Advanced PDSA- Keeping Small Tests of Change Small

June 25, 2013
Ask yourself:

• What is **one thing** that we are not doing that the evidence suggests we should be doing to improve our performance?

• How can we test ideas about this **one thing**?
## Research vs. Improvement

<table>
<thead>
<tr>
<th></th>
<th>Improvement: Used to Learn</th>
<th>Research/Reporting: Used to Judge</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>Bring learnings into daily practice</td>
<td>Discover new knowledge</td>
</tr>
<tr>
<td><strong>Tests</strong></td>
<td>Many test cycles, sequential, observable</td>
<td>One large “blind” test</td>
</tr>
<tr>
<td><strong>Biases</strong></td>
<td>Stabilize the biases from test to test</td>
<td>Control for as many biases as possible</td>
</tr>
<tr>
<td><strong>Data</strong></td>
<td>“Just enough”</td>
<td>“Just in case”</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>Small tests of significant changes accelerates the rate of improvement</td>
<td>Can take a long time</td>
</tr>
</tbody>
</table>
The PDSA Cycle

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)

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
PDSA in relation to DMAIC

<table>
<thead>
<tr>
<th>PDSA</th>
<th>DMAIC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plan</strong></td>
<td>Define</td>
</tr>
<tr>
<td><strong>Do</strong></td>
<td>Improve</td>
</tr>
<tr>
<td><strong>Study</strong></td>
<td>Control</td>
</tr>
<tr>
<td><strong>Act</strong></td>
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</table>

[Diagram showing the cycle of Define, Measure, Analyze, Improve, Control, and Plan, with arrows connecting each step.]
Testing on a Small Scale
Test—Implement—Spread

T = Test, small scale, 1pt., 1 nurse, etc.

I = Implement only after successful testing under a variety of conditions

S = Spread to other units once you have successfully implemented in one
Where have I seen this before?

T = Test, small scale, 1 pt., 1 nurse, etc.

I = Implement only after successful testing under a variety of conditions

S = Spread to other units once you have successfully implemented in one

Changes Being Tested, Implemented or Spread

For each listed change, indicate whether it is being Tested (T), Implemented (I) or Spread (S)
Why Test?

• To see if the idea will work in your setting
• To understand if the test results in the desired outcome
• Learn how to adapt the change to conditions in the local environment
• Evaluate costs and side-effects of the change
• Minimize resistance upon implementation
What NOT to do!

• Write a policy and procedure
• Take many months to get it approved
• Train your staff
• Go live
Our Question?

ADOPT

ADAPT

ABANDON
PDSA Examples

- Try hip protectors on 5 patients
- Show a new assessment protocol to 2 staff members and get feedback
- Assess the walk to the bathroom in 2 rooms
- Pilot floor mats on 2 patients
**NOT PDSA Examples**

- Implement an environmental assessment on one unit or in the facility
- Give *all* patients on the unit literature on falls
- Send out cards with a new falls prevention program to staff

*Hey everybody, I switched us over to decaf! Don’t you all feel BETTER?*
Preparation

1. **WHAT** are you going to test?

2. **WHO** is doing the test?
   
   (Hint: Work with the willing!)

3. **WHEN** will the test occur?

4. **WHERE** will the test occur?
5. What do you think will happen?

6. What would make this test successful?

7. What else do you need to conduct this test?

8. When are you going to evaluate the results?
Reduce the Data Burden

So many choices...

• Know when enough is enough
• Small is okay – ask 5 people, if different answers, you have enough

Not enough time...

• Need just enough data to make a sensible judgment for next steps
• Large amounts of data may not give clarity but will slow to stop improvement
**Data Collection Made Simple**

**HUC Call Light Tracking**

<table>
<thead>
<tr>
<th>Date</th>
<th>Unit Census</th>
<th>10 am to 11 am</th>
<th>1 pm to 2 pm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon 10/10</td>
<td>19 patients</td>
<td>19</td>
<td>11</td>
</tr>
<tr>
<td>Tue 10/11</td>
<td>9 patients</td>
<td>14</td>
<td>17</td>
</tr>
</tbody>
</table>

**Hallway Observation Data Collection Tool**

<table>
<thead>
<tr>
<th>Date:</th>
<th>Time:</th>
<th>Observer:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

**Patient Feedback – CNA Survey**

<table>
<thead>
<tr>
<th>DATE:</th>
<th>Used Call Light?</th>
<th>How quickly were you served?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient</td>
<td></td>
<td>Very quickly</td>
</tr>
<tr>
<td>1</td>
<td>✗ YES □ NO</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>□ YES ✗ NO</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>✗ YES □ NO</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>□ YES □ NO</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>□ YES □ NO</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>□ YES □ NO</td>
<td></td>
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</tbody>
</table>

Please give form to unit coordinator at end of shift.
### AIM Statement: What are we trying to accomplish?

