Quality Improvement Community of Learning

The How: Using PDSA Cycles to Learn and Improve

June 12, 2023

3-4 PM ET

AIM

ALLIANCE FOR INNOVATION ON MATERNAL HEALTH

NICHQ

National Institute for Children's Health Quality

JAT

Welcome!

Thank you for joining the call! We will get start at top of the hour

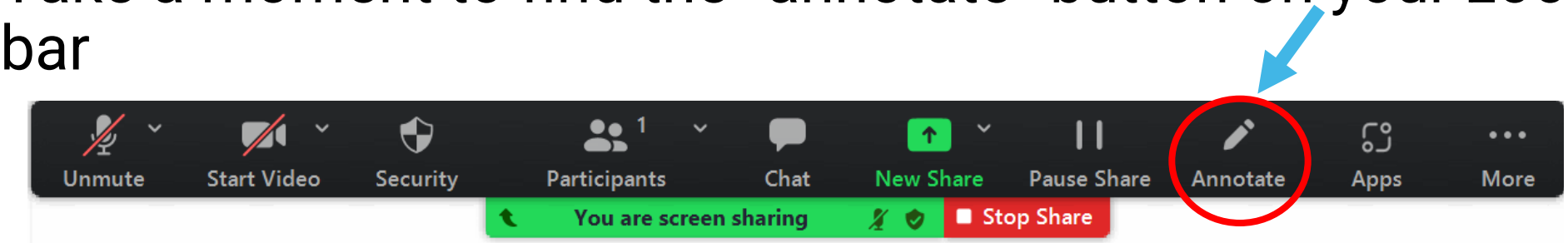
You are muted upon entry to the call; please unmute yourself to talk - we want to hear from you!

We encourage you to listen, ask hard question, share information, speak your truth.

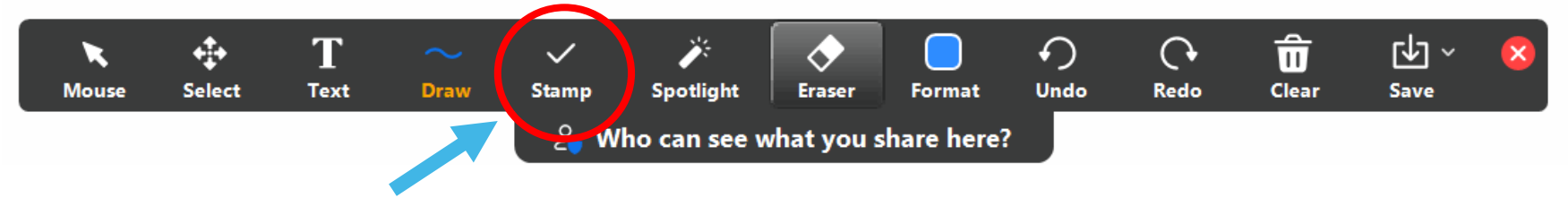
This presentation will be recorded

Tell us where you're from!

- Take a moment to find the "annotate" button on your zoom tool bar



- Now, locate the "stamp" feature



- Pick your favorite stamp and let us know where you're joining from!


Washington
Oregon
California
Idaho
Nevada
Montana
Wyoming
Utah
Arizona
Colorado
New Mexico
North Dakota
South Dakota
Nebraska
Kansas
Oklahoma
Texas
Minnesota
Iowa
Missouri
Arkansas
Louisiana
Wisconsin
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Kentucky
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Mississippi
Alabama
Georgia
Florida
South Carolina
North Carolina
Virginia
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New York
Maryland
Washington, DC
Delaware
New Jersey
Connecticut
Rhode Island
Massachusetts
Vermont
New Hampshire
Maine
Alaska
Hawaii

The NICHQ Team

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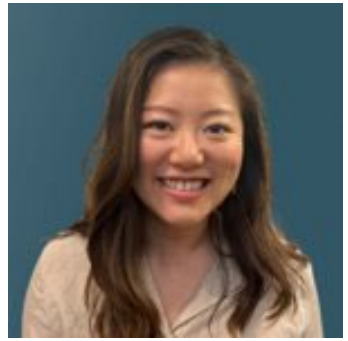

Rinka Murakami, MPH
Analyst, Applied Research & Evaluation

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Improvement Advisor

Jane Taylor, EdD
Improvement Advisor

The faculty have nothing to disclose.

