Lessons in Quality Improvement

Webinar
July 7, 2011
11:00 AM – 12:00 PM
CHES Credit

• If you are a certified health education specialist and interested in earning continuing education contact hours (CHECH) for this Webinar, send your CHES number and contact information to Sarah Rittner at Sarah.Rittner@iphionline.org.

• Specific CHECH paperwork must be completed.

• Documentation of participation is required.
Webinar Logistics

• Handouts are available for note-taking.
• We will have Q and A session at the end of the presentation.
• If you have questions that come up during the presentation, type them into the Chat Log.
• Please mute lines when not speaking.
Objectives

• Understand the basic model for Quality Improvement and Quality Planning.
• Identify key learning from past QI projects and efforts.
• Link to resources for QI and building a quality culture in their organization.
• Understand the relationship between QI and Accreditation.
Presenters

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Quality Improvement and Quality Planning

Laurie Call
# The Quality Trilogy
(adapted from Juran)

<table>
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<tr>
<th>Quality Planning</th>
<th>Quality Control &amp; Improvement (During Operations)</th>
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<tr>
<td><strong>Operations</strong></td>
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<tr>
<td>1. Define Opportunity &amp; Stakeholder Needs</td>
<td><strong>Model for Improvement</strong></td>
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<td>2. Design &amp; Pilot Service or Process</td>
<td>What are we trying to accomplish?</td>
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<td>3. Take Action</td>
<td>How will we know that a change is an improvement?</td>
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<td>4. Monitor Impact / Results of Service</td>
<td>What change can we make that will result in improvement?</td>
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<td><strong>Sporadic Spike</strong></td>
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<td>Original Zone of Quality Control</td>
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<td>Process not Achieving Desired Results (An Opportunity for Improvement)</td>
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<td>Quality Improvement</td>
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<td>New Zone of Quality Control</td>
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**Time**
Quality Planning Cycle

Define Opportunity & Stakeholder Needs
- Problem/Opportunity to Address
- Identify clients/stakeholders and needs
- Translate stakeholders needs
- Establish performance measures based on needs

Take Action
- Fully implement if expected outcomes achieved
- Initiate QI if outcomes not achieved

Design & Pilot Service/Process
- Develop activity to meet needs
- Establish outcome measures
- Implement service/process

Monitor Impact/Results of Service
- Measure Outputs and Outcomes
- Compare actual results to expected results

MCPP Healthcare Consulting
The 4 Dimensions of Quality

Quality by Design

Quality by Process Improvement

Quality by Compliance

Quality by Inspection

NIATx focus

Active

Reactive
Model for Improvement

1. What are we trying to accomplish?

2. How will we know that a change is an improvement?

3. What changes can we make that will result in an improvement?

Reference:
Langley, Nolan, Nolan, Norman, & Provost. The Improvement Guide
AIM Statement
1. What are we trying to accomplish?
2. How will we know that a change is an improvement?
3. What change can we make that will result in an improvement?
4. What baseline data do you have?
The PDSA Cycle for Learning and Improvement

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

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

**Study**
- Complete the analysis of the data
- Compare data to predictions
- Summarize what was learned

**Do**
- Carry out the plan
- Document problems and unexpected observations
- Begin analysis of the data
Adapted from *The ABC’s of PDCA*, Gorenflo and Moran

1. Identify and Prioritize Opportunities
2. Develop AIM Statement
3. Describe the Current Process
4. Collect Data on Current Process
5. Identify All Possible Causes
6. Identify Potential Improvements
7. Develop Improvement Theory
8. Develop Action Plan

**Check/Study**

1. Review analysis and make conclusions

**Act**

- Adopt
- Adapt
- Abandon

- Standardize/Hold the Gains
- DO - Modify/Try Again
- Plan

**Plan**

- 1. Test the Improvement
- 2. Collect and Analyze the data
- 3. Document Problems, Observations, and Lessons Learned

