



CSHS Nurse Leader Meeting 12/10/20 Recording

Topic: Quality Improvement Project Planning: Plan-Do-Study-Act

Prework:

Prior to coming to the meeting, please complete the following prework (~36 min):

1. Watch four short Quality Improvement/PDSA videos produced by the [Institute for Healthcare Improvement \(IHI\)](#). (11 minutes total)
 - a. [Whiteboard: PDSA in Everyday Life \(Part 1\)](#) (4:45 min)
 - b. [Whiteboard: PDSA Cycle \(Part 2\)](#) (3:48 min)
 - c. [Why Is Planning Such an Important Part of PDSA?](#) (1:17 min)
 - d. [How Long Should a PDSA Cycle Last?](#) (1:37 min)
2. **Read** the *Job Aid: PDSA Cycle Checklist* (5 min) – see below
3. **Read** the *QI Essentials Toolkit: PDSA Worksheet* (5 min) – see below
4. **Evaluate:** what change (Quality Improvement or QI) project(s) you want your district to engage in this year? What will your Plan look like and how will you carry out your test (Do)? (15 min)

Your QI project should be something manageable. It could be something you've already done or are in the process of doing (e.g., conducting flu clinics in a new way, creating training videos to educate your students/families, medication pick-up done in a new way, or establishing your medical waiting room, etc.)
5. **Complete** the Plan section of the PDSA worksheet below.

Objectives

- Describe how the PDSA cycle can be applied to quality improvement in the school health setting
- Identify an improvement project to be tested during the School Year 2020-2021
- Draft a plan for the improvement project utilizing the PDSA Worksheet Template

PDSA Cycle Checklist

Job Aid



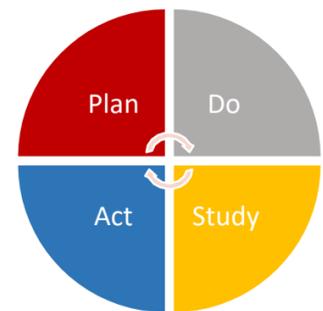
School Health Institute for Education
and Leadership Development

What is the PDSA cycle?

1

PDSA stands for:

- Plan – Identify an opportunity and plan for improvement
- Do – Test the theory for improvement
- Study – Use data to study results of the test
- Act – Standardize the improvement and establish future plans



PDSA is a cyclical process for improvement and testing changes that includes nine steps.

What are the steps under the Plan phase of the PDSA checklist?

2

The steps under the Plan phase of the PDSA checklist are:

1. Getting started –

- Identify area, problem, or opportunity for improvement
- Estimate and commit needed resources
- Obtain approval (if needed) to conduct QI

2. Assemble the team –

- Identify and assemble team members (including customers and/or stakeholders)
- Discuss problem or opportunity for improvement
- Identify team member roles and responsibilities
- Establish initial timeline for improvement activity and schedule regular team meetings
- Develop SMARTIE aim statement

3. Examine current approach –

- Examine the current approach or process flow
- Obtain existing baseline data, or create and execute data collection plan
- Obtain input from customers and/or stakeholders
- Analyze and display baseline data
- Determine root cause(s) or problem(s)
- Revise aim statement based on baseline data

4. Identify potential solutions –

- Identify all potential solutions to the problem based on the root cause(s)
- Review model or best practices to identify potential improvements
- Pick the best solution (the one most likely to accomplish aim statement)

5. Develop an improvement theory –

- Develop a theory for improvement (prediction using “if...then” approach)
- Develop a strategy to test the theory

What is the step under the Do phase of the PDSA checklist?

3

The step under the Do phase of the PDSA checklist is:

6. Test the theory for improvement –

- Carry out the test on a small scale
- Collect, chart, and display data to determine the effectiveness of the test
- Document problems, unexpected observations, and unintended side effects

What is the step under the Study phase of the PDSA checklist?

