



Quality Improvement Basics
December 13, 2022

Definitions

Quality health care is “doing the right thing, at the right time, in the right way, for the right person – and having the best possible results” -*AHRQ*

Quality Improvement (QI) is a systematic, formal approach to analyzing performance and efforts to improve performance

Continuous Quality Improvement (CQI) is a continuous and ongoing effort to achieve measurable improvements in the efficiency, effectiveness, performance, accountability, outcomes, and other indicators of quality.



Diving Deeper

Quality improvement uses data and feedback to:

1. Track and assess performance over time
2. Make necessary changes in processes

QI involves any activities that improve performance on the triple aim:

1. Improving individual and population health
2. Improving patient experience
3. Reducing cost

Continuous Quality Improvement emphasizes that opportunity for improvement exists in every process on every occasion

***QI is a continuous activity, not a one-time thing!**



Importance of Quality Improvement

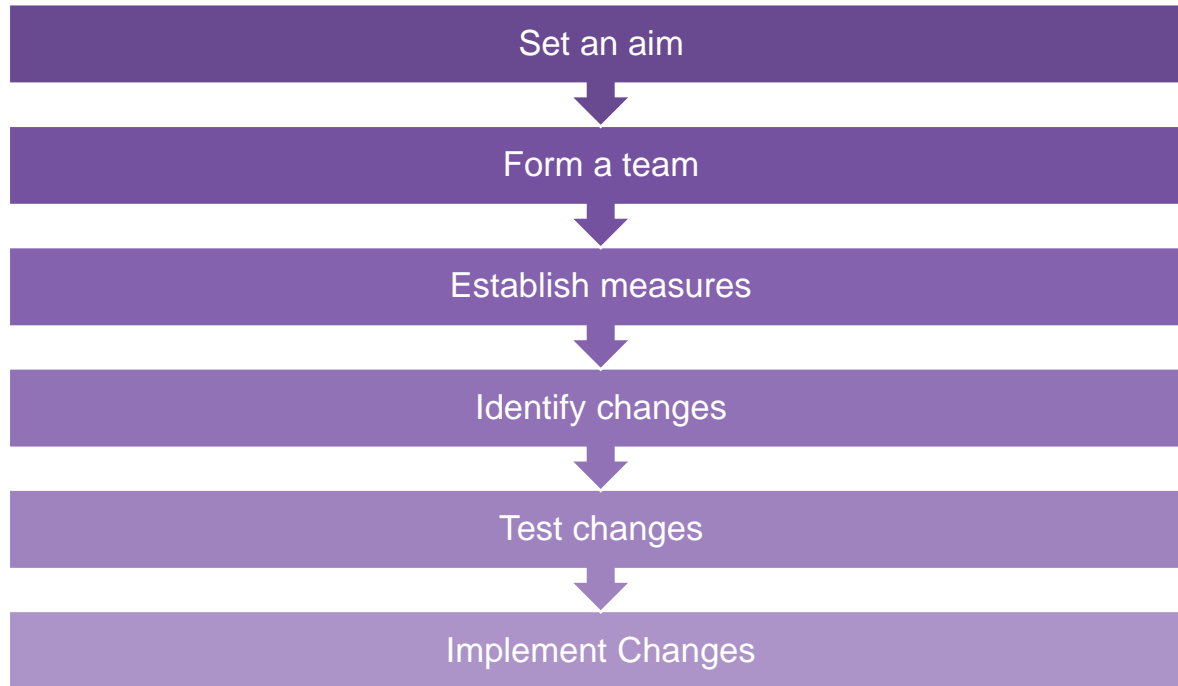
Reasons organizations should consider implementing QI activities:

1. QI activities align with providers' values of offering the most effective services possible for their patients
2. Implementing QI can lead to an improved reputation
3. Using data to make improvements can help increase return on investment
4. Organizations can gain a better understanding of their organization and programs, which can result in better anticipating and responding to changes in demand for services and resources
5. Using data helps organizations understand the link between goals and outcomes, leading to smarter, targeted choice
6. Employees can be energized by opportunities to improve their work processes and feel more invested



The QI Process

Steps for an improvement team in a clinical setting:



QI Models

The QI model is your framework to guide and accelerate improvement projects

- ✓ Model for Improvement/PDSA: Plan-Do-Study-Act**
- ✓ Six Sigma: method of improvement that strives to decrease variation and defects
- ✓ Lean: approach that drives out waste and improves efficiency in work processes so that all work adds value



Model for Improvement

Step 1: Three fundamental questions

Aim

- What are we trying to accomplish?