Objectives of the QI Workshop Series

Offer an introduction to quality improvement basics for those new to quality improvement (QI)

- Laying a foundation for learning and improving
- Developing improvement capability for your PQC, and other state or hospital-based teams
- Applying QI principles to your existing projects

What to Expect from this QI Basics Learning Series

- Four Workshops: 2 more session remaining
- Pre-work assignments for next workshop for action learning
- Targeted Coaching and Assistance in office hour calls

Discussion Questions

As we move through the workshop today consider discussing

- How might you and your teams use PDSA to learn how to adapt aim change package ideas to any hospital setting?
- How to suggest testing small and taking “baby steps” as an approach to change management
- The value of testing and learning prior to implementing changes

QI Community of Learning Overview

Session Title	Date and Time
Quality Improvement: What and Why? Foundations of Improvement	Thursday, May 25th 2023 3:00 – 4:00 PM ET
Activating the How Using PDSA Cycles to Learn and Improve	Monday, June 12th 2023 3:00 – 4:00 PM ET
Measurement for Improvement Collecting, Displaying, and Analyzing Data for Learning and Improvement	Monday, July 10th 3:00 – 4:00 PM ET
Holding the Gains Sustaining Improvement and Cohort Learning	Monday, August 21st 3:00 – 4:00 PM ET

Be sure to add all webinars to your calendar if you have not already done so!

Agenda for Session 2

- Welcome
- Review Aim Statement Exercise
- Using Plan Do Study Act Cycles for Learning and Improvement Leaving in action
- Q & A

Submitted Aim Statements

Sophie Silverstone
Ella Rusnacko
Leah Sanchez
Nichole Logan
Susan Dimitrijevic
Melissa Warde
Amy Walker
Sara Stubben
Staci Bohling
Sarah Henry

Aim Statement Samples

Increase the number of Massachusetts hospitals with a comprehensive and trauma informed policy for implementing Medications for Opioid Use Disorder to stabilize pregnant and postpartum patients with OUD (Opioid Use Disorder) by 10% by 5/2024.

By 12/2024, have 80% of providers and nurses attend a Respectful Maternity Care Training since 01/2023

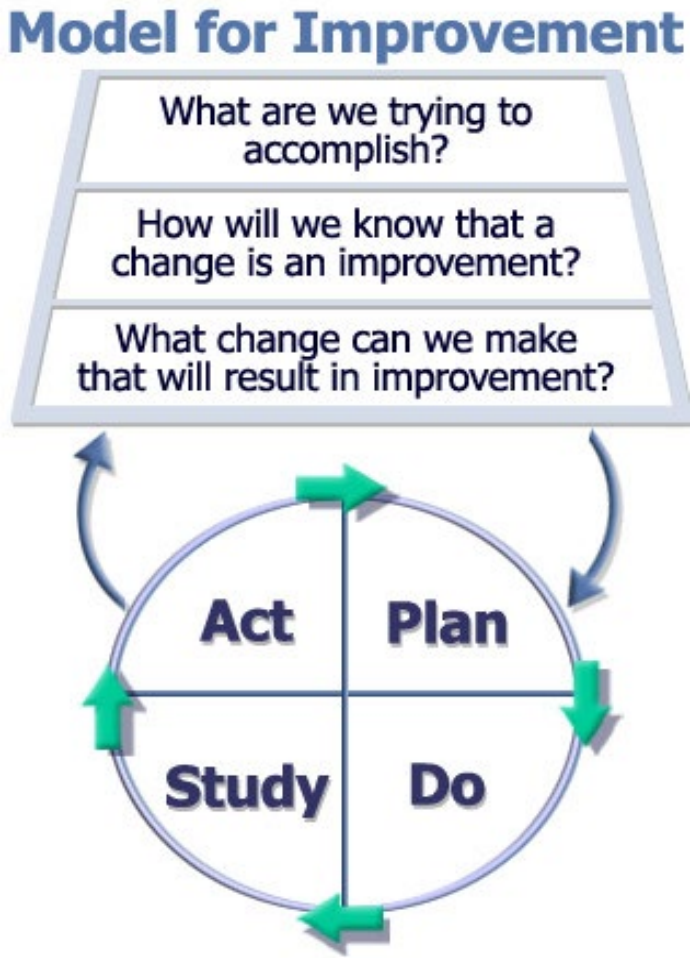
By June of 2024, 25% of licensed childcare providers in Dakota County will be trained in a nutrition education curriculum.

