling.
    1. *Size of sample* is determined by how certain you will be that your observation is based on real differences in a population and not just the result of chance. The smaller the sample, the greater the range of error.
    2. *Sampling method*: Samples can be randomly selected (every one in your at-risk population has an equal chance of being selected), stratified (the population is subdivided into units of interest, such as geography and then randomly sampled), or systematically sampled (the sample is selected based on an identifier (e.g., medical chart number) believed to be randomly assigned.

- **An Explanation of Statistical Sampling** - see Appendix E

Example of Prevalence Measure

Data Source:	Consumer Survey
Population	Older adults receiving home and community based care in the Year 2000 (N=10,000)
Sample	10% sample of population surveyed in first quarter of 2001 (n= 1,000)
Numerator	# of people who answered “yes” : the worker who comes to help arrives late (n=360)
Denominator	# of people who answered the survey (n=600)
Measure	60% of people surveyed indicated that the worker who comes to help arrives late (360/600)

Because sampling is a complex task that directs the credibility of your findings, it is best to consult a statistician or other research expert to guide you in determining whether and how to sample your at-risk population. Statistical significance is especially important if you want to compare performance across populations or geographic areas or with national benchmarks.

- *Collect data* in accordance with your data collection instrument. Several points to take into account include:
  1. Select and orient the data collection staff to the intended use of the data and data collection requirements.
  2. Field test the instrument on a small sample to determine how well it works and refine the instrument accordingly.
  3. Document any problems in data collection and how the problems were resolved.

- *Construct measures.* Calculate the numerator and denominator for each measure (see Chapter 5, Task 5.3).

- *Interpret data.* Leave adequate time to interpret the measures after they have been calculated. Be on the look out for confounding factors that may influence performance, such as:

  1. Potential problems with the data that threaten its validity;
  2. Statistical significance of each measure given sample size.

Comparability of measures across populations or service groups may be influenced by differences in data collection methods, or known characteristics that may affect performance (e.g., age of the population or functional status).

Elements of QI Project Implementation

1. Specify QI Project actions and tasks
    - *Is there a logical sequence to the actions?*
    - *What are the tasks that must be accomplished to implement each action?*
2. Assign responsibility entities
    - *Who is responsible for completing each task and action?*
    - *Has the responsible entity agreed to do the work within the time frame indicated?*
3. Conduct QI Project training or orientation
    - *Who needs to be aware of the QI Project Implementation?*
    - *How do they get oriented to the goals and activities of the project?*
4. Establish check-in points
    - *How will QI Team be alerted to problems in the project implementation?*
    - *What is the role of the QI Work Group during implementation?*
5. Document revisions to QI Project and notify others
    - *How will mid-course corrections be made, documented and communicated?*

- *Reassess performance.* The Data Collection Plan specifies the interval after which performance will be reassessed using the same data collection protocol adopted during baseline assessment.

Later in Chapter 8, we discuss how findings from your data collection efforts can be reported to both internal and external audiences.

Task 6.2 – Develop a QI Project Work Plan.

In Chapter 4, you defined actions to achieve desired consumer and system outcomes. The QI Project Work Plan further delineates these actions into tasks and arranges them in an orderly sequence. The project work plan serves two primary purposes. First, it alerts everyone to what must be done. Second, it is the basis for the QI Team to monitor the QI Project.

- *Specify QI Project actions and tasks.* List the QI Project actions identified in Chapter 4 (Task 4.2) on the work plan in the order in which they should be completed. Break down each action into manageable tasks. Identify the time period during which each task will be conducted.
- *Assign responsible entities.* For each task identified in the work plan, identify the person or group who is responsible for its completion. Be certain that each person is aware of this commitment and has the skills and support to do the work.
- *Conduct orientation.* Schedule time to bring all the people involved in the work plan together for an orientation. This should be a group meeting so that everyone hears the same message and understands how their work fits into the larger QI Project.

- *Establish check-in points.* Determine dates for periodic check-in with the QI Team, QI Work Group and QI Committee. Communications with the QI Team and QI Work Group should be frequent enough to encourage troubleshooting when the project is not going as intended. Check-in with the QI Committee can occur during regularly scheduled meetings during which time a portion of the agenda can be devoted to the status of the QI Project.

Task 6.3 – Identify resource requirements and budget.

Having completed the data collection and project work plans, estimate the resources that will be needed to do the work. Review each component of the QI Work Plan and estimate requirements in terms of human resources, outside contractors, equipment (including hardware and software), supplies and financing. For each of these resource requirements, consider potential sources of funds. If sufficient funds are not available to meet estimated resource requirements, it may be necessary to scale back the QI Project to levels that can be accommodated within resource constraints.

Examples of Resource Requirements

- Staff time
- Consultants
- Stipends or special payments
- Cost of meeting rooms
- Travel expenses
- Printing (surveys, brochures, reports)
- Equipment
- Computer analysis

Case Examples

Worksheet 6.1 - Data Collection Work Plan
The QI Work Group leader develops the data collection work plan. This plan sets forth the steps that must be completed for each activity, the time frame for completing them and the key people involved in the activity.

Worksheet 6.2 - QI Project Work Plan
The QI Work Group leader develops the QI Work Plan. The QI Project Work plan identifies the steps that must be completed to implement and maintain the QI Project. This includes the tasks, time frame and the staffing required for each step.

Worksheet 6.3 - QI Project Budget
The budget for the project provides a detailed estimate of the in kind and other costs associated with the project.

Worksheet 6.4 - Milestones
The milestones and products for the project are listed on Worksheet 6.4. This provides a way to monitor and assess progress toward the project goals.

WORKSHEET 6.1 Data Collection Work Plan

Project Title: Worker Reliability Project

TASKS	LEAD STAFF	YEAR 1				YEAR 2			
		Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2	Qtr3	Qtr4
1. Administration									
a. Establish / convene project team / work group	Maurice	x							
b. Project staff meetings	Maurice	x	x	x	x	x	x	x	x
2. Consumer Outcome Data Collection									
a. Select data collection instrument	Maurice	x							
b. Subcontract with Survey Research Firm to survey Program Participants	Johnson	x							
c. Conduct survey (Baseline, 6 months, 12 months)	Subcontract		x		x		x		
d. Analyze and report baseline data	Subcontract		x						
e. Analyze and report 6 month data	Subcontract			x					
f. Analyze and report 6 month and 12 month data collection results	Subcontract					x		x	
g. Prepare final report	Wells								x
3. System Outcome Data Collection									
a. Define “High-risk”	Lear	x							
b. Define “realistic back-up plan”	Wilbert	x							
c. Select sample of high-risk records	Lear		x						
(baseline, 6 months and 12 months)									
d. Review records and collect data from records	Lear		x		x		x		
e. Analyze and report baseline data	Wells			x		x		x	
f. Analyze and report 6 month and 12 month data	Wells			x		x		x	

See Supplement for blank Worksheets

WORKSHEET 6.2 QI Project Work Plan

Project Title: Worker Reliability Project

TASKS	LEAD STAFF	YEAR 1				YEAR 2			
		Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2	Qtr3	Qtr4
1. Administration									
a. Establish / convene project team / work group	Maurice	x							
b. Worker Reliability Task Force meetings	Maurice	x	x	x	x	x	x	x	x
2. Back-up Plans									
a. Develop criteria for identifying high-risk program	Lear	x							
b. Develop criteria for realistic back-up plans	Wilber	x							
c. Convene subgroup of QI team to recommend high-risk criteria and back-up plans	Lear / Wilber	x							
d. Review high-risk criteria and back-up plans with provider agencies	Lear / Wilber	x							
e. Finalize high-risk criteria and back-up plan components	Lear / Wilber	x							
f. Prepare protocols for assessing high-risk participants	Lear		x						
g. Prepare training materials for back-up plans	Wilber		x						
h. Conduct training for providers in ABC County	Lear		x						
i. Implement back-up plan protocols	Lear			x					
j. Document implementation issues	Lear			x	x	x	x	x	x
3. Emergency Response System									
a. Identify potential funding sources for ER systems	Johnson	x							
b. Assess options for group purchase of ER systems	Johnson		x						
c. Purchase ER systems, if possible	Johnson			x					
d. Implement / provide ER systems to all high-risk program participants for one year (if appropriate).	Johnson			x					

See Supplement for blank Worksheets

WORKSHEET 6.3 Budget for QI Work Plan

Project Title: Worker Reliability Project

Bureau of Long Term Care
Worker Reliability Project
Year 1
January 2003 – December 2003

Personnel	**FTE**	**In kind**	**Other**
Project Manager - Maurice	20%	12,000	
Nurse Reviewer - Lear	10%	3,500	
Nurse Reviewer - Wilbert	10%	3,500	
Data Analyst - Wells	15%	4,000	
Administrative Assistant	10%	2,000	
Total Salaries		25,000	
Benefits @	33%	8,250	
Total Personnel		**33,250**	
Other Direct Costs			
Consultants- Survey Research Firm			20,000
Travel In State -		-	1,000
Meetings – Quality Committee		-	2,000
Supplies			500
Postage/Shipping			300
Printing/Photocopying			400
Laptop Computer			1000
Total Other Costs			**25,200**
Total Project Costs			**58,400**

