



NCC Pediatrics Continuity Clinic Curriculum: Process Improvement—Meeting 1

Overall Goals:

ACGME Competency: Practice Based Learning & Improvement:

“Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and continuously improve patient care based on constant self-evaluation and life-long learning.”

American Board of Pediatrics: Requirement for Maintenance of Certification:

“To maintain board certification, diplomates must participate in an ABP certified (i.e. meets ABP standards for methodological rigor and successful improvement) quality improvement activity for MOC (maintenance of certification).”

Overall Objectives:

- Residents will work within their assigned continuity groups (5) to design and implement a quality improvement/process improvement (QI/PI) project focusing on some aspect of their practice— in the outpatient, inpatient, or community setting.
- Residents will learn the FOCUS-PDCA process and use this model as a guide for developing their projects. They will also appreciate the importance of QI/PI to their future practice.

Overall Timeline:

<u>Week Of</u>	<u>Event</u>
Aug 15	PI Project Overview
Sept 26	PI Team Meeting
Oct 3	PI Proposal Presentation @ Morning Report
Oct 31	PI Team Meeting
Dec 12	PI Team Meeting
Jan 23	PI Team Meeting
Jan 30	PDCA Cycle 1 Presentation @ Morning Report
Mar 5	PI Team Meeting
Apr 9	PI Team Meeting
May 21	PI Team Meeting
May 28	PDCA Cycle 2 Presentation @ Morning Report

** Note to PGY2-3s and Faculty Preceptors, this year we will be encouraging at least TWO Plan-Do-Check-Act (PDCA) Cycles, with TWO corresponding presentations at Morning Report. The intent is to achieve more complete and comprehensive projects by the end of the academic year, with more opportunities for enduring improvements within our department.*



NCC Pediatrics Continuity Clinic Curriculum: **Process Improvement—Meeting 1**

Pre-Meeting Preparation:

- Review Continuity Groups & 2010-2011 Projects (*below*)
- Read FOCUS-PDCA Table & PDSA Cycle PowerPoint
- Review [“Neobili Screening”](#) , as an example of a residency PI Project
- **Brainstorm 3 potential PI Project ideas. Include at least 1 inpatient idea.**

Conference Agenda:

- Review Pre-Meeting Prep Materials
- **Round-Table Discussion of PI Project ideas.**
- As a group, complete the FOCUS-PDCA worksheet and the PLAN section of the “Model for Improvement” worksheet for 1-2 of your “best” ideas.

Post-Conference Agenda:

- Nominate a continuity group “secretary” to email all group members—including those not present this week—to summarize project ideas.
- Plan ahead for the next Team Meeting (26 Sept) and Proposal Presentation (3 Oct). **The Proposal Presentations will be 5 min/group and structured according to “FOCUS” portion of the acronym.**

Extra Credit:

- Review [“Vision Screening”](#) as an additional example of a residency PI Project (*not in FOCUS-PDCA format, however*).
- Read [“Physicians as Leaders in the Improvement of Health Care Systems”](#) (Annals of Internal Medicine, 1998)
- Read [“Teaching Quality Improvement: The Devil is in the Details”](#) (JAMA, 2007)

2011-2012 Continuity Groups

Monday	Tuesday	Wednesday	Thursday	Friday
Lindsey Vasta Bay Wagner Ghanjanasak Stering Seide	Slocum Sigmon Pavey Royall Lozada Cunningham, B Cunningham, M	Thompson Schuldt Wilson Alexander Zuber Lorkowski Steele	Klein Senozan Torres Hajiaghamohseni Carter McElveen Paz Garcia	Weeks Gupta Hiraldo-Delgado Jaskiewicz McDonnell Choi Adams Costa
<i>Anderson</i> Gordon Gorman Merker/Pitchford Serwer	Foxx Powell Stokes Vogt	Hepps Higginson Labow	Cooper Hawley Kimball-Eayrs	<i>Anderson</i> Carr Coll Lopreiato Melzer

2010-2011 Continuity Projects

Anticipatory Guidance (Mon WR)
 Universal Anemia Screening (Tues WR)
 Outpt Asthma Management (Thurs WR)
 Flu Shot Compliance (Fri WR)

Well-Baby Visit Compliance (Mon Navy)
 Neobili Screening (Tues Navy)
 Stethoscope Cleanliness (Fri Navy)

2009-2010 Continuity Projects

EFMP Knowledge (WR Mon)
 Dental Health (WR Tues)
 CAM Usage in NCC (WR Thurs)
 Flu Vaccine Compliance (WR Fri)

