Quality Improvement
Community of Learning

February 22, 2022
2:00-3:00pm ET
Welcome!

Thank you for joining the call! We will get started shortly.

• You may be **muted upon entry** to the call
• You **DO have the ability** to unmute yourself
• We encourage participants to remain muted in an effort to reduce background noise

This presentation will be recorded
The NICHQ Team

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The faculty have nothing to disclose.
Objectives of the 5 QI Sessions

Participants Gain:

• Increased capability in improvement science—improvement basics
• Increased understanding of what is happening in other States
• The ability to include others (partners, team members, staff, community-based organizations) to expand boundaries of the work
• The ability to influence others to adopt quality improvement as an execution framework
January Session 1 Review

• Welcome & Introductions
• Quality Improvement
  • What is it?
  • Using Adult Education Theory and Principles with Improvement Science
  • Why do we use improvement science?
  • How do we start?
• Creating the Case for Change and Assessing Readiness for Change
  • Assessing the gap
  • Identifying steps to close gaps
• Leaving in action
Agenda

• Welcome
• Model for Improvement Part 1
  • Overview
  • Focus on Aim and Changes
    • Driver Diagrams
    • PDSAs
• Next Steps and Close
# Quality Improvement: What is it? Why do we use it? How do we start?

**January 25, 2022, 2-3:30pm ET**

## The Model for Improvement Part 1

**February 22, 2022, 2-3pm ET**

## The Model for Improvement Part 2

**March 31, 2022, 1-2:30pm ET**

## Obstetric Hemorrhage: Sharing Successes and Guidance

**April 2022 (exact date TBD)**

## Methods for Spreading Improvement

**April 27, 2022, 1-2pm ET**

## Severe Hypertension in Pregnancy: Sharing Successes and Guidance

**May 2022 (exact date TBD)**

## Care for Pregnant and Postpartum People with Substance Use Disorder: Sharing Successes and Guidance

**June 2022 (exact date TBD)**

## Sustaining the Gains

**July 26, 2022, 1-2:30pm ET**

## Cardiac Conditions in Obstetrical Care: Sharing Successes and Guidance

**August 2022**

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

• Chat #Q if you have a question
• Chat #onfire if you have something you really want to share

We will pause periodically to check in on the chat! We will test it for the first five hashtags.

Predictions: (Sue) We won’t have enough time to honor the #'s. (Jane) We will only get 2 #’s.

Source: Adam Grant, Think Again
Model for Improvement

Aim →

Building an Aim Statement

Start with

• What are we trying to accomplish?
• What do we want to do?
The Role of an Aim Statement

The aim statement is:

• Not just a vague statement
• But a clear commitment to achieve a measured improvement
  – In a specific system/process
  – With a definite timeline
  – And including numeric goals

“Hope” is *not* a plan
“Soon” is *not* a time
“Some” is *not* a number
Four Parts to an Aim Statement

• What do you intend to accomplish?
• For whom?
• By how much?
• By when?
Aim Critique: Example Aim Statements

- To reduce rates of severe maternal morbidity (SMM) related to hypertension among women giving birth at [site] by ___% from (year) to (year).

- Between February 22\textsuperscript{nd}, 2022, and Valentine’s Day 2023, reduce harm related to severe maternal hypertension by increasing the number of birthing people with acute-onset severe hypertension that persists for 15 minutes treated w/in 60 minutes to ____%.

Source: IHI’s Better Maternal Outcomes Improvement Sprint-- Reducing Harm from Hypertension Workbook February 2021
Example #3

• By February 2023, the MNPQC and its participating partners/members will develop reliable processes of recognition and treatment of obstetric (OB) HTN during pregnancy and up to six weeks postpartum. This initiative focuses on all points of care, such as hospitals, clinics, urgent care, emergency departments, first responders, and community organizations. The goal is to reduce severe maternal morbidity by 25% and achieve 80% or higher compliance of the HTN recognition tool and OB HTN emergency pathway.
Let’s Practice