By December 2023, participating Emergency Departments will improve the identification of pregnant and postpartum patients by 90 percent upon arrival to the Emergency Department and improve hypertension and preeclampsia assessments by 75% on pregnant and postpartum patients.

Photo by Jamie Street on Unsplash

What, by when, for whom, how much improvement?

Execute and Accelerate Improvement



Source: Langley, et al, The Improvement Guide, 2009

Cycle of Learning and Improvement
Rapid Testing/ Think BIG but Start SMALL

Welcome – 5 minutes

- We will form small groups.
- Please think back to a time when you experienced a change that made things better.
- Share your example with others.

Where do we get change ideas for improvement?

1. Literature: evidence-based changes, for example the aim bundle change packages
2. Experience of experts
3. Staff experience
4. Lived experience
5. Observation
6. Analogous observation
7. Generic change concepts

A Great Resource of Change Ideas: Aim Bundle Change Packages

What is a Change Package?

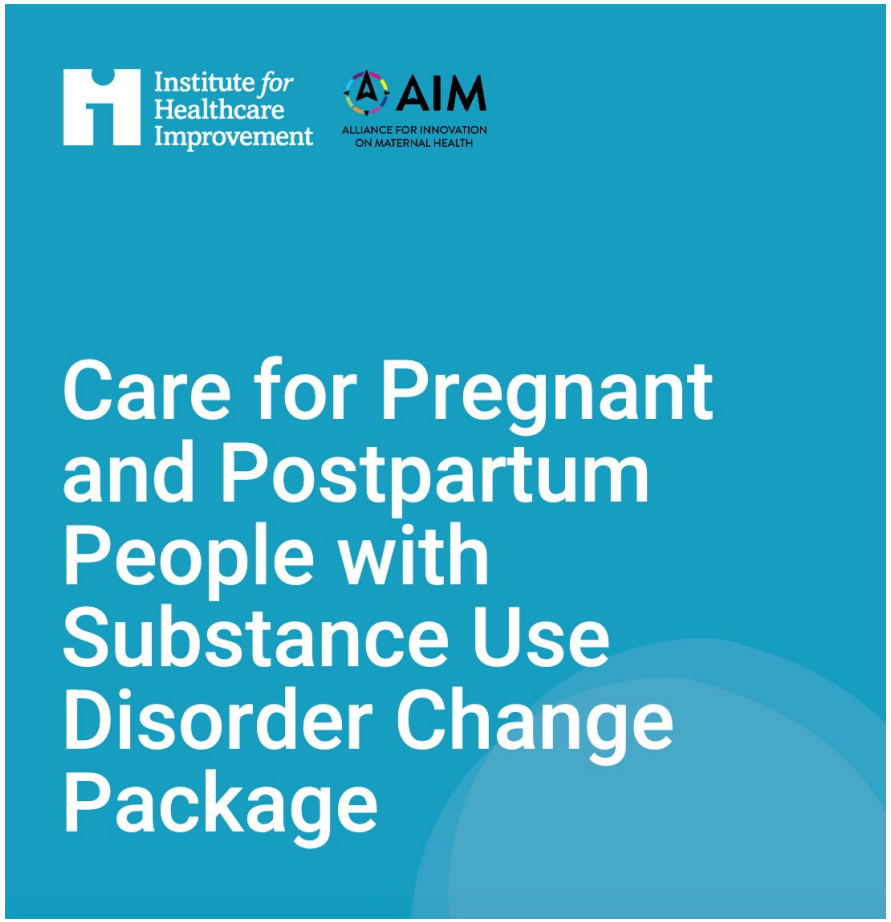
- The set of changes that get results
- List of essential changes needed to get the results
  - Ideas with a “pedigree”—either evidence in the literature or from credible expert opinion

"A change package is an evidence-based set of changes that are critical to the improvement of an identified process. "

Source: Improving Chronic Illness Care

It helps teams be able to learn faster!

