NYC Health

THE NEW YORK CITY DEPARTMENT of HEALTH and MENTAL HYGIENE

DIVISION OF MENTAL HYGIENE

Quality IMPACT Basic CQI Course

FY08 Major Revision!

QualityIMPACT

Improving Mental Hygiene Programs and Communities Together

Quality IMPACT Basic CQI Course

New York City Department of Health and Mental Hygiene
Division of Mental Hygiene
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Introducing the Quality IMPACT Basic CQI Course

The Quality IMPACT initiative brings government, providers, consumers and advocates together to improve outcomes for consumers throughout the mental hygiene service system. The initiative relies on a Continuous Quality Improvement (CQI) method using skills, strategies and collaborative action to move in small steps from "the status quo" to "the best system possible". It draws on evidence-based, promising and innovative mental hygiene practices. This course presents the basics needed to get started designing, participating in, supporting and monitoring CQI projects in mental hygiene programs. It is designed for use in a traditional training setting, as a self-study manual or in a train-the-trainer format.

A note on language: *As this manual is geared toward different stakeholder groups with different language conventions the words "consumer", "client" and "person" are used interchangeably.*

Quality IMPACT Mission and Principles

Mission

To provide the highest quality mental hygiene services to the residents of New York City by implementing a data-driven quality improvement process that includes the broad participation of stakeholders

Principles

1. CQI processes are used to make improvements in service processes and outcomes
2. Stakeholders, including consumers, families, providers, advocates and Division of Mental Hygiene (DMH) staff are involved in the quality improvement process at all levels
3. Quality indicators are useful, meaningful and manageable for all stakeholders
4. Use of evidence-based practices, clinical consensus guidelines, opportunities for innovation, and locally developed, promising practices are all encouraged
5. Performance data are transparent and publicly available

What are Highest Quality Mental Hygiene Services?

In recent years the crises in heath care in general and in the mental hygiene service delivery system in particular has become increasingly apparent. System fragmentation and serious quality issues have been nationally noted and addressed. The Surgeon General, the President's New Freedom Commission and The Institute of Medicine have all published major reports urging a national improvement agenda. From these efforts, in synergy with a vibrant grass roots consumer initiative, a consensus is emerging. High quality programs offer care that is:

- Person centered
- Hopeful
- Recovery and resiliency-oriented
- Easily accessible and timely
- Culturally responsive
- Accountable
- Safe
- Effective (based on evidence, expert consensus, or promising practice)
- Efficient
- Equitable

The Purpose and Goals of this Course

The purpose of this course is to prepare stakeholders to successfully implement, support or review Quality IMPACT CQI projects in mental hygiene programs.

The goals of this course are to:

1. Differentiate between a focus on compliance and a focus on improvement
2. Become familiar with the principles and framework of the Quality IMPACT CQI Projects
3. Identify and conceptualize meaningful areas for improvement
4. Master the basics of measuring improvement
5. Understand the execution of change through the **Plan, Do, Check, Act** cycle.
6. Understand the relationship between quality improvement, evidence-based, promising and innovative practices and better consumer outcomes
7. Develop a sense of enthusiasm and commitment about participating in continuous quality improvement

A Focus on Quality

Quality is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.
(Institute of Medicine http://www.iom.edu/focuson.asp?id=8089)

Two Different Approaches to Quality: CQI and Quality Assurance (QA)

CQI and QA are often referred to interchangeably, but actually refer to different points along the continuum of quality of care. While both are data-driven processes, the data sources they look at and the purposes of their data analyses are different. While CQI is aimed at moving services to higher levels of effectiveness, improving processes and achieving better outcomes, quality assurance ensures that the basic tenets of accountability and safety are followed and that negative outcomes are analyzed and corrected.

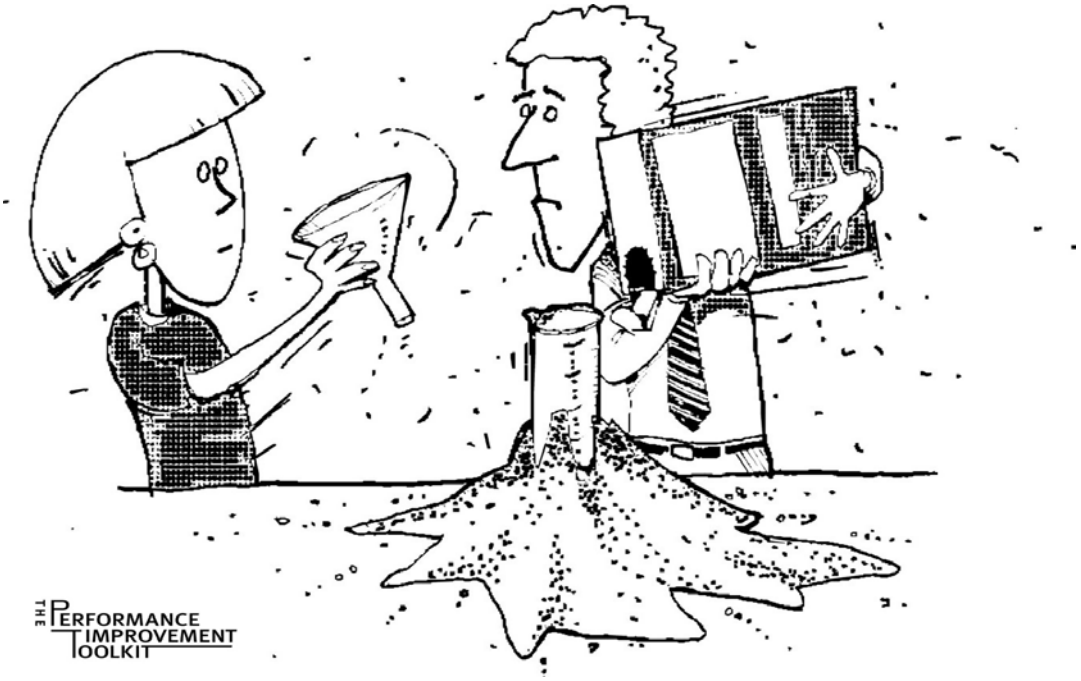
CQI vs. QA

CQI	QA
Focus is on systems first and individual performers second. CQI aims to seek root causes in a process that can be improved rather than attribute blame.	Focus is on human error and identifying and eliminating outliers (poor performers).
Strives to ensure that policies, procedures and protocols make sense and meet the current and evolving needs of consumers.	Strives to ensure that individuals are following their policies, procedures and protocols.
Relies on teamwork between different stakeholders of the organization, as those closest to the problem usually have the best ideas about the solution. Incorporates evidence-based care.	Relies on following the rules and policies of the organization to meet the standards required by regulatory and accrediting bodies.
Involves both prospective and retrospective review. It is aimed at measuring where you are and creating systems to make things better.	Involves retrospective policing and may be punitive.

Utilizes incentives to support incremental improvement.	
Monitors improvements in quality of care through continuous review.	Monitors compliance through periodic audits and inspections.

Mair, Frances. Performance Indicators for General Practice. British Medical Journal. 1995: 311:1167-1168.
Colbeck, Mark CCP. EMS Quality Management: An Introduction to Quality Management. 1998.
Virginia Health Quality Center. A Simple Explanation of the Outcome-Based Quality Improvement Process. January 2001:Vol. 1, Issue 2.
Kapriclan, MD Associate Clinical Professor, Dept. of Community and Family Medicine, Duke University Medical Center. Quality Improvement. 2003.