Vaccine Clinic Location (Navy Mon)
 Visual Acuity Screening (Navy Tues)
 Newborn Stooling Patterns (Navy Fri)

2008-2009 Continuity Projects

Electronic Growth Charts (WR Mon)
 Obesity Recognition (WR Tues)
 Vaccine Compliance (WR Thurs)
 Military Family Issues (WR Fri)

Autism Screening (Navy Mon)
 Asthma Education (Navy Tues)
 Vitamin D supplementation (Navy Fri)

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	<i>Find a process that needs improvement.</i> 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	<i>Select a team who is knowledgeable in the process.</i> Determine team size, members who represent various levels in the organization, select members, and prepare to document their progress.
C	CLARIFY	<i>Clarify the current knowledge of the process.</i> 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 the way it is meant to work.
U	UNDERSTAND	<i>Understand the causes of variation.</i> 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	<i>Select the potential process improvement.</i> 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	<i>Plan the improvement/data collection.</i> Plan the change by studying the process, deciding what could improve it, and identifying data to help.
D	DO	<i>Do the improvement/data collection/data analysis.</i> Execute the plan on a small scale or by simulation.
C	CHECK	<i>Check the data for process improvement.</i> Observe the results of the change. Document the results of the change. Modify the change, if necessary and possible.
A	ACT	<i>Act to hold the gain/continue improvement.</i> Implement the change if it is working. If it fails, abandon the plan and repeat the cycle.

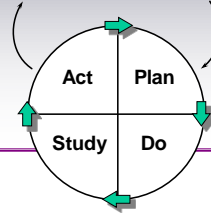
The PDSA Cycle Testing and Implementing Changes

Model for Improvement

What are we trying to accomplish?

How will we know that a change is an improvement?

What changes can we make that will result in improvement?

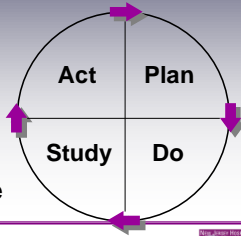


From: Associates in Process Improvement

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

Also known as:

- Shewhart Cycle
- Deming Cycle
- Learning and Improvement Cycle



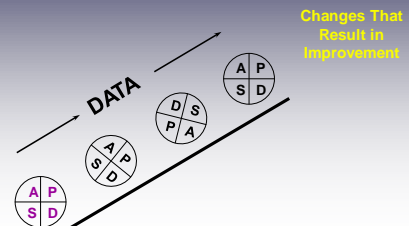
Use the PDSA Cycle for :

- Testing or adapting a change idea
- Implementing a change
- Spreading the changes to the rest of your system

Why Test?

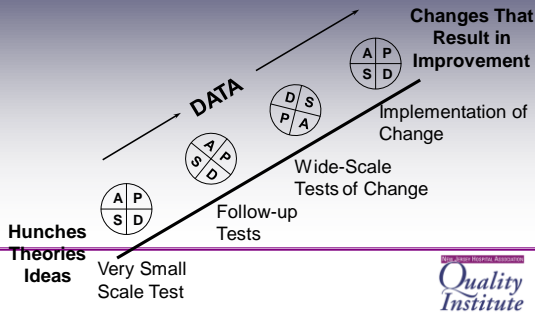
- Increase the belief that the change will result in improvement
- Predict how much improvement can be expected from the change
- Learn how to adapt the change to conditions in the local environment
- Evaluate costs and side-effects of the change
- Minimize resistance upon implementation

Repeated Use of the Cycle

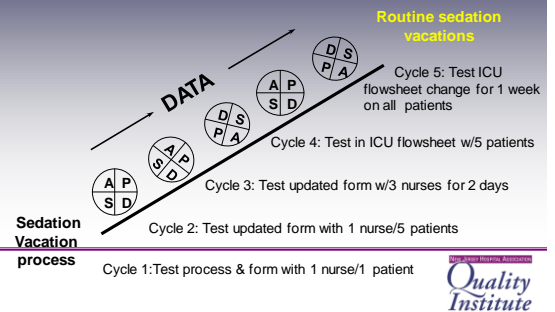


Hunches
Theories
Ideas

Repeated Use of the PDSA Cycle



PDSA Example: Sedation Vacation



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

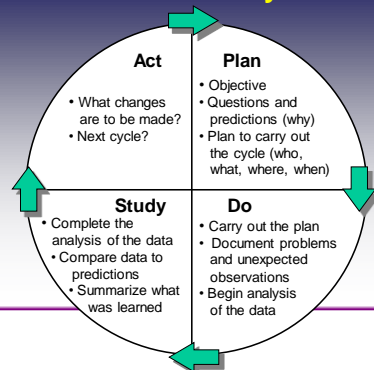
Testing on a Small Scale

- 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

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

The PDSA 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 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