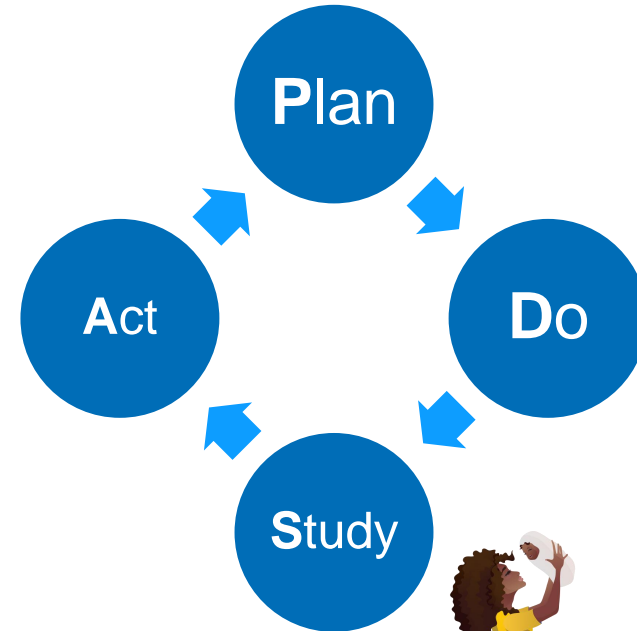
Measure

- How will we know that a change is an improvement?

Change

- What change can we make that will result in improvement?

Step 2: PDSA Cycle



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Setting an Aim

Aim

• What are we trying to accomplish?

Measure

• How will we know that a change is an improvement?

Change

• What change can we make that will result in improvement?

What are we trying to accomplish?

- Should be specific and measurable
- Important to understand current state of the problem or opportunity
- Aim statement addresses 3 points:
 1. How good?
 2. By when?
 3. For whom (or what system)?

Example: By June 2023, 100% of hospitals participating in the MDPQC neonatal antibiotic stewardship initiative will have implemented the neonatal early-onset sepsis calculator into their workflow for all babies.



Choosing Measures

How will we know that a change is an improvement?

- What do you want to learn about and improve?
- What measures will be most helpful for this purpose?
- What is the operational definition for each measure?
- What is your goal?
- What is your baseline?



Types of Measures

Aim

- What are we trying to accomplish?

Measure

- How will we know that a change is an improvement?

Change

- What change can we make that will result in improvement?

1. **Outcome measures:** Where are we ultimately trying to go?
2. **Process measures:** Are we doing the right things to get there?
3. **Balancing measures:** Are the changes we are making to one part of the system causing problems in other parts of the system?



Selecting Changes

Aim

• What are we trying to accomplish?

Measure

• How will we know that a change is an improvement?

Change

• What change can we make that will result in improvement?

What changes can we make that will result in the improvements we seek?

- Not every change is an improvement
- How to identify changes to test:
 - ✓ **Brainstorming:** spontaneously generating ideas as a group
 - ✓ **Observation:** generating ideas based on what team members see
 - ✓ **Ideal design:** generating ideas based on the “perfect world” scenario
 - ✓ **Shared experiences:** generating ideas based on personal experience with the issue
 - ✓ **Change concepts:** offer topics to discuss as a team that may generate ideas for change



Change Concepts

Improve Work Flow

- Minimize handoffs
- Find and remove bottlenecks
- Use automation
- Adjust to peak demand

Change the Work Environment

- Conduct training
- Implement cross-training
- Focus on core processes and purpose
- Develop alliances/cooperative relationships

Enhance the Customer Relationship

- Listen to customers
- Focus on the outcome to a customer
- Work with partners

Manage Time

- Reduce setup or startup time
- Reduce wait time

Manage Variation

- Standardization (create formal process)
- Develop operational definitions
- Develop contingency plans

