

Impacting Process: Quality Improvement in MCH Training

Impacting Process: Quality Improvement in MCH Training is learning tool intended for professional development by personnel in Maternal and Child Health (MCH) leadership education and training programs, Title V programs, and official health agencies, who desire to learn about quality improvement (QI). This learning tool was developed for implementation in group settings, but also may be completed individually as a self-study.

Developed by a MCH Nutrition trainee and faculty in the University of Tennessee, Knoxville's Public Health Nutrition Program and as part of its federally-funded MCH Nutrition Leadership Education and Training Project. The learning tool's development was supported by grant number T79MC09805 of the Health Resources and Services Administration's Maternal and Child Health Bureau, U.S. Department of Health and Human Services.

Session 1: Introduction to Quality Improvement

The session is an introduction to QI through reading materials and completion of an interactive online module. QI will be defined along with the processes that drive QI. Specifically, the PDSA (Plan, Do, Study, Act) cycle, a systematic approach used to engage in a QI process, is emphasized. Several tools, such as the fishbone diagram, are introduced. Additionally, the membership, structure, and leadership support required for a QI team are analyzed.

PREPARATION: The readings and online module are to be completed at the learner's desired pace, but prior to engagement in the active learning section.

Read: What is Quality Improvement?

Developed by the Health Resources and Services Administration, U.S. Department of Health and Human Services

Within this webpage:

Review: Donabedian Model

Read Section A slides (end at slide 23)

PowerPoint developed by Johns Hopkins School of Public Health

Read: Adapting Quality Improvement to Public Health (Pages 1-5)

Developed by the Robert Wood Johnson Foundation

Watch: CQI in Public Health: The Fundamentals

Developed by the Ohio State University College of Public Health

Click here to REGISTER. Allow a minimum of 48 hours for confirmation of registration for the module.

Read: Achieving and Maintaining Quality Performance

From the Community Tool Box developed at the University of Kansas.

ACTIVE LEARNING: The preparation section provides a foundation for QI. The following active learning section suggests questions and issues to promote application of information learned during the preparation section. Topic areas for active learning are each bulleted and shown in bolded font. Questions to ask are italicized.

Materials Needed for Group Discussions: White board or easel paper, markers

Definition of QI.

How do you define quality improvement without using the words “quality” or “improvement?” What words do you use to define quality? What words would you use to define a quality MCH trainee or a quality staff person? Take 1 minute to write an exhaustive list of all words used to define quality in general or quality in relationship to something specific, such as an MCH trainee or staff person.

If in a group setting, gather the exhaustive list made by each individual to develop a word cloud using an online program, such as [Wordle](#). Words that are repeated by participants are a larger font size in a word cloud, indicating similarities of how quality is defined.

Why is QI Important?

Why is there a focus on quality improvement within government organizations, such as the Maternal and Child Health Bureau or official health agencies?

QI Tools

Several QI tools were introduced during the preparation component. One tool, the fishbone diagram, can be used to uncover the causes of a particular effect. Draw a fishbone diagram on a board or easel paper (see example below). As an individual or collectively, determine an effect to analyze, such as the lack of influence on Title-V policy from MCH Trainees. Examine causes, classified into the inputs of people, equipment, materials, methods, and environment, related to the effect. Brainstorm causes of the effect based on each input.

For example

Once an effect is identified:

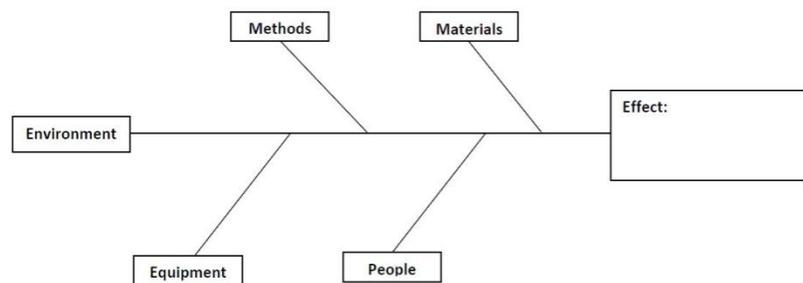
What are causes of the effect that are people inputs?

