The Art and Science of Process Improvement

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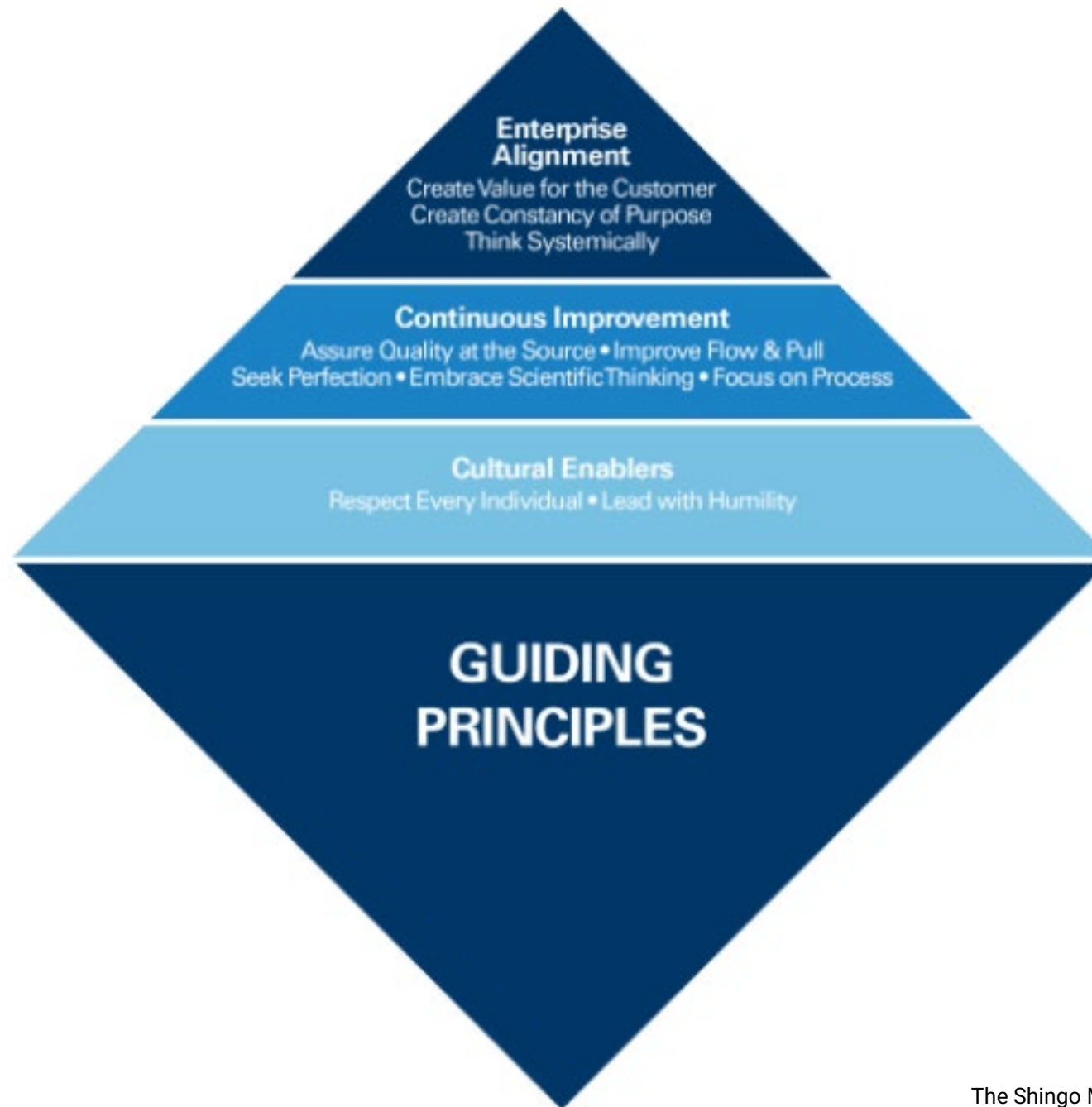
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How do we create a sustainable culture of operational excellence?

"Continuous improvement is the <u>ongoing improvement</u> of products, services or processes through incremental and breakthrough improvements"-ASQ

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The Shingo Model. Jon M. Huntsman School of Business Shingo Institute. Utah State University. https://shingo.org/shingo-model/

How does process improvement fit in?

Improvement is a TEAM sport

Quality improvement is the framework used to systematically improve care.

Seeks to <u>standardize processes</u> and <u>structure</u> to:

- reduce variation;

- achieve predictable results; and

- improve outcomes for patients, healthcare systems and organizations.