See Supplement for blank Worksheets

WORKSHEET 6.4 Milestones

Project Title: Worker Reliability Project

Reporting Period: January 1, 2003 – December 31, 2004

Milestones/Deliverables	**Due Date**
Data Collection	
Data Collection Instrument	March 2003
Baseline data collection	April 2003
Baseline data analysis	May 2003
Six month data collection	October 2003
Six month data analysis	November 2003
Twelve month data collection	April 2004
Twelve month data analysis	May 2004
Final Report	December 2004
Back-up Plan	
Criteria for defining high-risk people	March 2003
Protocols for realistic back-up plans	March 2003
Training materials	May 2003
Provider Training	June 2003
Implement back-up plan protocols	July 2003
Emergency Response System distribution	September 2003

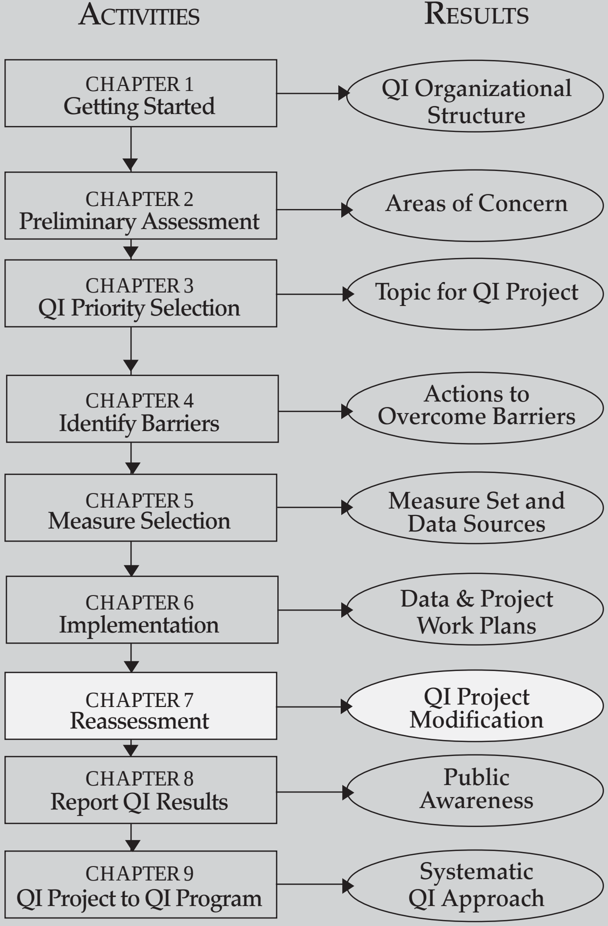
CASE EXAMPLE

Completed By: Maurice

See Supplement for blank Worksheets

CHAPTER 7
Monitor and Reassess

Quality Improvement Road Map



Summary

This chapter discusses the actions a state must take to continuously monitor the QI Project and its effectiveness in meeting project goals.

Tasks:

7.1 Maintain regular communication.
7.2 Identify problems in achieving goals.
7.3 Document QI Project modifications.
7.4 Reassess the QI Project.
7.5 Determine the ongoing status of the QI Project status.

Case Example

Worksheet 7.1	Monitor and Reassess
Worksheet 7.2	Consumer Outcomes – Baseline
Worksheet 7.3	System Outcomes - Baseline

Resources

Supplement	Blank Worksheets

Monitor and Reassess

During the implementation period, the QI Team and QI Work Group have important roles to play in troubleshooting, providing support, and monitoring progress and impact.

Task 7.1 – Maintain regular communication.

The QI Project Work Plan scheduled periodic check-in meetings with the QI Team, QI Work Group, and the QI Committee. These meetings are important opportunities to hear how the QI Project is working and whether assumptions that were made at the start of the project are still valid.

Task 7.2 – Identify problems in achieving goals.

Despite the best laid plans, unanticipated issues will surface. The QI Team should maintain close contact with all participating entities so that problems can be identified and resolved quickly. If issues suggest the need for a fundamental change in strategy, the QI Project Work Group may be consulted. Notify other project participants whenever the course of action is modified to the extent that their activity may be affected.

Task 7.3 – Document QI Project modifications.

Periodically throughout the project, set aside time to update the QI Project Work Plan to reflect any changes that may have been made.

Task 7.4 – Reassess the QI Project.

At the close of the implementation period or at checkpoints otherwise specified in the work plan, reassessment is conducted to determine

MONITORING AND REASSESSING PROJECT IMPACT

Task	Considerations
Identify problems in achieving goals.	What problems have been identified in achieving anticipated benchmarks? Have you consulted the perspectives of all stakeholders?
Propose modifications to the intervention as necessary.	What can be done to address identified problems? How can those changes be made, funded and communicated to those who need to know?
Determine project future.	Should the project be continued, discontinued, or refined? Should project activities be institutionalized into normal state operations? How often should consumer and system outcome indicators be reassessed?

the impact the QI Project has had on your desired consumer and system outcome indicators. The methodology adopted during your baseline assessment (see Chapter 6) is repeated.

Task 7.5 – Determine the ongoing status of the QI Project.

After the initial reassessment to determine whether the QI Project has had an impact on your selected measures, you will be faced with several choices:

- *Extend the duration of the QI Project* to affect positive change in the measures. The work plan should be adjusted accordingly.
- *Modify the QI Project* based on the experience and input of QI Project participants. Modifications should be reflected in a revised work plan.
- *Formalize the activity of the QI Project* into ongoing operations. Successful projects can be institutionalized in many ways. The intervention may become part of regulation, policy or contracts. Permanent positions may be established and funded to continue the activities. Provider payments may be modified to account for new responsibilities. If the project is made permanent, methods for periodically measuring progress should be established.

- *Terminate the QI Project.* This action should not be taken precipitously and makes sense only when conditions have radically changed or the actions are found to no longer have relevance.

Several caveats are useful to remember in the monitoring and reassessment phase of a QI Project:

- *Leave enough time for an intervention to take effect before reassessing.* Depending on the nature of your interventions, impact may be seen quickly or take a long time. For example, improving the flu vaccine rate for a target population will not be known until the intervention has been completed and the next flu season has ended. The impact of other interventions may be seen more quickly, such as arranging transportation service so that consumers can keep appointments.

- *Be ready to make mid-course corrections.* Problems that were not anticipated may surface during implementation of a QI Project. At these times, reconvene your QI Team and Work Group to reconsider assumptions and decide whether changes are necessary. Do not move too quickly to modify your intervention. Expect problems, try to understand why they are happening, and be deliberate in how they are addressed.

- *Know when to end, continue or institutionalize an intervention.* Earlier it was noted that a QI Project, by definition, is time-limited. At the close of a project, findings are reviewed to determine if: (1) the project should continue since findings are inconclusive and more time is needed to assess impact; (2) the intervention failed to achieve the desired outcomes and the project should be terminated; (3) the project should be substantially modified to address identified shortcomings; or (4) the intervention has improved the consumer and system outcomes and should become part of ongoing operations.

Case Example

Monitor and Reassess

The QI Team Leader submitted quarterly reports on the status of the project to her supervisor. This provided a way to monitor the progress of the project and to report on any modifications to the Work Plan that may have been necessary. In the course of implementation, it was found that abstraction of provider records would be a very costly and time consuming effort. After consulting with the Division of Licensing and Certification, it was decided that abstraction of records would take place during the annual on-site review, which is required as a condition of licensure. Adjustments to the milestones for completion were made accordingly.

Worksheet 7.1 - Monitor and Reassess

The Director of Long Term Care asked that she be provided with regular status reports on the project, the milestones and any adjustments to the project Work Plan due to unexpected delays or other difficulties. This worksheet provides a way to periodically review the progress of the project.

Worksheet 7.2 - Consumer Outcomes: Baseline

At the beginning of the data collection process, the QI Committee asked to see the baseline information from the Participant Experience Survey. A similar survey had previously been conducted on a sample of all HCBS program participants statewide. The Committee was interested in seeing the results of the survey that was conducted on high risk program participants.

Worksheet 7.3 - System Outcomes: Baseline

The QI Committee also wanted to see the results of the review of records of people with back-up plans and emergency response systems. The baseline data confirmed their earlier concerns about the vulnerability of frail older people. A review of the case records revealed that only 33% of the high risk program participants had a realistic back-up plan and only half of them had an emergency response system.

