

Fellowship in Minimally Invasive Gynecologic Surgery Quality Improvement & Patient Safety Project Toolkit

- Quality Improvement Methodology and Purpose
- Quality Improvement Project in 10 Steps
- Quality Improvement Measurement
Tools and Documents
- Resources for Quality Improvement

Quality Improvement Methodology and Purpose

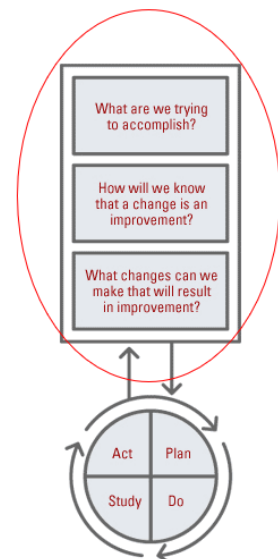
- **What is Quality Improvement and how does it relate to patient safety?**

Quality Improvement in medicine includes systematic and continuous actions that lead to measurable improvement in health care services and the health status of targeted patient groups.ⁱ

- **Quality improvement methodology is based on the model for improvement, which asks:**

The Model for Improvement

- What are we trying to accomplish?
 - *Team Aims*
- How will we know that the change is an improvement?
 - *Measurement*
- What changes can we make that will result in an improvement?
 - *Tests of Change/Interventions*



Source: www.ih.org

Methodology in QI

- Use of rapid change cycles
- Interventions may be short term or part of a larger goal



- Plan:** Plan the test, including a plan for collecting data.
- State the question you want to answer and make a prediction about what you think will happen.
 - Develop a plan to test the change. (Who? What? When? Where?)
 - Identify what data you will need to collect.



- Do:** Run the test on a small scale.
- Carry out the test.
 - Document problems and unexpected observations.
 - Collect and begin to analyze the data.



- Study:** Analyze the results and compare them to your predictions.
- Complete, as a team, if possible, your analysis of the data.
 - Compare the data to your prediction.
 - Summarize and reflect on what you learned.



- Act:** Based on what you learned from the test, make a plan for your next step.
- Adapt (make modifications and run another test), adopt (test the change on a larger scale), or abandon (don't do another test on this change idea).
 - Prepare a plan for the next PDSA.

Sample PDSA Cycle: SSI Example

AIM Statement	Reduction of SSI in abdominal hysterectomy by 2% over 12 months, at site X.
Plan	Obtain baseline data for SSI rate in abdominal hysterectomy over past 12 months. Identify metric: SSI rate (or SIR) Team members: Physicians, Nursing, OR Scheduling, Technicians, Administrative member, C-suite, infectious control department, EHR reporting
Do	Intervention: Use of clean closure tray for abdominal hysterectomies
Study	Implement intervention Obtain data on weekly basis regarding use of closure tray (process measure) Obtain quarterly data on SSI rate
Act	Keep project? Change project? Sustainability plans

- **How is quality improvement different than research?**
Quality improvement projects use established clinical practices, that are utilized in a specific care setting that

can help change process measures or outcomes measures or both. The difference is that it may not necessarily be standardized, and may have several rapid change cycles to achieve a goal. Research can be conducted in various methods, but one of its goals that differs from quality improvement work is that it is standardized, with a reproducible goal. ⁱⁱ

How to do a Quality Improvement Project in 10 Steps:

1. Identify a problem
2. Obtain baseline data
3. Make a process map: a visual process of each step
 - Software: LucidChart
4. Identify risk points (fishbone) or prioritize risks (FMEA)
5. Brainstorm strategies with stakeholders on solutions
6. Develop an aim statement
7. Use a rapid change cycle: PDSA or DMAIC
(*define/measure/analyze/improve/control*)
8. Measure change after the intervention and track progress
 - Run chart
 - Complete vs. Continuous Improvement vs. Change project
9. Repeat another cycle or two or three (PDSA cycle)
10. Sustainability: make a plan for sustainability (resident that will take on project?)

