NCC Pediatrics Continuity Clinic Curriculum:
PI-Meeting 6 & Case-Day

Pre-Meeting Preparation:

- Review your group's Cycle 1 Presentation
  - *Located in the Pediatric Folder, under "RESIDENT PI Projects"*
- Review PDSA Cycle Powerpoint
- Brainstorm for PDCA-Cycle 2. Complete "Plan" section of the worksheet.
- Select one of your continuity patients to present for Case-Day.

Conference Agenda:

- Compare group members' "Plan" sections. Come to a consensus and develop a timeline with assigned tasks. **Remember, the goal is to have a completed, analyzed PDCA-Cycle 2 by May 29.**
- *Time permitting,* discuss resident and/or staff cases.

Post-Conference Agenda:

- Enact the timeline developed during conference. Plan to touch base either at continuity meetings or via email to ensure that your group is meeting its goals.

Dates	Event
Week Aug 15	*PI Project Overview*
Week Sept 26	*PI Team Meeting*
Oct 7	**PI Proposal Presentation @ Morning Report**
Week Oct 31	*PI Team Meeting*
Week Dec 12	*PI Team Meeting*
Week Jan 23	*PI Team Meeting*
Feb 3	**PDCA Cycle 1 Presentation @ Morning Report**
Week Mar 5	**PI Team Meeting**
Week Apr 9	PI Team Meeting
Week May 21	PI Team Meeting
May 29	**PDCA Cycle 2 Presentation @ Morning Report**

The PDSA Cycle
Testing and Implementing Changes

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Model for Improvement

What are we trying to accomplish?

How will we know that a change is an improvement?
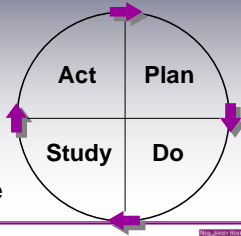
What change can we make that will result in improvement?

Act | Plan

Study | Do
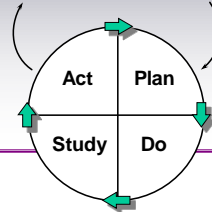
From:: Associates in Process Improvement

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The PDSA Cycle
Four Steps: Plan, Do, Study, Act

Also known as:

• Shewhart Cycle

• Deming Cycle

• Learning and Improvement Cycle
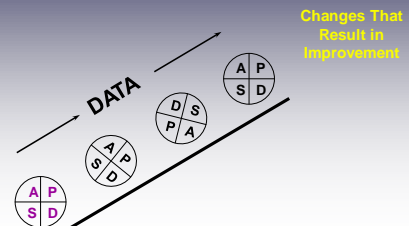
Act | Plan

Study | Do

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Use the PDSA Cycle for :

▪ **Testing or adapting a change idea**

▪ **Implementing a change**

▪ **Spreading the changes to the rest of your system**
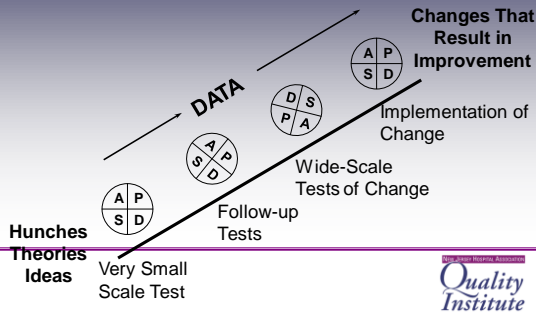
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Why Test?

• **Increase the belief that the change will result in improvement**

• **Predict how much improvement can be expected from the change**

• **Learn how to adapt the change to conditions in the local environment**

• **Evaluate costs and side-effects of the change**
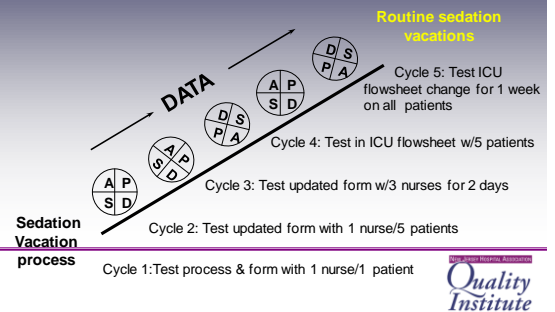
• **Minimize resistance upon implementation**

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Repeated Use of the Cycle

Changes That Result in Improvement

DATA

A P / S D

D S / P A

A P / S D

A P / S D

Hunches Theories Ideas

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Repeated Use of the PDSA Cycle