WORKSHEET 7.1 Monitor and Reassess

Reporting Period:

Completed By:

MILESTONES	DUE DATE	COMPLETED	COMMENTS/PROJECT SUMMARY
DATA COLLECTION			
Data Collection Instrument	March 2003	March 2003	
Baseline data collection	April 2003	April 2003	
Baseline data analysis	May 2003	May 2003	
Six month data collection	October 2003		Six and twelve month data collection delayed due to delay in start-up of project
Six month data analysis	November 2003		
Twelve month data collection	April 2004		
Twelve month data analysis	May 2004		
Final Report	December 2004		
BACK-UP PLAN			
Criteria for defining high-risk people	March 2003	April 2003	Final criteria for defining high-risk people delayed; organization of meetings with providers was time consuming
Protocols for realistic back-up plans	March 2003	May 2003	Final criteria for back-up plans delayed; internal reviews delayed due to illness of staff
Training materials	May 2003	July 2003	Two month delay
Provider Training	June 2003	August 2003	Two month delay
Implement back-up plan protocols	July 2003	September 2003	Two month delay
EMERGENCY RESPONSE SYSTEM DISTRIBUTION	September 2003		Purchase of ER systems not approved due to high cost; included in program budget for 2004

CASE EXAMPLE

See Supplement for blank Worksheets

WORKSHEET 7.2 Consumer Outcomes: Baseline

Data Collection Instrument: Participant Experience Survey
Population: All high-risk elderly waiver participants surveyed in ABC County April 2003 (N=600)
Respondents: N=200

MEASURE	NUMERATOR	DENOMINATOR	PERCENT
1. Percent of high-risk program participants who reported they knew who to call if a worker did not show up.	100	200	50%
2. Percent of high-risk elderly Waiver participants in ABC County who report that people who are paid to help show up when expected.	160	200	80%
3. Percent of high-risk program participants requiring help with transferring who report they are sometimes unable to get out of bed because there is no one there to help them.	30	200	15%
4. Percent of high-risk program participants requiring help with eating who report they are sometimes unable to eat because there is no one there to help them.	20	200	10%

CASE EXAMPLE

See Supplement for blank Worksheets

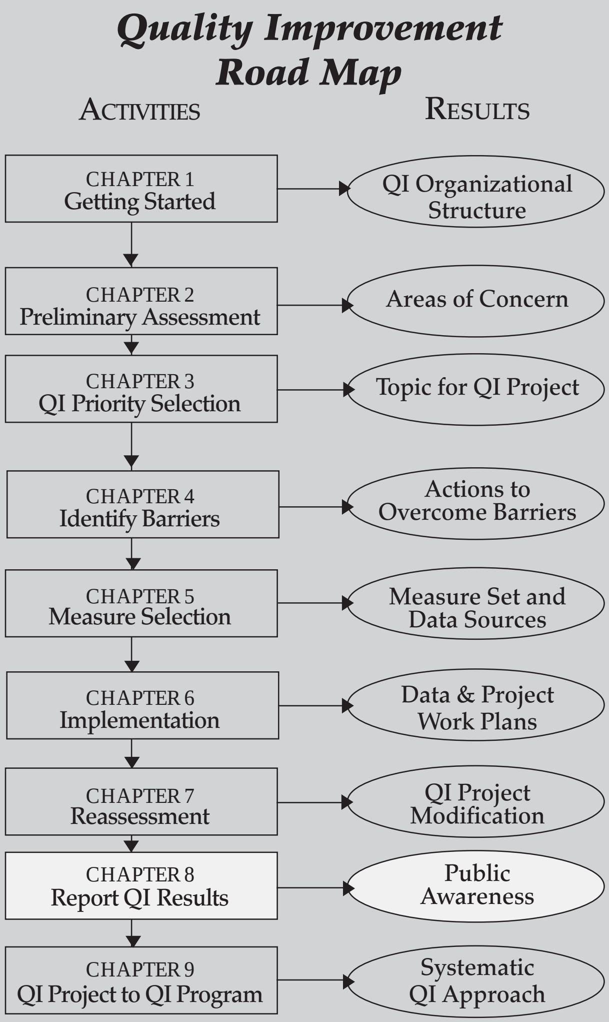
WORKSHEET 7.3 System Outcomes: Baseline

Data Collection Instrument: Record Reviews
Population: All high-risk elderly waiver participants surveyed in ABC County April 2003 (N=600)
Respondents: Record Reviews (N=90 cases)

MEASURE	NUMERATOR	DENOMINATOR	PERCENT
1. Percent of high-risk elderly waiver participants in ABC County with a realistic back-up plan.	30	90	33%
2. Percent of high-risk elderly waiver participants with emergency response systems.	45	90	50%

CASE EXAMPLE

See Supplement for blank Worksheets



CHAPTER 8
Communicate QI Results

Summary

This chapter discusses how a state prepares and disseminates results of a QI Project.

Tasks:

8.1 Identify the audience for your QI Project results.
8.2 Determine milestones for reporting results.
8.3 Determine how to report QI Project results.
8.4 Select a design for reporting your results.
8.5 Determine a format for reporting your results.

Case Example

Worksheet 8.1	Project Description
Worksheet 8.2	Consumer Outcomes: Baseline and Subsequent Periods
Worksheet 8.3	System Outcomes: Baseline and Subsequent Periods

Resources

Appendix E	Statistical Sampling
Supplement	Blank Worksheets

Communicate QI Results

How to use and report results of your QI Project is the topic of this chapter. Many of the issues raised in this chapter have relevance throughout implementation of a QI Project and should be considered early in the development of your QI Project.

Task 8.1 – Identify the audience for your QI Project results.

There are multiple audiences for quality improvement projects, some with complementary and others with competing interests. Many of these represent the same groups as the stakeholders brought into the quality improvement process. Understanding the perspective of your audiences is important in considering how best to communicate QI results. The QI Project Work Group is useful for thinking through a communication strategy and understanding the level of reporting that should be initiated.

Task 8.2 – Determine milestones for reporting results.

States will vary in the frequency with which they officially report on a QI Project. At least two junctures serve as important opportunities for a state to report.

- *Project initiation.* At the beginning of a project, it is useful to prepare a simple one-page summary of your QI Project to make others aware of your goals, what issues you will be addressing, and why the project should matter to constituents. This is an opportunity to bring others into the process and potentially benefit from their perspectives throughout implementation (e.g., to assist in the recruitment of QI Project Work Group members).

MAJOR AUDIENCES FOR QI PROJECT RESULTS

Audiences	Use
Consumers, Family Members, Guardians	To inform the general public about the effect of the QI Project on consumer services, choice, rights, or responsibilities. To make informed choices.
Consumer Advocates	To identify areas that require consumer involvement. To develop strategies for incorporating findings from the QI Project to the general population.
HCBS Providers	To improve understanding of best practices. To promote the adoption of other quality improvement projects.
Program Administrators	To inform policy development. To replicate findings in other areas.
State Legislators	To identify regulatory or statutory barriers to quality improvement. To provide funding for broader initiatives.

- *At the conclusion of the project.* After the QI Project is complete and its impact is known, a broad circulation of findings should be made. Results, regardless of success, inform others about the problem and the value of specific interventions.

Task 8.3 – Determine how to report QI Project results.

There is a general movement toward greater data reporting.
The general impression is that data will only improve if it is used and tested under public scrutiny. Holding data until it is perfect provides no incentive to providers to give the attention and focus that is needed to improve data reporting systems. At the same time, a state should not be reckless in putting out information they know to be misleading or faulty.

A state should carefully think through its reporting policies and develop guidelines to direct decisions in this area. Factors to consider include:

- *Level of data aggregation.* Data presented in the aggregate (e.g., statewide data) is less controversial than data presented with individual provider identifiers. A QI Project is a collaborative activity that typically involves the voluntary participation of providers and consumers. The intent is not to penalize or embarrass providers who perform poorly but rather to understand the factors that impede or enhance performance. Creating the environment of learning and sharing requires that the state use data in ways that promote cooperation and improvement and not discourage honest attempts to do better.
- *Consumer identification.* Information with consumer identifiers should not be published, nor should a state release aggregate information from which it would be possible to identify a particular consumer.

TalkingQuality — http://www.talkingquality.gov/

The TalkingQuality website was designed for people and organizations trying to educate consumers about health care quality. In particular, it is intended to help those who are providing consumers with information on the performance of health plans and providers.

Formats for Reporting Data - See Appendix E

Histogram: bar graph that shows the central tendency and variability of a data set.
Scatter diagram: graph that reveals a possible relationship between two variables.
Run chart: graph that shows the changes in a measurement over time.
Boxplot: graph that shows the changes in a measurement over time, with additional information about the variability of the range.
Control chart: similar to a run chart but includes statistically generated upper and lower control limits.

Plain Language
http://www.plainlanguagenetwork.org/index.html

Plain language is language that everyone in your audience can easily understand. It saves time, money, and lives. Whether you are preparing a brief, writing a procedure, publishing a newsletter, managing a department, or training workers, you need plain language. The site has plain-language links, papers and tutorials, consultants, and conferences.

- *Opportunities for review prior to release.* It is a courtesy to share data that may implicate providers or programs prior to its public release. This allows an opportunity to consider and document factors that may have contributed to the results or to note changes that have been put into place to improve results in the future.

Task 8.4 – Select a design for reporting QI Project results.

There are many vehicles for presenting findings of a QI Project.