4

The step under the Study phase of the PDSA checklist is:

7. Use data to study the result

- Determine if test was successful
 - Compare results against baseline data and measures of success in aim statement
 - Did results match the theory/prediction?
 - Were there unintended side effects?
 - Was there an improvement?
 - Do you need to test the improvement under other conditions?
- Describe and report what you learned

What are the steps under the Act phase of the PDSA checklist?

5

The steps under the Act phase of the PDSA checklist are:

8. Standardize the improvement or develop a new theory

- If the improvement was successful on a small scale, test it on a wider scale
 - Continue testing until an acceptable level of improvement is achieved
 - Make plans to standardize the improvement
- If the change was not an improvement, develop a new theory and test it

9. Establish future plans

- Celebrate your success
- Communicate your accomplishments to internal and external customers
- Take steps to preserve gains and sustain accomplishments
- Make long-term plans for additional improvements
- Depending on the results of the “Do” and “Study” phases:
 - Adopt: standardize the improvements
 - Adapt: adjust the improvement process for improved results
 - Abandon: drop unsuccessful predictions and start again with a new prediction
- Conduct iterative PDSA cycles, when needed

Where can I get more information on the PDSA checklist?

6

The Institute for Healthcare Improvement (IHI) provides excellent information on process improvement: <http://www.ihl.org/resources/Pages/HowtoImprove/default.aspx>



QI Essentials Toolkit:

PDSA Worksheet

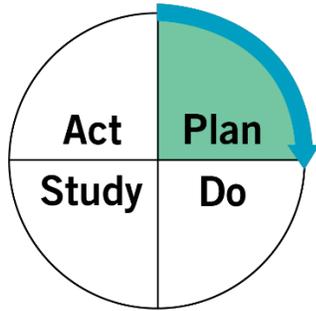
The Plan-Do-Study-Act (PDSA) cycle is a useful tool for documenting a test of change. Running a PDSA cycle is another way of saying testing a change — you develop a plan to test the change (Plan), carry out the test (Do), observe, analyze, and learn from the test (Study), and determine what modifications, if any, to make for the next cycle (Act).

Fill out one PDSA worksheet for each change you test. In most improvement projects, teams will test several different changes, and each change may go through several PDSA cycles as you continue to learn. Keep a file (either electronic or hard copy) of all PDSA cycles for all the changes your team tests.

IHI's QI Essentials Toolkit includes the tools and templates you need to launch and manage a successful improvement project. Each of the nine tools in the toolkit includes a short description, instructions, an example, and a blank template. NOTE: Before filling out the template, first save the file on your computer. Then open and use that version of the tool. Otherwise, your changes will not be saved.

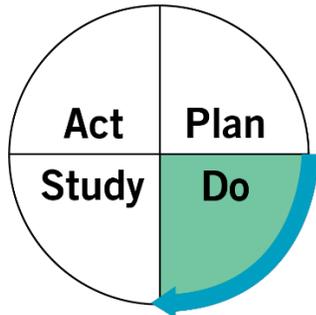
- Cause and Effect Diagram
- Driver Diagram
- Failure Modes and Effects Analysis (FMEA)
- Flowchart
- Histogram
- Pareto Chart
- **PDSA Worksheet**
- Project Planning Form
- Run Chart & Control Chart
- Scatter Diagram

Instructions



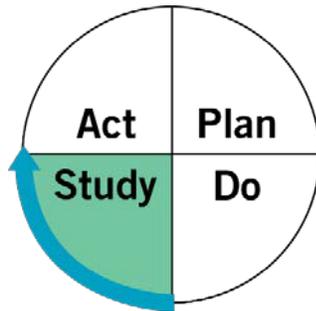
Plan: Plan the test, including a plan for collecting data.

- State the question you want to answer and make a prediction about what you think will happen.
- Develop a plan to test the change. (Who? What? When? Where?)
- Identify what data you will need to collect.



