Plan-Do-Study-Act: IHI Model for Improvement

The Plan-Do-Study-Act method is a way to test a change by going through four prescribed steps. It guides the thinking process into breaking down the task into steps and then evaluating the outcome, improving on it, and testing again. The IHI (Institute for Healthcare Improvement) model has two phases:

- Setting the aim, identifying measures, selecting changes
- Implementing PDSA cycles to test changes.

For more information on Plan-Do-Study-Act, go to the IHI (Institute for Healthcare Improvement) Web site. Registration is free.

Setting Aims
Quality improvement requires setting aims – stating the target.

1. State the aim clearly - include numerical goals that clarify expectations.
2. Set stretch goals—maintaining the status quo is not an option.
3. Be careful not to back away from the goal.
4. Be prepared to refocus and determine whether working on smaller changes will lead to the desired larger goal.

Establishing Measures
The next step is identifying measures to determine if an improvement happens. Be careful not to get bogged down in measurement and delay making a change.

1. Plot data over time and observe trends to identify needed improvements.
2. Remember measurement is not the goal; improvement is.
3. Develop a simple data collection form and make collecting the data part of someone’s job.
4. Identify source of qualitative and quantitative data.

Selecting Changes
Once an aim is set and measures are established, the next step is to brainstorm potential changes.

1. Get ideas for change from those who work in the system.
2. Borrow from the experience of others who have successfully improved.
3. Think about how to eliminate waste, improve process, change work flow, and manage time.
4. Identify the strongest change that the team can do quickly.
Test the Changes

Once the changes are selected, it’s time to test the change—by planning it, trying it, observing the results, and acting on what is learned. Each test provides valuable information and becomes the basis for further improvement.

1. **Plan**: State the objective of the test. Make predictions about what will happen and why. Develop a plan to test the change.

2. **Do**: Carry out the test. Document problems and unexpected observations. Begin analysis of the data.

3. **Study**: Complete the analysis of the data. Compare the data to your predictions. Summarize and reflect on what was learned.

4. **Act**: Determine what modifications should be made.

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Example:

**PDSA (plan-do-study-act) worksheet**

**Tool (Fill in the tool name you are implementing):**
*Patient feedback*

**Step (Fill in the smaller step within that tool you are trying to implement):**
*Dissemination of surveys*

**Cycle (Fill in the cycle number of this PDSA. Each time you make an adjustment and test it again, you will do another cycle):**
*1st Try*

**PLAN**

I plan to *(Write a concise statement of what you plan to do in this testing):*
*We are going to test a process of giving out satisfaction surveys and getting them filled out and back to us.*

I hope this produces *(Put a measurement or an outcome that you hope to achieve):*
*We hope to get at least 25 completed surveys per week during this campaign.*

**Steps to execute (Write the steps that you are going to take in this cycle. Include who you are working with and the time limit that you are going to do this study):**
1. *We will display the surveys at the registration desk.*
2. *The registration staff will encourage the patient to fill out a survey and put it in the box next to the surveys.*
3. *We will try this for 1 week.*

**DO**

After you have your plan, you will execute it or set it in motion.

**What did you observe? (Write down observations you have during your implementation. Include how the patients react, how the doctors react, how the nurses react, how it fit in with your system or flow of the patient visit. You will ask, ”Did everything go as planned?” “Did I have to modify the plan?”):**
*We noticed that patients often had other things to attend to at this time, like making an appointment or paying for services and did not feel they could take on another task at this time. The checkout area can get busy and backed up at times. The checkout staff often remembered to ask the patient if they would like to fill out a survey.*
STUDY
After implementation you will study the results.

What did you learn? Did you meet your measurement goal? (Record how well it worked, if you meet your goal):
We only had 8 surveys returned at the end of the week. This process did not work well.

ACT
What did you conclude from this cycle? (Write about whether this worked or not. If it did not work, what can you do differently in your next cycle to address that? If it did work, are you ready to spread it across your entire practice?)
Patients did not want to stay to fill out the survey once their visit was over. We need to give patients a way to fill out the survey when they have time. We will encourage them to fill it out when they get home and offer a stamped envelope to mail the survey back to us.
PDSA (plan-do-study-act) worksheet

TOOL:

STEP:

CYCLE:

PLAN
We plan to:

We hope this produces:

Steps to execute:

DO
What did we observe?

STUDY
What did we learn? Did we meet our measurement goal?

ACT
What did we conclude from this cycle?