- *Report or briefing paper.* Writing up the results of your QI Project serves multiple purposes. It provides a useful record and synthesis of your activities and its impact on your intended goals. Prior to writing a report, get the impressions of project participants and members of the QI Project Work Group and the QI Committee on what worked and did not work. While a complete report may be shared with the QI Committee, program directors and other internal stakeholders, it is helpful to prepare a brief version for external dissemination to legislative committee members, professional and consumer organizations and providers.
- *Newsletters.* Many programs publish their own newsletters or contribute to those published by professional or consumer organizations within the state.
- *Presentations.* The topic of your QI Project may be of keen interest to specific organizations. Ask to be put on the agenda to discuss your work and findings in person. Slides can be prepared as part of your presentation; copies of which can be left with participants.
- *Web sites.* For broader dissemination and use, a state may wish to include information about its project on the state website.

- *Forum:* What you learned in your QI Project may warrant a fuller discussion with project participants, consumers and experts in the field. Forums are an informal vehicle for bringing people together to discuss QI Project findings and how these findings impact the future direction of HCBS services.

A common complaint about data collection and quality improvement projects is that nothing is done with the information. Don't sit on your findings – whether results are good or bad— others can benefit from your experience. By exposing your findings to a broader audience, you also gain insight into new interpretations of the data and/or methods for improving your work in the future.

Task 8.5 – Determine a format for reporting your results.

People have different tolerances for understanding data. The method you use to report your results will affect the understanding.

Issues to consider include:

- *Print or web-based applications.* Think about your audiences and convenient ways for them to access your results.

- *"Layering" your report*. "Layering" means having summary bulleted information, followed by more detailed information, and finally the complete data set. Layering allows your results to appeal to different audiences and reduces the burden of reviewing details for those who are only interested in the bottom line.

- *Composite results*. This concept is particularly relevant when reporting results of surveys wherein multiple questions are asked on a similar topic. Rather than report on each individual item, cluster them and create a single score on a topic.

- *Numeric and statistical information versus narrative explanations*. A combination of both may be a good approach to assure you convey the level of information that can be most readily understood.
- *Explanatory text* – how much should be included regarding the purpose of the QI Project, the methods used, and how the state intends to use the results. While it is important to provide context, again think of your audience and their level of interest in the details.

Anticipate the questions your audience is likely to ask regarding the impact of the results. For example, consumers will want to know if services will be modified, providers will want to know about policies and payment changes that influence how they deliver services, and legislators will want to know cost implications and whether their past funding investments are paying off.

Case Example

Worksheet 8.1 - Project Description
At the start of the project, the Director of Long Term Care asked that a brief description of the project be prepared. She needed to provide a briefing to the Legislative Committee on Human Services. The description provides a brief overview of the area of concern, the desired consumer outcomes and system outcomes and a list of key stakeholder groups.

Worksheet 8.2 / Worksheet 8.3

Consumer Outcomes and System Outcomes - Baseline and Subsequent Periods

The Worker Reliability Work Group continued to meet on a monthly basis throughout project implementation. Members of the Work Group reported on the progress of the project and discussed issues or challenges they had encountered.

After the 6-month data collection, the QI Team prepared a short synopsis of the project and its impact for presentation to senior management. The Director of the Division of Long Term Care was so impressed that she included it within her monthly briefing of the Commissioner. The writer for “Any State USA News” who published the original story was brought in to meet with the QI Team and Worker Reliability Work Group to discuss the impact of the project on consumer and system outcomes.

WORKSHEET 8.1 Worker Reliability Project

CONTACT INFORMATION

Mary Jones
Quality Improvement Team Leader
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Voice:
Fax:
Email:

Other Collaborators

Any State Quality
Improvement Organization

PROJECT DESCRIPTION

People who live at home and receive services are particularly vulnerable if workers who are paid to help do not come when expected. The "Any State USA" Department of Human Services has begun a special project to improve the consistency and availability of home care services particularly for people who have complex care needs.

Desired Consumer Outcome

- Program participants are satisfied with the availability and consistency of services.

Desired System Outcomes

- Everyone who receives home care services who has complex care needs will have two things:
    - a back-up plan that says what to do if a worker does not show up when expected, and
    - an emergency response system, if appropriate.

Quality Improvement Committee

A 12 member Committee, has been formed to provide guidance and recommendations to the Any State Department of Human Services. The members of the Committee include:

- 6 consumers or consumer representatives
- 4 provider organizations / associations
- 1 direct care worker
- 1 legislator

CASE EXAMPLE

See Supplement for blank Worksheets

WORKSHEET 8.2 Consumer Outcomes: Baseline and Subsequent Periods

Title: Worker Reliability Project Baseline Performance Measures
Data Collection Instrument: Participant Experience Survey and "Any State USA" Consumer Satisfaction Survey
Population: All high-risk elderly waiver participants surveyed in ABC County April 2003 (N=600)
Respondents: n=200

MEASURE	BASELINE (n=195)	6 MONTHS (n=180)	12 MONTHS (n=205)
1. Percent of high-risk program participants who reported they knew who to call if a worker did not show up.	50%	75%	85%
2. Percent of high-risk elderly Waiver participants in ABC County who report that people who are paid to help show up when expected.	80%	85%	90%
3. Percent of high-risk elderly program participants requiring help with transferring who report they are sometimes unable to get out of bed because there is no one there to help them.	15%	10%	8%
4. Percent of high-risk elderly program participants requiring help with eating who report they are sometimes unable to eat because there is no one there to help them.	10%	8%	5%

See Supplement for blank Worksheets

WORKSHEET 8.3 Consumer Outcomes: Baseline and Subsequent Periods

Title: Worker Reliability Project
Data Collection Instrument: Record Reviews
Population: All high-risk elderly waiver participants surveyed in ABC County April 2003 (n=600)
Sample: Record reviews (n=90 cases)

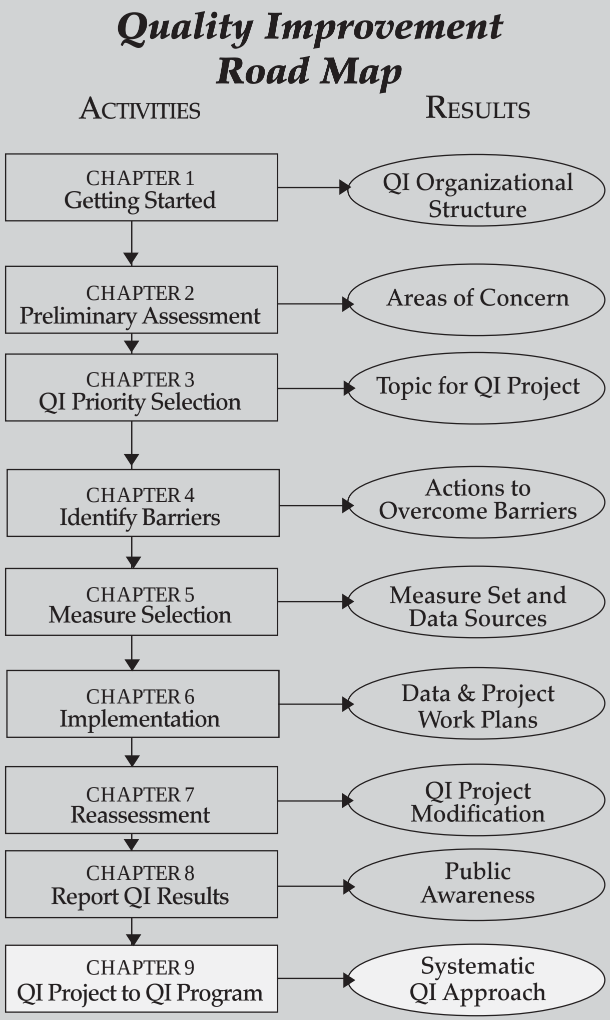
MEASURE	BASELINE (n=90)	6 MONTHS (n=90)	12 MONTHS (n=90)
1. Percent of high-risk elderly waiver participants in ABC County with a realistic back-up plan	33%	60%	90%
2. Percent of high-risk elderly waiver participants with emergency response systems	50%	55%	60%

CASE EXAMPLE

See Supplement for blank Worksheets

CHAPTER 9

Move from QI Project to QI Program



Summary

This chapter discusses the ways to create a systemic quality improvement approach for HCBS programs.

Tasks:

9.1 Sustain the improvements you have made.
9.2 Broaden your core measurement set.
9.3 Collect baseline data for core measurement set.
9.4 Compare core measurement set to established benchmarks.
9.5 Identify priority areas for QI Projects.
9.6 Maintain the cycle.

Move from QI Project to QI Program

Improving the outcome of your HCBS program has been the focus of this Work Book. Previous chapters described a process for defining problems and designing a QI Project to address a priority issue. The same process of problem identification, strategy development, and reassessment is the cycle of activity that sustains a quality improvement program. This chapter elaborates on how to make the quality improvement process a permanent feature of your HCBS program.

Task 9.1 – Sustain the improvements you have made

Too often effort is focused on a problem and, once improvement is achieved, effort is redirected to the next priority. While it is not wise to stay focused on a single area at the exclusion of others, it is also not prudent to assume that quality will be sustained or improved in perpetuity without continued effort. For that reason, it is important to put into place mechanisms that periodically reassess performance and initiate the problem-solving process when needed.