Exercise: Evaluating Quality: "I know it when I see it."



http://www.performanceimprovementtoolkit.com/

Each of us already knows a lot about quality. This exercise is designed to link what you already know to some of the formal terms used in CQI. To accomplish this we are going to use a technique called brainstorming. Brainstorming is a core technique of CQI, used to generate thoughts and ideas in a group. In the appendix you can find a complete guideline for using brainstorming in your program.

Focus: When you receive healthcare, how do you judge its quality?

Steps:

1. Each participant will give the topic some thought and record ideas.

2. All participants will contribute their criteria until all are listed. Listing criteria will help formulate a set of quality indicators.
3. The group will select one criterion, and determine what level we would judge as good quality. This will help in setting a target.
4. The group will sort the ideas into categories and name the categories. Establishing categories will help formulate a set of quality domains.
5. The group will draw conclusions together.

Three key terms in CQI

Indicator: A quantitative measure of a component of quality services. An indicator establishes the ability to monitor progress over time.

Example: The wait time for an appointment.

$$\frac{\text{\# of days from call to appointment date for all clients}}{\text{\# clients given an appointment}}$$

Target: The level of a measure that represents acceptable service and is a challenging but reachable increase from the starting point.

Example: Clients should be seen within three days

Domain: A group or category of indicators that address the same general aspect of concern.

Example: Access to Care

Implementing a Successful Quality IMPACT CQI Project

This unit will focus on how to do a CQI project. The process begins with preparing your program to succeed at CQI and ends with integrating a new process. We will feature the ***DMH Quality IMPACT*** *Project Proposal, PDCA, and Final Project Outcomes sheets, which are designed to guide all projects, whether Priority Projects or Program-Specific Projects*

Section 1: Establishing a Structure to Implement your Project

Getting Ready

CQI grows out of a philosophic commitment to the idea that teams of people working in a systematic way can, without undo burden, measurably improve their care processes and the outcomes of services. To be successful, CQI has to be fully integrated into the everyday flow of your program. Quality initiatives should be developed with input from key stakeholders and communicated to consumers, family, all staff and the agency board of directors.

Key Players

The Agency CEO

Leadership is one of the keys to improving quality. Research on quality improvement has shown that the support of the agency CEO is critical to the success of projects. The CEO can empower the CQI team and the broader program to "own" the process. A survey given to providers after the first year of Quality IMPACT bore this out, when the perception of CEO support was found to most significantly correlate with other positive project perceptions.

The Board of Directors

Every agency should have a mechanism for communicating CQI project proposals and progress up to the Board of Directors and feeding back the Board's response to the quality team. This is a mechanism for sharing critical program problems and opportunities, acquiring a mandate and possibly obtaining resources for proposed improvements.

The Quality IMPACT Team

To implement a Quality IMPACT project in a program, the program must develop an internal team. Ideally the team should include representatives of all stakeholder groups close to the problem/opportunity. Since Quality IMPACT is focused on consumer outcomes, teams should include a consumer or family member. A key clinician supporting the project is also important.

TIPS for Convening your CQI Team:

- Teams should have no fewer than three individuals who are committed to improving the quality of their program
- Teams should select a leader. The leader is responsible for the day-to-day project implementation, the monitoring of time-frames, the meeting schedules and coordination with DMH
- Teams should include consumers and family members
- Teams should have regular meetings at least once a month and share information on their progress
- Administrators should try to find ways to support team members who are taking on additional responsibilities on top of a full workload. For example, administrators may reduce some other kind of responsibilities for team members.

All Project Stakeholders

As you make progress on your project, make sure that all stakeholders get to share in the success. Administrator, clinicians and consumers will all be pleased to know about higher engagement rates, introduction of evidence-based practices and improved access for underserved minorities. Poster boards in the program space, announcements at community and staff meetings and publications are just a few ways of getting the word out.

Working Smarter, not Harder

Fitting CQI activities into the ongoing work of a busy program can seem daunting. Here are some suggestions on how to integrate CQI effectively into your ongoing work:

- Append CQI team meetings to already existing meetings
- If you have successfully participated in a DMH priority project, consider taking that project the next step by extending or expanding it, rather than switching to a whole new area
- Make sure that all of your CQI team members know everything about the project so that a staff turnover within your program will not derail your quality improvement efforts
- Use indicators, screening tools and assessments already publicly available, instead of creating your own - these guides contain many such tools and references for many others
- Take advantage of the training and technical assistance opportunities which DMH provides - the more you know, the easier it goes

Section 2: PLAN- Developing a Project Proposal

Highlights of the DMH Quality IMPACT Program Proposal

A. ***The Aim of the Project***
B. ***Project Indicators***
C. ***Data Planning***
D. ***Root Causes***
E. ***Project Self-review***

A. The Aim of the Project

Create your Aim Statement

The aim statement is a measurable and time-sensitive statement of the expected results of an improvement process. A good aim statement describes the quality area you are hoping to improve and defines the measure for recognizing improvement. Remember, the aim of CQI is to improve, not to understand, explore or monitor. Though all those activities are useful endeavors, the purpose of CQI is measurable improvement. Selecting a viable problem or opportunity to address is critical. Make sure the improvements you are striving for will really make a significant difference to your program. DMH requires only one project per year for each participating program. Ideas for projects can arise at any level of an organization, but to be successful a project must be fully endorsed by the upper management and implemented by a team of stakeholders closely involved with the topic area.

Steps in identifying an aim statement:

1. Identify an Area for Improvement

There are abundant opportunities for improvement in the mental hygiene service delivery system. The components of high quality services identified in the introduction to this course have all been targeted for improvement by localities, states or the federal government. In many areas routine program outcomes are far below the results that have been obtained by the highest performing programs. Opportunities include improving:

- Integration of services for co-occurring mental hygiene disorders
- Integration of mental hygiene and medical services
- Screening for depression in primary care
- Efficient and consumer-centered flow of the outpatient clinics
- Cultural competence
- Implementation of wellness self-management
- Medication management

- Employment outcomes
- Identification and treatment of mental hygiene disorders in jails and prisons
- Utilization of consumer perceptions of care to improve services
- Engagement and continuation in treatment of consumers and families

To identify a potentially successful CQI project, carefully examine your program's goals, strengths, resources, capacity and problem areas. The project's aim should be closely related to the core mission of the program. If the improvement process is successful, there should be a clear and meaningful impact on consumer outcomes. The practical issues of how data will be collected and who will implement the change cycles need to be thought through. Ideally, the project should be seamlessly integrated into the clinic's flow.

2. Consider the Evidence

In order to improve an area you must be able to identify some strategies that will have a good chance of creating positive change. One of the best ways to do this is to review the literature on the best services available for the population served by the program. Decide whether you can implement the evidence-based practice as is, or if it would need to be adapted to your program. Remember, by using the CQI method, you will be able to implement any changes in small incremental steps. If there are no practical evidence-based or promising practices addressing the improvements you wish to make, but you have some ideas for workable strategies, CQI is a safe way of moving forward and testing out your ideas before making large programmatic changes.

3. Consider your Work Flow and Business Processes

Always remember that the aim of the project is to improve services, and the method of making those improvements is designed to be incremental and to conserve limited resources. If the CQI team finds that an intervention feels overwhelming or suspects that the intervention will cause upheaval in the program flow that is a signal that the intervention must be modified before it is carried out. Simplify your efforts by streamlining tasks to enable the best possible outcome with the least possible effort, and carefully identify who will perform each task. Projects should function by drawing on the skill sets that program staff and consumers have, and CQI teams should assign tasks to those who are most able and willing to complete them.

