PDSA: Plan-Do-Study-Act

INSTRUCTION

Why would I use this tool?

PDSA is the action component of the Model for Improvement and is a fundamental tool in quality improvement work. PDSA allows the team to create new knowledge by conducting small tests of change with a minimum of risk, and builds confidence in the impact of the changes proposed. Ideas with positive impact can be continued on a larger scale (PDSA ramps) to implementation while ideas that do not have a positive impact are discontinued. PDSA can be used effectively to engage staff who may be reluctant to change.

How would I use this tool differently at different stages of the QI Framework?

PDSA cycles can be useful in almost every phase of your improvement journey.

- **GETTING STARTED**: To develop change ideas and help the team to move from planning to action.
- **DEFINING THE PROBLEM**: To test the methods of collecting information.
- **UNDERSTANDING YOUR SYSTEM**: To test the collection of measures and the method of gathering additional information for analysis (who will gather, and by what means).
- **DESIGNING AND TESTING SOLUTIONS**: To conduct small tests of change from the ideas of the team, hunches, best practices and change concepts. The team may also want to test discontinuing a process or practice if it is not shown to be providing value.
- **IMPLEMENTING AND SUSTAINING CHANGES**: Large-scale implementation is viewed in quality improvement as a series or “ramp” of PDSAs, each one larger or under different conditions. When you have evidence that an idea is reliable in one area, further tests and ramps can be spread to the new environment. Spreading change to other areas of your organization through engaging staff in the PDSAs increases the likelihood of success in creating sustainable improvement while minimizing the risk to patient care.
- **SPREADING CHANGE**: Spreading change to other areas of your organization through engaging staff in the PDSAs increases the likelihood of success in creating sustainable improvement while minimizing the risk to patient care.
How do I use this tool?

PDSAs are carried out in a step-by-step process to build knowledge and create sustainable change.

Step 1: Plan
- Be specific about the aim of the test.
- Make predictions about what will happen and why, as this reflects beliefs about the operation of your system.

Step 2: Do
- Carry out the test.
- Document the outcome of the test and other observations, positive and negative.

Step 3: Study
- Analyze the data.
- Compare the data to your predictions.
- Discuss what has been learned.

Step 4: Act
- Depending upon the results, decide whether to adapt, adopt or abandon the next test.
- Start to prepare for the next PDSA cycle.

What do I need to use this tool?

Materials
- PDSA Template
- Pen/pencil

Timing
PDSA can be done fairly quickly if you are clear on what you are trying to accomplish.
Tests of change can take an hour, a shift, or a day, depending upon the frequency of the change being tested.

Setup
Can be done as a team or by an individual.

What tips and tricks will be useful in facilitating this tool?

Always complete the test in writing, including your predictions; this gives the tool structure, encourages thoughtfulness and increases the chance of success, especially when developing a change.

If the Improvement Team members seem to be stuck on a single idea to test, use a creativity tool or a concept fan to move them beyond this stage.

PDSA test cycles are best performed on a small scale—if you’re thinking “all” patients, think one or two patients.
If you’re thinking “all” staff, think one staff member. If you’re thinking months, think weeks or days.

Although it is ideal to work with willing participants in carrying out tests, this approach also can work to create willingness to try something new when there is a reluctance to change.

The PDSA scale should be determined by the team based on:
- confidence that the change will result in an improvement, and
- the readiness of staff to accept the change.

Small tests are rarely stand alone; therefore, you should start to prepare the next test based upon your predictions.
Often a change idea will go through multiple PDSA cycles as data is collected and the idea is refined (this is called a PDSA ramp); large-scale tests of changes may require multiple concurrent PDSA ramps before implementation.
**PDSA: Plan-Do-Study-Act TOOL**

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<th>Test Topic:</th>
<th>Cycle #:</th>
<th>Date:</th>
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**PLAN**

The purpose of this cycle is to:  
- [ ] Develop  
- [ ] Test  
- [ ] Implement

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<th>What questions do you want to answer?</th>
<th>What are your predictions?</th>
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Plan to collect data to answer your questions:

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<th>What data will be collected?</th>
<th>How? (checklist, chart audit)</th>
<th>Who? (name or role)</th>
<th>When? (times, dates – be specific)</th>
<th>Where? (unit, area, charts)</th>
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List tasks necessary to set up test:

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**DO**
What did you observe during the test? Were there any unexpected observations?

**STUDY**
Analyze your data and describe the results. How do the results compare with your predictions?  
What did you learn from this cycle?

**ACT**
Are you ready to implement?
- Yes (I am confident that there is measured improvement, changes have been tested under different conditions and questions answered.)
- No (I have more questions, need to make adjustments and test again, OR risks outweigh benefits – new idea required.)

What is your plan for the next cycle?

Team: ______________________________