The frequency of reassessment depends on the importance of the area and the likelihood that setbacks will take place. Plan to reassess every year until you feel assured that progress in your QI Project is standard practice. Thereafter, monitor less frequently but keep an open eye and ear to issues that may surface and impede continued progress.

Task 9.2 – Broaden your core measurement set.

A core measurement set is a means to regularly evaluate the performance of your HCBS program. Findings from core measurements provide the basis for identifying issues that may

Domains of Interest

- Participant access
- Participant-centered service planning and delivery
- Provider capabilities
- Participant safeguards
- Participant rights and responsibilities
- Participant outcomes and satisfaction
- System performance

Source: CMS Quality Matrix and Framework

☐ **Michigan Core Measurement Set** - see Appendix G

become the subject of future QI Projects. A core measurement set also establishes a framework for public reports that may be required by legislators, policy-makers, or consumers.

So far, this Work Book has walked you through a process for developing measures related to one QI Project. It is now time to expand into other areas of interest.

Three factors are important to consider when developing a core measurement set:

What are the domains of interest? Domains are “durable dimensions” for defining the components of quality. They serve as an organizing principle for describing aspects of quality that are important to measure while allowing for variation in how they are measured over time. The literature on health care quality is replete with ways to define, organize and measure quality. There is very little consensus on the domains to use to define the major attributes of quality or the subcomponents of quality.

What should be measured under each domain? Domains are broad constructs. Measures determine components of a domain that are assessed. For example, there are many ways to measure participant outcomes and satisfaction. One measure may be to look at consumer satisfaction with PCA services; another may measure whether a consumer with diabetes is being trained in appropriate self-management skills. Selection of measures should follow the principles established in Chapter 7. Define measures that are relevant to your stakeholders, are actionable by your program, and which will yield credible, reliable data over time and across populations.

How many measures should be included in a core measurement set? Given the time and resources required to collect and analyze data, the number of measures should be kept small. Over time, new measures may be added or some or all measures may be rotated. Rotating measures is a way of expanding your oversight of the program without adding to the annual burden of collecting a large number of measures. For example, you may decide to conduct a consumer survey every year but focus on different dimensions of quality in each survey or different population sub groups. Similarly, you may want to select measures that assess the quality of care to your consumers with chronic health problems but rotate the conditions of interest each year (e.g., depression, congestive heart failure).

Measurement should reflect the interests of your stakeholders. Either at the time of measurement development or as a way of assessing broader buy-in, involve your QI Committee or convene stakeholder forums to discuss the proposed measures and develop consensus whenever possible.

Task 9.3 - Collect baseline data for core measurement set.

Repeat the tasks outlined in Chapter 5 for the collection of data to derive each measure included in your core set. Try to create economies of effort by determining which measures come from the same data source and could be collected together. Stagger the collection, using your work plan as a means for deciding which measures should be collected first, which ones should be done together, and which can wait.

Task 9.4 – Compare core measurement set to established benchmarks.

The benefit of using established measures is that there is often a national data base that allows you to compare results with those of other states and / or programs. National benchmarks, although convenient, may not always be the best basis for evaluating the quality of your program, especially if it is not clear if data is derived from comparable populations. Alternately, a state may decide not to compare its measurement findings to an arbitrary benchmark but to simply look for ongoing improvement from one reporting period to the next. Findings for some measures may be so egregious that a quality problem can be identified without a benchmark comparison.

Task 9.5 – Identify priority areas for QI Projects.

The assessment that was conducted in Chapter 2 is repeated using findings from your core measurement set. Ongoing assessments also can be used as an opportunity to identify issues that should be considered for future measurement. The quandary of any quality improvement process is not to get stuck just looking at those processes and outcomes of care for which there are established measures. Continue to factor in other sources of information that may direct you to quality problems (e.g., complaints, consumer interviews, waiting lists).

At least annually, go through a formal priority-setting process to determine how to focus your efforts in the coming year. Review findings from existing projects to determine whether they should be continued, terminated or standardized into your ongoing operations and policies. Develop and implement new QI Work Plans for priority topics.

Task 9.6 – Maintain the cycle.

The cycle of improvement that is initiated in one QI Project becomes the mantra for standardizing quality improvement within your HCBS program:

- Assess
- Prioritize
- Intervene
- Reassess

As your QI Program evolves, you are likely to have multiple projects underway. The quality improvement staff will have gained experience and confidence collecting data, developing measures and working with an active and vocal QI Committee with a mind toward improvement not punishment.

APPENDIX A
Brainstorming Techniques

What is it:
Brainstorming is a group technique for generating a "shopping list" of ideas about a specific problem or topic. It can help you:

- Generate a variety of ideas in a short time.
- Produce new and creative ideas.

Brainstorming is used solely for generating ideas; it does not involve analysis.

How to do it:
The goal of brainstorming is to *generate* ideas. Before you start, make sure everyone in your group understands the importance of *postponing* judgments until after the brainstorming session is completed.

- Write the problem or topic on a blackboard or flipchart where all participants can see it.
- Write *all* ideas on the board and do as little editing as possible.
- Number each idea for future reference.
- Use one of the following brainstorming techniques: structured brainstorming, free-form brainstorming, or silent brainstorming.

In structured brainstorming:

- Solicit *one* idea from each person in sequence.
- Participants who don't have an idea at the moment may say "pass."
- A complete round of passes ends the brainstorming session.
- The *advantage* of structured brainstorming is that each person has an equal chance to participate, regardless of rank or personality.
- The *disadvantage* of structured brainstorming is that it lacks spontaneity and can be somewhat rigid.

Source: Electronic Systems Center (Air Force Materiel Command) and the MITRE Corporation. *The ESC process improvement guide.* Published for the Seventh Annual National Conference on Federal Quality. 6-8, 15-20.

In free-form (or unstructured) brainstorming:

- Participants simply contribute ideas as they come to mind.
- The *advantage* of free-form brainstorming is that participants can build off each other's ideas. The atmosphere is very relaxed.
- The *disadvantage* of free-form brainstorming is that the less assertive or lower ranking participants may not contribute.

An ideal approach is to combine these two methods. Begin the session with a few rounds of structured brainstorming and finish up with a period of unstructured brainstorming.

In silent brainstorming:

- Have participants write ideas individually on sticky-back notes or small slips of paper.
- Collect the papers and post them for all to see.
- The *advantage* of silent brainstorming is that it prevents individuals from making disruptive "analysis" comments during the brainstorming session.
- The *disadvantage* of silent brainstorming is that the group loses the synergy that comes from an open session.

Silent brainstorming is best used in combination with other brainstorming techniques.

The result of a brainstorming session is a list of ideas. If this list is too long, the group can boil it down using a priority-setting process described in Appendix B.

Points to remember:

Never judge ideas as they are generated. The goal of brainstorming is to generate a lot of ideas in a short time. Analysis of these ideas is a separate process, to be done later.

Don't quit at the first lull. All brainstorming sessions reach lulls, which are uncomfortable for participants. Research indicates that most of the best ideas occur during the last part of a session. Try to encourage the group to push through at least two or three lulls.

Try to write down all of the ideas exactly as they were presented. When you condense an idea to one or two words for ease of recording, you are doing analysis. Analysis should be done later.

E*ncourage outrageous ideas.* While these ideas may not be practical, they may start a flow of creative ideas that can be used. This can help you break through a lull.

Try to have a diverse group. Involve process owners, customers, and suppliers to obtain a diverse set of ideas from several perspectives.

APPENDIX B
Priority-Setting Techniques

Multi-Voting Example
Members of a system program office attended a lot of meetings at different locations around the country. The meetings were not always as productive as they might have been, so the division chiefs called a meeting in hope of improving the situation. A brainstorming session produced the following list:

1. no agenda
2. no clear objectives
3. going off on tangents
4. extraneous topics
5. unproductive
6. time spent on travel
7. money spent on travel
8. too much “dog and pony”
9. problems not mentioned
10. unclear charts
11. few meaningful metrics
12. trouble calling home office
13. no parking
14. no administrative support

To reduce this list to a manageable size, each group member was given 7 votes (half the total of 14 items). The problems received votes as follows:

|	1.	no agenda
| | | |	2.	no clear objectives
| |	3.	going off on tangents
|	4.	extraneous topics
| |	5.	unproductive
𝍸	6.	time spent on travel
𝍸	7.	money spent on travel
𝍸	8.	too much “dog and pony”
| |	9.	problems not mentioned
𝍸 |	10.	unclear charts
| | | |	11.	few meaningful metrics
| |	12.	trouble calling home office
	13.	no parking
|	14.	no administrative support

As a result of the vote, the group chose to focus on problems 2, 6, 7, 8, 10, and 11.

Following are three techniques that you can use for setting priorities.

- Multi-Voting
- Nominal Group Technique
- Pairwise Ranking

MULTI-VOTING

What it is:
Multi-voting is a quick and easy way for a group to find the items of the highest priority in a list. This technique helps you:

> Prioritize a large list without creating a “win-lose” situation in the group that generated the list.
>
> Separate the “vital few” items from the “trivial many” on a large list.