Aim Collaboration with IHI for Change Packages: One Example - SUD



37 pages

Readiness

Every Unit/Team

Change Concept	Change Idea	Key Resources and Tools
Provide education to pregnant and postpartum people related to substance use disorder (SUD), naloxone use, harm reduction strategies, and care of infants with in-utero substance exposure	Develop education materials for pregnant and postpartum people that are culturally relevant and translated into most common languages spoken by population served ◊ *Have folders pre-filled with culturally appropriate education materials and referral resources* * ◊	Substance Abuse and Mental Health Services Administration (SAMHSA): Clinical Guidance for Treating Pregnant and Parenting Women With Opioid Use Disorder and Their Infants[7] Academy of Perinatal Harm Reduction (APHR): Free Resources[8] The Center on Parenting and Opioids: Substance Use and Recovery in Pregnancy and Early Parenting[9] Example Instructions Before Getting Started on Buprenorphine (included in Appendix B)
	Create educational videos, to play in waiting rooms, that describe a spectrum of options (treatment, harm reduction) and how to access them *Use subtitles/closed captioning for all video content* * ◊	
	If available, engage community health workers in providing educational information and treatment options	Behavioral Health Leadership Institute: Community Health Worker Toolkit (pg. 44-45)[10]
	Reliably use interpreter services at all points of care ◊	U.S. Department of Health & Human Services (HSS): National Culturally and Linguistically Appropriate Services (CLAS) Standards[11]

Institute for Healthcare Improvement | AIM ALLIANCE FOR INNOVATION ON MATERNAL HEALTH

Buprenorphine/Naloxone Initiation in Pregnancy

Example policy and procedure adapted from Dartmouth Health

I. Purpose of Procedure: To standardize buprenorphine/naloxone initiation during pregnancy.

II. Procedure Scope: Providers and RNs caring for pregnant women on the Inpatient Obstetric Unit and OB/GYN Clinic at [names]

