

QI Tools to Support Measurement Activities

Margie Beaudry

Director, Performance Management & Quality Improvement
Public Health Foundation

Performance Improvement Managers Network Webinar

May 23, 2013

888-566-8978 or 1-517-623-4997; passcode: 3478212

Introduction

YET ANOTHER TWIST ON QI

Health Departments Are Using Quality Improvement (QI)

- ❑ **By now you should each have a copy of the *Public Health Quality Improvement Encyclopedia***
 - 75 QI tools and methods
 - Public health examples
- ❑ **One of many resources Performance Improvement Managers (PIMs) have to support their agencies' use of QI in daily practice**
- ❑ **We know that many PIMs have been actively using QI these last three years**

Live Poll: When Do You Use QI Tools in Your Current Practice?

(please select all that apply)

- To help analyze and understand problems**
- To help identify solutions and solve problems**
- To help monitor improvements**
- To help interpret data**
- None of the above**

When Do You Use QI Tools in Your Current Practice?

- __% To help analyze and understand problems**
- __% To help identify solutions and solve problems**
- __% To help choose measures and indicators**
- __% To help monitor improvements**
- __% To help interpret data**
- __% None of the above**

QI Is Not Just for Problems

- ❑ **A 2011 paper by Jack Moran & Grace Duffy (in the ASQ Newsletter) and on the Public Health Foundation (PHF) website**
 - Success and Effect Diagram
 - Highlights the attributes of a successful process
 - “5 Whats” (instead of “5 Whys”)
- ❑ **Ensuring right information is uncovered**
- ❑ **Ensuring the information is used effectively**

Improving Measurement with QI

A TOOL FOR ALL SEASONS

2012–2013: How Can QI Support Measurement Activities?



- ❑ Applying QI tools to strengthen measurement activities
- ❑ PHF and National Network of Public Health Institutes (two capacity-building assistance partners)
- ❑ A menu of 25 tools potentially to use at progressive stages of measurement
- ❑ Purpose and applicability of each tool on the menu
- ❑ Comments on drafts of the tool provided by CDC, and PIMs from Houston, Kansas, Kentucky, Maine, Maricopa County

Stages of Measurement

- ❑ Choosing measures
- ❑ Choosing indicators
- ❑ Managing data quality
- ❑ Analyzing and interpreting data

Choosing Measures

Identifying the factors that the program aims to impact, and therefore what to measure in evaluating a project

- Affinity diagram
- AIM statement
- Brainstorming
- Cause and effect diagram/fishbone
- Five whys
- Force & effect diagram
- Pareto chart
- PEST chart
- SMART matrix
- Voice of the customer

Example: SMART MATRIX

- ❑ Use to develop clear, actionable goals and tactics
- ❑ Use to align plans with overall goals, and create a results-focused plan

Improvement Areas	Specific (S)	Measureable (M)	Attainable (A)	Resources (R)	Time (T)
Time to Receive Service	Reduce client wait time by 25%	<ul style="list-style-type: none"> • Reduce time from client call to exit from 15 minutes to 11.25 minutes 	<ul style="list-style-type: none"> • Process owner buy-in • Process map • Within team control 	<ul style="list-style-type: none"> • Stopwatch • Time tracking software • Access to clinic 	3 days per week from September 1- November 30
Registration Time	Analyze current clinic registration cycle time	<ul style="list-style-type: none"> • Measure current cycle • Analyze current state for improvement 	<ul style="list-style-type: none"> • Process owner buy-in • Team trained in process mapping 	<ul style="list-style-type: none"> • Stopwatch • Team member dedicated to observations • Access to registration area 	October 4, 6, 7, 11, 13, 14

Choosing Indicators

Choosing the specific metrics and indicators that reflect performance on target measures

- ❑ AIM statement
- ❑ Control & influence matrix
- ❑ Force & effect diagram
- ❑ Nominal group technique
- ❑ Prioritization matrix
- ❑ Tree diagram

Example: TREE DIAGRAM

□ Use to move from the general to the specific and to explain details organized within categories

Goal	Objectives	Tasks	Measures
Maintaining a Qualified Workforce	Recruitment	Expand job posting locations	2 or more new posting sources
		Encourage internal applicants to apply	Increased number of internal applicants
		Create internship opportunities	Number of interns who apply for positions
	Retention	Offer opportunity to telework	Write new telework policy
		Offer flexible hours	Write new policy detailing flexible scheduling
		Create mentorship program	Identify mentors and schedule initial program development meeting
	Training	Provide professional development funds	Allot 5% of budget to professional development
		Create monthly email highlighting the Public Health Core Competencies	Send monthly emails
		Provide incentives for completing courses on TRAIN	Update annual review form to include training evaluation