4. Incorporate Consumer Feedback

In implementing changes you must always consider the consumers' perception of the care they are receiving. Suppose you are trying to reduce the time from first contact to intake, and you establish an open intake time on a first-come, first-served basis. Even if the intake occurs much closer to the request date, you need to hear feedback from the consumers if the wait times generated by the new system were acceptable.

The strongest ideas for quality improvement tend to emerge when the CQI structure allows all stakeholders (senior management, clinical staff, clerical staff, consumers and family members) to have input into the selection process.

5. Consider DMH Priority Areas for Improvement

The following DMH Priority Projects have been created to encourage programs to address these areas, where there is evidence of a need for systematic improvement.

- ***Improving Identification and Coordination of Care for Adults with Co-occurring Mental Health and Chemical Dependency Disorders.*** National statistics suggest that co-occurring mental health and chemical dependency disorders are under-identified, which interferes with the effectiveness and quality of care. Recognizing that effective treatment begins with timely identification, the overall goal of this Priority Project is to improve the screening and monitoring of co-occurring mental health and chemical dependency disorders.

- ***Improving Cultural Competence in Mental Health Treatment Programs and Chemical Dependency Outpatient Clinics.*** It is recognized that there is a need to increase cultural competence in mental health and chemical dependency services to address the disparity in access and quality of care for individuals from diverse groups. The goal of this Priority Project is to better meet the treatment needs of New York City's diverse client population in mental health and chemical dependency settings by using cultural competence techniques in outreach strategies, at intake and during the assessment and treatment planning phases of service delivery.

- ***The Welcoming Clinic: Improving Access, Engagement and Continuation in Services through Implementing Consumer-Centered Interventions.*** A person-centered mental hygiene service system that values consumer self-determination and empowerment is a top priority at the Federal, State and local level, this Priority Project aims to assist mental hygiene service providers in identifying new ways to provide more responsive and engaging services for consumers. This project encourages providers to improve consumer access, engagement and clinic flow by tailoring services to be more consumer-centered.

- ***Improving Mental Health Services for Children.*** Recent studies suggest that 17% to 26% of the children in the U.S. are in need of mental health care, and the rates for those in urban, low-income communities may be as high as 40%. The goal of this Priority Project is to improve the quality of mental health services for children by improving rates of initial engagement of children in outpatient mental health clinic services. This Priority Project also encourages providers to incorporate family and strength-based approaches in the development of interventions and to use promising and evidence-based practices to better engage children, their families and caregivers in mental health services.

Exercise: Evaluate your Aim Statement

Which of the Aim Statements below would be most effective in guiding a CQI project? Why?

1. *The Quality IMPACT team recognizes that there are numerous adult with mental health disorders in the chemical dependency treatment system. We want to improve our ability to identify these adult and monitor how the number of individuals currently in our program compares to the NY State mean for co-occurring disorders in licensed CD clinics. We aim to achieve this by gradually phasing in a screening tool currently*

recommended by the state substance-abuse authority for all newly admitted clients. The above will be accomplished by March 31, 2007.

2. *The Quality IMPACT team recognizes that there are numerous adult with mental health disorders in the chemical dependency treatment system. We want to improve our ability to identify these adults to ensure delivery of care which successfully targets their particular needs. In order to achieve this goal, we plan to implement a mental health screening tool, and, if needed, provide or coordinate a mental health assessment and plan for effective. Formal screening of mental health needs is a promising practice in improving treatment and recovery outcomes for individuals with co-occurring disorders. The above will be accomplished by March 31, 2007.*

3. *The Quality IMPACT team recognizes that there are numerous adult clients with mental health disorders in the chemical dependency treatment system. We want to determine the most effective way to identify these adults. We will give every new client one of two screens for co-occurring disorders and check the validity of the screen with a complete follow-up assessment by a psychiatrist. The above will be accomplished by March 31, 2007.*

Answer:
2. Reason: It is the most directly focused on improved clinical outcomes for program consumers.

For more examples of Aim Statements see The Priority Focus Guide.
http://www.nyc.gov/html/doh/downloads/pdf/qi/qi-companionguide.pdf

B. Project Indicators

Find out what is already known about the topic you've selected

- Literature review: One of the first tasks that the team should undertake is conducting a literature review. The Internet has greatly simplified the process of finding literature on a topic. Often the literature review can point you to potential evidence-based indicators, targets and interventions.
- Internet notifications: There are many Internet sites that develop e-mail lists to inform interested individuals when new findings in an area of interest become available.
- Governmental initiatives: Federal, state and local government units regularly publish policy and research documents that can be used to shape interventions.
- Program research: The program itself may have generated some data (formal or informal) regarding promising practices.
- Observations and qualitative data.

Evidence-based interventions must be carefully evaluated. Many studies must be conducted over time in order to develop a strong evidence base. Often, research evidence is established in controlled conditions very different than actual practice settings. While it is important to introduce evidence-based practices into clinical practice, be careful to select practices based not only on research evidence, but on whether they have a good chance of working in your program.

Select your Indicators

**** While this course provides information to help you develop indicators "from scratch," DMH strongly suggests that you select project indicators that have already been specified for mental hygiene use:***

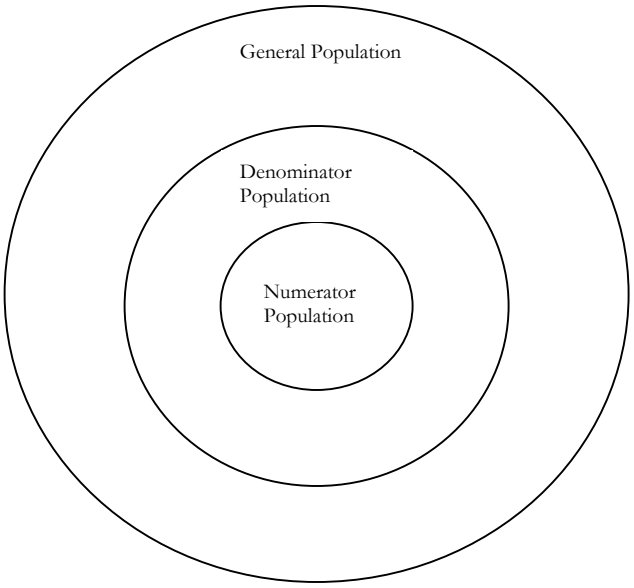
- There are a large number of indicators that have been constructed to measure mental hygiene services and this number is continually growing. Government, managed care organizations, accrediting bodies and practice improvement organizations all develop indicators and indicator sets. Indicators are also reported in the mental hygiene literature and the best-practice implementation literature. If at all possible, try to utilize an indicator that has worked for others. Though you may have to tweak it to fit your program, most of the work will have been done for you.
- DMH-sponsored collaborative workgroups have specified indicators for all priority projects sponsored by the division. These indicators have had "real life" testing in our priority projects. They are measured using computerized tracking sheets that calculate indicators automatically and create graphs which track your progress. In addition, using these indicators may allow you to compare your results with the aggregate data from the DMH priority projects. DMH has also collected examples of indicators that have been developed independently by providers. DMH encourages providers to use any of these indicators.