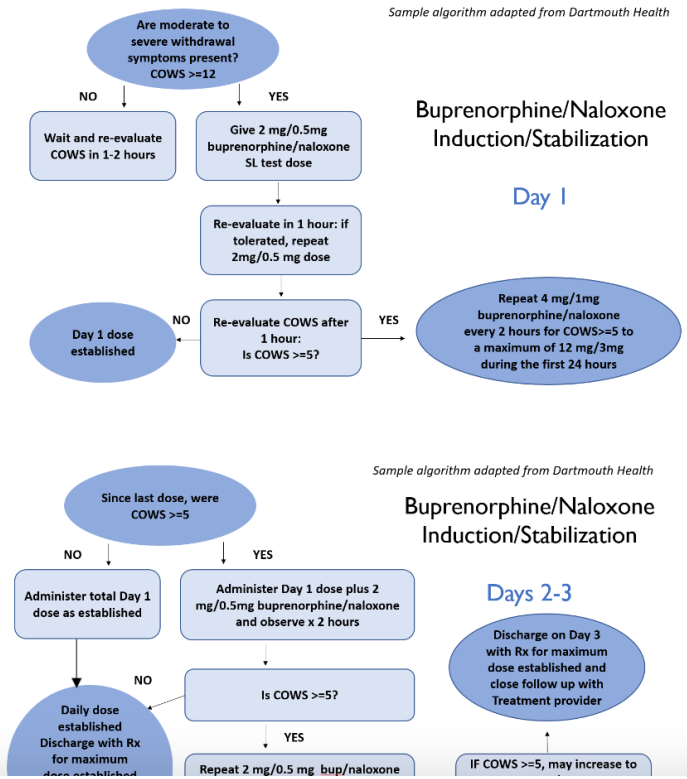
III. Definitions

- Buprenorphine Initiation: Buprenorphine Initiation: Transition of substance use from illicit opioids to buprenorphine/naloxone utilizing the lowest dose needed to minimize symptoms of withdrawal and cravings and prevent use of illicit opioids.
- Buprenorphine/naloxone (AKA Suboxone®): Appropriate treatment for women with opioid use disorder utilizing three phases: initiation, stabilization, and maintenance.
  - A partial agonist at the mu opioid receptor and antagonist and the kappa receptor. It can precipitate an opioid withdrawal syndrome if administered to a patient who is physiologically dependent on opioids and has receptors occupied by opioids at the time buprenorphine is initiated. Note that precipitated withdrawal is caused by buprenorphine itself, and not by the naloxone on combination formulations. When buprenorphine/naloxone is used sublingually as directed, naloxone is minimally absorbed.
  - A patient should no longer be intoxicated or experiencing residual effects from her last dose of an opioid when receiving her first dose of buprenorphine/naloxone. Therefore, a period of abstinence is required (a minimum of 12-24 hours after last use of a short-acting opioid) and patients should be experiencing moderate withdrawal symptoms before initiating buprenorphine/naloxone treatment.
  - Clinical Opioid Withdrawal Scale (COWS): A scoring tool to quantify withdrawal symptoms and guide in the buprenorphine/naloxone initiation process. Withdrawal symptoms are classified with the following score ranges: Mild (5-12). Moderate (13-24). Moderately Severe (25-36). Severe (greater than 36).

IV. Criteria for initiation

- Inpatient Initiation Criteria: Women with acute medical or surgical illness, significant polysubstance use, use of long-acting opioids or who are presenting at a gestational age post-viability often require inpatient admission for close monitoring and clinical evidence

Buprenorphine/Naloxone Induction/Stabilization Algorithm



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Generic Change Concepts

Eliminate Waste

1. Eliminate things that are not used
2. Eliminate multiple entry
3. Reduce or eliminate overkill
4. Reduce controls on the system
5. Recycle or reuse
6. Use substitution
7. Reduce classifications
8. Remove intermediaries
9. Match the amount to the need
10. Use Sampling
11. Change targets or set points

Improve Work Flow

12. Synchronize
13. Schedule into multiple processes
14. Minimize handoffs
15. Move steps in the process close together
16. Find and remove bottlenecks
17. Us automation
18. Smooth workflow
19. Do tasks in parallel
20. Consider people as in the same system
21. Use multiple processing units
22. Adjust to peak demand

Optimize Inventory

23 Match inventory to predicted demand
24 Use pull systems
25 Reduce choice of features
26 Reduce multiple brands of the same item

Change the Work Environment

27. Give people access to information
28. Use Proper Measurements
29. Take Care of basics
30. Reduce de-motivating aspects of pay system
31. Conduct training
32. Implement cross-training
33. Invest more resources in improvement
34. Focus on core process and purpose
35. Share risks
36. Emphasize natural and logical consequences
37. Develop alliances/cooperative relationships

Enhance the Producer/customer relationship

38. Listen to customers
39. Coach customer to use product/service
40. Focus on the outcome to a customer
41. Use a coordinator
42. Reach agreement on expectations
43. Outsource for "Free"
44. Optimize level of inspection
45. Work with suppliers

Manage Time

46. Reduce setup or startup time
47. Set up timing to use discounts
48. Optimize maintenance
49. Extend specialist's time
50. Reduce wait time

Manage Variation

51. Standardization (Create a Formal Process)
52. Stop tampering
53. Develop operation definitions
54. Improve predictions
55. Develop contingency plans
56. Sort product into grades
57. Desensitize
58. Exploit variation

Design Systems to avoid mistakes

59. Use reminders
60. Use differentiation
61. Use constraints
62. Use affordances

Focus on the product or service

63. Mass customize
64. Offer product/service anytime
65. Offer product/service anyplace
66. Emphasize intangibles
67. Influence or take advantage of fashion trends
68. Reduce the number of components
69. Disguise defects or problems
70. Differentiate product using quality dimensions