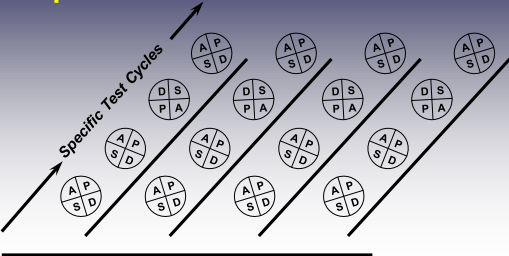
Do — Study

- Reasons for failed tests
 - Change not executed well
 - Support processes inadequate
 - 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.




Overall Goal: Reduce Ventilator Complications

Specific Test Cycles


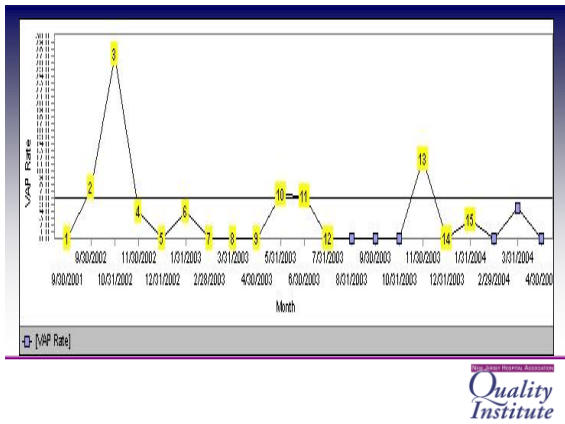


HOB 30 degrees PUD prophylaxis DVT prophylaxis Sedation vacation



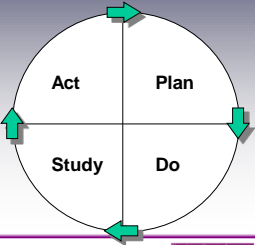

Measurement and Data Collection During PDSA Cycles

- 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

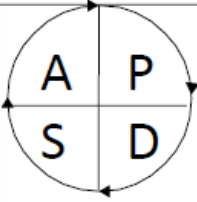



Accelerating Learning and Improvement

- 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.

Example of PDSA Worksheet:

MODEL FOR IMPROVEMENT		Cycle: #1 Date: 11.30.07
	Objective for this PDSA Cycle: Test reducing backlog by adding 2 extra slots per clinic session for non-urgent requests (Preventive care, F/Us)	
PLAN:		
QUESTIONS: Will 2 extra patients per session be too stressful or disruptive for clinicians and staff? Will patients calling today for non-urgent appointments take these slots?		
PREDICTIONS: Will not be overly taxing for clinicians and staff. Can easily fill these slots with patients calling today.		
PLAN FOR CHANGE OR TEST: WHO, WHAT, WHEN, WHERE: Next 2 days, schedulers will add 2 extra slots per session for Dr. Bundy. Megan will contact schedulers about adding extra patients at 10am, 11am, 2pm, and 3pm. Team will review results in 3 days.		
PLAN FOR COLLECTION OF DATA: WHO, WHAT, WHEN, WHERE: Megan will check with schedulers and ask how easy it was to fill slots and if any went unfilled. She will also ask Dr. B and his nurse, Amanda, about how the change affected their workflow, wait times, and quitting times.		
DO:	CARRY OUT THE CHANGE OR TEST; COLLECT DATA ➤ Completed on 6/9 and 6/10.	
STUDY:	COMPLETE ANALYSIS OF DATA (qualitative and quantitative); SUMMARIZE WHAT WAS LEARNED. ➤ ¾ of schedulers (one forgot on 6/9) offered the extra slots each day, but half of slots went unfilled; schedulers found that many patients were surprised and not prepared to come in that day. Dr. B and Amanda did not note any changes in waiting or quitting times; however, not as many patients added as planned.	
ACT:	DOCUMENT WHAT YOU LEARNED. ARE YOU CONFIDENT THAT YOU SHOULD EXPAND SIZE/SCOPE OF TEST? ➤ Repeat cycle 5 more days as above, but ask schedulers to offer appointments both today, and if not possible, in one of these extra slots anytime in next 5 days. Also will post reminders above schedulers' phones on these 5 days.	

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P **PLAN**

D **DO**

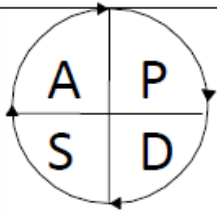
C **CHECK**

A **ACT**

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?