How to do it:
Empower. Give each team member a number of votes equal to approximately half the number of items on the list (e.g., 10 votes for a 20-item list).

Vote. Have the members vote individually for the items they believe have high priority.

Compile the votes given to each item. You can put a mark beside each item for every vote it receives.

Select the top four to six items. Discuss and prioritize these items relative to each other. If you can’t establish the top four to six, remove from the list the items that have the fewest votes and then conduct another vote.

Nominal Group Technique Example

The following office problems were identified in a brainstorming session:

A. Ineffective organizational structure.
B. Poor communications outside the office.
C. Lack of training.
D. Poor communications within the office
E. Unclear mission and objectives.
F. Poor distribution of office mail.
G. Lack of feedback on reports on management.

Each group member then wrote the letters A through G on a piece of paper and prioritized each problem from 1 to 7 (lowest to highest), using each number only once. The results were summarized as follows:

Problem	Person					Total	Priority	
	1	*2*	*3*	*4*	*5*			
A	6	5	7	5	6	29	#2	
B	3	2	4	1	3	13	#5	
C	1	1	2	2	2	8	#7	Lowest
D	4	4	5	6	4	23	#4	
E	7	7	6	7	5	32	#1	Highest
F	2	3	1	3	1	10	#6	
G	5	6	3	4	7	25	#3	

Helpful hint:
Multi-voting is best suited for large groups and long lists. Its simplicity makes it very quick and easy to use.

NOMINAL GROUP TECHNIQUE

What it is:

Nominal group technique is a structured method that a group can use to generate and prioritize items in a list. This method uses priorities of each group member to discover the overall priorities of the group. Nominal group technique helps you:

- Generate and prioritize a list of ideas.
- Make decisions using inputs from *all* participants.

How to do it:

Generate ideas. Give an appropriate amount of time for silent brainstorming. Clarify and consolidate ideas.

Assign a letter to each idea. For example, for eight ideas, you would assign the letters A through H.

List the letters. Have each person in the group write the assigned letters on a piece of paper.

Prioritize the lists. Have each person prioritize their list by writing a number beside each letter. If there are eight ideas, then “8” is written beside the letter corresponding to the most important idea. This is repeated for each number until “1” is written beside the letter corresponding to the least important idea. Each number (1 through 8) is used only once by each group member.

Compute the group total for each letter. The letter with the highest score is the idea with the highest priority, and the letter with the lowest score has the lowest priority.

PAIRWISE RANKING

What it is:

Pairwise ranking is a structured method for ranking a small list of items in priority order. It can help you:

- Prioritize a small list.
- Make decisions in a consensus-oriented manner.

How to do it:

Construct a pairwise matrix.
Each box in the matrix represents the intersection (or pairing) of two items. If your list has five items, the pairwise matrix would look like this, with the top box representing idea 1 paired with idea 2:

	1	2	3	4
2				
3				
4				
5				

Rank each pair. For each pair, have the group (using a consensus-oriented discussion) determine which of the two ideas is preferred. Then, for each pair, write the number of the preferable idea in the appropriate box. Repeat this process until the matrix is filled.

1 and 2 compared:
2 is better

	1	2	3	4
2	2			
3				
4				
5				

1 and 3 compared:
1 is better

	1	2	3	4
2	2			
3	1			
4				
5				

. . . and so on
until . . .

4 and 5 compared:
5 is better

	1	2	3	4
2	2			
3	1	2		
4	1	2	3	
5	5	5	5	5

Pairwise Ranking Example

A program team was asked to recommend a site for testing a unique portion of a system. A feasibility study produced a list of six possible locations. The team then used pairwise ranking to determine that Nellis AFB was best suited for this particular test.

1. Fort Huachuca
2. Edwards AFB
3. Kirtland AFB
4. Nellis AFB
5. Eglin AFB
6. Hanscom AFB

↓

	1	2	3	4	5
2	2				
3	1	3			
4	4	4	4		
5	5	5	5	4	
6	1	6	6	4	5

↓

Site	**1**	**2**	**3**	**4**	**5**	**6**
Count	2	1	1	5	4	2
Rank	3rd	6th	5th	1st	2nd	4th

Count the number of times each alternative appears in the matrix.

Alternative 5 appears 4 times in the matrix.

Alternative	**1**	**2**	**3**	**4**	**5**
Count	2	3	1	0	4
Rank					

Rank all items. Rank the alternatives by the total number of times they appear in the matrix. To break a tie (where two ideas appear the same number of times), look at the box in which those two ideas are compared. The idea appearing in *that* box receives the higher ranking.

Alternative 5 ranks 1st overall

Alternative	**1**	**2**	**3**	**4**	**5**
Count	2	3	1	0	4
Rank	3rd	2nd	4th	5th	1st

Source: Electronic Systems Center (Air Force Materiel Command) and the MITRE Corporation. *The ESC process improvement guide.* Published for the Seventh Annual National Conference on Federal Quality. 6-8, 15-20.

APPENDIX C
Web-Based Sources for Practice Guidelines

Agency for Healthcare Policy and Research
http://www.ahcpr.gov/clinic/
http://www.guideline.gov/
American Academy of Allergy, Asthma, And Immunology
http://www.aaaai.org/aadmc/default.htm
American Association of Respiratory Care
http://www.rcjournal.com/online_resources/cpgs/cpg_index.asp
American College of Cardiology
http://www.acc.org/clinical/statements.htm
American College of Radiology
http://www.acr.org/dyna/?doc=frames/main-publications.html
American College of Rheumatology
http://www.rheumatology.org/guidelin/guidelin.html
American Medical Association
http://www.ama-assn.org/ama/pub/category/4555.html
American Psychiatric Association
http://www.psych.org/clin_res/index.cfm
CDC Prevention Guidelines
http://wonder.cdc.gov/wonder/prevguid/prevguid.shtml
Canadian Medical Association
http://www.cmaj.ca/misc/service/guidelines.shtml
Centers for Medicare & Medicaid Services
http://cms.hhs.gov/promisingpractices/
Emory University
http://www.emory.edu/PEDS/SICKLE/prod04.htm
NSW Public Health Division, Australia
http://www.health.nsw.gov.au/public-health/clinprac/clinprac.html
National Guideline Clearinghouse
http://www.guideline.gov
National Heart, Lung, and Blood Institute
http://www.nhlbi.nih.gov/guidelines/index.htm
National Institutes of Health
http://www.nlm.nih.gov/databases/alerts/clinical_alerts.html
University of California, San Francisco
http://www.medicine.ucsf.edu/resources/guidelines
University of Iowa
http://www.vh.org/Providers/ClinGuide/CGType.html
University of Washington
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APPENDIX D

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APPENDIX E
Statistical Sampling

Introduction

To describe the basic concepts of statistical sampling, a few fundamental terms will need to be reviewed. A population consists of all units of analysis; e.g., people, the focus of a data collection effort. In health care studies, units of analysis are typically "people," but units of analysis can also be other items of interest, such as pregnancies and encounters with providers of care, or certain types of surgeries, such as appendectomies. A population could be defined as "all citizens of a country," "all homes in the state of Vermont," or "all individuals enrolled in a managed care plan." A sample is a part or subset of the population from which a set of data is obtained. A goal of many statistical studies is to draw conclusions or inferences about a population characteristic (e.g., the rate of screening for a particular health problem) by using a sample.

Benefits of taking a Sample vs. Conducting a Census

Several reasons exist for studying a sample, as opposed to conducting a census. (The term census is used to represent the effort to collect data from all the units of analysis in a population.) Conducting a census in the typical managed care setting is impractical, generally because of the size of populations. Taking a sample often becomes a practical fact of life. Taking a sample:

Costs less
Takes less time
Yields more current information

Conducting a census:

Removes uncertainty
Promotes an image of quality and completeness

This appendix gives a brief overview of the concepts and methods of statistical sampling and sources of error in data collection. Discussion touches on three critical concepts for data collection via either a census or sampling: data definition, reliability and validity. For a more in-depth treatment of statistical sampling, refer to *Elementary Survey Sampling* by Schaeffer, Mendelhall and Ott (see Appendix 2).

Methods of Statistical Sampling

The two basic categories of statistical sampling methods are: probability sampling and nonprobablility sampling.

■ Probability Sampling Methods

Probability sampling methods leave selection of population units totally to chance, and not to preference on the part of individuals conducting or otherwise participating in a study. Biases are removed in these methods.

Simple Random Sampling. Simple random sampling (also known as random sampling) assures that every unit in the population has an equal probability of appearing in the sample. Population members are generally numbered, and random numbers generated by computer are used to select units from the population.

Stratified Random Sampling. Here, the population is first conceptually subdivided into groups (or strata) that are homogeneous within themselves with respect to what is being measured (e.g., length of stay), on the basis of prior knowledge about the population. A random sample is taken from each strata. Stratification is done both to improve the accuracy of estimating the population characteristic and to yield information about strata characteristics. However, stratified random sampling requires more information about the population. To create discrete data, it also requires a larger overall sample size than simple random sampling.