Remember that the Jamboard can ultimately serve as your closing storyboard😊

• In a breakout with your team, critique your aim (on page 2 of your Jamboard). If you haven’t entered one yet, create one together.
  • What you want to improve
  • For whom
  • By when
  • Write a concrete measurable goal(s)
  • Remember to consider ❤️
Breakout Room Instructions

• Before you go to breakout, locate your Jamboard link in the document shared in chat.
• There are breakout rooms for each state and rooms established for those who are joining alone.
• If you are the only person from your state, feel free to join a “floater” room to review aim statements. Those not affiliated with a state can join these rooms as well.
• One person volunteer to share Jamboard on their screen and share their draft aim statement (frame/page 2 of Jamboard).
• Going around the virtual room, each person share feedback on the strengths and potential improvement opportunities as it relates to inclusion of the critical components (what the are improving, for whom, by how much, and by when).
• Feel free to use the Aim Statement worksheet shared in invite and chat to help guide your discussion.
• NOTE: To leave a breakout room, go to the bottom right blue button and click leave the breakout room and NOT the meeting!
Model for Improvement

Changes

Where do we get change ideas for improvement

1. Literature: evidence-based changes
2. Experience of experts
3. Staff experience
4. Lived experience
5. Observation
6. Analogous observation
Methods for Identifying Changes

1. Logical thinking about the current system
2. Benchmarking or learning from others
3. Using technology
4. Creative thinking
5. Using change concepts

Source: The Improvement Guide Page 120
Complete List of 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. Use 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

<table>
<thead>
<tr>
<th>Category</th>
<th>Method or Tool</th>
<th>Typical Use of Method or Tool</th>
<th>Q1 Aim &amp; Assessment</th>
<th>Q2 Measures O/P/B</th>
<th>Q3 Understanding &amp; Change Ideas</th>
<th>PDSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viewing Systems &amp; Processes</td>
<td>Block Diagram</td>
<td>Simplest picture of process/system.</td>
<td>*</td>
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<tr>
<td></td>
<td>Flow Diagram</td>
<td>Develop a picture of a process. Communicate and standardize processes.</td>
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<tr>
<td></td>
<td>SIPOC</td>
<td>Develop a picture of a system/process components.</td>
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</tr>
<tr>
<td>Gathering Information</td>
<td>Data Collection Methods</td>
<td>Plan and organize a data collection forms &amp; effort. Recording data to ID patterns.</td>
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<tr>
<td></td>
<td>Surveys</td>
<td>Obtain information from people.</td>
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<tr>
<td></td>
<td>Benchmarking</td>
<td>Obtain information on approaches from other organizations (beware of copying).</td>
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<td></td>
<td>Creativity Methods</td>
<td>Develop new ideas and fresh thinking. (Includes Brainstorming and NGT).</td>
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<td></td>
<td>Affinity Diagram</td>
<td>Organize and summarize qualitative information.</td>
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<tr>
<td>Organizing Information</td>
<td>Force Field Analysis</td>
<td>Summarize forces supporting and hindering change.</td>
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<tr>
<td></td>
<td>Cause and Effect Diagram</td>
<td>Collect and organize knowledge about potential causes of problems or variation</td>
<td>*</td>
<td>*</td>
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<tr>
<td></td>
<td>5 Why</td>
<td>Used to uncover understanding of reasons behind intractable problems.</td>
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<tr>
<td></td>
<td>Matrix Diagram</td>
<td>Arrange information to understand relationships and make decisions.</td>
<td>*</td>
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<tr>
<td></td>
<td>Tree Diagram</td>
<td>Visualize the structure of a problem, plan, or any other opportunity of interest.</td>
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<tr>
<td></td>
<td>Radar Chart</td>
<td>Evaluate Alternatives or compare against targets with 3 or more variables.</td>
<td>*</td>
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<td></td>
<td>FMEA</td>
<td>Used by process designers to identify and address potential failures.</td>
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<tr>
<td>Understanding Variation</td>
<td>Run Chart</td>
<td>Study variation in data over time; understand the impact of changes on measures.</td>
<td>*</td>
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<td></td>
<td>Control Chart</td>
<td>Distinguish between special and common causes of variation to understand correct.</td>
<td>*</td>
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<tr>
<td></td>
<td>Pareto Chart</td>
<td>Focus on areas of improvement with greatest impact in stable process.</td>
<td>*</td>
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<tr>
<td></td>
<td>Frequency Plot</td>
<td>Understand location, spread, shape, and patterns of data. Also called Histogram.</td>
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<tr>
<td>Understanding Relationships</td>
<td>Scatter Plot</td>
<td>Analyze the associations or relationship between two variables.</td>
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<td></td>
<td>Two-Way Table</td>
<td>Understand cause/effect relationships for two categorical variables in planned exp.</td>
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<tr>
<td></td>
<td>Planned Experimentation</td>
<td>Design studies to evaluate relationships and test changes.</td>
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<tr>
<td>Team Decision Making</td>
<td>Brainstorming</td>
<td>Used to generate a large number of alternative ideas.</td>
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<td></td>
<td>Nominal Group</td>
<td>Generate large number of ideas, gives silent time to list ideas, often uses sticky notes.</td>
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<td></td>
<td>Multi-Vote</td>
<td>Reduce large list of ideas to a list of 10 or less.</td>
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<tr>
<td></td>
<td>Rank Order</td>
<td>Use to reduce a list of 10 or less, to the vital few ideas for further discussion.</td>
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<tr>
<td></td>
<td>Structured Discussion</td>
<td>Used to discuss the vital few ideas to arrive at a consensus decision.</td>
<td>*</td>
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</tr>
<tr>
<td>Planning</td>
<td>PDSA Forms</td>
<td>Used to plan, organize and keep track of testing, implementation and spread cycles.</td>
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<td></td>
<td>Team Member Matrix</td>
<td>Identify range of talent, knowledge and skill needed for improvement team.</td>
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<td></td>
<td>Communications Plan</td>
<td>Identify key stakeholders and communications needs for each.</td>
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</tr>
<tr>
<td></td>
<td>Seven Step Agenda</td>
<td>Use to plan and run effective meetings.</td>
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</tr>
</tbody>
</table>