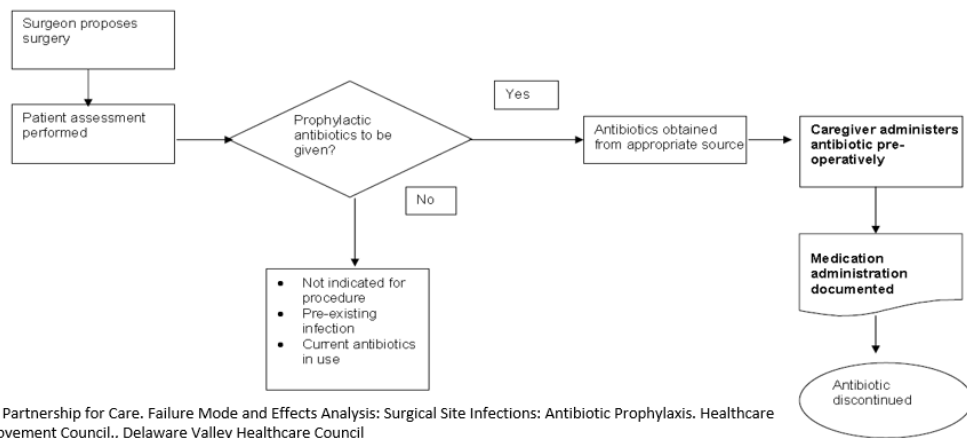
QI Measurement Tools:

- **Process Map**

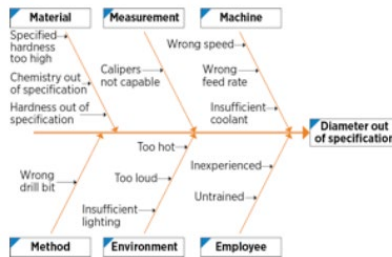
Process Map

- A graphical representation of a process, depicting inputs, outputs, and units of activity
 - Should detail the entire process and all of its steps
 - Allows for analysis and intervention regarding optimization of workflow.

- **Flow Chart for Prophylactic Antibiotic Administration**



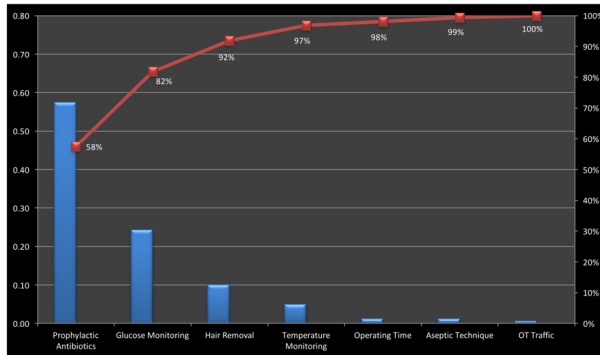
- **Fishbone**



Fishbone Diagram Example

Source: ASQ.org

Example of Pareto Chart



Source: Reducing surgical site infection in a hospital in Singapore, [Kui-Hin L, Aung, KT.](#) NYS Partnership for Patients conference, 2013.

Run chart



QI Documents to Get Started:

- Project Charter

(from The institute for healthcare improvement, <http://www.ihl.org/resources/Pages/Tools/QI-Project-Charter.aspx>)

- QI Essentials Toolkit

<http://www.ihl.org/resources/Pages/Tools/Quality-Improvement-Essentials-Toolkit.aspx>

Rapid Change Cycles:

PDSA

DMAIC (lean six sigma)

Resources for Quality Improvement Projects:

- For documents, methodology and QI courses:
Institute for Healthcare Improvement (www.ihp.org)
- For examples of bundles and targeted improvement in obstetrics and gynecology:
AIM, ACOG Patient Safety Council
- For support with quality improvement projects in MIGS:
Fellowship in Minimally Invasive Gynecologic Surgery's Quality Improvement Committee
- SQUIRRE 2.0 Checklist for Quality Improvement

Other Resources:

- AHRQ
- National Quality Forum
- The Joint Commission

Journals for Quality Improvement Manuscript Submissions:

- Green Journal
- American Journal of Medical Quality

ⁱ Source: US Dept. of Health and Human Services Administration, IOM

ⁱⁱ Office for Human Research Protections. Quality Improvement Activities FAQs. Available at, <https://www.hhs.gov/ohrp/regulations-and-policy/guidance/faq/quality-improvement-activities/index.html>. Accessed February 24, 2017.

Hodge JG, Gostin LO. Revamping the US federal Common Rule: modernizing human participant research regulations. JAMA. February 22, 2017. Available at, <http://jamanetwork.com/journals/jama/fullarticle/2606525>. Accessed February 24, 2017.