

Improvement of Systems

**Branch-Hillsdale-St. Joseph Community Health
Agency**

Quality Improvement Basics for Management and Staff

Objectives for this Presentation

What you Will Learn

- ❑ to explain what a process is,
- ❑ to explain what a system is, and
- ❑ to employ a systematic approach to improving systems

The first question: What is quality?

- Quality is meeting your objectives
- So, what are the objectives of public health practice?

The purpose of public health practice is to assure the conditions under which people can be healthy.

The Future of Public Health
Institute of Medicine, 1988
(paraphrase)

Functions of Public Health (IOM)

- **Assess** the public's health and health needs
- **Develop** and promote **policies** that will improve the conditions that support the health of the people
- **Assure** that necessary public health and personal health care services are provided to the population

Objectives of Public Health Practice

- To provide adequate assessment of the public's health and health needs
- To develop and promote policies that advance the public's health
- To assure the provision of services needed
 - to achieve an environment that supports the public's health, and
 - to meet the personal health care needs of individuals

Good public health practice:

- ❑ provides *comprehensive assessment* of the health and health needs of a given population,
- ❑ develops and promotes public policies that will meet the health needs and improve the health of the population,
- ❑ provides services that optimize the environment as it affects the health of the population, and
- ❑ assures that the personal health care needs of individuals are met, providing care directly if it is needed

How shall we achieve good practice?

- By educating public health practitioners?
- By close supervision of public health practitioners?
- By improving the systems used by public health agencies to achieve its objectives?
- All of the above

The primary path to improvement is systems change

- ❑ Individual performance is dominated by the context of work, that is, by the system
- ❑ Those with a population orientation will see this truth more easily than those with an individual orientation
- ❑ Public health has an inherent advantage over clinical medicine in this respect

Systems and Processes

- ❑ A system is a group of interacting, interdependent parts unified into a whole with a clear purpose
- ❑ The activity of a system consists of repetitive and interactive sequences of events that serve to accomplish the system's purpose
- ❑ Each of these sequences of events can be called a "process"
- ❑ Systems, then, are bundles of processes

A process ...

- is a series of steps or events
- has inputs
- has an output or outputs
- is a "value chain"
- is repetitive
- interacts with other processes either as supplier or receiver

The main question:
How do we best
improve processes?

Old Approach to Improvement

- Identify a process that could or should be performing better
- Think up a way to improve it
- Do it
- See what happens

Problems with the old Approach

- ❑ Lack of clear goal in making changes
- ❑ Lack of ability to determine reliably whether there has been improvement
- ❑ Seizing on the first change idea that sounds good
- ❑ No experimentation to determine whether a promising idea works
- ❑ No reliable method for extending a successful change to a wider arena (the whole organization)

Model for Improvement

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What are we trying to accomplish?

How will we know that a change is an improvement?

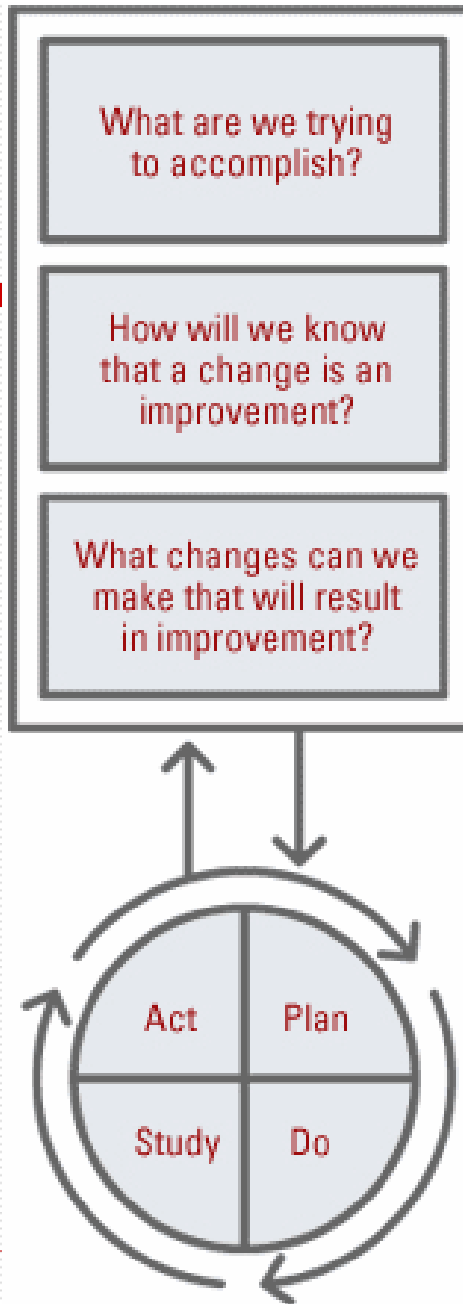
What changes can we make that will result in improvement?

