

CATCH RURAL Falls

***Coordinated Action Toward
Community Health: RedUce
Risk And Limit Falls***

**Applying Plan-Do-Study-Act (PDSA)
Cycles to Improve Assessment of
Orthostatic Blood Pressure**

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Introductions and Contact Information

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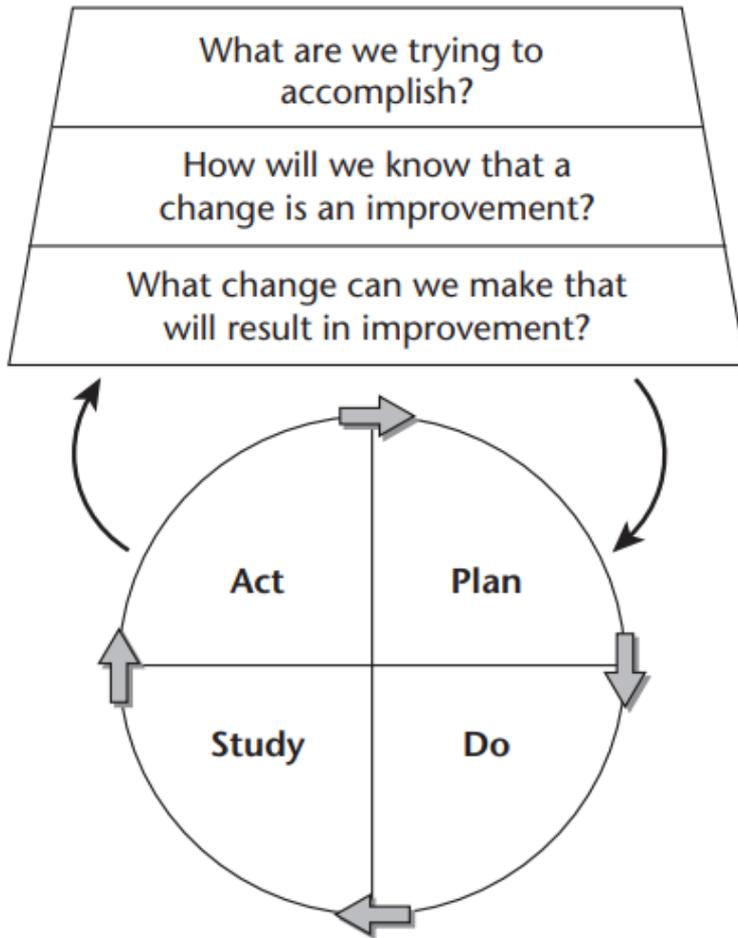


Educational Objectives

- Describe the intended purpose of Plan-Do-Study-Act (PDSA) cycles
- Describe each element of a PDSA cycle
- Apply the PDSA approach to improve assessment of orthostatic blood pressure in your clinic

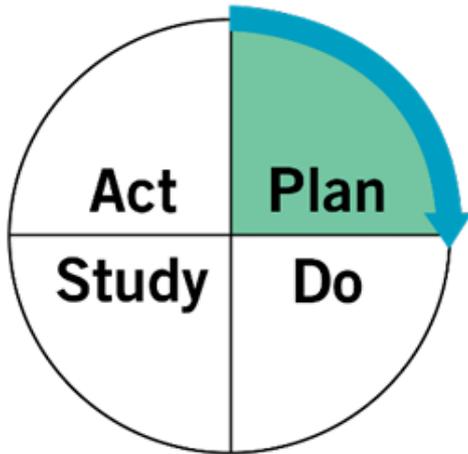


The Model for Improvement



- ✓ Provides a framework for developing, testing, implementing, and spreading changes that result in improvement
- ✓ Can be applied widely to many different types of problems and situations
- ✓ Attempts to balance careful study with action
- ✓ Emphasizes and encourages 'trial-and-learning' as an iterative process for improvement
- ✓ Allows project plans to adapt as learning occurs

“Plan”



- What question do you want to answer with this test?
- What do you think will happen? (make a prediction)
- Create a plan to test the change
- Identify the data you need to collect to help answer your question



Assessment of Orthostatic Blood Pressure Example

Question to Answer: To what extent will our clinic increase our rate of assessment of orthostatic blood pressure for adult patients ages 65 and older who screened positive for fall risk? What will staff report as facilitators and barriers to completing this assessment?

