



PDSA Cycle

A Quality Improvement Activity

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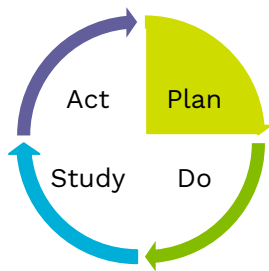
Introduction

Healthcare process improvement techniques are methodologies in which your health center can evaluate its current processes and adapt them with the intent to enhance outcomes of the patient population. The Plan-Do-Study-Act (PDSA) model is a foundational improvement tool that your Quality Improvement (QI) team can use to support rapid change cycles as part of a QI Project or your health center's QI Action Plan.

The PDSA Model

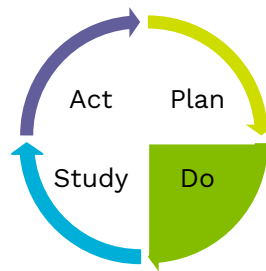
[The Institute of Healthcare Improvement \(IHI\)](#) provides guidance on the role and steps of the PDSA model used in healthcare. Running a PDSA cycle is another way of saying “testing a change” — you develop a plan to test the change (Plan), carry out the test (Do), observe, analyze, and learn from the test (Study), and determine what modifications, if any, to make for the next cycle (Act).

Conducting a PDSA Cycle According to the [IHI](#)



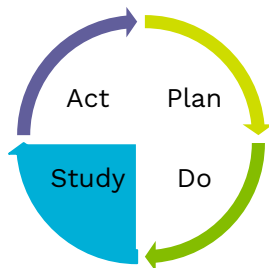
Plan: Plan the test, including how you will collect data.

- 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.



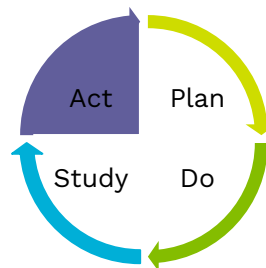
Do: Run the test on a small scale.

- 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, 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.

PDSA Considerations

Keep the following in mind when using PDSA cycles:

- **Focused Steps** — Each PDSA cycle should concentrate on one step of the PDSA cycle at a time. This will allow your QI team time to plan and evaluate each step. The team, for example, should look at the PLAN phase and think through it to create a small change that will have the largest impact. The team should determine what outcomes will be achieved and what data is needed to evaluate the PLAN.
- **Duration** — Each PDSA cycle should not stretch over a long period of time. The purpose of the PDSA is to implement simple changes, evaluate them, and then analyze what occurred. If the desired outcome is not achieved, you go back to the PLAN and begin again. One change may not resolve the challenge or need for change.
- **Sample Size** — A successful PDSA cycle will test the effect of change on a small scale. Your QI team may want to test the change in a specific department or on a subset of patients. Once the test is successful, you can broaden the scope of implementation.

Conclusion

Implementation of a QI Action Plan with specified goals can lay a foundation for a PDSA cycle. In order to meet the goals of the QI Action Plan, QI Projects may need to be considered. For example, if the QI Action Plan's goal is to increase enrollment in the National Diabetes Prevention Program (National DPP) lifestyle change program, there may be several projects that address this challenge. For example, your health center may have a project around:

- communication strategies to patients about the National DPP;
- your health center's internal referral processes; or
- screening practices to identify patients eligible for the National DPP.

The options are endless.

The PDSA is a widely used, evidence-based quality improvement tool. Providing education on the use of the PDSA tool to staff across positions throughout your health center will prove to be helpful as you create your QI team(s) and foster all levels of participation in quality improvement strategies. The use of an effective QI team with a unified vision, goals set with methods to collect data, and use of expertise to evaluate outcomes will assist your health center is successfully reaching its goals.

Resource

Click [here](#) for a template of a PDSA worksheet from the Institute of Healthcare Improvement.

ACME Health Center: PDSA Example

(This example is a simple cycle created for educational purposes.)

Objective:

Maintain enrollment of individuals participating in the National DPP lifestyle change program at ACME Health Center.

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

Questions and predictions:

ACME Health Center will allow a distance learning option for the National DPP lifestyle change program after a participant's initial enrollment in the program. ACME Health Center's information technology department will support the distance learning option through utilization of the health center's telemedicine platform. ACME Health Center predicts that a distance learning option will result in 80% retention of individuals who enroll in the program.

Who, what, where, when:

- The rate of participants will be documented in the first quarter and compared to the rate of participants at the end of each month.
- The National DPP Coordinator for ACME Health Center will track enrollee and retained individuals each month.

Plan for collecting data:

The data will be documented in an excel spreadsheet. ACME Health Center will collect data on individuals with a 'no show' appointment.

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

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

ACME Health Center offered distance learning options, facilitated through the health center's telemedicine platform, to patients who had a 'no show' appointment. The National DPP Coordinator will teach each patient with a 'no show' appointment how to use the telemedicine platform during a follow up call. The National DPP Coordinator will survey each patient with a 'no show' appointment on the reason for the missed appointment, and attempt to mitigate any barriers the individual communicated.

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

Summarize and reflect on what you learned:

The National DPP Coordinator noticed a decreased 'no show' rates with the use of the virtual visits. The National DPP Coordinator found that the individuals expressed it was easier to engage when they did not have to travel or miss work for an appointment.

The retention rate at the end of the month was 70%. While this rate was not the goal, it did increase from 50%

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

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

Based on the findings, ACME Health Center will expand the pilot to all include individuals engaged in the National DPP lifestyle change program, instead of only those with a 'no show' appointment.