Quality Improvement in Public Health

It’s not another program

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Objectives

Review and discuss

- Performance management and quality improvement (QI)
- Principles of quality improvement
- Health department initiatives to build agency capacity for quality improvement
Performance Management and QI

- Performance Measurement
- Standards for Public Health
- Public Health Indicators
- Breakthrough Collaborative
- Self-Assessment or Accreditation
- QI Plans & Councils
- Business Process Analysis
- Lean Six Sigma
- QI Methods & Tools
PERFORMANCE STANDARDS
- Identify relevant standards
- Select indicators
- Set goals & targets
- Communicate expectations

PERFORMANCE MEASUREMENT
- Refine indicators & define measures
- Develop data systems
  • Collect data

REPORTING OF PROGRESS
- Analyze data
- Feed data back to managers, staff, policy makers, constituents
- Develop a regular reporting cycle

QUALITY IMPROVEMENT PROCESS
- Use data for decisions to improve policies, programs & outcomes
- Manage changes
- Create learning organization

PERFORMANCE MANAGEMENT SYSTEM
Establish performance standards

• Public Health Accreditation Board (PHAB) standards

• National Public Health Performance Standards (CDC)

Establish and define outcomes and indicators

• Process outcomes

• Health outcomes
Performance Measurement

Monitoring of Performance
- Review of performance (Accreditation/Self-Assessment) results
- Program evaluation results

Monitoring of Indicators and Outcomes
- Process and short-term outcomes
- Health indicators and outcomes
Quality Improvement Process

- Establish QI structure and capacity in agency
  - Establishing QI councils and plans
  - Conducting QI teams
- Quality improvement methods and tools
  - Plan-Do-Check/Study-Act cycle
  - Rapid Cycle Improvement (RCI)
  - Improvement collaboratives
  - Lean Six Sigma
  - Adapting or adopting model practices
Definition of Quality Improvement

A management process and set of disciplines that are coordinated to ensure that the organization consistently meets and exceeds customer requirements.

**QI**
Top management philosophy resulting in complete organizational involvement

**qi**
Conduct of improving a process at the microsystem level

Bill Riley and Russell Brewer, Review and Analysis of QI Techniques in Police Departments, JPHMP Mar/April 2009
Levels of QI Integration

Level 1
No interest or activities

Level 2
Awareness, interest, and one-time projects

Level 3
Multiple teams and QI tools, but no repetition or saturation

Level 4
Specific QI model integrated into agency management structure with continuous improvement
Poll Question

How would you describe level of quality improvement integration in your organization?

A. Level 1: No interest or activity
B. Level 2: Awareness, interest, one time projects
C. Level 3: Multiple teams and QI tools but no repetition or saturation
D. Level 4: Specific QI model integrated throughout organization
Ottawa, MI example


www.accreditation.localhealth.net

More storyboards at National Network for Public Health Institutes

www.nnphi.org
Reporting Progress

- Performance in standards
- Indicators and outcomes
  - Health indicators
  - Program evaluation data
- Regular data tracking, analysis and review
- Basis for QI efforts
The Quality Environment

- Agency-wide commitment to assessing and continuously improving quality over time?
  - Decisions based on data?
  - Agency achieving goals?
- Use data to decide on improvement initiatives and to know if the improvements are successful?
Principles of Quality Improvement

1. Know your stakeholders and what they need
2. Focus on processes
3. Use data for making decisions
4. Use teamwork to improve work
5. Make quality improvement continuous
6. Demonstrate leadership commitment
Know Your Stakeholders

Identify stakeholders and their needs

- Sector mapping
- Community assessment
- Advisory council input
- Survey data and focus groups
- Force field analysis

Set goals based on stakeholder needs
Focus on Work Process

- Improve overall process, not just one part
  - 85% of poor quality is a result of poor work processes, not of staff doing a bad job
  - Processes often “go wrong” at the point of the “handoff”
  - Some of the most complex processes are the result of creating a “work around”
Tools to Link Work and Outcomes

Logic models and work flow charts

- Customer-supplier relationships
- Client flow, information flow

Data and analysis tools

- Root cause tools: fishbone diagram, Pareto chart
- Force field analysis
- Interrelationship digraph

Note: See PH Memory Joggers at GOAL/QPC or QI tools at ASQ
3 Use Data to Make Decisions

- Use performance assessment data to target improvement
- Use data analysis tools to develop information
- Analyze data to identify root cause
- Use data to monitor performance outcomes
How frequently do you/your organization use data to target improvement efforts?