For a List of DMH-specified indicators and references for additional indicators, see the Priority Focus Guide

Understand Indicator Development

Remember, an indicator is a measure. It measures either a process associated with an improved outcome, or an improved outcome directly. Indicators clarify and operationalize the aim of your project and allow you to monitor your overall progress as you initiate small interventions. Most indicators are rates; however they can also be counts or means.

A rate-based measure can be thought of as three successively smaller concentric circles. The outermost circle is made up of the general population being examined. The next smallest circle (representing the denominator) is made up of the portion of the population that the measure will be applied to. The smallest circle (representing the numerator) is made up of that portion of the population who meet the specific circumstance you are measuring.



[1]

Basic Example: Admission of adults from an underserved group to outpatient treatment

A chemical dependency program wishes to construct an indicator to measure whether they are moving toward their aim of improving access and service engagement of Southeast Asian individuals (who are underserved in their neighborhood). Their initial concern is attracting and admitting more Southeast Asians from their community through community outreach efforts.

General Indicator Population:	Neighborhood of the clinic
Denominator:	New admissions from the neighborhood to the clinic
Numerator:	New Southeast Asian adult admissions

The indicator would look as follows:

$$\frac{\text{\# of Southeast Asian adults admitted to the clinic}}{\text{\# of adults admitted to the clinic}}$$

If this measure is repeated monthly and graphed (you will learn how to do this in a following section on run charts), as the numerator goes up, the *percentage* of Southeast Asian adults admitted will also go up. The graph will show a positive trend.

Considerations in specifying your indicator:

[1] Herman, R.C.: Improving Mental Healthcare, Guide to Measurement –Based Quality Improvement. Washington DC, American Psychiatric Publishing Inc, 2005, P.40.

- The exact requirements for inclusion in the numerator and denominator must be defined. What age will be considered adult? How will the neighborhood be delineated? Will individuals outside of the neighborhood be included? What constitutes admission?
- How will the data be collected? Do you have a registration system that can report this data? Will each individual clinician need to note it on a tracking sheet? Will you have a central person collecting and reviewing all the data?
- Will this indicator link to any others? If you just want to know admission rates, aggregate (grouped) monthly data might be fine. If you also want to know whether the newly admitted Southeast Asian individuals are continuing in treatment, you may need a system to track each person counted in the numerator (of the indicator above) as they move forward.

Advanced Example: Increasing consumer continuation in weekly treatment

A mental health program has been working for some time to increase the initial engagement and continuation in treatment of adult consumers. They have had some success, but analysis of their data has showed that half of their clients scheduled for weekly treatment drop out in the first month. They find that most of the consumers who stay longer than a month and attend at least four sessions usually continue in treatment long enough to attain some goals. They would like to create an additional indicator to track this.

General Indicator Population:	Consumers recently admitted to the clinic
Denominator:	Consumers assigned to weekly treatment who have been at the clinic for 40 days
Numerator:	Those in the denominator who have attended four visits in 40 days

The constructed indicator would look as follows:

$$\frac{\text{\# of consumers scheduled weekly who attended at least four visits in the 40 days}}{\text{\# of consumers scheduled weekly who this month completed 40 days since admission}}$$

If this measure is repeated monthly and graphed (you will learn how to do this in a following section on run charts), as the numerator goes up, the *percentage* of consumers scheduled weekly who attended at least four visits in the 40 days will also go up. The graph will show a positive trend.

Considerations in specifying your indicator:

- The exact requirements for inclusion in the numerator and denominator must be defined. What age will be considered adult? What will be considered a visit? Will we count business days or calendar days?
- How will the data be collected? Do you have a registration system that can report this data? Will each individual clinician need to note it on a tracking sheet? Will you have a central person collect and review all the data?
- What should happen if a consumer is discharged before completing the 40 post-admission screening days? Suggestion: if a consumer has completed at least four visits before being discharged, count them in the indicator, since they still received the targeted amount of care. For those that didn't complete four visits, if a discharge was due to a consumer meeting

treatment goals or was due to a planned transfer, count the consumer in the indicator because he or she wasn't expected to stay in the program. If the discharge was due to non-attendance, count the consumer in the denominator in this indicator.

C. Data Planning

Once you have developed indicators to track your progress toward your aim, you will need to develop a starting point and a target. You will also need to make sure that your program has established, or will establish, a system to measure your indicator at regular intervals to assess change.

Baseline Data: Data collected to establish the existing measure of an indicator before changes are implemented.

Target: The level of a measure that represents acceptable service and is a challenging, but reachable, increase from the starting point.

Standard: The level of a measure that, through validation, benchmarking or consensus, is widely accepted as an indication of quality service.

Establishing an Indicator/Project Baseline

Usually, you will establish a baseline for every indicator. You also may want to establish some more general or estimated baseline measures for the project as a whole. For example, in the DMH project ***Improving Identification and Coordination of Care for Adults with Co-occurring Mental Health and Chemical Dependency Disorders,*** providers are asked to look back through the medical records to determine the approximate percentage of consumers with a co-occurring disorder as identified by diagnosis or intake notes. This is important information to compare with subsequent screening results, but does not relate to a specific project indicator.

Starting from scratch

If you are implementing a completely new protocol, treatment modality or tool that has never been used in the program before, your baseline will be 0.

Using administrative and electronic data

Often your baseline data can be derived from administrative data sets already used by your program. Administrative data is often collected electronically, making it easier to compile and manipulate. Common electronic data systems include registration systems, billing systems and electronic medical records. Even if the data you are seeking is not available in the form you need, the system administrator may be able to add or combine data fields to give you the data you need. Non-electronic sources of data include caseload attendance rosters, group attendance lists and various consumer assessments and questionnaires. Administrative data often informs measures that address show rates, waitlists, admission patterns, discharge rates and service frequency/type.

Retrospective chart review

Information routinely recorded in the medical record but not aggregated (added and averaged) can be used for calculating many types of clinical baselines. Information typically recorded in the medical record includes demographics, diagnosis, treatment type and frequency, changes in

functional, mental and physical status and cultural considerations. Chart reviews are time consuming. If your program is large, you might want to review a random sample of charts. The sample should be selected from the particular segment of consumers who are targeted in the improvement project (new admissions, individuals with co-occurring disorders, individuals in a particular age category, etc.). Ideally the review should be the average of several months of data prior to the beginning of the project, to avoid developing a baseline using atypical data.

Other sources of baseline data

There are several other ways of developing baseline data. You can collect baseline data prospectively by giving a data questionnaire to consumers as they register. You can sometimes access external data sources such as pharmacy data and insurance company data. As a last resort, you can simply use your first data collection point as your baseline.

Establishing an Indicator Target

It would be great if all indicators could be improved to perfection; however, this is usually not the case. The closer your topic comes to the demands of basic health and safety, the higher the target has to be. While it may be sufficient to aim for a 75% consumer show rate in an outpatient clinic, even one lethal medication error is too many. Your target should represent a challenging reach for your program, or in the case of a Priority Project, the group of programs involved. Targets for the Priority Projects are selected through literature review and past year performance of project participants. In cases where there is no information available, the target is simply noted as increase or decrease.

Targets can be stated as an absolute level to be achieved:

> Ninety percent of individuals admitted to a methadone clinic will be screened for hepatitis.

Or, as an increase or decrease from the baseline:

> There will be a 60% increase in the number of individuals screened for hepatitis upon admission to a methadone clinic.