DATA

Changes That Result in Improvement

Implementation of Change

Wide-Scale Tests of Change

Follow-up Tests

Very Small Scale Test

Hunches Theories Ideas

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PDSA Example: Sedation Vacation

DATA

Routine sedation vacations

Cycle 5: Test ICU flowsheet change for 1 week on all patients

Cycle 4: Test in ICU flowsheet w/5 patients

Cycle 3: Test updated form w/3 nurses for 2 days

Cycle 2: Test updated form with 1 nurse/5 patients

Sedation Vacation process

Cycle 1: Test process & form with 1 nurse/1 patient

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Successful Cycles to Test Changes

- Plan multiple cycles for a test of a change
- Think a couple of cycles ahead
- Scale down size of test (# of patients, location)
- Test with volunteers
- Do not try to get buy-in, consensus, etc.
- Be innovative to make test feasible
- Collect useful data during each test
- Test over a wide range of conditions
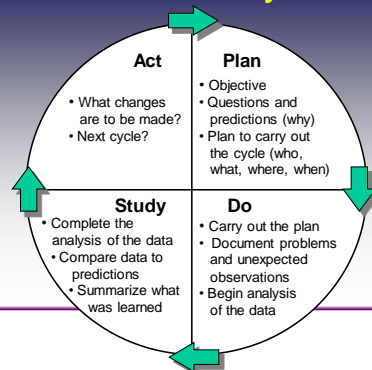
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Testing on a Small Scale

- Have others that have some knowledge about the change review and comment on its feasibility
- Test the change on the members of the team that helped develop it before introducing the change to others
- Incorporate redundancy in the test by making the change side-by-side with the existing system

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Testing on a Small Scale

- Conduct the test in one facility or office in the organization, or with one patient
- Conduct the test over a short time period
- Test the change on a small group of volunteers
- Develop a plan to simulate the change in some way

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The PDSA Cycle

Act
- What changes are to be made?
- Next cycle?

Plan
- Objective
- Questions and predictions (why)
- Plan to carry out the cycle (who, what, where, when)

Study
- Complete the analysis of the data
- Compare data to predictions
- Summarize what was learned

Do
- Carry out the plan
- Document problems and unexpected observations
- Begin analysis of the data

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Slide 1

MODEL FOR IMPROVEMENT CYCLE:____ DATE:____

Objective for this PDSA Cycle

A | P
S | D

PLAN:
QUESTIONS:

PREDICTIONS:

PLAN FOR CHANGE OR TEST: WHO, WHAT, WHEN, WHERE

PLAN FOR COLLECTION OF DATA: WHO, WHAT, WHEN, WHERE

DO: CARRY OUT THE CHANGE OR TEST; COLLECT DATA AND BEGIN ANALYSIS.

STUDY: COMPLETE ANALYSIS OF DATA; SUMMARIZE WHAT WAS LEARNED.

ACT: ARE WE READY TO MAKE A CHANGE? PLAN FOR THE NEXT CYCLE.
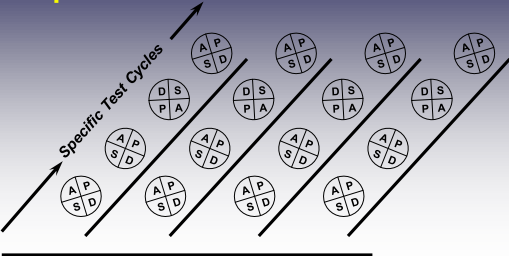
Form for planning a PDSA cycle

Slide 2

Do ⟶ Study

- **Reasons for failed tests**
  - 1. **Change not executed well**
  - 2. **Support processes inadequate**
  - 3. **Hypothesis/hunch wrong:**
    - Change executed but did not result in local improvement
    - Local improvement did not impact access or efficiency
- **Collect data during the Do Phase of the Cycle to help differentiate these situations.**

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Slide 3

Overall Goal: Reduce Ventilator Complications

Specific Test Cycles

HOB 30 degrees   PUD prohylaxis   DVT prophylaxis   Sedation vacation

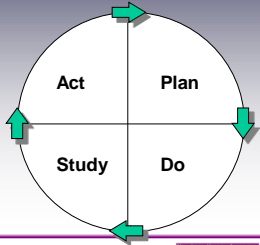*Quality Institute*

Slide 4

Measurement and Data Collection During PDSA Cycles

- **Collect useful data, not perfect data - the purpose of the data is learning, not evaluation**
- **Use a pencil and paper until the information system is ready**
- **Use sampling as part of the plan to collect the data**
- **Use qualitative data rather than wait for quantitative**
- **Record what went wrong during the data collection**