Design Systems to Avoid Mistakes

- Use reminders
- Use differentiation

Focus on a Service

- Offer service any time
- Offer service any place
- Emphasize intangibles



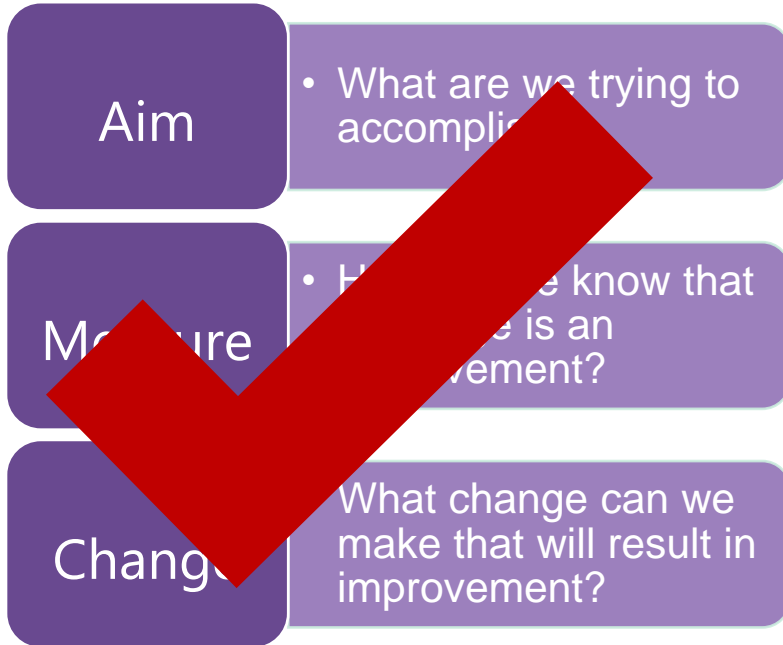
Langley GL, Moen R, Nolan KM, Nolan TW, Norman CL, Provost LP. The Improvement Guide: A Practical

Approach to Enhancing Organizational Performance (2nd

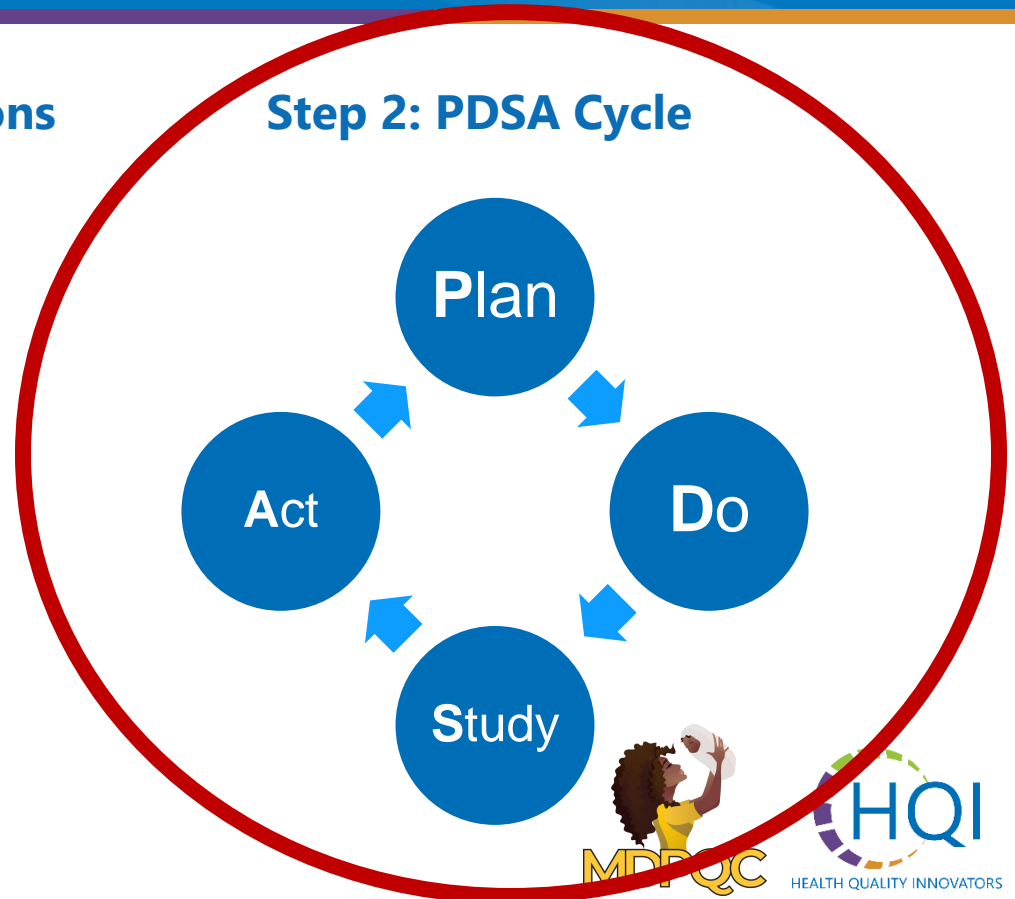
edition). San Francisco: Jossey-Bass Publishers; 2009.