71. Change the order of the process steps
72. Manage uncertainty, not tasks

Reference: The Improvement Guide, 2nd Ed. 2009

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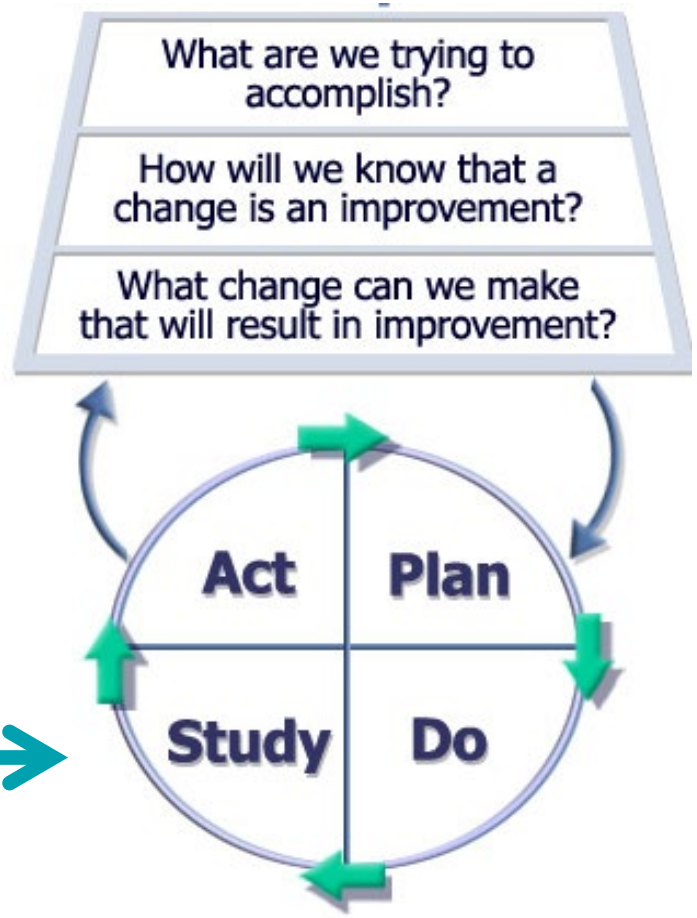
Model for Improvement

Identifying Changes →



Testing Change Ideas →

[Cycle of Improvement](#)

- Rapid Testing
- Think BIG and Start SMALL

SBD

PDSA (Plan Do Study Act) cycles // Testing BEFORE Implementing - YouTube

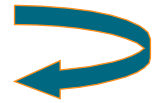
Testing Tips

Tips for Testing

- Scale down – think “Drop Two”
- Use a PDSA form to document your test and maintain rigor
- N of 1

Just 1

- Year
- Quarter
- Month
- Week
- Day
- Hour



- Make changes in parallel

“What can we do by Tuesday without harming the hair on the head of a patient?”

- Don Berwick

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Which scenario has the best chance of generating learning ?

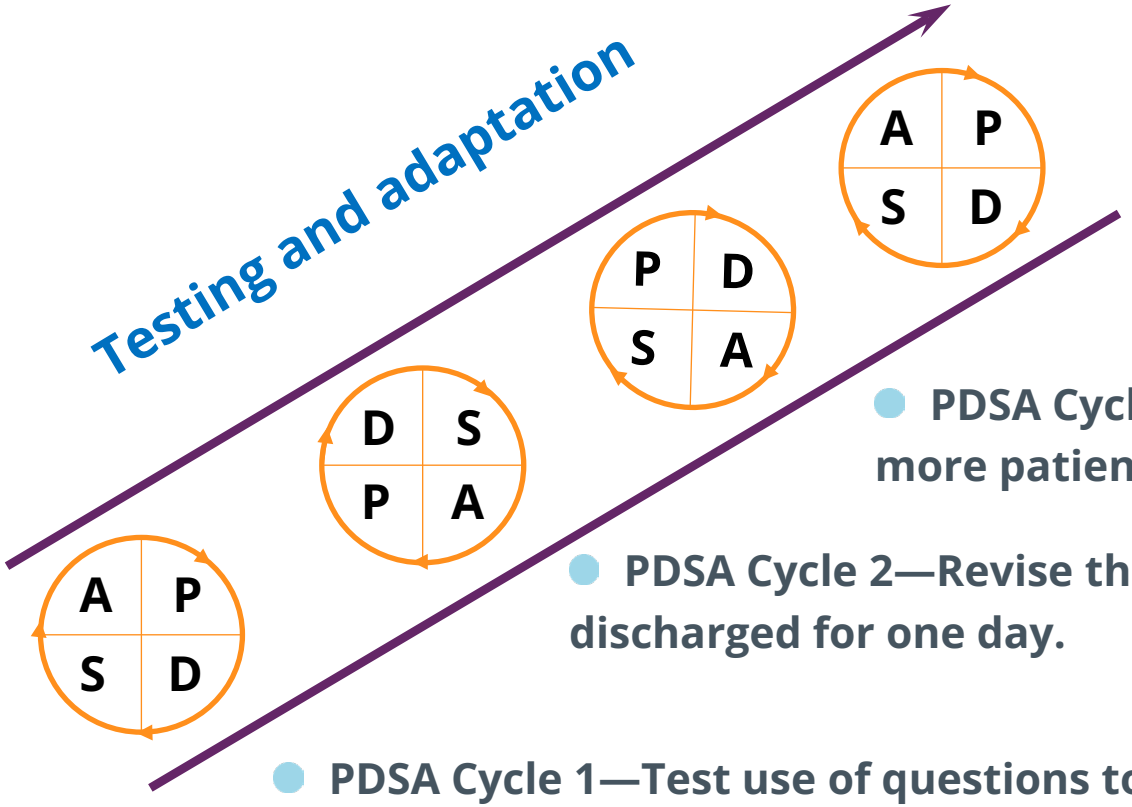
This?