What are causes of the effect that are equipment inputs?

.....materials inputs?

.....methods inputs?

.....environment inputs?



Select one of the causes (fish bones) and use the “5 Whys” to uncover the root cause of the selected cause from the fishbone diagram. For example, each immediate cause has a preceding cause, which was caused by something else.

Cause #5 →Cause #4 →Cause #3 →Cause #2 →Cause #1 →Effect

State Effect. Why?

State Cause #1. Why?

State Cause #2. Why?

State Cause #3. Why?

State Cause #4. Why?

The fishbone diagram is one tool to present data; however, several others are available, such as a flow chart, run chart, histogram, pareto chart, scatter diagram, or control diagram.

Think of a particular audience that would perhaps use a different tool to present the data. Of the tools presented in the preparation section, such as a flow chart or scatter diagram, which ones would be more appropriate for a particular audience? Less appropriate?

What would be the best way to present data or outcomes from a QI process to the Maternal and Child Health Bureau? Title-V program director? Faculty or trainees from a training program? Child with special health care needs? A parent?

Definition of Team

Consider a QI team charged with increasing diversity among new hires in an organization.

Who should be on the team? What would be included in the team charter? What time and resources are needed?

Wrap-up

QI can be applied broadly to health care, public health, agriculture, and manufacturing. Regardless of what sector or setting, QI is a continuous process, but how this process is maintained over time is challenging.

What is the culture of quality that has been built within your organization or where you work? Look to the next 5-years. What can be done to maintain the “culture of quality” that has been established?

Session 2: Quality Improvement in Clinical Care

This session provides exposure to QI in clinical care settings and especially draws from material from the American Academy of Family Physicians and the American Academy of Pediatrics. A document from the Institute of Medicine that proposed how the health care system can be reinvented is read and examined in relationship to the Patient Protection and Affordable Care Act passed in 2010. Implementing a QI process to promote the ability of primary care providers to provide intensive obesity counseling is explored also. A research article about the development, implementation, and evaluation of a quality improvement project in clinical care allows the learner to identify key components (e.g., specific aim, how to know if a change is an improvement, etc.) of a QI project.

PREPARATION: The readings and review of webpages are to be completed at the learner's desired pace, but prior to engagement in the active learning section.

Read: Crossing the Quality Chasm: A New Health System for the 21st Century Report Brief Institute of Medicine. March 2001

Watch: Model for Improvement (10 min)
Developed by the American Academy of Family Physicians

Review: EQIPP: Helping You Improve Care for Children Homepage
Developed by the American Academy of Pediatrics

Read: Lee HC, Kurtin PS, Wight NE, et al. A Quality Improvement Project to Increase Breast Milk Use in Very Low Birth Weight Infants *Pediatrics*. 2012;130(6):e1679-e1687. This article can be acquired through online databases, such as PubMed, or purchased for a nominal fee from the American Academy of Pediatrics.

ACTIVE LEARNING: The preparation section focused on the use of QI in clinical settings. The following active learning section suggests questions and issues to promote application of information learned during the preparation section. Topic areas for active learning are each bulleted and shown in bolded font. Questions to ask are italicized.

Comparison of the Institute of Medicine's (IOM) 10 rules of redesign and the Affordable Care Act (ACA)

The Institute of Medicine (IOM) Report: *Crossing the Quality Chasm: A New Health System for the 21st Century* discusses how the health care system can be reinvented. In addition to the 6 aims for improvement, 10 rules for redesign are proposed. These include: 1) care is based on continuous healing relationships; 2) care is customized; 3) patient is source of control; 4) information is shared; 5) evidence-based; 6) safety; 7) transparency; 8) needs are anticipated; 9) waste is decreased; and 10) cooperation among clinicians.