**MCPP Healthcare**
<table>
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<tr>
<th>QI Tool</th>
<th>What the Tool Does</th>
<th>Public Health Memory Jogger II</th>
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</thead>
</table>
| Activity Network Diagram/Gantt Chart | Used to: Schedule sequential and simultaneous tasks  
- Gives team members the chance to show what their piece of the plan requires and helps team members see why they are critical to the success of the project  
- Helps team focus its attention and scarce resources on critical tasks. | Page 3                        |
| Affinity Diagram        | Used to: Gather and group ideas  
- Encourages team members' creativity by breaking down communication barriers  
- Encourages ownership of results and helps overcome “team paralysis” due to an array of options and a lack of consensus. | Page 12                       |
| Brainstorming           | Used to: Create bigger and better ideas  
- Encourages open thinking and gets all team members involved and enthusiastic  
- Allows team members to build on each other’s creativity while staying focused on the task at hand. | Page 19                       |
| Cause and Effect/ Ishikawa Diagram | Used to: Find and cure causes, not symptoms  
- Enables a team to focus on the content of the problem, not the problem’s history or differing personal issues of team members  
- Creates a snapshot of the collective knowledge and consensus of a team around a problem.  
- Focuses the team on causes, not symptoms. | Page 23                       |
| Check Sheet             | Used to: Count and accumulate data  
- Creates easy-to-understand data – makes patterns in the data become more obvious  
- Builds a clearer picture of “the facts”, as opposed to opinions of each team member, through observation. | Page 31                       |
| Control Charts          | Used to: Recognize sources of variation  
- Serves as a tool for detecting and monitoring process variation. Provides a common language for discussing process performance.  
- Helps improve a process to perform with higher quality, fewer errors, and higher effective capacity. | Page 36                       |
| Data Points             | Used to: Turn data into information  
- Determines what type of data you have  
- Determines what type of data is needed | Page 52                       |
| Flowchart               | Used to: Illustrate a picture of the process  
- Allows the team to come to agreement on the steps of the process. Can serve as a training aid  
- Shows unexpected complexity and problem areas. Also shows where simplification and standardization may be possible.  
- Helps the team compare and contrast the actual versus the ideal flow of a process to help identify improvement opportunities. | Page 56                       |
| Force Field Analysis    | Used to: Identify positives and negatives of change  
- Presents the “positives” and “negatives” of a situation so they are easily compared  
- Forces people to think about all aspects of making the desired change as a permanent one. | Page 63                       |
| Histogram               | Used to: Identify process centering, spread, and shape  
- Displays large amounts of data by showing the frequency of occurrences  
- Provides useful information for predicting future performance.  
- Helps indicate there has been a change in the process  
- Illustrates quickly the underlying distribution of the data. | Page 66                       |

Developed from The Public Health Memory Jogger II (2007)
### Commonly Used QI Tools:

**Intertemporal Digraph**
- **Used for:** Look for drivers and outcomes.
- **Features:**
  - Encourages team members to think in multiple directions rather than linearly.
  - Explores the cause and effect relationships among all the issues.
  - Allows a team to identify root cause(s) even when credible data doesn’t exist.

**Matrix Diagram**
- **Used for:** Random relationships.
- Features:
  - Makes patterns of responsibilities visible and clear so that there is even distribution of tasks.
  - Helps teams come to consensus on small decisions, enhancing the quality and support for the final decision.

**Nominal Group Technique**
- **Used for:** Rank for consensus.
- Features:
  - Allows every team member to rank issues without being pressured by others.
  - Makes a team’s consensus visible.
  - Puts quiet team members on an equal footing with more dominant members.

**Pareto Chart**
- **Used for:** Focus on key problems.
- Features:
  - Helps teams focus on those causes that will have the greatest impact if solved. (Based on the Pareto principle ~ 20% of the sources cause 80% of any problem.)
  - Progress is measured in a highly visible format that provides incentive to push on for more improvements.

**Prioritization Matrix**
- **Used for:** Weigh your options.
- Features:
  - Forces a team to focus on the best thing(s) to do and not everything they could do.
  - Increases the chance of follow-through because consensus is sought at each step in the process (from criteria to conclusions).

**Process Capability**
- **Used for:** Measure conformance to customer requirements.
- Features:
  - Helps a team answer the question “Is the process capable?”
  - Helps to determine if there has been a change in the process.

**Radar Chart**
- **Used for:** Rank organization performance.
- Features:
  - Makes concentrations of strengths and weaknesses visible.
  - Clearly defines full performance in each category.
  - Captures the different perceptions of all the team members about organization performance.

**Run Chart**
- **Used for:** Track trends.
- Features:
  - Monitors the performance of one or more processes over time to detect trends, shifts, or cycles.
  - Allows a team to compare a performance measure before and after implementation of a solution to measure its impact.

**Scatter Diagram**
- **Used for:** Measure relationships between variables.
- Features:
  - Supplies the data to confirm a hypothesis that two variables are related.
  - Provides a follow-up to a Cause & Effect Diagram to find out if there is more than just a consensus connection between causes and the effect.

**Tree Diagram**
- **Used for:** Map the tasks for implementation.
- Features:
  - Allows all participants (and reviewers outside the team) to check all of the logical links and components at every stage or phase level.
  - Reveals the real level of complexity involved in the achievement of any goal, making potentially overwhelming projects manageable, as well as uncovering unknown complexity.