The important thing is that your target be challenging but realistic.

Using a Standard

Few areas of mental hygiene services have commonly accepted standards, and standards tend to change over time and within specific contexts. For example, the current national standard for use of seclusion and restraint in inpatient mental hygiene treatment is approaching 0%. As the use of data driven performance monitoring expands, greater numbers of agreed upon performance standards are bound to emerge.

Developing a data plan

During the course of your CQI project, you will have to re-measure your indicator periodically (usually monthly) to assess change. It is important to check and recheck that your indicators are measurable, and that you have an acceptably efficient way of regularly collecting the data. DMH will provide automated spreadsheets and data training for program staff to make this process as simple as possible. In a later segment of this course, you will learn how to present your results.

D. Root Causes

A CQI project is aimed to improve a certain area or aspect of services. Before initiating efforts to improve services, it is necessary to assess the current state of service delivery.

1. First the CQI team shall meet, if possible, with wider program staff and consumers to brainstorm about possible reasons for the program's failure to meet particular targets.

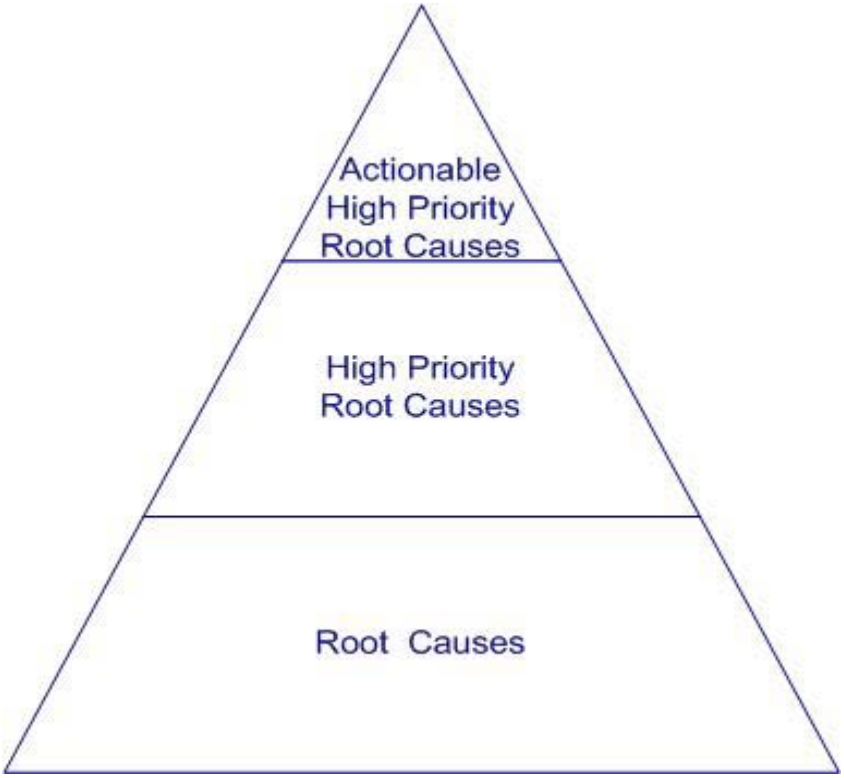
   Example:
   If a CQI team aims to improve access to services, the brainstorming session will focus on the question "What is keeping the program from reaching the optimal level of consumer access?" or even, "What is keeping consumers from coming and staying in services?" **All of the many possible reasons for the less-than-ideal access to services will be listed and identified as root causes of the problem.**

   TIP:
   Often, CQI teams find it easy to list many possible root causes that relate to consumers, but it is equally important to consider the program itself, the community and the overarching system of care, when exploring for root causes. Take care to identify root causes that are unique to the consumer groups that your program serves, the staff members that comprise the program's work force, the funding sources that finance the work and the physical setting and neighborhood within which the program exists.

2. Group together the root causes that are similar in theme.
3. Identify the high-priority root causes – those that the CQI team considers primarily responsible for the problem.
4. Distinguish actionable from non-actionable root causes.

   TIP:
   An actionable root cause is one that the CQI team believes could be addressed in the current project year, while a non-actionable root cause is one considered outside the scope of what is possible to manage in the current year. The amount of executive support and staff time may determine whether a root cause is actionable or not. A root cause may be actionable this year even though it was not actionable in earlier years.

Hierarchy of Root Causes:



Why use tools to determine root causes?

- To capture all possible causes (brainstorming)
- To organize causes (fishbone)
- To identify potential problem areas
- To eliminate causes which can not be addressed
- To guide your choice of interventions

Common problems with determining root causes:

- Deciding on the solution before identifying the cause
- Not digging deep enough
- Not including all the relevant stakeholders in the investigation of root causes

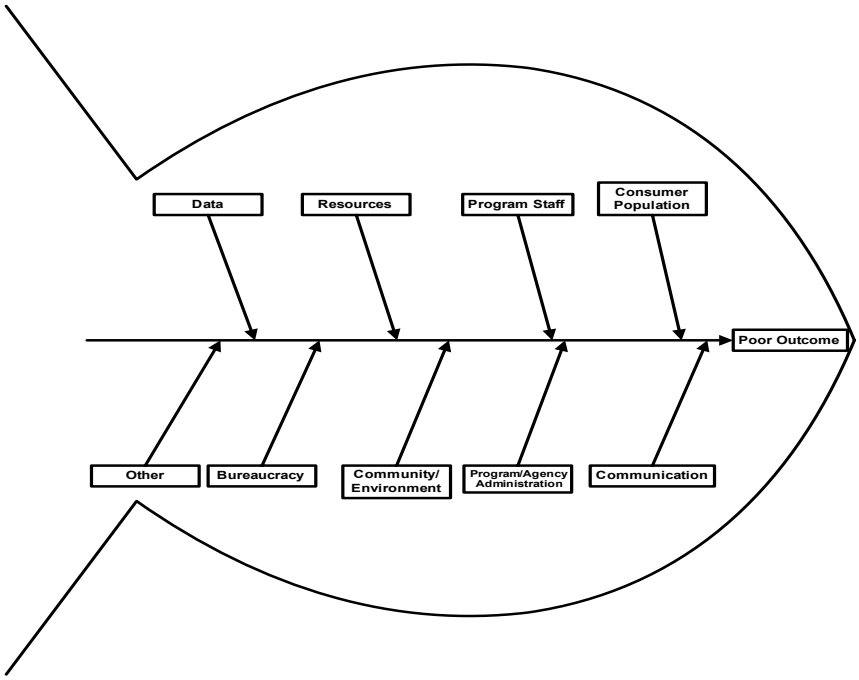
The Fishbone (cause and effect) Diagram: A Valuable Tool for Addressing Root Causes

What is a fishbone diagram?

Fishbone diagrams are useful for understanding all of the contributing factors to a problem. Often, when a team is working on a process, the number of factors that contribute to a specific problem becomes confusing. This diagram allows the team to sort out the various dimensions of the problem and to begin to form a consensus around initial efforts towards change.