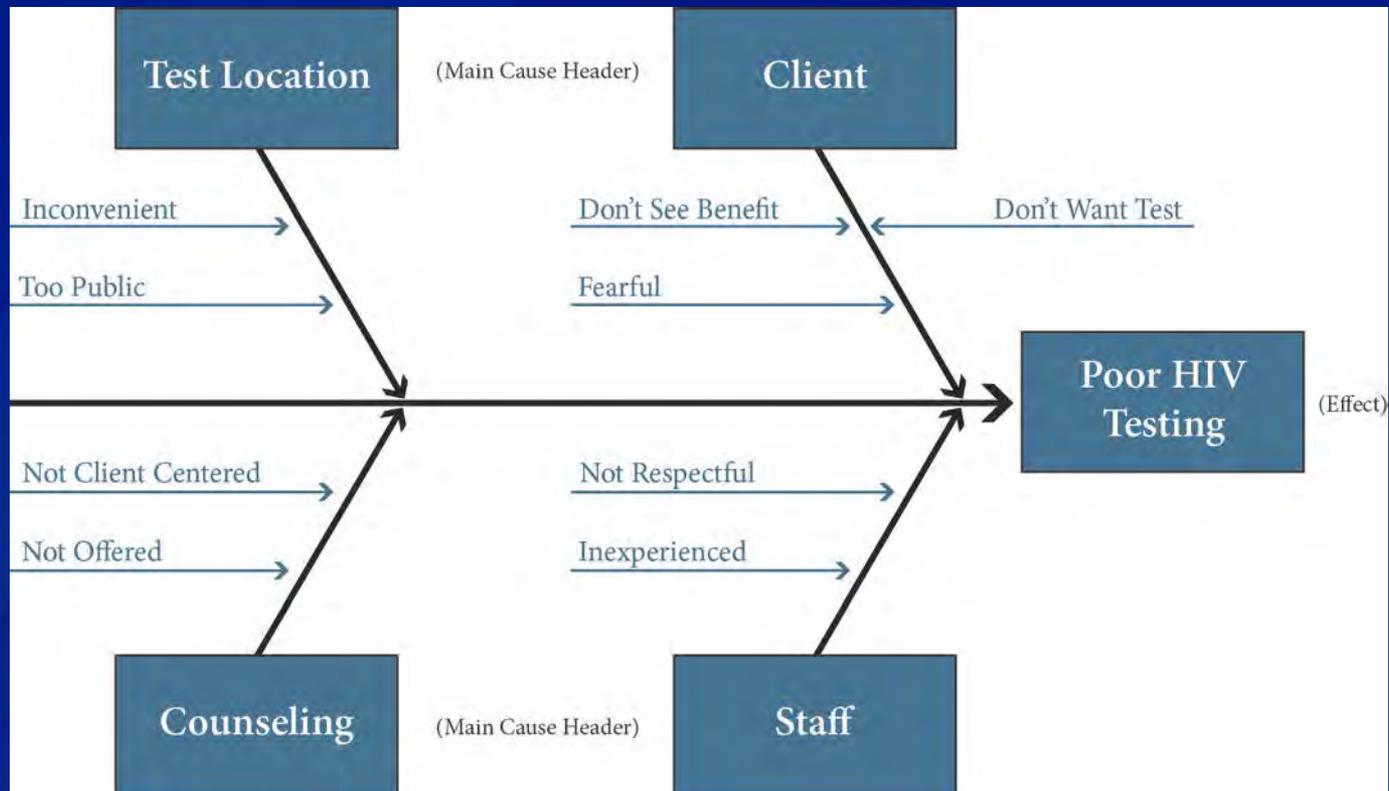
Managing Data Quality

Putting safeguards in place to help ensure that data gathered are reliable and valid, and truly represent the target measures

- ❑ Cause and effect diagram/fishbone
- ❑ Check sheet
- ❑ Control chart
- ❑ Critical path analysis
- ❑ Flowchart
- ❑ Gantt chart
- ❑ PDCA cycle
- ❑ Stop-start-continue-improve matrix

Example: CAUSE AND EFFECT DIAGRAM

- ❑ Use to organize ideas about potential causes of observed effects
- ❑ Helps to create a map of multiple causes contributing to an effect