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*Developed from The Public Health Memory Jogger II (2007)*
Deena Mosbarger

Clay County Health Department
Lessons Learned

- Quality Improvement is fundamental.
- Clarity of AIM statement is essential to success.
- Objectives must be SMART.
- Build data collection (evidence) into the QI process from the beginning.
Integrating QI into the LHD

- Thinking in “QI”
- Develop a QI Management Team
- Looking for easy QI opportunities
- Train all staff in QI methodology
- Integrate QI into Strategic Planning
QI Resources

www.accreditation.localhealth.net/guidebook.htm

http://www.goalqpc.com/shop_products_detail.cfm?PID=754

www.NIATx.net
QI and Accreditation

Voluntary Accreditation Domain 9

“Evaluate and continuously improve processes, programs, and interventions.”

Source: Taken from the DRAFT PHAB standards and measures document. Final version is due out late in July 2011.
Uche Onwuta
Kane County Health Department
Lessons Learned

• The collaborative introduced us to many QI tools and provided TA to our team
• The TA calls were extremely beneficial as we heard from national QI experts and broadened our scope
• PDCA is not static. Our AIM statement and objectives changed as we refined the project.
• Buy-in from leadership absolutely essential
• QI should be a corporate culture not an activity done when time permits
• QI requires a dedicated full time staff or two!
Integrating QI into the LHD

- QI/PI Committee Formed, 2007
- NACCHO Accreditation Preparation Demonstration Site Project Grant, 2008
- IPHI QI Collaborative - MLC II Grant, 2009-2010
- Health Department’s strategic plan included QI as one of the four priority areas: “The Three Keys Plus QI”
- Planning for PHAB Accreditation/IPLAN Recertification – 2010/2011
- Department-wide Restructuring - 2010
- QI/PI and Accreditation committee re-formed – 2011
- Monthly Compulsory All Hands Meeting on QI Implementation
- 2011 Quality Improvement Plan approved
- QI Committee Charter approved
QI Resources

- Tools used in our MLC Project: Force field analysis, fishbone diagram, radar chart, Gantt chart, flow chart
- New tools are introduced at every monthly meeting
- Action agenda used at all meetings hosted by health department staff
- PDCA projects by each section of the health department and senior leadership
- Storyboarding
QI and Accreditation

- QI paved the way for accreditation preparation
- Each member of Senior Leadership Team responsible for a domain
- Committees formed around each domain involving staff directly responsible for programs relating to the domain
- Monthly meetings of senior leadership on accreditation
- Health Data QI coordinator provides support for QI and Accreditation activities
PDCA Activities at KCHD

- Improve response rates of employee call-down drills.
- Improve rates of initial High Risk Infant Follow-up visits within compliance levels.
- Improve structured spending of grant money.
- Decrease critical food inspection violations (to decrease instances of Food Borne Illnesses).
- Improve pre & post meeting communication in Community Health.
- Improve collection & reporting of immunization data.
- Improve rate of immunization competence for Public Health Nurses.
- Improve KCHD financial management.
QI and Accreditation

Laurie Call
Benefits of Accreditation

- Credibility
- Recognition of high performing health departments
- Framework for effective planning
- Culture of quality and performance improvement
- Access to resources for improvement
- Public health services aimed at improving health outcomes

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Results of Accreditation Leads to QI Focus

The process of preparing for and achieving accreditation yields information about the agency that can be used to identify areas of improvement.
Quality Improvement Defined for Public Health

A continuous and ongoing effort to achieve measurable improvements in the efficiency, effectiveness, performance, accountability, outcomes and other indicators of quality of services or processes that achieve equity and improve the health of the community.

Characteristics of QI

“Small QI”
Program or activity level
Great way to learn a specific model

“Large QI”
Organization/enterprise-wide
System focused
Important Elements of a QI System

• Set focus on a vital few priorities
• Engage every employee
• Create a sense of urgency for measurable results
• Build QI time into daily workload
  – Part of their job, not extra work!
• Support a culture that values constructive feedback
• Adopt fact-based decision making
• Reward and celebrate progress

PHAB 2011
For Additional Information

Laurie Call
Center for Community Capacity Development
Laurie.Call@iphionline.org
✓ www.iphionline.org
  – Click on the IL Accreditation Development Project Tab to find resources.
✓ http://iphionline.wikispaces.com/
  – Archived Webinars and QI resources
The Michigan QI Guidebook
www.accreditation.localhealth.net/guidebook.htm

Public Health Memory Jogger II
http://www.goalqpc.com/shop_products_detail.cfm?PID=754

NIATx (for treatment and recovery but applicable to all fields....PH specific site coming soon funded by CDC and PHF)
www.niatx.net

National Network of Public Health Institutes (NNPHI) QI Resources
http://www.nnphi.org/programs/mlc/resources

Public Health Foundation (PHF) QI Quick Guide (user guide/ tutorial)
http://www.phf.org/quickguide/Content1Panel.aspx

PHF – The Public Health Quality Improvement Handbook
This session has been recorded and will be available for future viewing.

Please complete the feedback form. We value your input.