All staff in the L & D unit attend a 2-hour knowledge and skills training about timely treatment of severe maternal hypertension to apply interventions learned with every birthing person starting March 1, 2022.

Or this?

A few members of the team from one L & D unit attend a 2-hour knowledge and skills training about timely treatment of severe maternal hypertension (2 physicians, 2 nurses, etc.) with plans to practice during a simulation on the next day. Their learnings will be fed back to the faculty to adjust the training.

PDSA Series: Changes Evolve

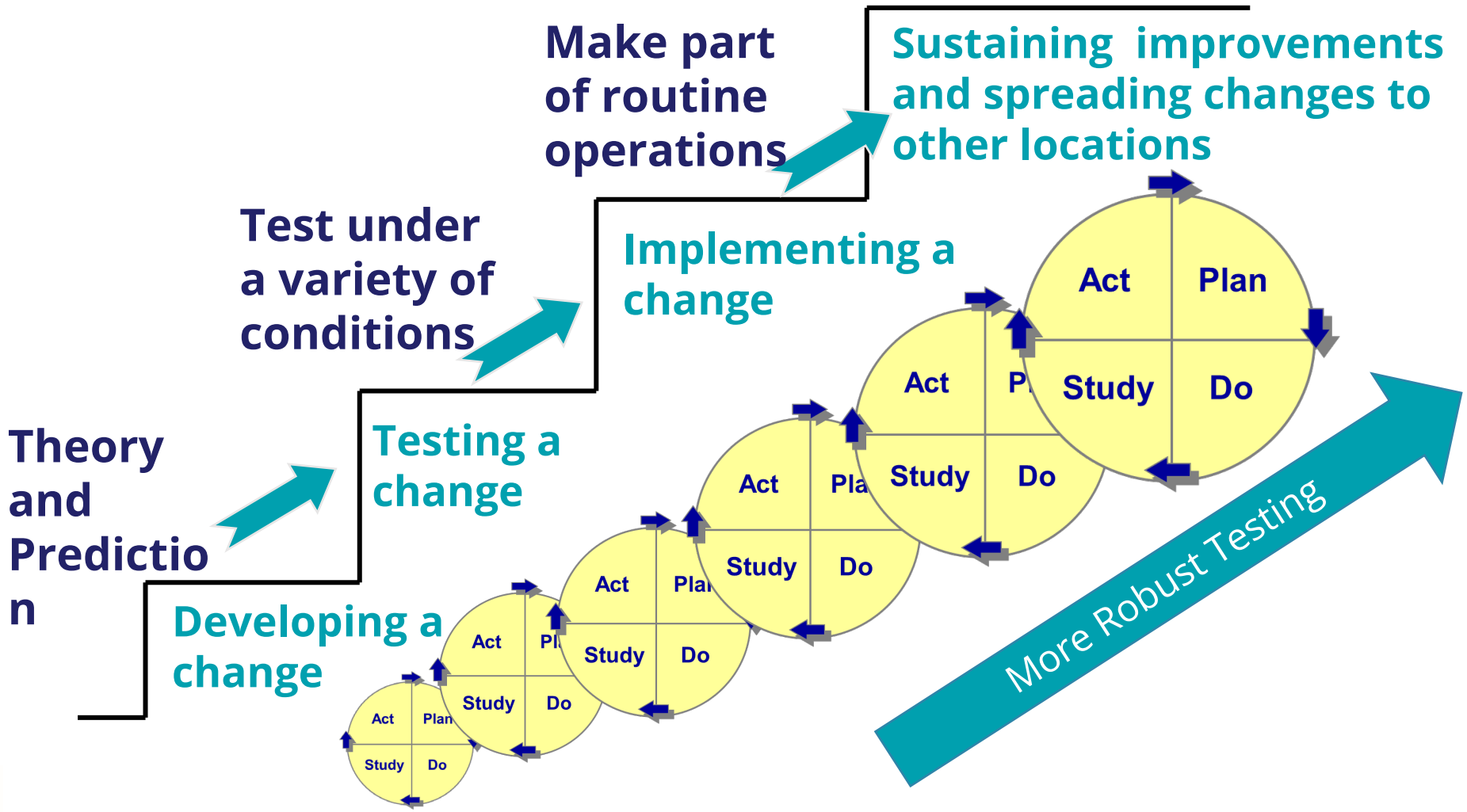


PDSA Cycle 4—Formalize the questions and hard wire (build into EHR).

- PDSA Cycle 3—continue refinement and more people test w/ more patients discharged and during busier days.
- PDSA Cycle 2—Revise the questions and same person test with a all patients discharged for one day.
- PDSA Cycle 1—Test use of questions to gather information from patients about social drivers of health (one person w/ next person discharged).

Langley, G., R. Moen, K. Nolan, T. Nolan, C. Norman, and L. Provost. "The Improvement Guide: A Practical Approach to Enhancing Organizational Performance." 2nd ed. San Francisco, CA: Jossey-Bass, 2009.

Sequence of Improvement



Source: IHI

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PDSA Worksheet

PDSA Worksheet

Objective of this cycle:

Team Name:
Date:

PLAN: Describe the change you are testing:

What questions does this test seek to answer?

Plan for the test: who, what, when, where

Data collection plan to learn if the test is successful: who, what, when, where

What do you predict the result will be?

What tasks are needed to prepare for and carry out the test?

DO: Report what happened when you carried out the test. Describe observations, findings, problems encountered, special circumstances.

STUDY: Compare your results to your predictions. What did you learn? Any surprises?

ACT: What will you do next? Adopt, adapt, or abandon the change?

Which scenario has a greater chance of happening?