CMS Quality Measurement and Quality Improvement What is Quality Improvement?: https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/Quality-Measure-and-Quality-Improvement-#:~:text=Quality%20improvement%20is%20the%20framework,%2C%20healthcare%20systems%2C%20and%20organizations

What is the mechanism of QI?

PROCESS IMPROVEMENT is the mechanism in which QI is standardized.

1. Behavior is made systematic so the same inputs result in the same outputs within the bounds of uncertainty (randomness).

2. Second, behavior is aligned with evidence on sound practices (e.g., guidelines and systematic reviews).

Standardization of _structure and process_ increases the likelihood of desired health outcomes.

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Why is using QI science important?

"These are <u>the processes</u> that get us to the goals we are trying to achieve. Both with our health delivery and also with measuring impact."
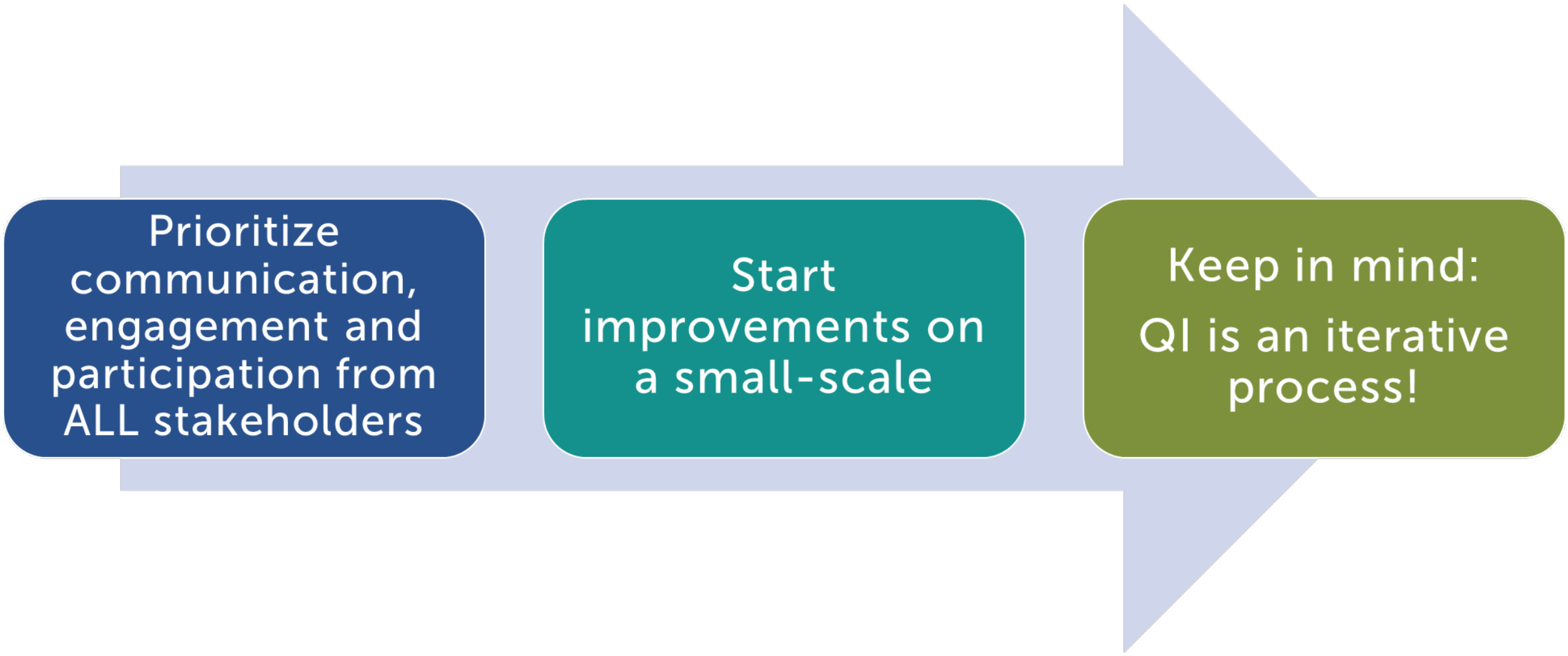
- Michael Hanak, MD, FAAFP, Associate Chief Medical Information Officer, Rush University Medical Center

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[IHI video: Achieving health equity by using quality improvement science](https://www.youtube.com/watch?v=bsV_0E1yc00)

Getting started

Facilitating the QI process

Prioritize communication, engagement and participation from ALL stakeholders
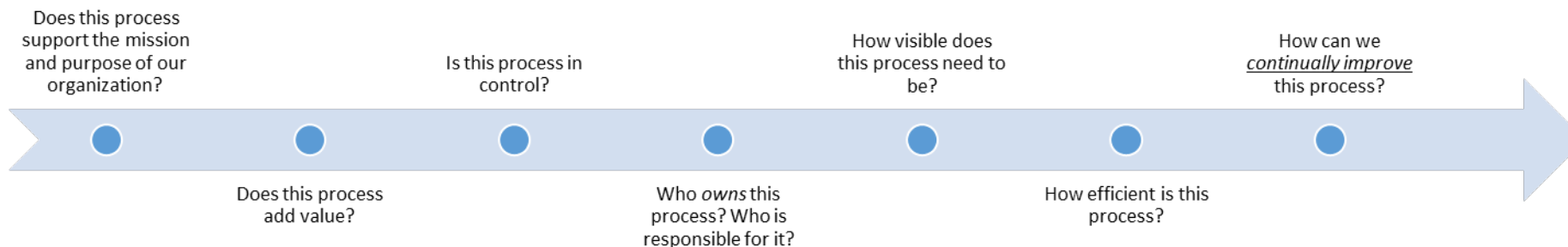
Start improvements on a small-scale

Keep in mind: QI is an iterative process!

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AHRQ Ways to Approach Quality Improvement Process: https://www.ahrq.gov/cahps/quality-improvement/improvement-guide/4-approach-qi-process/index.html

1. Foster a culture of quality

- **engage** leadership and key stakeholders
- **commit** to a goal of zero harm
- **create** a *sense of urgency to change*
- **mobilize** your team and *execute your change strategy*

Think of times when significant organizational processes or procedures changed within your organization. Did development of those changes include multiple levels of staff? Were they communicated effectively? When they were not, how invested or inclined to change did you feel?

Does this process support the mission and purpose of our organization?

Does this process add value?

Is this process in control?

Who *owns* this process? Who is responsible for it?

How visible does this process need to be?

How efficient is this process?

How can we *continually improve* this process?

Good Leaders, Ask Good Questions!

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2. Form a frontline of defense

- **create** an effective safety culture and ensure accountability

- **assess** your current state and conduct QI activities

- **pinpoint** barriers and address clinical areas of improvement

CHANGE IDEA: Mobilize clinical "microsystems" to assess the 5Ps

Patients
People
Patterns
Processes
Purpose

What is most important to the people who make up your microsystem?

Look for ways to help them embrace the changes & take ownership!

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3. Boost bundle compliance

- **adopt** an [evidence-based care bundle](#) to improve processes of care and patient outcomes

- **redesign system and utilize** clinical pathways to support [staff implementation](#) of clinical guidance

- **conduct** data quality audits to assess clinical practice against standards

Remember: The goal is to make the process <u>more reliable,</u> and you do that by *<u>improving habits and processes</u>!*

4. Harness technology

Explore how best practices can encompass technology and digital tools

- **identify** platform enhancement and integration opportunities

- **utilize** tools (i.e. CDI) to boost clinical efficiency, optimize processes, workflows and task(s)

- **develop** customized process improvement programs *in advance* to effectively manage resistance and acceptance

Improve communication among team members	Increase access to relevant & reliable data
Provide timely feedback on performance	Make necessary changes in processes

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5. Strengthen coding & documentation

Ensure assessment and prevention strategies are documented and supported by internal guidelines and staff education.

- **increase understanding** between clinical & coding language with use of clinical documentation improvement programs

- **utilize** end-to-end "documentation chain" to address CDI, coding and quality issues (downstream processes)

- **engage** physician champion/team workgroups to tackle barriers related to workflow and documentation processes

6. Diagnose root causes

Root cause analysis is a structured facilitated team process to identify root causes of an event that resulted in an undesired outcome and develop corrective actions.

- **gather team** to find out what happened, why it happened and determine what changes need to be made

- **investigate breakdowns** in processes and systems (i.e. contributing factors)

- **make changes** to mitigate and eliminate system vulnerabilities

- **target sustainable** solutions for system change sustainability and spread

Root Cause Analysis Example[6]
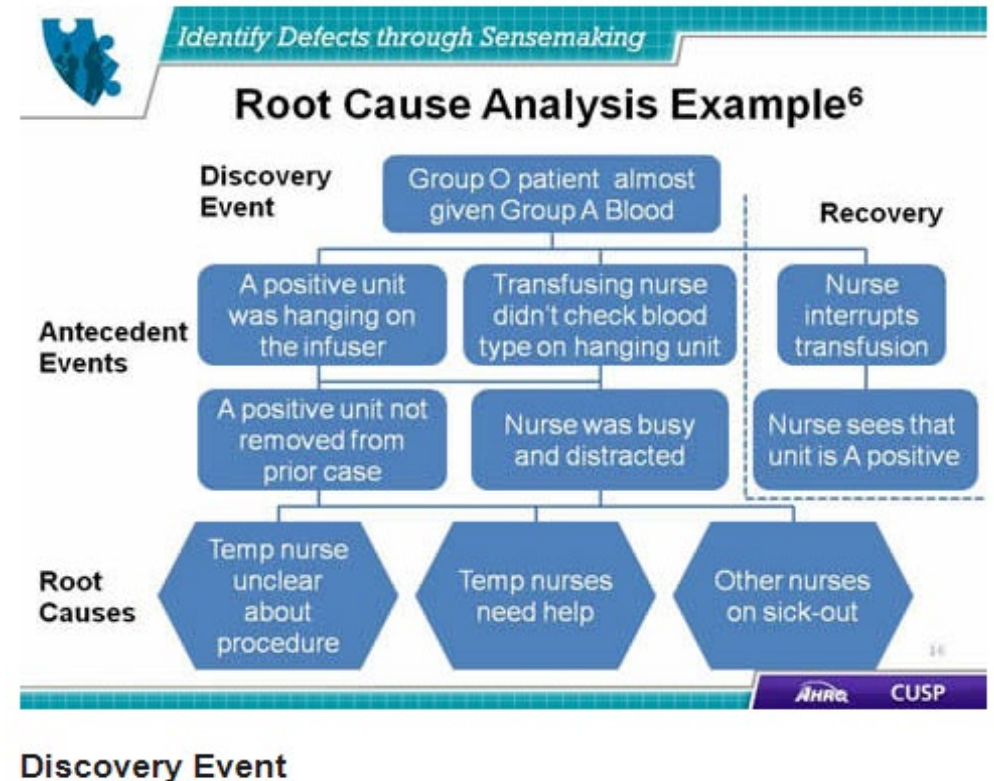
7. Dig into your data!

Bring together stakeholders to assess your data for specific quality issues negatively impacting your organization

- examine data to effectively understand, track and communicate performance on patient safety metrics

- benchmark using scorecards and dashboards

- use a balanced set of measures

- utilize data tools to support evaluation of structures and processes (i.e. control charts)

What can you learn from your data about where to focus improvement efforts?

How can you use your data to better identify gaps and trend performance against goals?

Remember, measurement is not the goal; *improvement is the goal!*

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8. Set your challenge

- **adopt** an established improvement methodology (i.e. PDSA, Lean, Six Sigma)
- **incorporate** use of process improvement tools and evidence-based methodologies to improve patient safety
- **integrate** small rapid-cycle tests of change to identify processes for improvement
- **maintain** plans for monitoring quality and prioritizing improvement activities

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Plan, Do, Study, Act

A popular starting point

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The Model for Improvement

Thinking and Planning Phase

1. **What are we trying to accomplish?**
   - Think about what you are trying to do and set clear and desirable aims and objectives

2. **How we will know that a change is an improvement?**
   - Establish measuring processes and outcomes

3. **What change can we make that will result in improvement?**
   - Generate ideas based on what others have done, what you think could happen, and what can be learned through this process
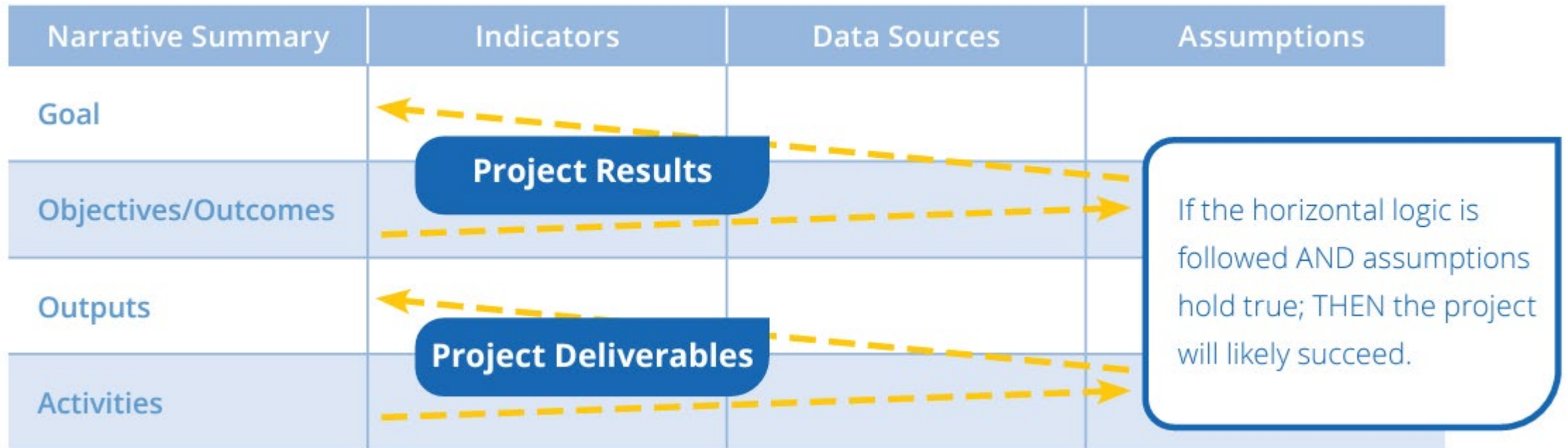
Action Phase

Act
- What changes should be made by the next cycle?
- If no changes, roll out the improvement

Plan
- Set improvement goals
- Predict what will happen
- Plan the cycle
- Decide what data to gather

Study
- Fully analyze data
- Compare data to predictions
- Examine learning

Do
- Carry out the plan
- Document any problems and observations
- Gather data

Source: Developed by Associates in Process Improvement

Adapted from: Associates in Process Improvement

PDSA In Everyday Life: https://youtu.be/_-ceS9Ta820

CQI Asks: "How are we doing?" and "Can we do it better?"

A process is defined as a series of activities that transforms a set of inputs into a specific set of outputs.

Narrative Summary	Indicators	Data Sources	Assumptions
Goal			
Objectives/Outcomes	**Project Results**		If the horizontal logic is followed AND assumptions hold true; THEN the project will likely succeed.
Outputs			
Activities	**Project Deliverables**		

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9. Go to the guidelines

Stay-up to date!

- **review current guidelines** for evidence-based practice recommendations

- **prioritize** interventions and develop <u>quality indicators</u>

- **adapt and customize** to your setting

- **educate** providers and embed into daily clinical practice

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Final thoughts

Perfecting the QI project cycle

Project planning

- Develop a project plan "roadmap."

- Identify the specific tasks and deliverables for project initiation, execution and sustainment.

- Determine appropriate timeline for completing each phase.

- Assign tasks/deliverables to team members to ensure your plan stays on track.

3. Develop and Pilot a Reliable Standard Process of Care

Tasks	Driver	Status 1: planned 2: in progress 3: complete	Next Steps
Get to know the current processes in detail: Use observation, process maps, value stream maps, run charts, surveys, Pareto analysis, etc.	Team Lead		
Sketch an initial process design	Team Lead/ Improvement Advisor		
Select which changes and improved design elements to test using PDSA cycles	Team Lead		
Test changes and refine the design by starting with 1 patient or event (testing and refining changes is an iterative, continuous process using PDSA cycles)	Team Lead		
Regularly analyze how the process and the changes are working and test additional changes as needed based on your analysis	Team Lead/ Improvement Advisor		
Track and document changes, tests, and results over time	Team Lead/ Improvement Advisor		
Coach and support front-line staff on problem identification, PDSA testing	Team Lead		
Provide regular feedback to process participants and the executive sponsor at least weekly	Team Lead		
When you are confident that the change is producing improvement, begin planning for implementation (making the change permanent)	Team Lead		

> Are the parts/steps in the system performing as planned?
> Are we on track in our efforts to improve the system?

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Don't overlook the relational aspects of improvement

What skills do improvers need?

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

- Involve leadership, find your champions and mobilize.

- Extend process ownership across teams.

- Encourage a culture that challenges the status quo.

- Make process improvement part of everyday conversation.

- Expect resistance as you introduce new processes.

- Be patient, sustainable practices take work and time to succeed.

- Celebrate successes AND failures – *both are part of the process!*

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Quality toolbox takeaways

Hospital Toolkits for Action	Project Management Resources	Templates
• EQIC Website | Unit-Based Patient Safety and Quality Improvement Toolkit • IHI Quality Improvement Essentials Toolkit	• AHRQ Project Planning and Management • Project Management & Dissemination Toolkit • Project Change Concepts Worksheet	• Cause-and-effect diagram template • Check sheet template • Control chart template • Histogram template • Pareto chart template • Scatter diagram template • Stratification template

Quick QI Podcasts
• How do you spread QI?
• What an Improvement Coach Does and Doesn't Do
• Creating a Culture of Continuous Improvement that Outlasts your Leaders|

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Take the survey!

Thank you.

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