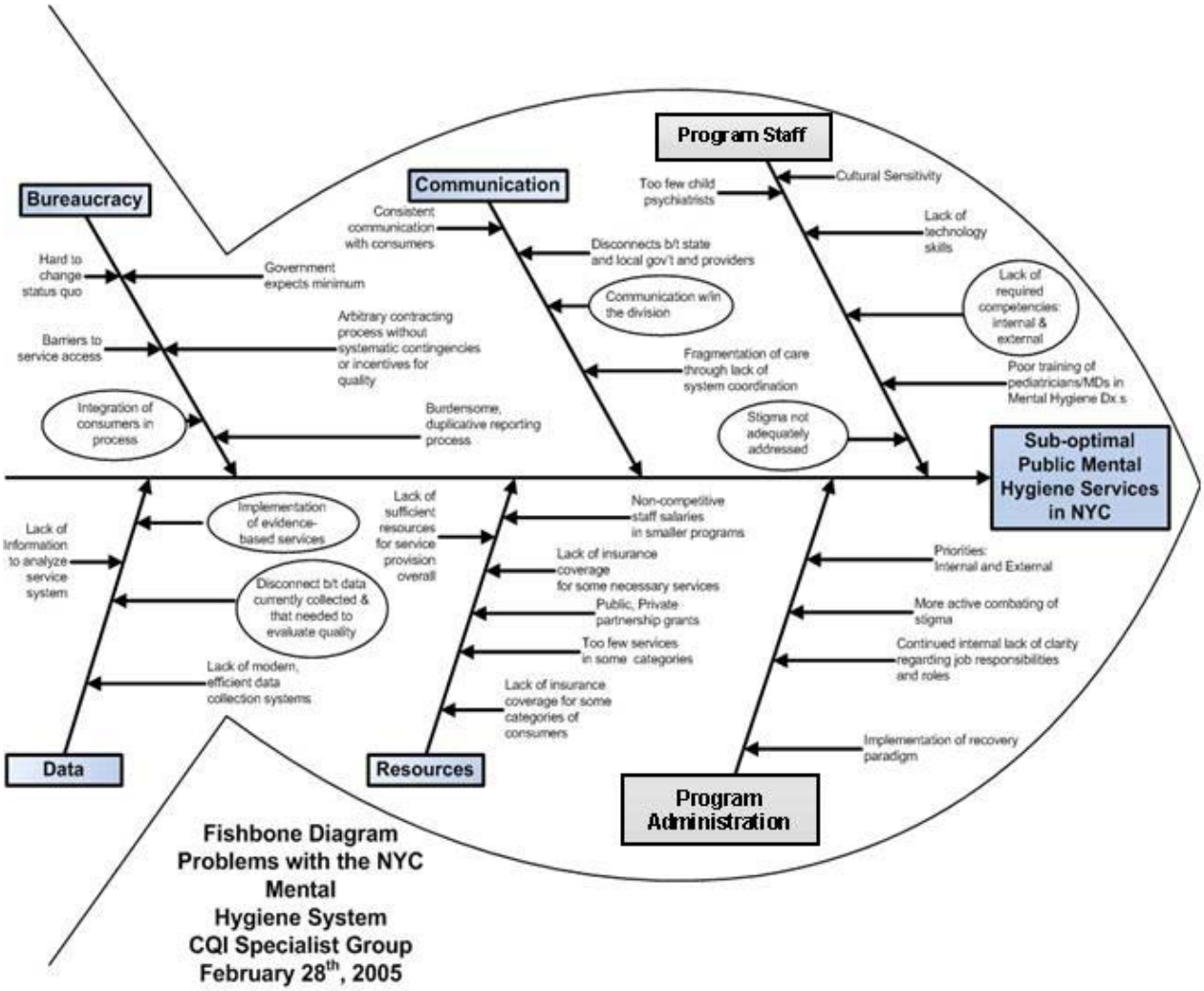
Construct a fishbone diagram by following these steps:

1. Draw a spine to represent the overarching problem to be solved
2. Brainstorm to establish as many potential causes as possible
3. Group the causes identified into major factors. The fishbone below has the common major factors that contribute to poor outcomes for mental hygiene services. You may not have details for every major factor
4. Construct the fishbone as illustrated below, by representing the major factors as bones angling off the spine and by incorporating details from the brainstorming exercise



5. Come to consensus about which causes seem most important
6. Eliminate the causes that are out of the group's control
7. Identify a few causes that you will try to improve first

Example of a completed fishbone, with the main actionable causes circled



A fishbone diagram should be used to:

- Study a problem/issue to determine the root cause
- Study all the possible reasons why a process is beginning to have difficulties, problems or breakdowns
- Identify areas for data collection
- Study why a process is not performing properly or producing the desired results.

E. Proposal Self-review

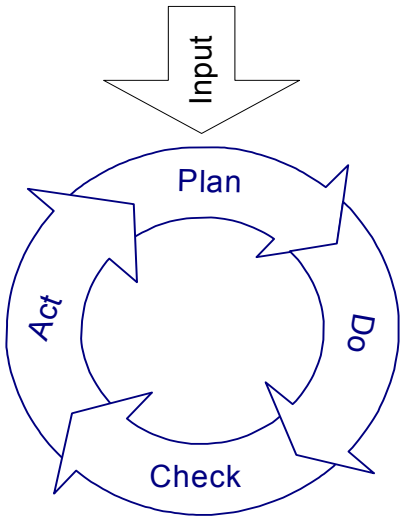
The project proposal is a critical guide to your project's success. Before moving forward, the team should review the questions below and make sure that the answer to each is "yes". If the answer to any of the questions is "no", the team must decide how they will manage that issue in order to move forward successfully.

Checklist items	Yes	o
Will succeeding at the project be meaningful for your program?		
Have major stakeholders had input into the project selection process?		
Is there an evidence-base supporting your aim?		
Are all of your chosen indicators measurable?		
Is there an evidence-base supporting your indicators?		
Is the gap between your indicator baseline and target outcome challenging but possible?		
Were you able to identify actionable root causes?		
Have you determined how you will implement this project with the resources you have available?		

Section 3: DO – Making Changes: Developing and Evaluating PDCA Cycles

Highlighting the Interventions for Incremental Change: Rapid PDCA Cycle Worksheet

Progressing Toward your Target: Getting Started with the PDCA Intervention Process



The Rapid Plan, Do, Check, Act Cycle (PDCA Cycle):

The rapid Plan, Do, Check Act cycle is the engine of the CQI and is used to implement a quick test of an intervention, by gathering feedback to shape future program action. Using this method quickly demonstrates the potential success of a given intervention allowing you to break down your project into experimental steps where failures are easily discarded and successes build upon each other bringing you incrementally closer to your program's target. The process is data-driven and must be quantified so that the result of each "test" can be clearly documented. As successful PDCA cycles accumulate, your program will gain confidence in the effectiveness of the change process and the cycles may expand in scope and length. Ultimately, the PDCA cycles can result in large changes that may be spread to the entire program and agency.

Highlights of the PDCA Cycle:

PLAN	• What is your objective for your first test and what is your prediction? • Plan to carry out the cycle (who, what, when, where). • Plan for data collection.
DO	• Carry out the plan. • Document problems and unexpected observations. • Collect data.
CHECK	• Analyze data. • Compare data to predictions. • Summarize what was learned.
ACT	• What changes need to be made? • What is the next cycle?

Example: Increasing Consumer Input into Service Planning

Context: A program using Individual Service Plans (ISPs) to guide recovery finds from its consumer survey that only 30 percent of consumers agree that they have input into developing their plan. This organization places a high value on collaboration with clients and would like to improve this process. They develop the following Aim Statement:

Aim: The Quality IMPACT team plans to increase the collaboration of consumers in service planning as our program is committed to person-centered care. Evidence shows that involvement in choice of services is an important factor in service outcomes. We will achieve this by implementing a new service-planning methodology that has recently been described and evaluated as successful in two research articles. The project duration will be six months.