Prediction: The rate of assessment of orthostatic blood pressure will increase from 0% to 50% over the next two weeks. Staff will identify successes and barriers to assessing orthostatic blood pressure that will be addressed in the next test of change.

Plan: During the next two weeks, all patients ages 65 and older who screened positive for fall risk using the clinic's fall risk screening tool during their appointment will be offered an assessment of their orthostatic blood pressure. Medical assistants and nurses were provided with in-person training and written instructions for how to measure orthostatic blood pressure, and how to educate patients about the purpose of measuring orthostatic blood pressure. The clinic wants to trial if the process works well if the assessment begins as soon as patients are roomed since the assessment requires that patients start the process by lying down.

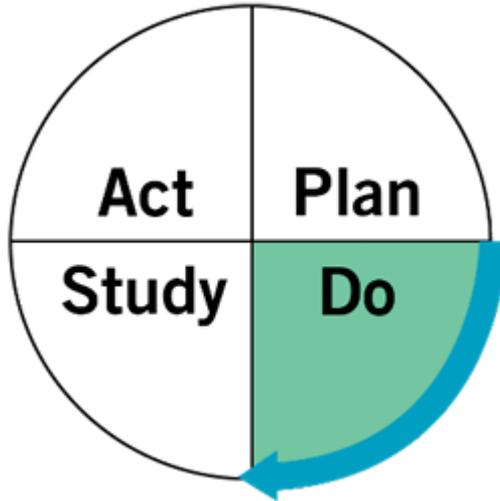
Data to collect: In order to calculate rates of assessment of orthostatic blood pressure for eligible patients, we will collect data from the medical records of all patients ages 65 and older who screened as at risk for falls during the two-week trial timeframe. We will need to determine which of those patients do and do not have orthostatic blood pressure assessment results documented in the EMR. The completion rate = those who have fully completed assessment of orthostatic blood pressure documented divided by the population of patients ages 65 and older who screened positive for fall risk. Medical assistants and nursing staff will also document their experience/observations of the current process for measuring orthostatic blood pressure in a separate document.

Checklist for Developing the Plan

- Establish the objective of the test
- Ensure key background information is available to understand the plan
- Be clear about the change(s) to be tested in this specific cycle
- Specify the question(s) to be answered
- Specify the measures that will be collected in this specific test cycle
- Generate your predictions about what will happen (related to the question(s) to be answered in this test cycle)
- Establish the test design
 - ✓ Specify the scale of the test
 - ✓ Clarify the people or things selected for this test and your sampling strategy
 - ✓ Clarify the when and where
 - ✓ Describe the test design
 - ✓ Describe the method of data analysis planned for the 'study' phase
 - ✓ Discuss the possible influential uncontrolled conditions



“Do”



- Run your test
- Collect and monitor data
- Document any successes, issues, problems, unexpected observations along the way

Assessment of Orthostatic Blood Pressure Example

- Plan is initiated. For two weeks the clinic will run a trial to offer an assessment of orthostatic blood pressure to all patients ages 65 and older who screened positive for fall risk using the clinic’s fall risk screening tool.
- Feedback is solicited from staff at the regular monthly staff meeting 1 week later. Staff anecdotally report that the process to measure orthostatic blood pressure is taking longer than expected. Sometimes it is difficult to find another staff member to help with the assessment when needed. Some patients are questioning staff about if they know what they are doing, because they are used to having their blood pressure measured only when sitting up. Two patients refused the assessment. Three patients arrived for appointments with multiple issues to discuss during their clinic visit and there was not enough time to measure their orthostatic blood pressure.
- Staff encouraged to continue to document their experience/observations.
- After the two weeks are complete, data are pulled from the medical record for analysis. The experiences/observations documented by staff are also compiled.

