Rapid Cycle Quality Improvement (RCQI): What Do Grantees Need to Know?

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Key Elements of Quality

- **Will**: to do what it takes to change to a new/improved system
- **Ideas**: on which to base the design of the new/improved system
- **Execution**: of the ideas (know-how)
Have You Heard of...

- Total Quality Management
- Continuous Quality Improvement
- Six Sigma DMAIC
- Lean
- The Model for Improvement
- Others?
Quality Improvement vs. Quality Assurance

- Systems focused
- Fallibility Recognized
- Teamwork
- Errors seen as opportunities for learning

- Individual Focused
- Perfection Myth
- Solo practitioner
- Errors punished
“Every system is perfectly designed to get the results it gets”

~Paul Bataldin
What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?

Model for Improvement

Aim
Measures
Changes

Act
Plan
Study
Do
What are we trying to accomplish?
Aim Statement

• What will you do
• How much will you improve
• For Who
• By When

Smart Goal

Create S.M.A.R.T. Goals

SPECIFIC
MEASURABLE
ACHIEVABLE
REALISTIC
TIMELY
Example – Advanced Nursing edu.

• By June 2016, XYZ University will ensure that 100% of clinical preceptors are prepared to facilitate a positive clinical experience for students. All preceptors will undergo an annual clinical competency evaluation and will score at least 90% competency in four domains:
  • Student evaluation
  • Goal setting
  • Teaching strategies
  • Demonstration of organized knowledge"
Example – Geriatric Workforce

By June 2017, improve primary care engagement in the early identification of Alzheimer’s disease and related dementias (ADRD) so that:

• At least 90% of patients 75 years of age or older are assessed for ADRD at least once per year
• 90% or more of those identified with ADRD have education provided directly to the primary caregiver
The Aim – A Simple and Powerful Tool

- One Provider’s Aim
- Health System’s Aim
- Region’s Aim
- HRSA’s Aim
How Will We Know if a Change is an Improvement?
How Do We Know That a Change is an Improvement?

- Quality Improvement is about changing and improving care provided.
- It is not about measurement.
- However ....
Measurement Assumptions

• The purpose of measurement in QI is for learning not judgment
• All measures have limitations, but the limitations do not negate their value
• Measures are one voice of the system. Hearing the voice of the system gives us information on how to act within the system
• Measures tell a story; goals give a reference point
### Performance Measurement in 3 Worlds

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Improvement</th>
<th>Accountability</th>
<th>Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aim</td>
<td>Improve care</td>
<td>Compare, reassure, spur change</td>
<td>New knowledge</td>
</tr>
<tr>
<td>Methods Test Observable</td>
<td>Yes</td>
<td>N/A. Evaluate current performance</td>
<td>Test blind or controlled</td>
</tr>
<tr>
<td>Bias</td>
<td>Accept stable bias</td>
<td>Adjust data to reduce bias</td>
<td>Design to eliminate</td>
</tr>
<tr>
<td>Sample Size</td>
<td>Just enough data, small</td>
<td>N/A. Report 100%</td>
<td>Just in case data</td>
</tr>
<tr>
<td></td>
<td>sequential samples</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How to determine improvement</td>
<td>Run or Shewhart charts</td>
<td>No focus on change</td>
<td>Hypothesis, Statistical tests: F-test, t-test, chi square, p value</td>
</tr>
<tr>
<td>Testing Strategy</td>
<td>Small sequential tests</td>
<td>No tests</td>
<td>1 large test</td>
</tr>
<tr>
<td>Data confidential</td>
<td>Data used only by those</td>
<td>No subjects. Data is for</td>
<td>Subjects protected</td>
</tr>
<tr>
<td></td>
<td>involved in improvement</td>
<td>public</td>
<td></td>
</tr>
</tbody>
</table>
Measures

- Outcome
- Process
- Balancing
A Closer Look

**Process Measures**
- Data collection may be time limited
- Are within your control
- Are linked to your ideas (changes)
- Are a means to the ends – not the ends

**Outcome Measures**
- Are patient focused
- Reflect how care is experienced differently by a family
- Sometimes take time to “move the marker”
- Are in your aim!
How we display our data influences how we use our data
Aggregate Statistics

Was the improvement due to the intervention?  

Intervention begins in January 2014
Time Ordered Statistics

Decreased mortality was not due to the new protocol, which may have had a negative effect.

2013 Avg. = 5%

Intervention begins in January

2014 Avg. = 4%

Median = 4.5
Aggregate vs. Time Ordered

- **Bar Chart**: Percent mortality for 2013 and 2014. The bar for 2014 is shorter than the bar for 2013, indicating a decrease. A note suggests that the improvement might be due to the intervention in January 2014.

- **Line Graph**: Percent mortality over months from January 2013 to December 2014. The graph shows a decrease in mortality from 5% in 2013 to 4% in 2014. The text notes that this decrease was not due to a new protocol, which may have had a negative effect.

- **Points of Interest**:
  - **2013 Avg. = 5%**
  - **2014 Avg. = 4%**
  - **Median = 4.5%**
  - **Intervention begins in January 2014**
“You can’t fatten a cow by weighing it”

Palestinian Proverb
What Changes can we make that will result in improvement?
Ideas

BAD NEWS, EVERYONE. PRODUCTION IS DOWN.

WE NEED TO FIGURE OUT HOW TO GET IT GOING AGAIN.

SIR, I’VE GOT AN IDEA.

THAT’S PERFECT.
Why we PDSA

- Fast – We have a short attention span
- Low risk – no harm option
- Try everything
- Create confidence
- Learn how to adapt
- Evaluate side-effects
- Build momentum
- Decrease resistance
- Make REAL improvement
Learning with the PDSA cycle: Plan

PLAN
Prediction If ___ Then____
Plan to carry out the test (who, what, when?)
Plan for data collection
Learning with the PDSA cycle: Do

**DO**
- Carry out the plan
- Document observations – successes/unexpected issues
- Begin analysis of data
Learning with the PDSA cycle:

**Study**

- Compare to prediction
- What did you learn
- What was unexpected
- What about the data
Learning with the PDSA cycle: Act

**ACT**
Select an action based on the results of the test:
- Adopt
- Adapt
- Abandon

If appropriate, plan next test
Use of the PDSA Cycle

Proposals, Theories, Ideas

Learning from Data

Changes That Result in Improvement

PDSA’s will grow each time
Common Hang Ups

- Starting too big
- Decision by committee
- Implementing too quickly
- Decisions without data
- Spreading too quickly
- Tasking not testing
- Talking not doing
Simple yet balanced

- How will we know a change is an improvement
- What are we trying to accomplish
- What changes will lead to improvement

Improved Outcomes
ANY questions?