Indicator:

$$\frac{\text{\# of consumers who agree that they had input into their service plan}}{\text{\# of consumers who get a service plan}}$$

Target: 75%

Root causes determined by the team:

Lack of time
Clinician's beliefs that input is not essential
Lack of consumer advocacy
Badly designed service plan form

PLAN: Who, what, when, where

1. Jamie, MSW, will implement the new joint service planning format with at least five clients in his recovery-oriented clinic program starting next Tuesday.
2. Charmaine (receptionist) will give clients a 3-question feedback survey upon completion of the session. She will also collect the surveys before the clients leave the premises. The team will meet with Jamie on Monday to discuss client responses and provider perceptions of the new plan.

STOP HERE UNTIL YOU HAVE ACTUALLY PERFORMED THE TEST! WHEN THE TEST IS COMPLETE, THEN DOCUMENT THE REST OF THE CYCLE.

DO: Carry out the intervention and collect data

3. Jamie used the new joint service plan with six clients and collected surveys from five of them. The team met on Monday from 8-9 a.m. and discussed the perceptions of clients and the time that it took to use a joint service plan.

CHECK: Complete the analysis of data; summarize what was learned

4. Five out of five consumers agreed that they had input into the plan. Jamie reported that the process of doing a collaborative plan was satisfying, but more time-consuming.

ACT: Are we ready to make a change? Plan for the next cycle

5. Carrie will join Jamie in using the new joint service-planning format next week. They will check and limit the time for completing the plan and report back at the next meeting. Charmaine will continue to distribute the consumer feedback survey.

Exercise: Planning a PDCA cycle

Break into groups of three to develop an additional PDCA cycle for this project. It can build on the cycle highlighted above, or it can address a different aspect of the project. Usually a CQI team will work on two or more interventions simultaneously.

The idea is to start small by building on changes as they appear successful. Keep moving in the direction of your overall indicators and targets. Often several interventions can be carried out at once.

Measuring your PDCA cycle data

As you have seen in the example above, measurement is built into the PDCA process. Data can be qualitative and/or quantitative. Below are a few more examples of PDCA cycles you may want to measure:

- Measure whether a process can be completed more quickly while remaining just as effective by charting the time of five consecutive assessments done by a newly trained clinician. If the speed improves, check if the clinician feels she was able to be just as effective in the shorter time frame, and/or if the consumers were equally satisfied.

- Measure whether individual or small group training was successful by administering a post test, and/or asking the trainees to rate the training.

- Assess consumer perception of a new process by holding a focus group or giving a brief one- or two-item questionnaire.

More tips for PDCA cycles[2]

1. **Stay an intervention ahead.**
   When designing an intervention, imagine at the start what the subsequent intervention or two might be, given various possible findings in the "Check" phase of the PDCA cycle. For example, if you are implementing the use of a cultural assessment, you should also be planning an implementation for integrating that assessment into the intake.
2. **Limit the scope of the intervention.**
   Different dimensions of the interventions may be scaled down including the number of consumers, staff and others involved ("Sample the next 10" instead of, "Get a sample of 200") and the location or duration of the intervention ("Test with one social worker's consumers for one week").
3. **Pick willing and eager stakeholders for your project team.**
   Work with those who want to work with you ("I know Dr. Jones will help us" instead of, "How can we convince Dr. Smith to buy in?").
4. **Postpone the need for consensus, buy-in or political solutions.**
   Whenever possible, choose changes that do not require long processes of approval, especially during the early testing phase.
5. **Don't reinvent the wheel.**
   Instead, replicate changes made elsewhere. For example, instead of creating your own dual diagnosis assessment tool, try modifying another program's tool, or try one from the literature.
6. **Pick easy changes to try.**
   Look for the concepts that seem most feasible and will have the greatest impact.
7. **Avoid technical slowdowns.**
   Don't wait for the new computer to arrive; try paper and pencil instead.

[2] **Adapted from the IHI website http://www.ihi.org/**

8. **Reflect on the results of every change.**
   After making a change, a team should ask, "What did we expect to happen? What did happen? Were there unintended consequences? What was the best thing about this change? The worst? What might we do next?" Too often, people avoid reflecting on failure. Remember that teams often learn very important lessons from failed tests of change.
9. **Right-size your PDCA cycles**
   As you progress through a few cycles and it becomes clearer that your change is going to improve program outcomes, your interventions can get larger and more sweeping as you build on what you have learned.
10. **Be prepared to end the intervention.**
    If the intervention shows that a change is not leading to improvement, the intervention should be stopped. Note: "failed" interventions are a natural part of the improvement process. They teach us in a short time with few resources what works and what doesn't. If a team experiences very few failed interventions, it is probably not pushing the boundaries of innovation far enough.

Using PDCA cycles to link interventions

Linking interventions is an iterative process: the completion of each intervention rolls directly into the start of the next intervention. A team learns from the intervention (What worked and what didn't work? What should be kept, changed, or abandoned?) and uses the new knowledge to plan the next intervention. In this way, the team continues linking interventions, refining and then spreading the change.

People are far more willing to try an intervention when they know that changes can and will be modified as needed. Linking small interventions helps overcome an organization's natural resistance to change and ensures staff buy-in.

The DMH PDCA worksheet (See next page) is a convenient way to keep track of all of your PDCA cycles and to evaluate you incremental progress.

For examples of additional cycles of change reflecting promising practices used by providers in CQI projects, see The DMH Priority Focus Guide.

Section 4: CHECK/ACT - Evaluating your Project

Highlights of the DMH Final Project Outcome Sheet

A. *Collecting and analyzing your project data*
B. *Evaluating the overall success of your project*
C. *Integrating improvements and moving forward*

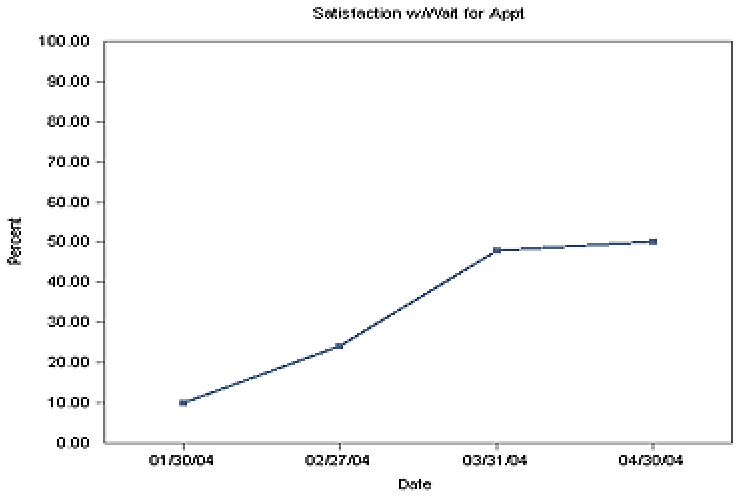
How to Collect Data to Measure Your Progress

Don't be afraid of data. Changes from baseline are the way you will know how you are doing. As you learned in the last section, each time you do a PDCA cycle you collect data about how effective the intervention is. In this section of the course, you will examine your overall results. These results are best tracked with a straightforward tool called a "run chart."