Then:

Plan, Do, Study, Act

PDSA

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Planning the improvement

- The question: What are we trying to accomplish?
- Get clear on the desired end of the effort
 - What arena do we wish to affect?
 - What sorts of indicators do we seek to change?
 - What is our timeline?

Stated Goals

- ❑ For WIC clients, decrease the delay between eligibility determination and first service by 50% in the next 3 months
- ❑ Decrease the number of restaurants permitting smoking to zero by year's end
- ❑ Decrease the number of schools with pop machines by 75% in the next 2 years

Defining the Measure

Setting Benchmarks

- The question: How will we know that a change is an improvement?
- Get explicit about the measure of success
 - What is the operational measure of achievement or our aim?
 - Which population will we measure?
 - What definition will enable us to know with quantitative precision whether we are making progress?

Defined Measures

- ❑ For all new WIC clients identified in a given month, the average number of days from date deemed eligible to first service – benchmark = ave # of days
- ❑ Among all restaurants in a given geographical area, the number in which cigarette smoking occurs on the test day – benchmark = # of restaurants
- ❑ Among all schools in the defined area, the number of schools with 1 or more pop machines on the inspection day – Benchmark = # of schools

Possibilities for Action

- The question: What changes can we make that will result in improvement?
- Get clear on our choices for action
 - What are the options we have for action?
 - What defects in the current process suggest what we might do?
 - What has been done elsewhere to deal with similar processes?

Plan – Do – Study – Act

It's not rocket science (but they use it!)

The
Shewhart
Cycle



The
Deming
Wheel

Plan

- ❑ Assess the possible options generated
- ❑ Using criteria, select one
- ❑ Plan implementation of the change in a small setting
- ❑ Don't set out to change the whole organization straight off

Do

- Try out the planned change in a limited setting
- Work with willing and positive participants, not nay-sayers
- Set a firm timeline for the trial

Study

- Reflect on the test of change
- Consider three questions
 - Did we do what we intended to do?
 - Did the change have the effect that we wanted it to have?
 - Is the change ready for use in other places in the organization?

Act

- ❑ This step is suitable only if the change was actually put in place, had the intended effect, and is ready for adoption in a wider arena
- ❑ If so, move ahead methodically with broader adoption
- ❑ If not, return to "P" to re-plan the trial or plan a new one

Key Points of the Model

1. Start with a plan
2. Define a measurement (knowing you have succeeded)
3. Generate ideas for process change
4. Try a change on a small scale
5. If successful – take it global!

Example:

Reduction of Childhood Obesity

- Problem: Rising percentage of children who are obese
- Question 1: What is our Goal
 - Decreased obesity through increased physical activity and improved nutrition?
 - Increased physical activity? Increase access to it?
 - Improved nutrition? Expand access?
 - What age group do we want to focus on? Toddlers? Teens?

Childhood Obesity

□ Question 2: How will we measure success

Possible measures

- percentage of junior high schools providing nutrition education to all students
- number of hours of nutrition education per student
- percentage of schools with “sound” meals at lunch
- percentage of schools with no snack food machines

Childhood Obesity (4)

Question 3: Creating Objectives that can be actions

- Obtain a proven educational curriculum and approach schools with it?
 - Develop a curriculum jointly with teachers?
 - Approach school nutritionists about school menus?
 - Approach school administrators about removing snack food machines?

Childhood Obesity

Plan

- Identify a target school to partner project
- Determine strategies with school
- Identify resources to use with schools
- Decide who will be involved from the schools and the Health Department – Admin? Health Ed.? WIC? Others?

Childhood Obesity (6)

Do

- Contact the chosen school
- Adjust the plan in response to how it is received;
- Limit the trial to 1 year Study
- Assess progress using the measures chosen

Childhood Obesity (7)

Act

- ❑ Take the program to additional schools—but only if it succeeded at the first school
- ❑ Continue to follow the measures chosen—but now at all schools and overall