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Slide 5

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Slide 6
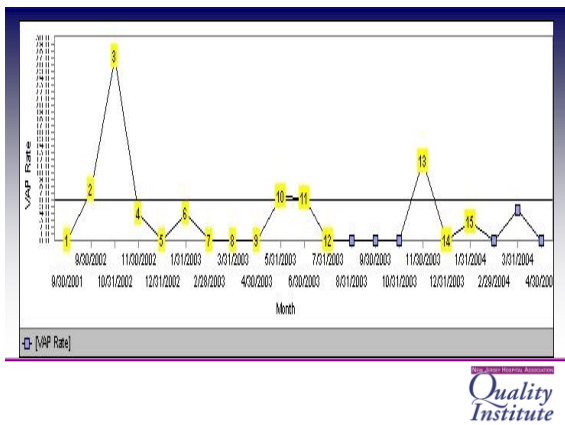
Accelerating Learning and Improvement

- *What cycle can we complete by next Tuesday?*
- **Willing to compromise on scope, size, rigor, and sophistication, but the cycle must be completed by Tuesday.**

Act | Plan
Study | Do

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FOCUS P-D-C-A
Performance Improvement Model to Identify and Solve Problems and Processes

The FOCUS phase
helps to narrow the team's attention to a discrete opportunity for improvement.

|		
F	**FIND**	*Find a process that needs improvement.* Define the process and its customers. Decide who will benefit from the improvement. Understanding how the process fits within the hospital's system and priorities.
O	**ORGANIZE**	*Select a team who is knowledgeable in the process.* Determine team size, members who represent various levels in the organization, select members, and prepare to document their progress.
C	**CLARIFY**	*Clarify the current knowledge of the process.* Define the process <u>as it is</u> and <u>as it should be</u>. Team reviews current knowledge and then must understand the process to be able to analyze it and differentiate the way it actually works and they way it is meant to work.
U	**UNDERSTAND**	*Understand the causes of variation.* Team will measure the process and learn the causes of variation. They will then formulate a plan to data collection, collecting the data, using the information to establish specific, measurable, and controllable variations.
S	**SELECT**	*Select the potential process improvement.* Determine the action that needs to be taken to improve the process (must be supported by <u>documented evidence</u>.)

The P-D-C-A phase allows the team to pursue that opportunity and review its outcome.

P	**PLAN**	*Plan the improvement/data collection.* Plan the change by studying the process, deciding what could improve it, and identifying data to help.
D	**DO**	*Do the improvement/data collection/data analysis.* Execute the plan on a small scale or by simulation.
C	**CHECK**	*Check the data for process improvement.* Observe the results of the change. Document the results of the change. Modify the change, if necessary and possible.
A	**ACT**	*Act to hold the gain/continue improvement.* Implement the change if it is working. If it fails, abandon the plan and repeat the cycle.

MODEL FOR IMPROVEMENT
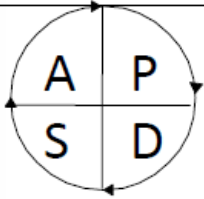
Cycle:_____
Date:_____

Objective for this PDSA Cycle:

PLAN:

QUESTIONS:

PREDICTIONS:

PLAN FOR CHANGE OR TEST: WHO, WHAT, WHEN, WHERE:

PLAN FOR COLLECTION OF DATA: WHO, WHAT, WHEN, WHERE:

DO: CARRY OUT THE CHANGE OR TEST; COLLECT DATA

STUDY: COMPLETE ANALYSIS OF DATA (qualitative and quantitative); SUMMARIZE WHAT WAS LEARNED.

ACT: DOCUMENT WHAT YOU LEARNED. ARE YOU CONFIDENT THAT YOU SHOULD EXPAND SIZE/SCOPE OF TEST?

Continuity Clinic Case Day

Select an interesting or challenging patient to discuss with your continuity group. Solicit feedback and guidance regarding your management.

1. Who is your patient? (Give a one-liner)

2. How long have you been following him/her?

3. What are the major issues you've been addressing? Medical? Psychosocial?

4. What questions do you have about your patient? Diagnoses? Treatment?

5. What are you plans for following-up with your patient?

6. *How have you applied the previous modules to your patient(s)?*