Adapted from The Improvement Guide, pages 411-413. for the IHI Improvement Coach Professional Development Program, April 2016
Developing Driver Diagrams

• Theory of change: Which structures, processes, and norms need to improve to achieve better improved performance reflected in the AIM measure set. We work on the causal system and see improvement unfold over time.

• Driver diagrams depict our theory of change; how we will work on the causal system for improvement
  • Usually one page; revised as we learn what does and doesn’t work
  • Supported with change ideas with a pedigree, i.e., evidence-based and experience-based change
Driver Diagrams Include:

**Aim**
- What will be accomplished, by who, and when

**Primary Drivers**
- 3-5 key processes, norms, or structures that are required to change in order to achieve results

**Secondary Drivers**
- Discrete moments in time, e.g. first visit, during assessment, when teaching a patient or family member
- Places or steps in a process, e.g., generating visit summary, rooming a patient, referring
- Places where, e.g., at home, in hospital, at office
- May also include steps in a process

**Change ideas**
- Concrete, actionable activities to learn how to change
- Most often tested with PDSA cycles
- Include evidence base changes, changes on the cutting edge in the field, and experience
What it looks like…

- Plan-Do-Study-Act (PDSA) cycles are a disciplined inquiry and learning approach about how these changes will work in your state.

- How a state customizes good ideas, ready for use to their unique context.

Note: Some driver diagrams may go directly from primary drivers to changes, depending on complexity of the system.
Key Points

• There is no right or wrong.
• The key is that the primary drivers, secondary drivers and changes represent those that are necessary and sufficient to accomplish the aim.
• The most important thing about Driver Diagrams is that they be useful to the teams doing the improvement work.
Stepping-stones to a specific package of changes
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’s what helps teams be able to go faster!
Driver Diagrams help connect the dots from aim to the changes!!