Model for Improvement

Step 1: Three fundamental questions



Step 2: PDSA Cycle



Testing Change

PDSA Cycle

- **Plan:** Plan the test or observation, including a plan for data collection
- **Do:** Try the test out on a small scale
- **Study/Check:** Analyze the data and study how results compared to predictions
- **Act:** Make adjustments where necessary based on what was learned from the small-scale test

Conducting multiple PDSA cycles allows the team to test a change quickly on a small scale, see how it works, and refine the change as necessary before implementing it on a broader scale



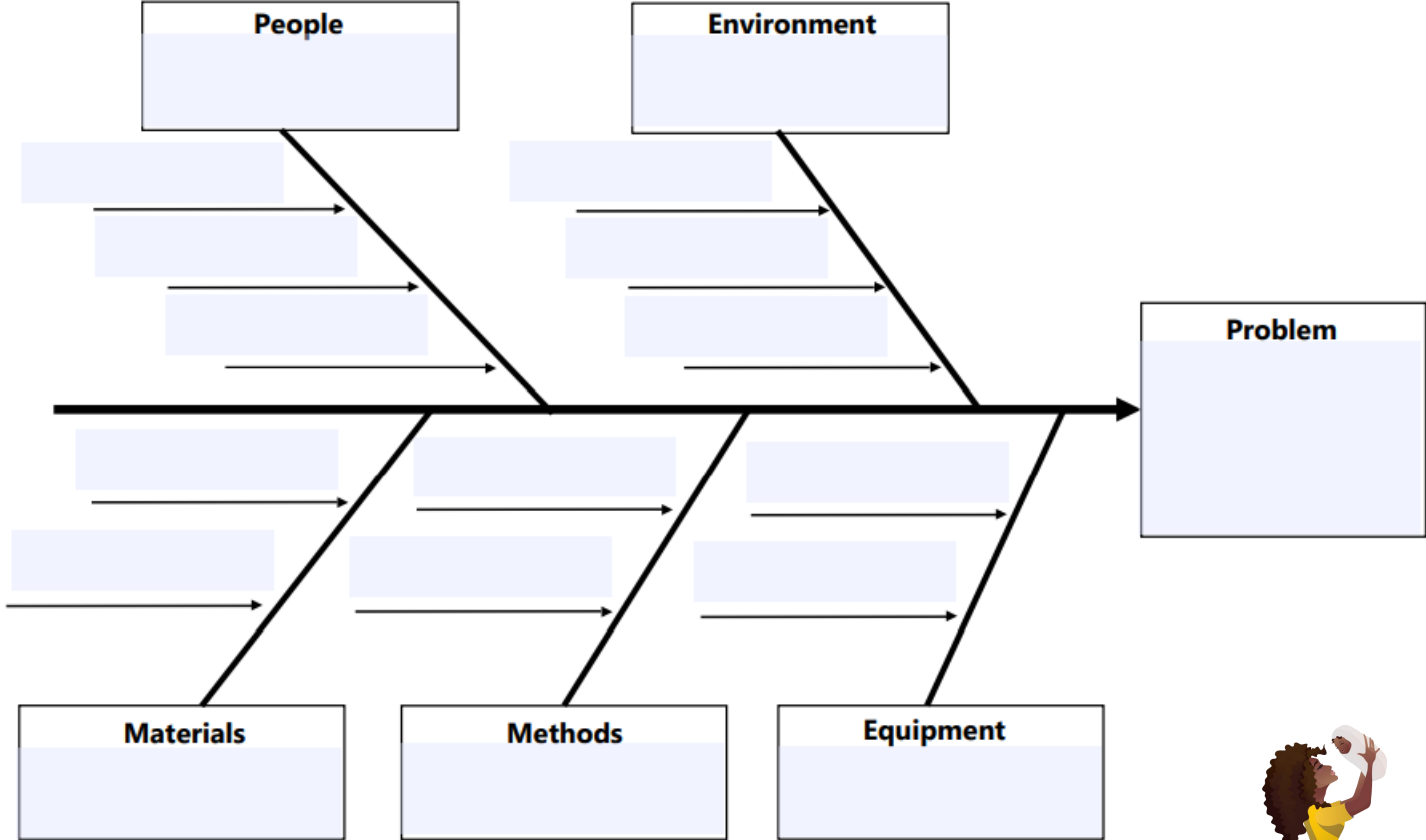
QI Tools

QI tools are standalone strategies or processes that can help you better understand, analyze, or communicate your QI efforts

- Run chart
- Flowchart
- PDSA Worksheet
- Fishbone diagram
- Root cause analysis
- 5 Whys
- Driver diagram
- Failure Modes and Effects Analysis (FMEA)
- Pareto chart
- Cause and effect diagram



The Fishbone Diagram Template



PDSA Worksheet

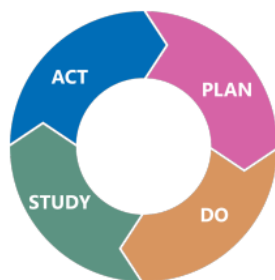
Achieving your goal will require multiple small tests of change to reach an efficient process and the desired results

3 Fundamental Questions for Improvement

1. What are we trying to accomplish (AIM)?

2. How will we know that a change is an improvement (MEASURE)?

3. What changes can we make that will lead to improvement (CHANGE)?



PLAN

What is your first (or next) test of change?

Test population?

Due Date

List the tasks needed to set up test of change:

Who is responsible

Due Date

Predict what will happen when test is carried out:

Measure to determine whether prediction succeeds:

PDSA Worksheet

Achieving your goal will require multiple small tests of change to reach an efficient process and the desired results

DO

Describe what happened when you conducted the test (e.g., what was done, what were the measure results, what were the observations).

STUDY

Describe how the measured results and observation compared with predictions.

ACT

Describe the steps (e.g., modify the idea and retest (Adapt), spread the idea (Adopt), test a new idea (Abandon this idea))

The 5 Whys Template

Purpose

The Five Whys analysis is the art of systematically drilling down to determine the root cause of a problem and show the relationship of causes by repeatedly asking the question, "Why?". The team should first identify the problem, then ask "why" five times to identify the root cause of the problem and document possible solutions.

Define the Problem

Why did this occur?

Why?

Why?

Why?

Why?