This?

All staff in the L & D unit attend a 2-hour knowledge and skills training about equity for birthing people to apply in every case review starting May 1, 2023.

Or this?

A few members of the team 2 physicians, 2 nurses, etc.) from one L & D unit attend a 2-hour knowledge and skills training about equitable treatment to apply it two case reviews. Their learnings will be fed back to the team and used for modifying the equity training sessions so others can begin to make improvements.

Leaving in Action

- Develop and run one test (small!) using the PDSA cycle

Photo by Sammie Vasquez on Unsplash

Next Steps

- Submit a completed a PDSA cycle, it may be one you have conducted, or are planning to test or in the middle of testing. It may be personal or work related. You may want to own load one of the aim bundle change packages for change ideas. Submit by Wednesday, July 5th, 2023
- Mark calendar for next workshop
  - Monday, July 10th 3:00 – 4:00 PM ET
- If you want Q I technical assistance or time with Sue and/or Jane sign up for office hours
  - Jane: June 13th, July 12th, July 26th, August 16th
  - Sue: June 15th, June 22nd, Jul 20th, August 7th
- If you have not done so already, register for all QI COL sessions and download them to our calendar: https://nichq.zoom.us/meeting/register/tJMtf-2vrjIvHNeOQsssPR1jeVR-E2PVgn8z

Resources

- Youtube video on PDSA Univ. of Cincinatti: https://www.youtube.com/watch?v=_YOq4KXBahM&t=121s
- Use of PDSA as a personal life example, Domestic Goddess. https://www.youtube.com/watch?v=jsp-19o_5vU&t=5s
- NICHQ QI 101
- NICHQ QI 102
- How to Improve, IHI Website www.ihi.org How to Improve | IHI - Institute for Healthcare Improvement
- The Improvement Guide (2007). Langeley et al. Jossey Bass

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Reminder: TA Sessions

- Sign up for a TA session at this link:
- Complete this TA request form to set up a session with Jane or Sue when you're ready!
- One person from your state, if joining as a state, should fill this out.

Session Evaluation