Systematic sampling. In this method, every kth unit in an ordered population is selected (e.g., every 10th case). A randomly determined starting place for the first selection is made between l and k, and thereafter, every kth unit is selected. If the order of units is ransom, a systematic sample is essentially a simple random sample. This is an easy method to implement, but if cycles or periodicities exist in the population data, systematic sampling can give misleading results.

Cluster sampling. In this method, units in the population are gathered or classified into groups, similar to stratified sampling. Unlike stratified sampling, the groups must be heterogeneous within themselves with respect to the characteristic being measured. The groups are, in effect, microcosms of the population. This method requires prior knowledge about the population. Once clusters are identified, a random sample of clusters are selected and censused.

Probability sampling methods lend themselves to formal statistical estimation and testing of population characteristics. However, they are somewhat more difficult to employ operationally than nonprobability sampling.

■ Nonprobability Sampling Methods

Nonprobability sampling methods are based on personal choice, rather than chance. Some bias can therefore be expected.

Judgment sampling. In this method, units are included in the sample if they are thought (or judged) to be representative of the population. By doing so, the sample is constructed to be a “mini-population.”

Convenience sampling. This approach uses units that are readily (or conveniently) available. For example, if the objective were patient opinion regarding a group practice, patients in the office on any given day could be interviewed.

Quota sampling. This type of sampling ensures that units in the sample appear in the same proportion as in the population. For instance, if a certain target population consisted of 55% female and 45% male, the quota sample would require a similar female/male distribution.

The disadvantage of nonrandom sampling methods is that they do not lend themselves to formal statistical methods to estimate or test population characteristics. However, because they are relatively quick and easy to do, they have some popularity and usefulness.

Source: National Committee for Quality Assurance (NCQA). (1994). Health care quality improvement studies in managed care settings: Design and assessment: A guide for state Medicaid agencies. (DHHS Health Care Financing Administration (HCFA) #HCFA-92-1279.) Washington, DC.

APPENDIX F
Report Formatting

HISTOGRAM

What it is:

A histogram is a bar graph that shows the central tendency and variability of a dataset. Histograms are sometimes referred to as frequency distributions. A histogram can help you:

- Understand the total variability of a process.
- Quickly and easily determine the underlying distribution of a process.

How to use it:

Determine the type of data you want to collect. Be sure that the data is measurable, for example, time, length, speed, etc.).

Collect the data. Obtain a random sample of data from the process. Collect as many measurable data points as possible.

Count the total number of points you have collected.

Determine the number of intervals required. Use this table to determine how many intervals (or bars) the graph should have.

If you have this many data points:	Then use this number of intervals:
Less than 50	5 - 7
50 - 99	6 - 10
100 - 249	7 - 12
More than 250	10 - 20

HISTOGRAM Example

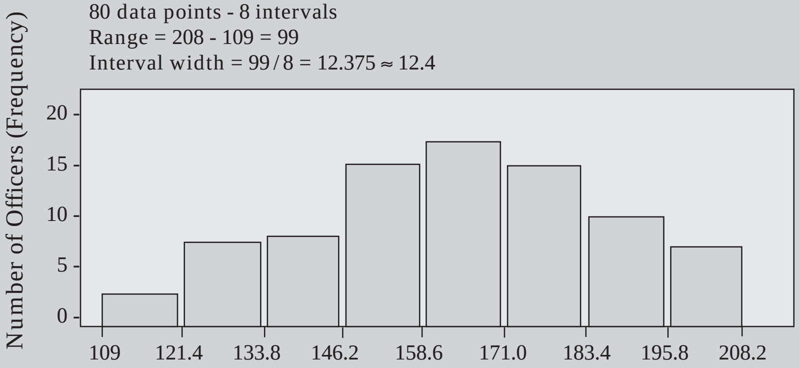
This table gives the weights of 80 Air Force officers.

Weights of 80 Officers

208	180	139	163	159
155	180	165	149	127
159	171	141	190	159
153	181	180	137	161
115	156	173	165	191
159	109	179	145	144
150	206	166	188	165
127	130	172	180	147
145	150	156	171	189
190	200	208	169	139
130	128	155	185	166
165	187	159	178	169
147	150	201	128	170
189	163	150	158	180
139	149	185	129	169
175	189	150	201	175

A histogram shows the distribution of the data:

80 data points - 8 intervals
Range = 208 - 109 = 99
Interval width = 99/8 = 12.375 ≈ 12.4



Determine the range. Subtract the smallest value in the dataset from the largest. This value is the range of your dataset.

Determine the interval width. Divide the range by the number of intervals. Round your answers up to a convenient value. For example, if the range of the data is 17 and you have decided to use 9 intervals, then your interval width is 1.88. You can round this to 1.9 or 2.0. It is helpful to have intervals defined to one or more decimal place than the data collected.

Determine the starting point of each interval. Use the smallest data point value as the starting point of the first interval. The starting point for the second interval is the sum of the smallest data point plus the interval width. For example, if your smallest data point is 10 and the interval width is 2, then the starting point for the second interval is 12. Label intervals along the horizontal axis.

Plot the data. Count the number of data points that fall within each interval and plot this frequency on the histogram. Keep in mind that each data point can appear in only one interval. For example, if your first interval begins with 10.0 and the second with 12.0, then all data points that are equal to or greater than 10.0 and still less than 12.0 are counted in the first interval.

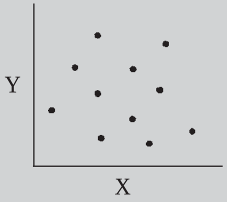
Points to remember:

- Each data point appears in one and only one interval.

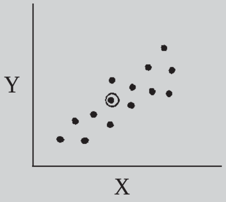
- The number of intervals can influence the pattern your data will take.

- Don’t expect the histogram to be a perfect bell curve; variations will occur. Ask yourself if the picture is reasonable and logical. But, be careful not to let your preconceived ideas influence your decision unfairly.

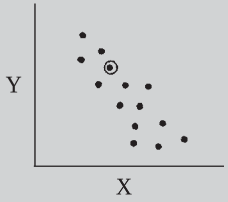
SCATTER DIAGRAM Correlations:



No correlation:
(Y does not appear to be related to X)



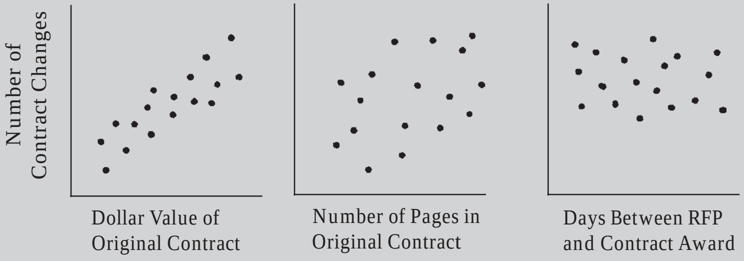
Positive correlation:
(An increase in X *may* be related to an increase in Y)



Negative correlation:
(An increase in X *may* be related to a decrease in Y)

SCATTER DIAGRAM Example:

A contracting agency wanted to investigate why they had so many changes in their contracts. They used the following scatter diagrams to explore possible relationships.



SCATTER DIAGRAM

What it is:

A scatter diagram is a graph that reveals a possible relationship between two variables. It can help you:

- Identify possible causes of problems.
- Recognize that one important variable might be related to another.

How to use it:

Collect the data in pairs. A data pair consists of two different variables that appear to have a relationship.

Construct the graph. Label the horizontal and vertical axes in an ascending fashion. Ensure that the values on the two axes correspond to the data pairs.

Plot the data. As you plot each point, look for patterns. Circle repeated points. The figures to the left show how to interpret scatter diagrams.

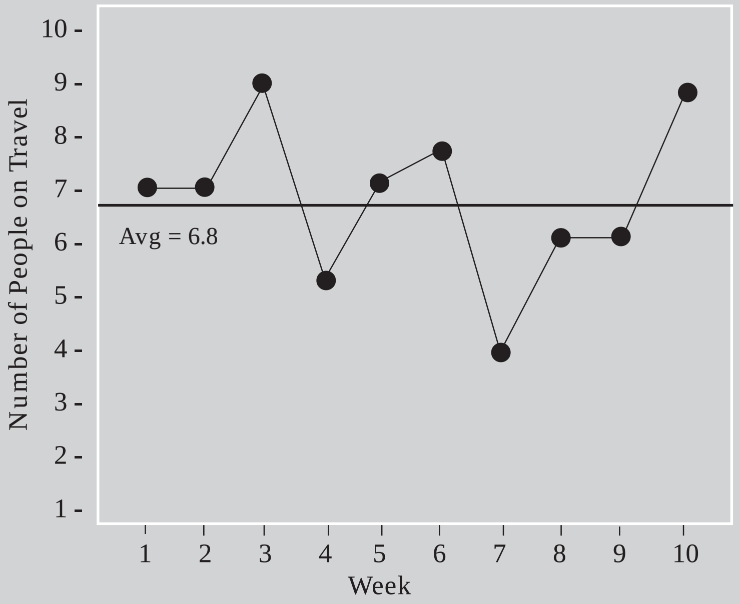
Points to remember:

- If there appears to be a relationship between two variables, they are said to be correlated. Both negative and positive correlations, as shown in the figures, as useful for continuous process improvement.