“Study”



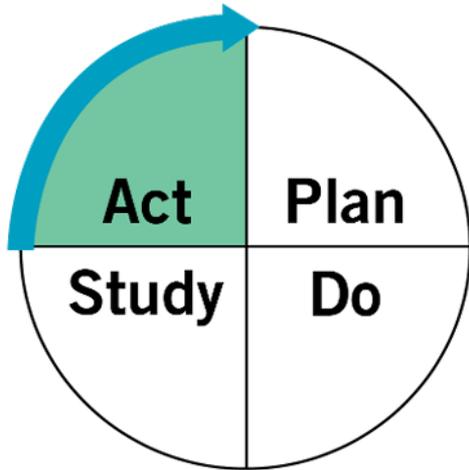
- Analyze your data for this test
- Compare your data to the prediction made for this test
- Summarize what was learned from this test



Assessment of Orthostatic Blood Pressure Example

- Analysis reveals that rate of assessment of orthostatic blood pressure increased from 0% to 35%.
- Staff meet again to discuss the improvement observed, successes and barriers, and brainstorm next steps.
- Discussion about the test of the starting the process as soon as patients are roomed (since the assessment requires that patients start by lying down) reveals the following:
 - Staff reported that it made sense to start the process as soon as patients were roomed, given the amount of time it takes to complete the assessment of orthostatic blood pressure.
 - Staff felt concerned about leaving some patients alone while they were lying down in the exam room for 5 minutes because the exam tables are rather narrow, and they were afraid some patients might fall from the table. Staff reported staying in the room for the 5-minute period, which made it difficult to complete other tasks.
 - In some cases, a second staff member was needed to help safely assist a patient from the standing to lying position, and vice versa, and to provide support during the measurement of orthostatic blood pressure. The primary challenge with this was that it took time to both find and wait for another available staff member to support the assessment.
 - In addition to reflections on the process, staff wanted to revise the patient education materials and process to help them better explain orthostatic blood pressure and the process to measure it.

“Act”



- Decide to:
 - Adapt – modify and run another test
 - Adopt – test the change on a larger scale
 - Abandon – do not run another test on this change
- Create a plan for the next PDSA cycle

Assessment of Orthostatic Blood Pressure Example

Adaptations/Plan moving forward:

- Given the length of time it takes to assess orthostatic blood pressure, the clinic decided to continue with starting the process as soon as patients were roomed.
- To ensure patient safety, staff decided they will trial remaining in the room for the entirety of the time in which patients must lie down. During that time, staff will gather any additional patient intake information relevant to the patient’s visit to streamline the appointment.
- Two staff members plan to revisit their patient education process and materials and will evaluate these in a future test cycle.



Rapid Cycle PDSA Testing: Fall Risk Screening Example

Cycle	Plan	Do	Study	Act
1	Educate MAs and RNs to administer measurement of orthostatic blood pressure and associated patient education for patients ages 65 and older who screen positive for fall risk.	For 2 weeks, all patients ages 65 and older who screen positive for fall risk during their visit will be offered an assessment of their orthostatic blood pressure upon rooming.	Examine rate of assessment of orthostatic blood pressure for eligible patients. Ask staff about process and explore reasons behind successes and barriers.	Keep process. Staff will stay in room through duration of assessment for safety purposes.
2	Staff will stay in room through duration of assessment of orthostatic blood pressure and gather any additional patient intake information relevant to the appointment while the patient is lying down.	For another 2 weeks, all patients ages 65 and older who screen positive for fall risk during their visit will be offered an assessment of their orthostatic blood pressure upon rooming. Staff will remain in room and collect additional information during that time.	Compare desired to actual rate of assessment of orthostatic blood pressure for eligible patients. Patients seem confused about the process of measuring orthostatic blood pressure and the time it takes to do so.	Revise patient education materials and process for delivering this education to patients.
3	Educate MAs and RNs on new patient education materials and process for measurement of orthostatic blood pressure.			