Overall Project Measures:

Track your overall project measures by measuring your indicators at predetermined time intervals (weeks, months, quarters etc.) and plotting the relevant numbers, mean or percentage on a line graph that is called a "run chart". The run chart gives you a graphic image of whether you are moving in the direction of your aim.

Example: Run Chart[3]



[3] **Adapted from the indicator tracking template IHI website http://www.ihi.org/**

The indicator being measured in the chart above:

$$\frac{\text{Consumers satisfied with the wait for their appointment}}{\text{Total consumers given a satisfaction survey}}$$

The data collection plan: Create a simple one-question survey asking consumers to rate their wait time on a five-point scale from unacceptable to excellent.

The target: Greater than 80% of consumers will rate wait-time as "excellent."

Timeframe for data collection: Monthly

Formula for data collection: Number of consumers rating the length of wait as "excellent" per month divided by the total number of consumers surveyed per month. Multiply the result by 100.

Steps in Constructing a Run Chart

1. Draw and label the vertical (y) axis using the measurement units you are tracking (e.g. mean wait time, number of graduates, percent kept appointments, etc.).
2. Draw and label the horizontal (x) axis to reflect the times at which the data are collected (e.g., weekly, monthly, bimonthly, etc.).
3. Plot the data points on the chart as you collect them and connect the points with lines between them.
4. If you are participating in a Quality IMPACT Priority Project with automated data collection sheets your run chart will be generated for you automatically.

Interpreting your Run Chart

As your run chart develops, you can analyze it for information about how your project is progressing. What trends can you observe? Check the implementation dates of your PDCA cycles and see if there is movement related to any particular cycle. Are you moving nearer to your targets? Are there seasonal variations? Are there variations due to staffing? Modify your PDCA cycles in light of what you're learning.

How to Evaluate Your Project: Steps toward a Culture of Quality

Project success is gauged by how well the program was able to meet or approach the established aim. When considering your successes, look at both quantitative and qualitative evidence of change. Keep in mind that results may not always be immediate.

Quantitative Measures:

Meeting or exceeding your indicator targets
Approaching your indicator targets
Successful small cycle outcomes

Increased program capacity to utilize evidence-based, promising or innovative practices
Increased program capacity to utilize CQI methods to improve client-centered outcomes
Increased capacity to collect and use data
Improved consumer perceptions of care

Qualitative Measures:

Increased stakeholder sensitivity to priority issues
Increased engagement in education and supervision around priority issues
Increased hopefulness and a sense of empowerment regarding the capacity of individuals, programs, and systems of care to change and improve
Effective new procedures successfully implemented into the everyday operations of the program

Conclusion: Integrating Improvements and Moving Forward

"Continuous" is the operative word here. The outcome of this year's project can become the baseline of next year's. Or, perhaps there is a whole different aspect of the program that needs to be addressed. The CQI team and the broader stakeholder group (consumers, staff, and community members who have been touched by the project)should take some time to ensure that the progress made is fully integrated into the program's work flow, and then develop a new aim.

This course has highlighted the basics of completing a mental hygiene CQI project. Many participants have reported that their successes go beyond fulfilling requirements and reaching targets. CQI provides programs with a framework for continual improvement; by engaging staff, consumers and families in identifying opportunities for change, all program stakeholders may work together toward tangible, measurable changes. Meeting challenges through continuous, collaborative and well-planned change is the essence of a culture of quality.

Glossary

Aim
A written, measurable and time-sensitive statement outlining the expected results of an improvement process. *For example: The Quality IMPACT team intends, within the next six months, to increase the number of consumers discharged from a hospital who attend their first outpatient follow-up appointment. Evidence shows that continuing in outpatient treatment after hospitalization reduces relapse rates (See also* **Indicator** *and* **Standard***).*

Baseline Data
Data collected to establish the existing measure of an indicator before changes are implemented.

Continuous Quality Improvement (CQI)
An efficient and effective data-driven change process. Problems and opportunities are identified and then quantified to obtain baseline measures of an area targeted for improvement. This targeted area is measured over time to determine subsequent change from the baseline after a quality improvement plan is instituted. CQI monitors improvements in quality of care through continuous review, and aims to increase the effectiveness of services and to improve service outcomes.

CQI Team
The group of individuals in a service program, usually from multiple disciplines, that drive and participate in the quality improvement process. A core CQI team of two individuals attend the formal Quality IMPACT meetings, but a larger team of four to eight people participate in the quality improvement process in the program.

Domain
A group or category of indicators that address the same area of concern. *For example: The "Access to Care" domain can include indicators for service coordination and continuity of care; the "Quality/Appropriateness of Services" domain can have indicators for cultural competency and treatment for co-occurring disorders.*

Implementation
Introduction of a systematic series of changes as a permanent part of the system. A change may begin as an intervention and then be implemented throughout the organization.

Indicator
A quantitative measure of a component of quality services. An indicator establishes the ability to monitor progress over time. *For example: The percentage of clients seen for a first appointment within five days of intake (See also* **Aim** *and* **Standard)**.

$$\frac{\text{Numerator = All clients seen within five days}}{\text{Denominator = All clients given a first appointment.}}$$

Interactive Project Group (IPG) Meetings
Meetings that offer an opportunity for Quality IMPACT programs to share how the CQI projects are progressing and to receive input from experts in areas where they are requesting more help *(i.e., cultural competence screenings, motivation interviewing, etc.).*

Intervention
A small-scale test of a new approach or a new process. The test is designed to reveal whether the new approach generates improvement. The test is fine-tuned to fit the organization and clients. Interventions are carried out using one or more Plan-Do-Check-Act (PDCA) Cycles.

Plan-Do-Check-Act (PDCA) Cycle
The PDCA Cycle is a structured process that is the engine of continuous quality improvement. It has four stages:

Plan – Identify who, what, where, and when
Do – Try the change
Check – Observe and analyze the results of the intervention
Act – Devising next steps based on the analysis.

The "Act" component of a PDCA cycle will often naturally lead to the "Plan" component of a subsequent cycle.

Priority Projects
CQI projects which are designed to encourage programs to address areas where there is evidence of a need for systemic improvement. They offer participating programs the opportunity to work with other programs on the same improvement area, engaging in mutual support and problem solving. Priority Projects are designed to be completed within the contract cycle, allowing for nine months of active work time *(See also* **Program Specific Projects***).*

Program-Specific Projects
CQI projects that offer providers participating in Quality IMPACT the opportunity to focus on a problem of particular interest to their program. Program-specific projects are designed to be completed within the contract cycle, allowing for nine months of active work time. *(See also* **Priority Projects***).*

Quality IMPACT (Improving Mental Hygiene Programs and Communities Together)
The NYC Department of Health and Mental Hygiene-Division of Mental Hygiene (DMH)'s Quality Improvement Initiative, which aims to improve the quality of mental hygiene services in New York City through a data-driven, continuous quality improvement process.

Run Chart
A graphic representation of data over time, also known as a "time series graph" or "line graph." This type of data display is particularly effective for presenting changes in an indicator over time.

Standard
A target that through validation, benchmarking, or consensus is widely accepted as indicating quality service. For example, Mental health policymakers are moving toward a standard that restraints should not be used in psychiatric in-patient hospitalizations.

Stakeholder
Any individual or group that has an interest (stake) in the structure, process or outcome of an aspect of service.

Target
The level of a measure that represents acceptable service and is a challenging, but reachable increase from the starting point.