Developed by a MCH Nutrition trainee and faculty in the University of Tennessee, Knoxville's Public Health Nutrition Program and as part of its federally-funded MCH Nutrition Leadership Education and Training Project. The learning tool's development was supported by grant number T79MC09805 of the Health Resources and Services Administration's Maternal and Child Health Bureau, U.S. Department of Health and Human Services.

What is similar between the IOM's 10 rules for redesign and the ACA? What is different? Which of the IOM's 10 rules for redesign are not components of ACA?

Quality improvement and Intensive Obesity Counseling

The Centers for Medicare and Medicaid Services released a statement in 2010 that primary care providers can be reimbursed for intensive obesity counseling for Medicare patients. Consider a setting where primary care providers are delivering obesity counseling. Brainstorm a QI process that can increase the abilities of primary care providers to provide obesity treatment successfully.

Who should be on a QI team for this project? Apply the PDSA cycle to a process about how to increase the knowledge and skills of primary care providers. For the Plan stage of PDSA, what are possible solutions to the problem? From the list of possible solutions, select one.

How will the selected solution be implemented? How will implementation of the proposed solution (process) be evaluated? How will the solution be implemented in the larger system of all primary care offices? What if the outcomes are not as planned with the selected solution? What solution developed in the planning stage will be tried next?

QI in Research

Use "A quality improvement project to increase breast milk use in very low birth weight infants" or similar research article that reports on implementation of a QI project.

What is the aim or purpose of the QI project? Who is the target population? What is the time frame of the project? How will you know if the change is an improvement? What change can be made that will result in improvement?

Wrap-up

What QI processes have you experienced in clinical care?

What is one way that you could use QI processes in clinical care where you work or have worked?

From this session, what is a single take-home message from this session that you have about using QI in clinical care?

Session 3: Quality Improvement in Public Health-Part 1

This session defines quality in public health and provides a foundation for what QI in public health is. A preparatory reading from the Institute of Medicine introduces the nine aims of public health, which then are applied at big (big QI) and small (small QI) organizational levels during the active learning component. An interactive online module provides information about additional QI models, strategies for how to prepare aim statements, and benefits of using a process map as a tool to understand what is truly happening within a process.

PREPARATION: The reading and online module are to be completed at the learner's desired pace, but prior to engagement in the active learning section.

Read: Honore PA, Wright D, Berwick DM, et al. Creating a framework for getting quality into the public health system. *Health Affairs.* 2011;30(4):737-745.

Watch: Operationalizing Quality Improvement in Public Health (1.5 hrs)
Developed by the University of Minnesota, School of Public Health
Click here to register. Allow a minimum of 48 hours for confirmation of registration for the module.

ACTIVE LEARNING: The preparation section introduced QI in public health. The following active learning section suggests questions and issues to promote application of information learned during the preparation section. Topic areas for active learning are each bulleted and shown in bolded font. Questions to ask are italicized.

Materials Needed for Group Discussions: White board or easel paper, markers, Post-it notes

Big QI vs. Little QI

List the 9 aims (population-centered, equitable, proactive, health-promoting, risk-reducing, vigilant, transparent, effective, and efficient) of public health on a board or easel with two additional columns. Label one column Maternal and Child Health Bureau (MCHB) and label the other column after your program or institution.

For example:

Public Health Aims	MCHB	Your Program
Population-centered		
Equitable		
Proactive		
Health-promoting		
Risk-reducing		
Vigilant		
Transparent		
Effective		
Efficient		

The 9 aims of public health emerged from 6 Institute of Medicine (IOM) aims. What 3 aims are included in both the 9 aims of public health and the 6 IOM aims? How does each of the 9 aims of public health apply to the MCHB (big QI)? Write responses in the MCHB column aligned with each of the 9 aims of public health listed.

How does each of the 9 aims of public health apply to your Title V program or organization (small QI)? If in a group consider providing each participant with 9 Post-it notes. Each participant then can write one aim on each Post-it note. The Post-it notes then are placed in the small QI column in the row related to the aim of public health written on the Post-it note.

How do the aims apply similarly for the large and small organization? How do they apply differently?