SBD
Model for Improvement

Identifying Changes

1. What are we trying to accomplish?
2. How will we know that a change is an improvement?
3. What change can we make that will result in improvement?

Testing Change Ideas

Cycle of Improvement
- Rapid Testing
- Think BIG and Start SMALL
Tips for Testing

• Scale down – think “Drop Two”
• Use a form to document your test

Just 1

• Make changes in parallel

“What can we do by Tuesday without harming the hair on the head of a patient?”
- Don Berwick
## Deciding on the Scale of the Test

<table>
<thead>
<tr>
<th>Readiness To test changes</th>
<th>No commitment</th>
<th>Some commitment</th>
<th>Strong commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low degree of belief that change idea will lead to Improvement</td>
<td>Cost of failure large</td>
<td>Very small-scale test</td>
<td>Very small-scale test</td>
</tr>
<tr>
<td></td>
<td>Cost of failure small</td>
<td>Very small-scale test</td>
<td>Small-scale test</td>
</tr>
<tr>
<td>High degree of belief that change idea will lead to Improvement</td>
<td>Cost of failure large</td>
<td>Very small-scale test</td>
<td>Small-scale test</td>
</tr>
<tr>
<td></td>
<td>Cost of failure small</td>
<td>Small-scale test</td>
<td>Large-scale test</td>
</tr>
</tbody>
</table>

Source: The Improvement Guide: A Practical Approach to Enhancing Organizational Performance, Table 7.1, p. 146.
Reflecting

• What is your experience with testing on a small scale?

• Where do the two change ideas you identified as part of the pre-work for this session fit in the grid?
  • Degree of believe
  • Cost of failure
  • Readiness
    • No commitment
    • Some commitment
    • Strong commitment

• How might this guide the scale at which you test? (very small scale, small scale, large scale, implement)?
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 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 Ideas That Evolve

PDSA Cycle 1—BP accuracy

PDSA Cycle 2—response kit at bedside

PDSA Cycle 3—drill response in ED

PDSA Cycle 4—drill response on unit

Sequence of Improvement

Source: IHI

1. Theory and Prediction
   - Developing a change
   - Testing a change
   - Implementing a change
   - Test under a variety of conditions
   - Make part of routine operations
2. Sustaining improvements and spreading changes to other locations

Source: IHI
# PDSA Worksheet

**Objective of this cycle:**

**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?
# PDSA

How did our # PDSA go?
What did we learn?
What will we do next session with the #?
Leaving in Action

• Continue to refine your aim
• In preparation for March session:
  • Go to https://1drv.ms/b/s!AlvzNhmpnx9kgQB8lWkLFa9ZKidC to access your state’s Jamboard
  • On page 4 of Jamboard, insert a few measures that your team looks at (or might look at) to know if you are improving and moving closer to the goal established in your aim.
We want to hear from you!

- https://jamboard.google.com/d/19M9Ucf7AaYgqcKBhsNgixisLqm_pbphPkdZxFmgGDz8/viewer
Resources

- NICHQ QI 101
- NICHQ QI 102
- How to Improve, IHI Website [How to Improve | IHI - Institute for Healthcare Improvement]
Reminders and Next Steps

• The next QI COL webinar will be held on: March 31st, 2022, from 1-2:30 pm ET. The topic will be Model for Improvement Part 2 with a focus on measurement.

• If you have not done so already, register for all QI COL sessions and download them to your calendar: https://nichq.zoom.us/meeting/register/tJckcOGorDoiHdXJ27vnCTcEZC8iuE39ucS6

• You can sign up for at least one TA session. Complete this TA request form to set up a session with Jane or Sue when you’re ready! One person from your state should fill this out. https://survey.alchemer.com/s3/6707471/QI-Community-of-Learning-TA-Form
Thank you!

We are improvers at heart.
We want to hear and learn from your experiences during these sessions.

Please take a moment to complete the brief evaluation before signing off!