PDSA Self-Assessment



- ✓ PDSA cycles are rarely intended to be a 'one-and-done' situation
- ✓ Start with small scale tests of change with a series of follow-up tests before making changes on a larger scale
- ✓ Use a variety of measures to evaluate the changes and their implementation
- ✓ Identify and address implementation barriers
- ✓ Refinement is expected – this is 'trial-by-learning' for improvement



Summary: Review of Objectives

- The Model for Improvement and PDSA cycles are useful tools to guide efforts to improve assessment of orthostatic blood pressure
- Create a clear, focused plan for a small test of change to help you get started
- Be clear on what question(s) you are trying to answer to help inform the data you need to collect in each test of change
- Remember this is an iterative process to support change over time



Model for Improvement Resources

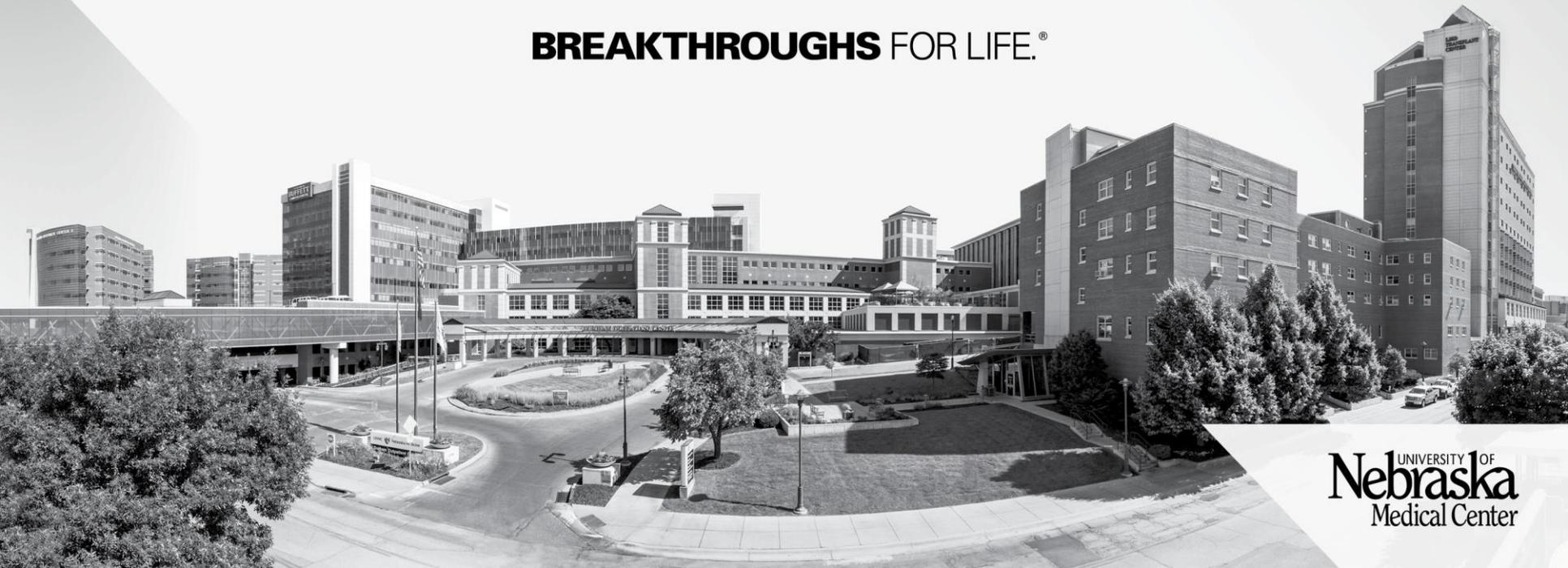
- Institute for Healthcare Improvement. QI Essentials Toolkit: PDSA Worksheet.
<https://www.ihp.org/resources/tools/plan-do-study-act-pdsa-worksheet>





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