<table>
<thead>
<tr>
<th>Measures</th>
<th>How will we know that a change is an improvement?</th>
<th>How Much?</th>
<th>By when?</th>
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<tbody>
<tr>
<td>1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3)</td>
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</table>

This tool is your best friend for improving and sustaining a change.

### Tests of Change: What change can we make that will result in improvement?

<table>
<thead>
<tr>
<th>CYCLE 1:</th>
<th>Plan:</th>
<th>Who will do?</th>
<th>Study Result?</th>
<th>Adapt/Accept/Abandon?</th>
</tr>
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<table>
<thead>
<tr>
<th>CYCLE 2:</th>
<th>Plan:</th>
<th>Who will do?</th>
<th>Study Result?</th>
<th>Adapt/Accept/Abandon?</th>
</tr>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>CYCLE 3:</th>
<th>Plan:</th>
<th>Who will do?</th>
<th>Study Result?</th>
<th>Adapt/Accept/Abandon?</th>
</tr>
</thead>
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Small Test of Change...

Make it smaller!!!
Is this test of change small enough?

- 1st cycle – Med Surg unit is testing a new order set on 10 newly admitted patients
- 1st cycle – Bedside handoff tested with 1 incoming and 1 off going nurse from each shift for 1 day on all assigned patients (3-4pts)
- 1st cycle – 1 pharmacist utilizes new patient folder for all patients counseled 1 day
# Completed PDSA Example

## Design Plan for Small Tests of Change

**Initiative:** Reducing Readmissions  
**Intervention:** Assess patients’ pre-discharge understanding of their condition and care

**Smallest change:** 1 nurse and 1 patient  
**Scope:** All RNs on Med/Surg. unit  
**Total # of staff impacted:** 42 RNs

**Planned Testing Timeframe:** Will conduct a series of small tests during February  
**Total # of staff to test:** 12 RNs

<table>
<thead>
<tr>
<th>#</th>
<th>Test Description</th>
<th>Test Plan</th>
<th>Testers</th>
<th>Lesson(s) Learned</th>
<th>Decision</th>
<th>Adaptation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>One RN volunteer will test the assessment tool with one of their patients</td>
<td>During day shift on Monday or Tuesday – Gather feedback on Wed</td>
<td>Sue</td>
<td>Prefer 1 page versus 2; Took over 30 minutes to complete</td>
<td>✕ Adapt</td>
<td>Removed the 3 ?s on Medications - pharmacy will review with pt.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✒ Adopt</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>☑ Abandon</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Four volunteer RNs will test the assessment tool with one or two of their patients.</td>
<td>During day shift on Thursday or Friday – Gather feedback on Mon</td>
<td>Sue, Rob,</td>
<td>Form is easy to use, time to complete varied from 5 to 20 mins. Instructions could be clearer</td>
<td>✕ Adapt</td>
<td>Clarified instructions on form; Provided &quot;How to ask...&quot; training sheet</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Janet, Cyndi</td>
<td></td>
<td>☑ Adopt</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>☑ Abandon</td>
<td></td>
</tr>
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Tip for Testing

“What tests can we complete by next Tuesday?”

- Use a form to document your test.
- Scale down – think “Drop Two”
  - Oneness
    - 1 patient
    - 1 day
    - 1 admit
    - 1 physician
  - Year
  - Quarter
  - Month
  - Week
  - Day
  - Hour
- Make changes in parallel
- Know the situation in your organization
The Value of “Failed” Tests

“I did not fail one thousand times; I found one thousand ways how not to make a light bulb.”

Thomas Edison
Common Traps

• Plan Do, Plan Do
• Do Act, Do Act
• No testing, only data collection
• No ramps of tests, random PDSAs
• Undisciplined PDSAs, no documentation
• No Prediction – what are we going to learn
• Beware of cycles longer than 30 days
Cycle For Learning and Improvement

“Negative results on the fish…Let’s try rubbing two sticks together.”
Applying Lessons Learned
Table Exercise

• Review your table’s case study and discuss the PDSA example and complete the questions on the worksheet.

• Report out in 5 minutes
YOUR TURN!

CASE STUDIES:

1. What is being tested?
2. Is the scale of the test as small as possible for the first cycle?
3. What does the team predict will be the outcome of the test?
4. How will data/feedback be collected? Is this specific enough?
5. How will the data/feedback collected be used to plan the next cycle?
6. What is your recommendation for the next cycle?
   - How large?
   - What should be kept, changed or abandoned?
Linking Tests of Change

✓ Testing changes is a *continuous* process: the completion of each PDSA cycle leads directly into the start of the next cycle = *RAPID CYCLES*

✓ A team learns from the test:
  • What worked and what didn't work?
  • What should be kept, changed, or abandoned?
  • Uses the new knowledge to plan the next test.
  • The team continues linking tests in this way, refining the change until it is ready for broader implementation.
Next Steps

• Look at your PfP data! Where should you focus your efforts?
• Revisit the HRET change package and driver diagram for your initiative(s) to identify potential opportunities for improvement
• *Plan your next PDSA cycle!*
Questions?
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