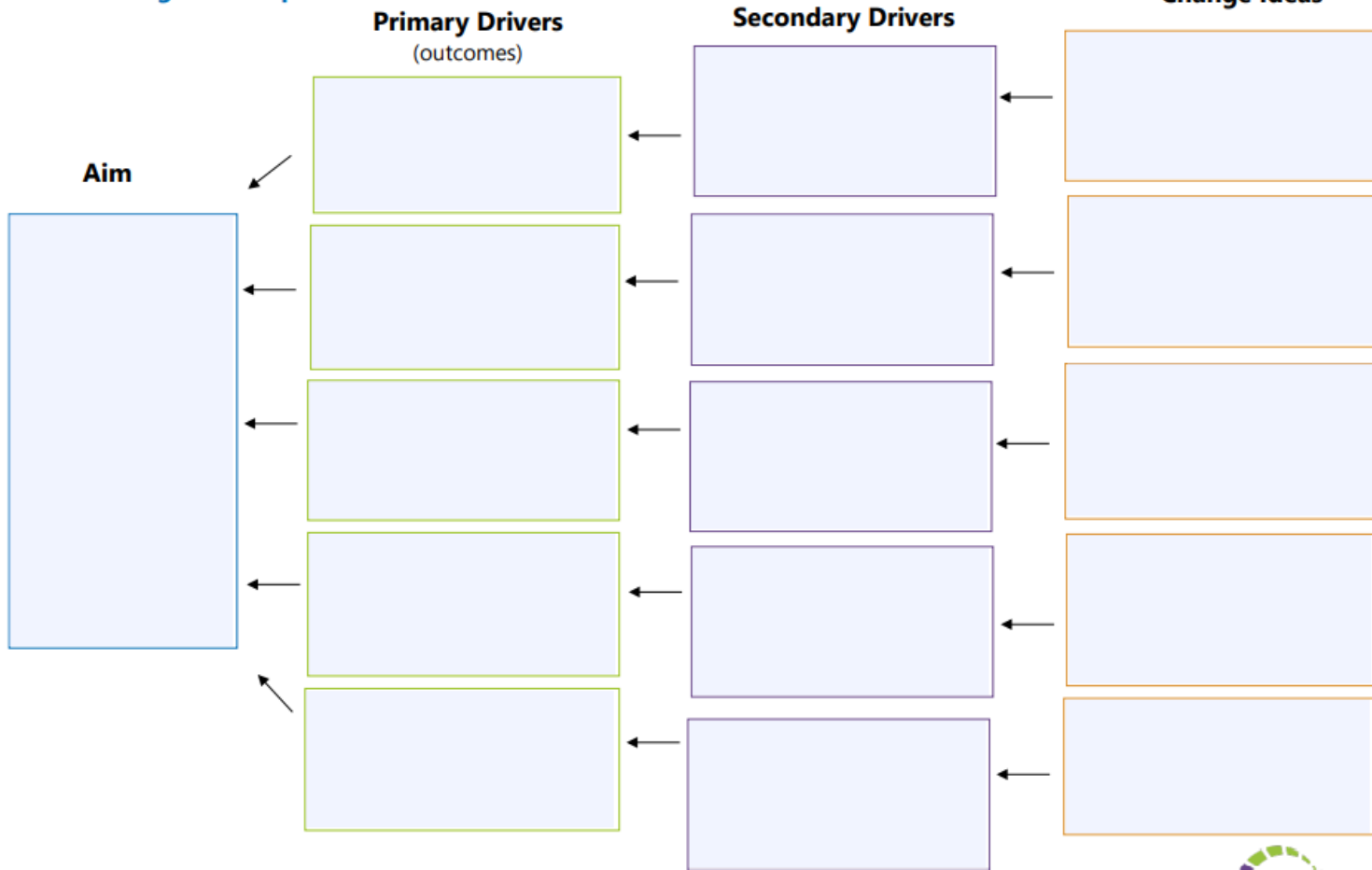
Why?

Root Cause:

Possible Solutions:



Driver Diagram Template



Final Tips for Success

- If you can't measure it, you can't improve it
- Manage the processes, not the providers
- Engage the people who do and understand the work
- Start small
- QI is an iterative process

Resources

1. [Institute for Healthcare Improvement Quality Improvement Essentials Toolkit](#)
2. [AHRQ Ways to Approach the Quality Improvement Process](#)
3. [NICHQ Quality Improvement 101](#)
4. [Basics of Quality Improvement in Healthcare](#)
5. [PDSA Worksheet Template](#)
6. [Building the Business Case for Quality Improvement](#)
7. [Five Whys Worksheet](#)
8. [Fishbone Diagram Template](#)
9. [ASQ Learn About Quality](#)
10. [Population Health Improvement Partners QI Videos & Tools](#)
11. [Promoting Success: Getting to Outcomes Guide to Implementing Continuous Quality Improvement for Community Service Organizations](#)
12. [ASTHO QI Plan Toolkit](#)



HEALTH QUALITY INNOVATORS



Open Discussion

Any other questions for the group?



HEALTH QUALITY INNOVATORS



Stay Connected



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