Wrap-up

Thinking about a QI project can be difficult, because a process is rarely working in the way you think it does. As a process map always moves forward, it can be a helpful tool when developing a QI project, such as the one you will be developing in Session 5.

What opportunities have you had to utilize a process map? If you have not used a process map previously, how can it be helpful in applying QI to a project?

Session 4: Quality Improvement in Public Health-Part II

This session defines the difference between QI, quality assurance, and evaluation. Readings from the American Public Health Association share the successes and challenges of state and local health departments that have implemented QI projects. The primary focus is how to evaluate effectiveness in public health across organizational levels to ensure the end product is useful. Several innovative methodologies, such as using a social network structure, are introduced and applied during the active learning component.

PEPARATION: The readings and online module are to be completed at the learner's desired pace, but prior to engagement in the active learning section.

Watch: Evaluating Effectiveness in Public Health at the Individual and Organizational Level (2 hrs)

Developed by the South Central Public Health Partnership (University of Alabama Birmingham and Tulane University). Click here to [register](#). Allow a minimum of 48 hours for confirmation of registration for the module.

Read: Quality Improvement Initiatives

Developed by the American Public Health Association
Within this webpage read the following QI brochures:

Health Department Initiatives: Moving Toward Quality Improvement
Quality Improvement in Public Health: It Works!

Read: What is Quality Improvement?

Developed by the Health Resources and Services Administration, U.S. Department of Health and Human Services

Within this webpage:

Review: Section A slides of the [Donabedian Model](#)

Read: Section B slides (sides 24-40) of the [Donabedian Model](#)

PowerPoint developed by Johns Hopkins School of Public Health

ACTIVE LEARNING: The preparation section allowed further study of QI in public health. The following active learning section suggests questions and issues to promote application of information learned during the preparation section. Topic areas for active learning are each bulleted and shown in bolded font. Questions to ask are italicized.

Materials Needed for Group Discussions: White board or easel paper, markers

QI, Quality Assurance, and Evaluation

What is the difference between QI, quality assurance, and evaluation? Why is it important to understand the differences between each?

State Examples of QI Projects

Several state examples were shared in “QI in Public Health: It Works!” from the American Public Health Association. If you have engaged in a QI process, what did you experience similarly? Differently?

Evaluating Effectiveness and Social Network Structures

What types of evaluation have you used?

A more novel form of evaluation is the use of a social networking structure. Make a node in the middle of the board or easel paper labeled Maternal and Child Health (MCH) Trainees or MCH staff.

How do MCH Trainees (or staff) influence maternal and child health populations? Make nodes for each area of influence to develop a social network structure.

Wrap-up

How can a social network map be used to evaluate impact of MCH training programs?

Session 5: Quality Improvement in MCH Nutrition Training

This session provides an opportunity to prepare a QI plan and logic model for MCH training based on the knowledge and skills learned in the previous four sessions.

PREPARATION: The development of a quality improvement (QI) plan and logic model is to be completed at the learner's desired pace, but prior to engagement in the active learning section.

Review: NACCHO Toolkit Sample QI Improvement Plan

Worksheet developed by MarMason Consulting as part of the NACCHO QI toolkit

Complete: QI Improvement Plan for MCH Training Worksheet

Complete: A logic model using the Logic Model Worksheet

Worksheet developed by the Dayton & Montgomery County Health Department as part of the NACCHO QI toolkit

ACTIVE LEARNING: The preparation section focused on you and group participants preparing a QI plan and logic model for MCH Training. The following active learning section suggests questions and issues to promote application of information learned during the preparation section. Topic areas for active learning are each bulleted and shown in bolded font. Questions to ask are italicized.

QI Improvement Plan and Logic Model

Ask participants to share the QI project developed for this session.

What is the QI project you developed? What is the specific aim? How do we know the change is an improvement? What changes will result in an improvement? Who will be on the QI team for this proposed project?

What inputs, outputs, and outcomes are expected based on the proposed project?

Wrap-up

How will you include a QI strategy or tool in the development of your next project?