A. Rarely
B. Sometimes
C. Often
D. Always
The Power of Root Cause Analysis

W. Edwards Deming transformed quality control processes by applying his beliefs

• Measuring outputs/outcomes at the end ignores root cause and ensuing poor results.
• Addressing root causes through ongoing evaluation and quality improvement avoids problems and improves quality.
• Ongoing measurement with feedback loops helps processes.
WIC Client Redemption of Farmer's Market Coupons

**People**
- Knowledge Deficit
- Client has more distractions in the summer
- Language

**Access**
- Distribution
- Frequency
- Timing
- Limited supply
- Staff explanations of Farmer's Market option
- Limited WIC Providers
- Customer Service
- Locations
- Hours
- Small dollar value
- No change is given

**Methods**

**Materials**

`WIC clients do not redeem all of the farmer’s market coupons`
Problem statement: Lack of knowledge and skill in QI methods and tools
Exercise: Fishbone Diagram

- People
- Methods
- Resources

- Lack of knowledge & skill in QI
- Culture
- Materials
4 Use Teamwork

- QI efforts need buy-in from all stakeholders
- Creative ideas are needed
- Division of labor is needed
- Process often crosses functions
- Solution generally affects many
5. Make QI Continuous

- Use conclusions from data analysis to identify areas for improvement
- Charge QI team and support
  - Provide QI training
  - Develop AIM statement
  - Use tools to understand root causes
  - Use data for baseline and analysis
  - Design process improvement to address root causes
- Train QI team in Plan-Do-Study-Act cycle
Improvement Model: PDSA Cycle

- Trial-and-learning method to discover an effective and efficient way to design or change a process
- “Check” or “study” may need clarification:
  - Learn from data
  - Figure out effects on other parts of the system and under different conditions
Learning and Improvement Cycle

**Act**
- What changes are to be made?
- Next cycle?

Documentation of recommendations: report or minutes

**Plan**
- Objective
- Questions and predictions
- Plan to carry out the cycle (who, what, where, when)
- Plan for data collection

Logic model

**Study**
- Complete the data analysis
- Compare data to predictions
- Summarize lessons

Data analysis / report

**Do**
- Carry out the plan
- Document problems and unexpected observations
- Begin analysis of the data

Track progress on work plan or Gantt
Poll Question

Do you use the PDSA cycle in your organization?

A. Not familiar with the PDSA cycle
B. Familiar with PDSA cycle but don't use
C. Familiar with cycle and use occasionally
D. Knowledgeable about the cycle and use consistently
Adopt or Adapt Model Practices

- Use data to identify need for improvement
- Identify exemplary practices
  - Local and state health departments
  - CDC, national organizations*
  - Industries
- Describe process (logic model or flow chart)
- Study exemplary practice process
- Adopt or adapt as needed

* [www.naccho.org/topics/modelpractices](http://www.naccho.org/topics/modelpractices)
Demonstrate Leadership Commitment

- Build QI culture
- Connect strategic plan to performance improvement
- Know and use quality principles
- Initiate and support QI teams
- Encourage staff to use quality improvement in daily work
- Reward improvements
- Assure adequate QI infrastructure for quality assessment and improvement activities
## Agency Level Performance Measures

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<thead>
<tr>
<th>Measure</th>
<th>Indicator</th>
<th>Responsibility</th>
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<tbody>
<tr>
<td>Improve immunization rates</td>
<td>Increase the percentage of kindergarten enrollees that are up to date on their immunizations upon school entry from 86% to 92% by 2014.</td>
<td></td>
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<tr>
<td>Reduce tobacco use</td>
<td>Decrease the percentage of adult smokers to 16% by 2014.</td>
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<tr>
<td>Reduce overweight &amp; obese populations</td>
<td>Reduce the rate of increase for adult obesity to 0% by 2014.</td>
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<tr>
<td>Increase healthy physical activity</td>
<td>Increase the percent of youth who are physically active for at least 60 minutes per day from 16.8% to 18.5% by 2014.</td>
<td></td>
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<tr>
<td>Reduce substance abuse</td>
<td>Increase the number of adults receiving opiate treatment service by 23% by 2014, to 800 patients.</td>
<td></td>
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<tr>
<td>Increase responsible sexual behavior</td>
<td>Increase the percentage of sexual partners treated for sexually transmitted diseases by 10% by 2014.</td>
<td></td>
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</table>
Develop tracking process to understand why eligible MSS women do not receive services.

Revised tracking system developed (short-term outcome)

Increase % of referrals in their first trimester of pregnancy.

% MSS first trimester referrals (medium-term outcome)

Pregnant women receive referral, education, and support for healthy behaviors throughout pregnancy.

% MSS clients who receive 3+ home visits (medium-term outcome)

Can assess pregnant women in first trimester for risk factors: smoking, PN & dental care needs, substance abuse, and nutritional status.

% first trimester MSS home visits (long-term outcome)

Known risk factors for low birth weight decreased.
Pregnancy outcomes improve.
WA DOH: PM System & QI Structure

Performance Management System

Organizational Strategic Planning

Performance Management and Accountability

Operational/Business Planning and Performance

Focused Quality Improvement Efforts

QI Structure

Quality Steering Committee

PALS (Performance Accountability Liaisons)

Project Mgmt. Resource Team

Process Improvement Teams
WA QI Organizational Structure

Quality Steering Committee

• Reviews and approves the agency QI plan annually
• Fosters supportive QI environment
• Champions QI activities, tools, and techniques
• Selects and supports agency QI projects
We must become masters of improvement
We must learn how to improve rapidly
We must learn to discern the difference between improvement and illusions of progress.
Some QI References

- Breakthrough Method and Rapid Cycle Improvement [www.ihi.org](http://www.ihi.org)
Questions?