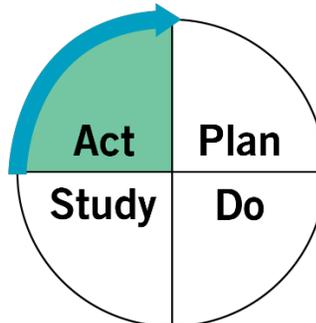
Do: Run the test on a small scale.

- Carry out the test.
- Document problems and unexpected observations.
- Collect and begin to analyze the data.



Study: Analyze the results and compare them to your predictions.

- Complete, as a team, if possible, your analysis of the data.
- Compare the data to your prediction.
- Summarize and reflect on what you learned.



Act: Based on what you learned from the test, make a plan for your next step.

- Adapt (make modifications and run another test), adopt (test the change on a larger scale), or abandon (don't do another test on this change idea).
- Prepare a plan for the next PDSA.

Example: PDSA Worksheet

Objective: Test using Teach-Back (a closed-loop communication model, in which the recipient of information repeats the information back to the speaker) with a small group of patients, in hopes of improving patients’ understanding of their care plans.



1. Plan: Plan the test, including a plan for collecting data.

Questions and predictions:

- How much more time will it take to use Teach-Back with patients? It will take more time at first (5 to 10 minutes per patient), but we will start to learn better communication skills and get more efficient.
- Will it be worthwhile? The extra time will feel worthwhile (and possibly prevent future rework).
- What will we do if the act of “teaching back” reveals a patient didn’t understand the care plan? If a patient is not able to explain his or her care plan, we will need to explain it again, perhaps in a different way.

Who, what, where, when:

On Monday, each resident will test using Teach-Back with the last patient of the day.

Plan for collecting data:

Each resident will write a brief paragraph about their experience using Teach-Back with the last patient.



2. Do: Run the test on a small scale.

Describe what happened. What data did you collect? What observations did you make?

Three residents attempted Teach-Back at the end of the day on Monday. Two residents did not find anything they needed to ask patients to Teach-Back. Jane found that her patient did not understand the medication schedule for her child. They were able to review it again and, at the end, Jane was confident the mother was going to be able to give the medication as indicated.



3. Study: Analyze the results and compare them to your predictions.

Summarize and reflect on what you learned:

- Prediction: It will take more time at first (5 to 10 minutes per patient), but we will start to learn better communication skills and get more efficient. *Result: Using Teach-Back took about 5 minutes per patient.*
- Prediction: The extra time will feel worthwhile (and possibly prevent future rework). *Result: Jane felt the time she invested in using Teach-Back significantly improved the care experience.*
- Prediction: If a patient is not able to explain his or her care plan, we will need to explain it again, perhaps in a different way. *Result: After a second review of the medication orders, the patient was able to Teach-Back the instructions successfully.*

In addition to the team confirming all three predictions, Jane realized the medication information sheets she had been handing out to parents weren't as clear as she thought. She realized these should be re-written — maybe with the input of some parents.



4. Act: Based on what you learned from the test, make a plan for your next step.

Determine what modifications you should make — adapt, adopt, or abandon:

Jane is planning to use Teach-Back any time she prescribes medication. Although it may take more time, she now understands the importance. The other residents are going to work on using Teach-Back specifically for medications for the next week.

They would like to pull together a team to work on some of the medication information sheets with parent input, but they are first going to gather more information through more interactions in the coming days.

Before filling out the template, first save the file on your computer. Then open and use that version of the tool. Otherwise, your changes will not be saved.

Template: PDSA Worksheet

Objective:



1. Plan: Plan the test, including a plan for collecting data.

Questions and predictions:

- ---

- ---

Who, what, where, when:

Plan for collecting data:



2. Do: Run the test on a small scale.

Describe what happened. What data did you collect? What observations did you make?



3. Study: Analyze the results and compare them to your predictions.

Summarize and reflect on what you learned:



4. Act: Based on what you learned from the test, make a plan for your next step.

Determine what modifications you should make – adapt, adopt, or abandon:
