Maintaining and sustaining a highly reliable quality improvement strategy

Data in action: Ready, set, go!

June 26, 2024

EQIC

EASTERN US QUALITY IMPROVEMENT COLLABORATIVE

Learning objectives

- Review QI tools and how to use them
- Explore the PDSA cycle
- Recap and plan for sustainability
- Game time!

Speakers

- **Jenna Winokur,** *Project Manager,* HANYS
- **Elizabeth Perry,** *Manager of Project Coordination, H*ANYS
- **Brenda Chapman,** *Project Manager,* HANYS

Quality improvement tools

- Cause and effect diagram
- Driver diagram
- Failure modes effects analysis
- Flowchart
- Process map
- Root cause analysis
- Value stream map

Where are we in the QI process?

- Example:
  - Hospital data show an increase in *C. difficile* rates.
  - A team of stakeholders was assembled to explore the possible causes of the rate increase.
  - Because there were numerous possible causes that were contributing to the increased rate, a cause and effect diagram was used.

What is the tool?

The cause and effect diagram is a graphic tool used to explore and display a list of causes associated with a certain effect. The graph organizes the list of causes into categories and is also known as an Ishikawa or “fishbone” diagram.

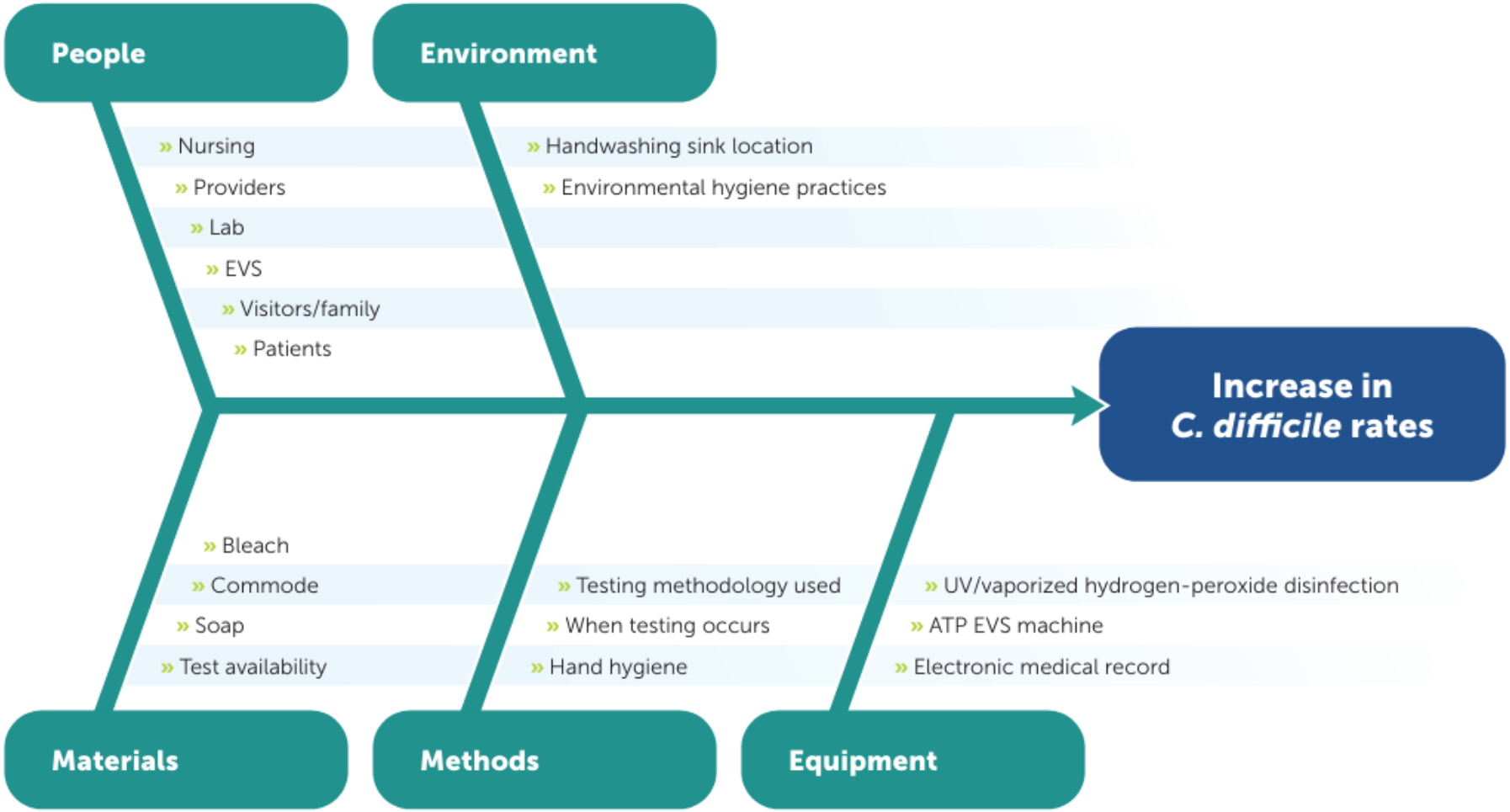
When should the tool be used?

- Teams should use a cause and effect diagram to explore multiple causes that may be contributing to a particular outcome. It can be used for a brainstorming activity and can help identify previously undiscovered areas for improvement.
- The cause and effect diagram should be constructed by a team comprised of stakeholders who are familiar with the process that produces the effect.

C. *difficile* fishbone diagram

- People
- Environment
- Materials
- Methods
- Equipment

C. *difficile* fishbone diagram

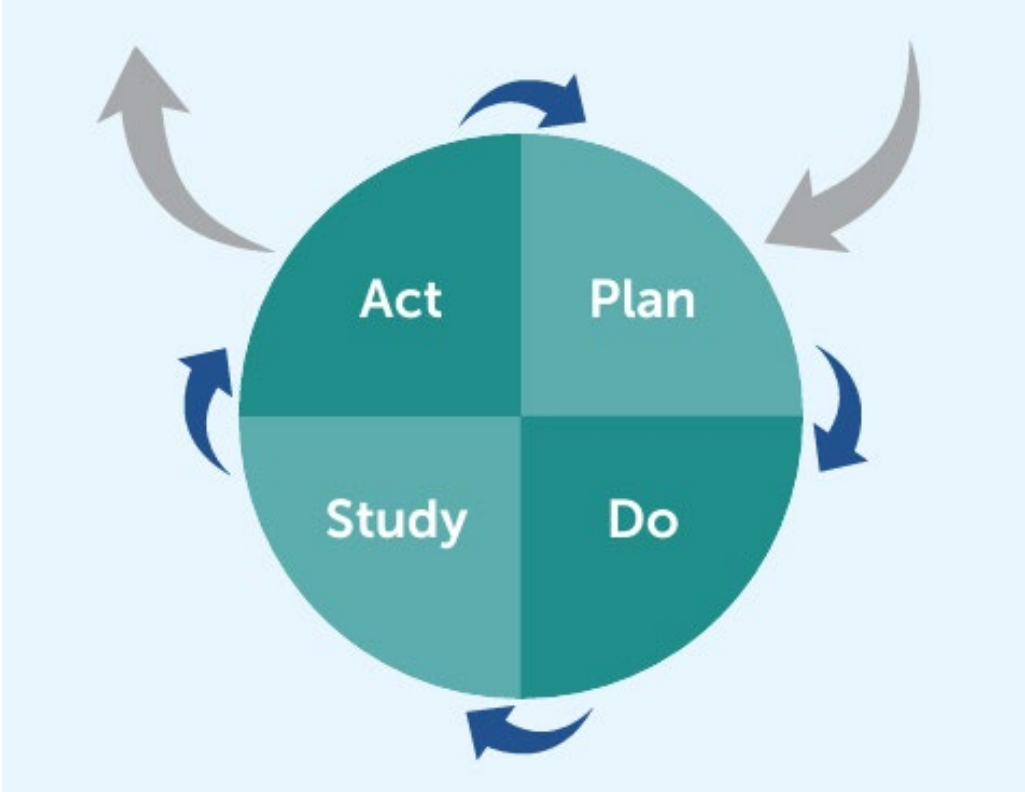


EQIC
EASTERN US QUALITY IMPROVEMENT COLLABORATIVE

Next steps

- Narrow down focus
- Rapid test of change – Some are more resource intensive … but some we can test now to see if we can create an impact.
- PDSA

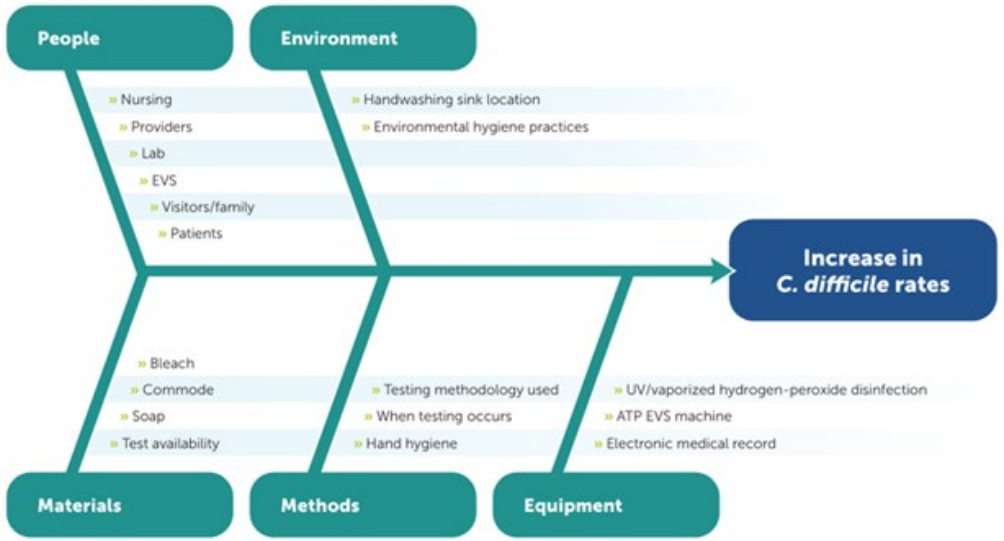
Plan-Do-Study-Act



EQIC
EASTERN US QUALITY IMPROVEMENT COLLABORATIVE

Getting started

- Review RCA findings
- Select improvement project
- Identify test area and timeline



Understanding the PDSA cycle

- **Benefits**
  - Continuous improvement and adaptability
  - Data-driven decision making
  - Enhanced compliance and patient outcomes
  - Foster a culture of quality and safety
- **Challenges**
  - Staff resistance
  - Resource limitations
  - Data collection issues

Plan phase:
Identify issues and goals

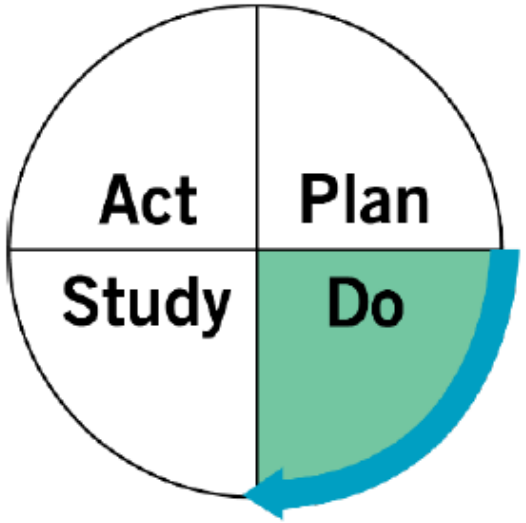
- Initial assessment
- Seek staff feedback
- Engage stakeholders
- Set SMART goals
- Identify potential solutions
- Use high-reliability principles
- Create an implementation plan

PDSA Worksheet. Boston, Massachusetts: Institute for Healthcare Improvement; 2024. (Available on www.IHI.org)

EQIC
EASTERN US QUALITY IMPROVEMENT COLLABORATIVE

Do phase:
Implement the plan

- Pilot-chosen intervention
- Training sessions for involved staff on new procedures

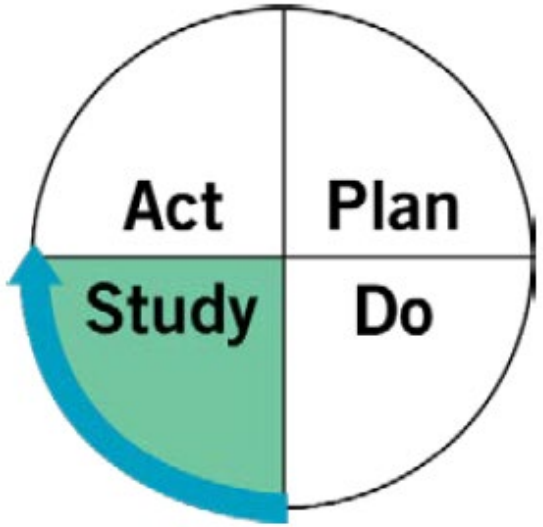


PDSA Worksheet. Boston, Massachusetts: Institute for Healthcare Improvement; 2024. (Available on www.IHI.org)

EQIC
EASTERN US QUALITY IMPROVEMENT COLLABORATIVE

Study phase:
Analyze the results

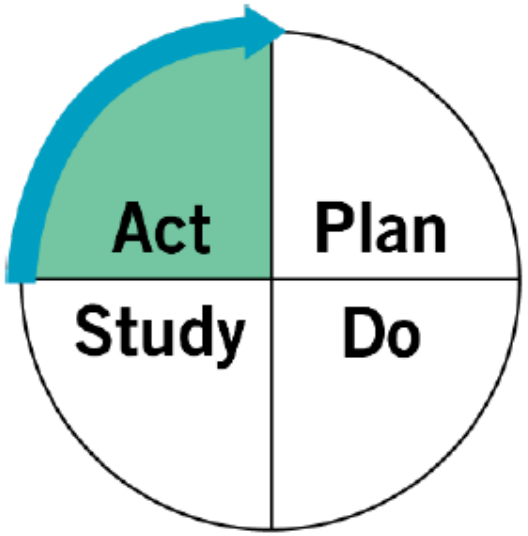
- Review the results and determine the effectiveness of interventions
- Identify successes and areas for improvement



PDSA Worksheet. Boston, Massachusetts: Institute for Healthcare Improvement; 2024. (Available on www.IHI.org)

Act phase:
Make adjustments

- Decide on next steps
- Plan next PDSA cycles
  - Constant, short tests of change



PDSA Worksheet. Boston, Massachusetts: Institute for Healthcare Improvement; 2024. (Available on www.IHI.org)

EQIC
EASTERN US QUALITY IMPROVEMENT COLLABORATIVE

Quality improvement sustainability

EQIC
EASTERN US QUALITY IMPROVEMENT COLLABORATIVE

What have we learned about QI?

HRO

DATA

TOOLS

EQIC
EASTERN US QUALITY IMPROVEMENT COLLABORATIVE

Foundations of QI

UBS is one of the important pieces of QI work. The UBS approach is a process for interactive learning and bringing care improvement to the bedside by:

- increasing staff awareness and involvement in improvement processes;
- identifying and implementing best practices (i.e. bedside and leadership rounds);
- providing education and development to ensure up-to-date knowledge and evidence-based interventions; and
- creating an organizational structure that supports a unit-level safety culture.

High-reliability organizing/organization

HRO recap:

- Preoccupation with failure:
  - Anticipate/avoid errors
  - Rescue
- Reluctance to simplify: Standardization denotes specific, detailed, documented standard procedures
- Sensitivity to operations: Every voice matters
- Defer to the experts: Frontline staff
- Commitment to resiliency: Adaptive capability

Data collection and reporting

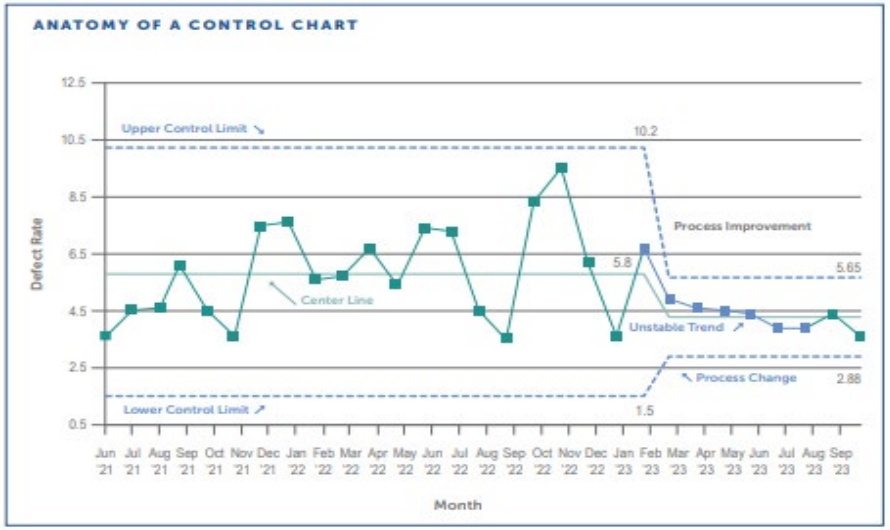
Standardizing the process

A well-documented, standardized data collection plan is essential to the successful start of a QI project.

- Teams should:
  - determine who collects the data for the measure;
  - what methodology will be used to collect the data; and
  - when the data will be collected.

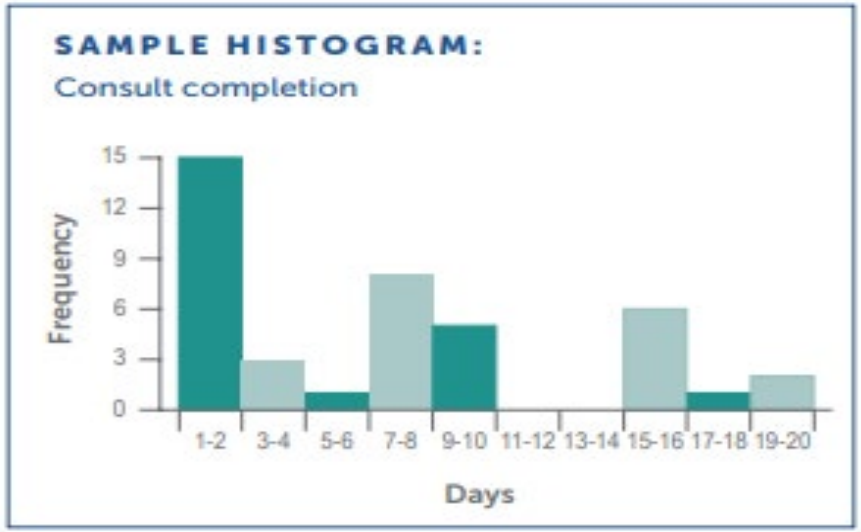
Displaying and sharing data

A **run chart** displays data over time



A **control chart** shows data over time and includes upper and lower control limits

A **histogram** is a bar chart that groups data into ranges



EQIC
EASTERN US QUALITY IMPROVEMENT COLLABORATIVE

EQIC RCIP assessment tools

Rapid-cycle Improvement Program

Sepsis Assessment

WHAT IS THIS TOOL?

This assessment allows hospitals to identify opportunities for improvement to reduce the risk of a patient developing sepsis. Use this tool to interview unit-based staff and compare current practices with recommended evidence-based best practices.

WHO SHOULD USE THIS TOOL?

Hospital-based quality improvement teams focused on reducing sepsis.

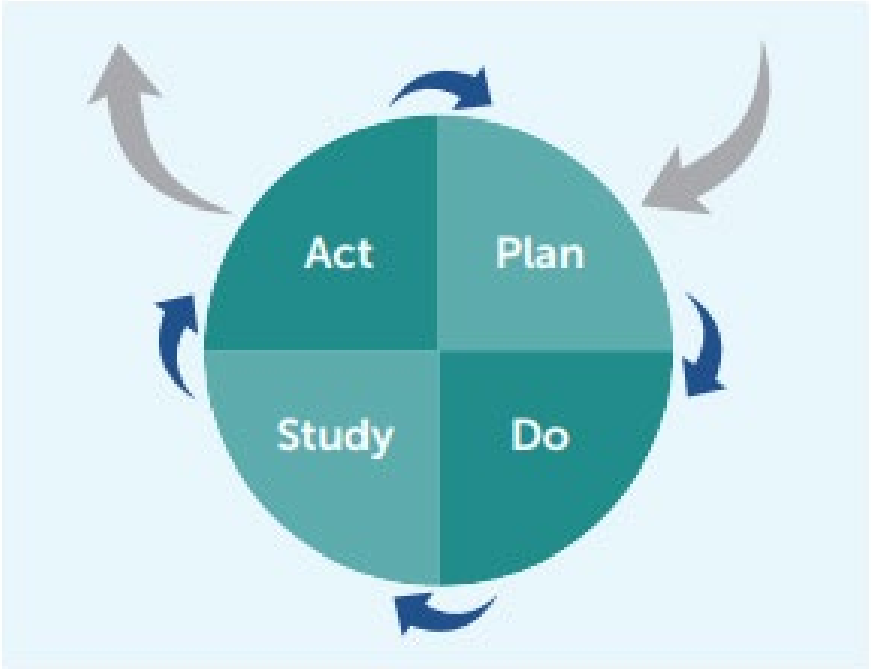
ASSESSMENT PROCESS:

- Review the hospital's internal policies and protocols.
- Review electronic medical records for selected patients to evaluate the presence of documented assessments and interventions.
- Complete the assessment with unit-based staff from multiple hospital areas to ensure that unit-to-unit variation is accounted for in any hospital-wide action plans developed as a result of the assessment.
- Review responses with your EQIC project manager for additional guidance and next steps.

EQIC
EASTERN US QUALITY IMPROVEMENT COLLABORATIVE

Tools for improvement

- Model for Improvement / Plan-Do-Study-Act cycle
- Cause and effect diagram
- Driver diagram
- Failure mode effects analysis
- Flowchart
- Process map
- Root cause analysis
- Value stream map



EQIC
EASTERN US QUALITY IMPROVEMENT COLLABORATIVE

Sustaining improvement

EQIC
EASTERN US QUALITY IMPROVEMENT COLLABORATIVE

Definition of sustainability:

Ensuring gains are maintained beyond the life of the project[1], or the institutionalization or routinization of programs into ongoing organizational systems

[1]Clinical Excellence Commission (CEC), Enhancing Project Spread and Sustainability – A Companion to the "Easy Guide to Clinical Practice Improvement." Sydney, Australia: CEC. August 2008. http://www.cec.health.nsw.gov.au/__data/assets/pdf_file/0007/258343/spread-and-sustainability.pdf.

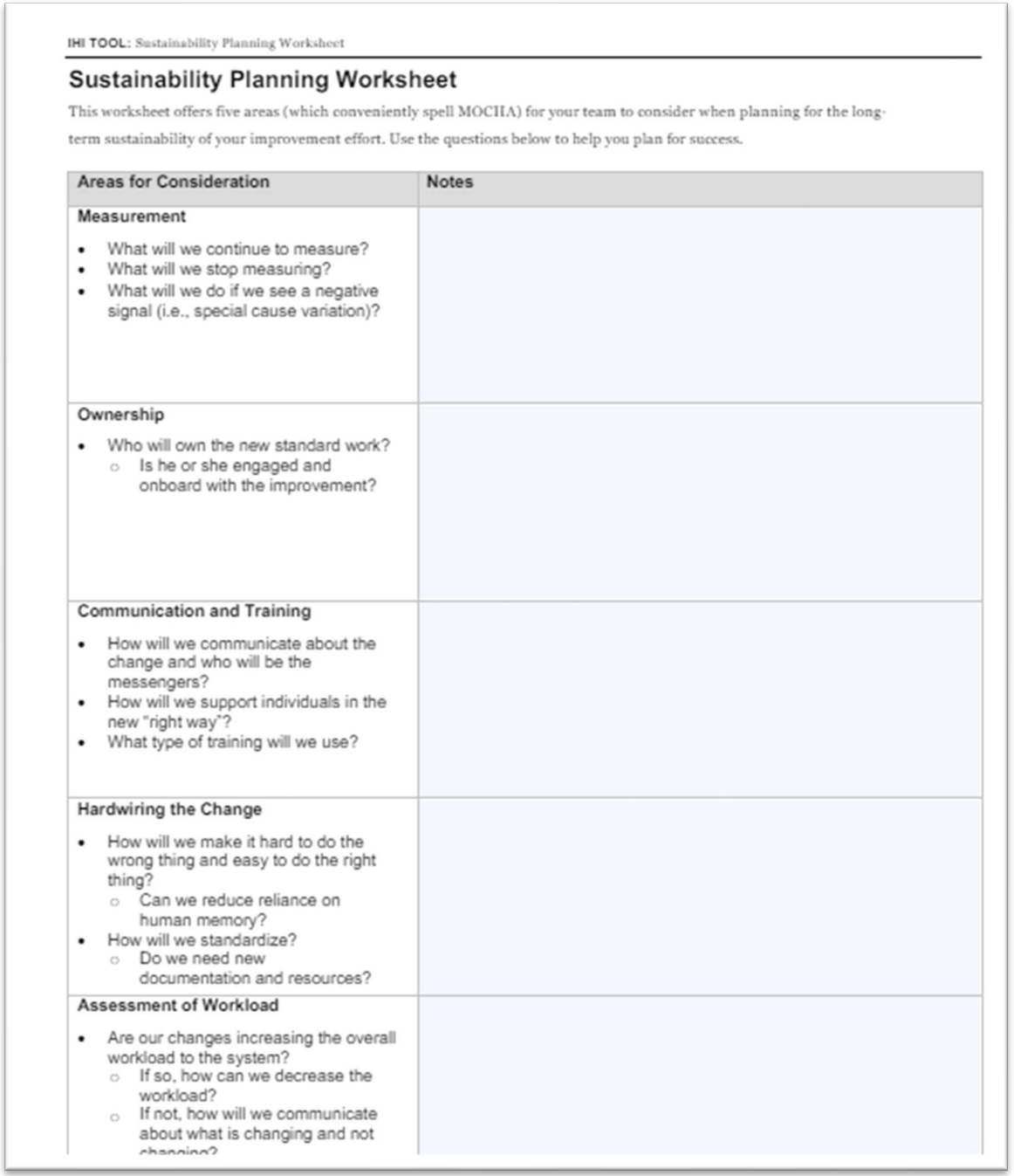
EQIC
EASTERN US QUALITY IMPROVEMENT COLLABORATIVE

Maintaining and sustaining projects

- Refer to the project plan schedule to keep milestones and timelines on target.
- Continue regularly scheduled meetings for frontline staff and leadership to share successes and opportunities and to pivot when necessary.
- Evaluate project measures and data for successes and opportunities.
- Determine if projects can be replicated or scaled.
- Continue the improvement cycle as needed.

Maintaining momentum and sustaining change

- ✓ Holding regular QI team meetings
- ✓ Sustainability checklist
- ✓ Spreading improvements



IHI TOOL: Sustainability Planning Worksheet

Sustainability Planning Worksheet

This worksheet offers five areas (which conveniently spell MOCHA) for your team to consider when planning for the long-term sustainability of your improvement effort. Use the questions below to help you plan for success.

Areas for Consideration	Notes
Measurement • What will we continue to measure? • What will we stop measuring? • What will we do if we see a negative signal (i.e., special cause variation)?	
Ownership • Who will own the new standard work? ○ Is he or she engaged and onboard with the improvement?	
Communication and Training • How will we communicate about the change and who will be the messengers? • How will we support individuals in the new "right way"? • What type of training will we use?	

Hardwiring the Change
• How will we make it hard to do the wrong thing and easy to do the right thing?
  ○ Can we reduce reliance on human memory?
• How will we standardize?
  ○ Do we need new documentation and resources?	

Assessment of Workload
• Are our changes increasing the overall workload to the system?
  ○ If so, how can we decrease the workload?
  ○ If not, how will we communicate about what is changing and not changing?	

EQIC
EASTERN US QUALITY IMPROVEMENT COLLABORATIVE

Sustaining improvement

- Focusing on the daily work of frontline managers, supported by a system of standard tasks and responsibilities for managers at all levels of the organization.
- Ensuring that after improvement, care and support processes continue to perform at new levels of quality and safety.
- Engaging frontline staff.

Unit-based practices

- Buddy systems
- Cross-unit rounding
- Geographic modeling
- Unit group chat

EQIC
EASTERN US QUALITY
IMPROVEMENT COLLABORATIVE

Measuring resiliency: Zero preventative harm

Metrics:

- ✓ Days with rescue
- ✓ Utilization metrics
- ✓ Time for system issues resolution
- ✓ # Rescues - (reassigned)
- ✓ System fix/events
- ✓ Great catches
- ✓ Great saves

EQIC
EASTERN US QUALITY IMPROVEMENT COLLABORATIVE

Continual Improvement

Continual improvement is an unending journey.

-Lloyd Dobyns

EQIC
EASTERN US QUALITY IMPROVEMENT COLLABORATIVE

Questions?

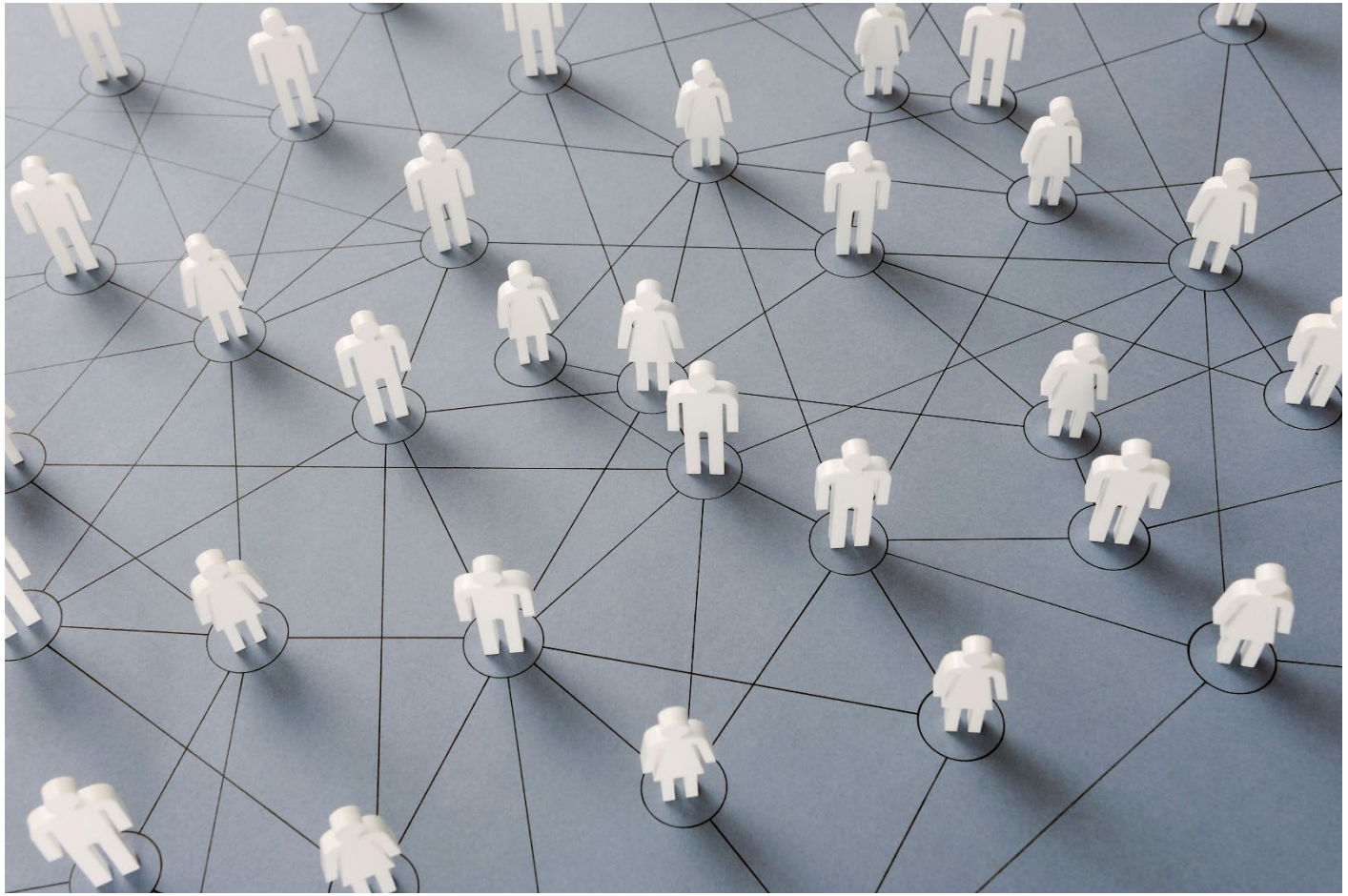
EQIC
EASTERN US QUALITY
IMPROVEMENT COLLABORATIVE

Resources

- EQIC unit-based safety and quality improvement toolkit
- Leading a QI project
- IHI's PDSA worksheet

Connections!

Let's play a game!
EQIC connections



EQIC
EASTERN US QUALITY
IMPROVEMENT COLLABORATIVE