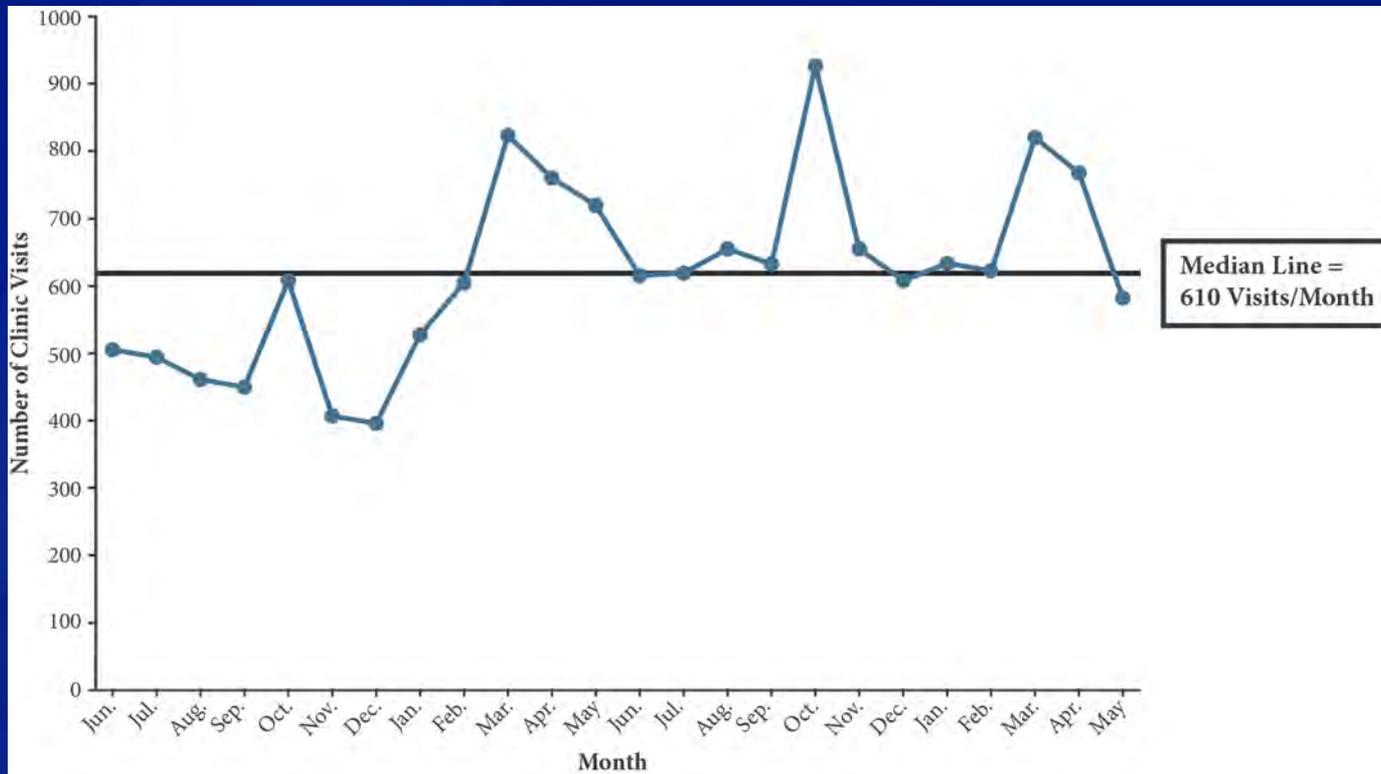
Analyzing & Interpreting Data

Knowing how to “crunch” the numbers and make sense of trends in the data

- ❑ Control chart
- ❑ Radar chart
- ❑ Run chart
- ❑ Scatter diagram
- ❑ Variation plot

Example: RUN CHART

- ❑ Use to display performance over time
- ❑ Use to assess data stability
- ❑ Use to pinpoint areas needing improvement



Just a Starting Place

- ❑ **Fitting tool selection and application to each unique circumstance**
- ❑ **Discovering where multiple tools can work together effectively**
- ❑ **A working document that is meant to prompt experimentation**
- ❑ **We welcome comments based on users' experience and observations**

Discussion/Q&A

All lines are open and live!

Please remember to use your mute button or *6

Thank you!
Please send comments and questions to
pimnetwork@cdc.gov

For more information please contact CDC's Office for State, Tribal, Local and Territorial Support.

This presentation was supported by funds made available from the Centers for Disease Control and Prevention, Office for State, Tribal, Local and Territorial Support, under Grant No. 5U58CD001342-03.

The findings and conclusions in this presentation are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.