- This method only shows that a relationship exists, not that one variable causes the other. Further analysis using advanced statistical techniques can quantify how strong the relationship is between two variables.

Run Chart Example

This run chart shows that the average number of people on travel is 6.8, and this has been fairly consistent for the past ten weeks. It is important to recognize the variability (four to nine people per week) that is inherent to this or any other process.



Source: Electronic Systems Center (Air Force Materiel Command) and the MITRE Corporation. *The ESC process improvement guide.* Published for the Seventh Annual National Conference on Federal Quality. 6-8, 15-20.

RUN CHART

What it is:

A run chart is a graph that shows the changes in a process measurement over time. It can help you:

- Recognize abnormal behavior in a process.
- Document changes over time.

How to use it:

Construct the chart. Label the vertical axis with the key measurement of the process being measured.

Collect the data. Collect data over time.

Plot the data. Plot each data point on the chart. Then, average all the points and use this average as the centerline of the chart.

Interpret the chart. Interpret the chart using your best judgment. Look for patterns and trends. Two possible signals that the process has significantly changed are:

- Six points in a row that steadily increase or decrease.
- Nine points in a row that are on the same side of the average.

Repeat. Recompute the average for subsequent blocks of time, or after a significant change has occurred.

APPENDIX G
Michigan's Core Measurement Set

FY 2003-05

Type of Measures	Dimension of Quality
I. COMPLIANCE INDICATOR	A. Access
II. QUALITY IMPROVEMENT INDICATOR	B. Efficiency
III. MONITORING MEASURE	C. Outcome
	D. Quality & Appropriateness

I. COMPLIANCE INDICATORS

A. Access

1. The percentage of children with SED and the percentage of all other persons receiving a pre-admission screening for psychiatric inpatient care for whom the disposition was completed within three hours
Standard: 95%

2. The percentage of persons receiving a face-to-face meeting with a professional within 14 calendar days of a non-emergency request for service (by 4 subpopulations: MI-adults, MI-children, DD-adults, DD-children)
Standard: 95%

3. Percentage of persons starting any needed on-going service within 14 days of a non-emergent assessment with a professional (by 4 subpopulations: MI-adults, MI-children, DD-adults, DD-children)
Standard: 95% within 14 days

4. The percentage of persons who met the OBRA Level II Assessment criteria for specialized mental health services for persons residing in nursing homes, as determined by the Department, who received CMHSP managed mental health services
Standard: 95%

B. Efficiency – No compliance indicators currently required

C. Outcomes

5. *The percentage of children with SED and the percentage of all other persons readmitted to an inpatient psychiatric unit within 30 days of discharge.*
Standard: 15%

D. Quality and Appropriateness

6. Required contractual reports are submitted within the contractually-defined time frames
Standard = 100%

7.CMHSP maintains a **95%** accuracy rate on selected data elements in demographic and service use files submitted to MDCH

II. QUALITY IMPROVEMENT MEASURES

A. Access

Continuity of Care
8. The percentage of children with SED and the percentage of all other persons discharged from a psychiatric inpatient unit who are seen for follow-up care within 7 days.

B. Efficiency

9. Days of psychiatric inpatient care per thousand persons with mental illness served

10. Percentage of expenditures for persons with developmental disabilities used for 24-hour specialized residential care provided in a group home or institutional setting for which the case is paid by the CMHSP

11. Percentage of expenditures for persons with mental illness used for psychiatric inpatient care

C. Outcomes

Employment
12. Percentage of persons with developmental disabilities receiving any daytime service who are served in supported employment

13. Percentage of persons with developmental disabilities who earned minimum wage and above

14. Percentage of adults (18-65 years of age) with serious mental illness who are employed and / or are in supported employment (information to be collected from demographic data)

15. Percentage of adults (18-65 years of age) with developmental disabilities who are employed and / or are in supported employment (information to be collected from demographic data)

Living Arrangement
16. Percentage of children served living with their families[1]

17. Percentage of adults with developmental disabilities served living in their own residence[2]

D. Quality and Appropriateness

No quality improvement indicators currently required

III. TRACKING MEASURES

A. Access

Penetration Rates of Under-Served Populations
18. Ratio of the percentage of persons under 18 in the area population receiving services to the percentage of persons under 18 in the area population.

19. Ratio of percentage of persons 65 years and older in the area population receiving services to the percentage of persons 65 years and older in the area population.

20. Ratio of percentage of ethnic minority persons in the area population receiving services to the percentage of ethnic minority persons in the area population (by 4 subpopulations: Native American, Asian or Pacific Islander, African American, Hispanic).

21. Ratio of percentage of persons 18 or older with serious mental illness in the area population receiving services to the percentage of persons 18 or older with serious mental illness in the area population.

22. Percentage of area Medicaid recipients having received CMHSP managed services. For affiliations, this included the number of Medicaid recipients in all counties of the affiliation, served by all CMHSP affiliates.

23. Percentage of total CMHSP service population, not living in a nursing home, with a diagnosis of dementia.

24. Number of children 0-3 years old, receiving home-based services, regardless of who has the open case, where the primary treatment target is the 0-3 child.

25. Number of children under age 18 referred by courts who were assessed by CMHSP, and number who received services (information to be collected from demographic data).

Continuity of Care
26. The percentage of persons who met the OBRA Level II criteria determined to need nursing home care but less than specialized mental health services, as determined by the Department, who received CMHSP managed mental health services.

Denial / Appeals
27. Percentage of face-to-face assessments with professionals that result in denials or referrals elsewhere

28. Percentage of Sec. 705 second opinions that result in services

B. Efficiency

Cost Per Case (Data collected from Sub-Element Report)
29. Cost per case for adults with mental illness (18-64, 65+)

30. Cost per case for children (under 18) with a mental illness or severe emotional disturbance

31. Cost per case for persons with a developmental disability (0-17, 18-84, 65+)

Other
32. The percentage of Medicaid eligible persons who received (a) inpatient care, (b) day / night care, and (c) ambulatory services.

33. The percentage of total expenditures spent on administrative functions

C. Outcomes

Employment
34. Percentage of persons in Supported Employment (SE) working 10+ hours per week

35. Percentage of adults with MI in SE earning minimum wage and above

36. Percentage of adults with MI and adults with DD in SE, continuously employed 6 months or longer

Living Arrangements
37. Percentage of adults with MI served living in their own residence.[3]

Recipient Rights
38. Number of substantiated recipient rights complaints per 1,000 persons served, in the categories of Abuse and Neglect I and II

39. Total number of persons making an allegation of a rights violation per thousand persons served

40. Total number of substantiated allegations for all categories other than abuse and neglect per thousand persons served

Sentinel Events (Data collected semiannually)
41. Number of sentinel events per thousand persons served (by 3 subpopulations: MI-adults, MI-children, and Persons with DD)

42. Number of suicides per thousand persons served (by 2 subpopulations: MI and DD)

D. Quality and Appropriateness

43. The percentage of adults served (in intensive services such as ACT, specialized residential, continuous in-home supports, day program, inpatient psychiatric hospitalization, partial hospitalization, etc.), who identify that they are parents of minor children (information to be collected from the consumer demographic data).

44. The percentage of children 0-3 served by CMHSP who are enrolled in the Early On program (information to be collected from the consumer demographic data).

45. The percentage of children with developmental disabilities, ages 0-17, who received services in addition to respite care (information to be collected from the encounter system data).

46. The percentage of adults with a diagnosis of schizophrenia served who received atypical antipsychotic medications (information to be collected from the consumer demographic and pharmacy data).

47. The percentage of Medicaid eligible adults served on antipsychotic medications receiving one of the new atypical antipsychotic medications (information to be collected from the consumer demographic and pharmacy data).

48. The percentage of children / adolescents (age 7-17) initiating treatment during the quarter who have admission CAFAS scores (information to be collected from the consumer demographic data).

49. The ratio of the number of children / adolescents (age 7-17) with follow-up CAFAS scores at 90 days post-admission, 180 days post-admission, or at exit, to the number of children / adolescents with CAFAS scores at admission (information to be collected from the consumer demographic data).

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[1] "Family means natural or adoptive relatives (parents, grandparents, siblings, etc.)

[2] "Own residence" means lease, rental agreement, or deed / mortgage of home, apartment, or condominium in the adult consumer's name or the name of his / her spouse, friend, guardian, relative or parent. Consumers living with (a) their parents, or (b) in a residence owned or leased by a CMHSP or provider, are **not considered** to be living in their "own residence."

[3] "Own residence" means lease, rental agreement, or deed / mortgage of home, apartment, or condominium in the adult consumer's name or the name of his / her spouse, friend, guardian, relative or parent. Consumers living with (a) their parents, or (b) in a residence owned or leased by a CMHSP or provider, or **not considered** to be living in their "own residence."