



OMSA

QUALITY IMPROVEMENT TOOLKIT:

A GUIDE FOR MEDICAL STUDENTS

NOTE: *As this toolkit is an introductory guide, it is important to recognize that there are many other helpful resources available to medical students in Ontario. We encourage you to reach out to faculty advisors for mentorship or guidance in your areas of research interest.*

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WHAT IS QI?

A **quality improvement (QI) project** is an initiative designed to study and improve the care for patients and healthcare professionals. This toolkit is meant as a guide to help with the initiation and development of a quality improvement project for medical students. It is an introductory resource to connect students to resources that have already been developed for the purpose of quality improvement in health care.

RESOURCES

01

HEALTH QUALITY ONTARIO

QI offers a proven methodology for improving care for patients, residents, and clients. This guide is an introductory resource including models for improvement, methods and tools, and examples to support practitioners of QI in Ontario.

 [HTTP://WWW.HQONTARIO.CA/PORTALS/0/DOCUMENTS/QI/QI-QUALITY-IMPROVE-GUIDE-2012-EN.PDF](http://www.hqontario.ca/portals/0/documents/qi/qi-quality-improve-guide-2012-en.pdf)

INSTITUTE FOR HEALTHCARE IMPROVEMENT (IHI) OPEN SCHOOL

Essential training and tools in an online, educational community through modules that guide students to gain competency in developing a strong QI project.

 [HTTP://WWW.IHI.ORG/EDUCATION/IHIOPENSCHOOL/COURSES/PAGES/STARTLEARNING.ASPX](http://www.ihl.org/education/ihlopenschool/courses/pages/startlearning.aspx)

The IHI has developed and adapted tools to help organizations accelerate improvement. In addition, many organizations have developed tools in the course of their improvement efforts – for example, successful protocols, order sets and forms, instructions, and guidelines for implementing key changes – and are making them available on IHI.org for others to use or adapt in their own organizations.

 [HTTP://WWW.IHI.ORG/RESOURCES/PAGES/TOOLS/DEFAULT.ASPX](http://www.ihl.org/resources/pages/tools/default.aspx)

02

03

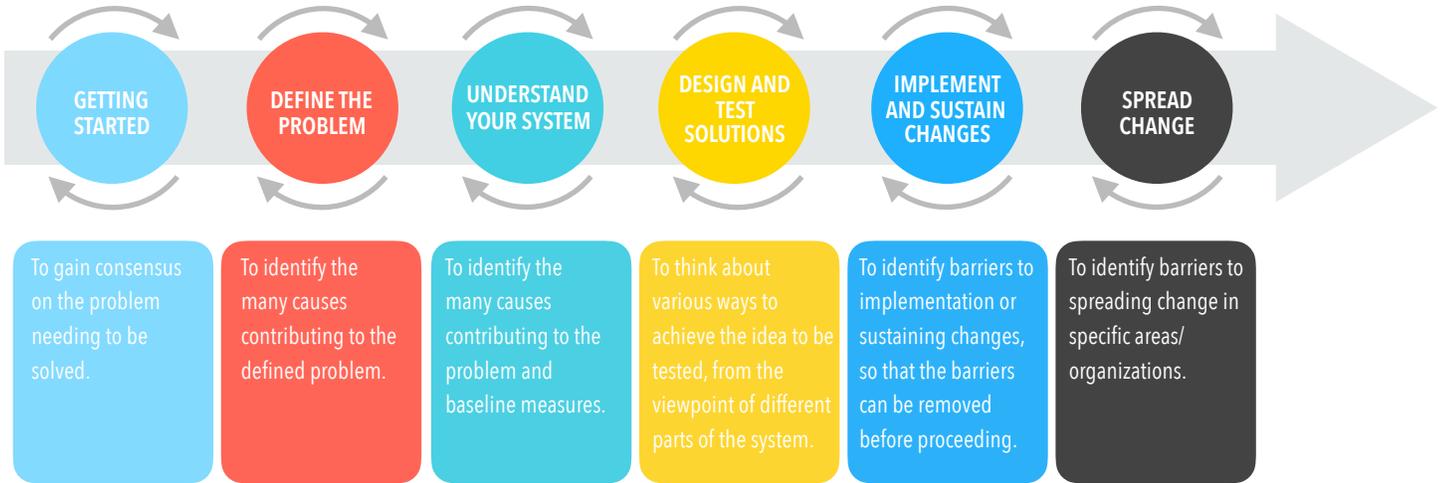
QUALITY IMPROVEMENT ESSENTIALS TOOLKIT

IHI's QI Essentials Toolkit includes the tools and templates you need to launch a successful quality improvement project and manage performance improvement. Each of the ten tools can be used with the Model for Improvement, Lean, or Six Sigma, and includes a short description, instructions, an example, and a blank template.

 [HTTP://WWW.HQONTARIO.CA/PORTALS/0/DOCUMENTS/QI/QI-QUALITY-IMPROVE-GUIDE-2012-EN.PDF](http://www.hqontario.ca/portals/0/documents/qi/qi-quality-improve-guide-2012-en.pdf)

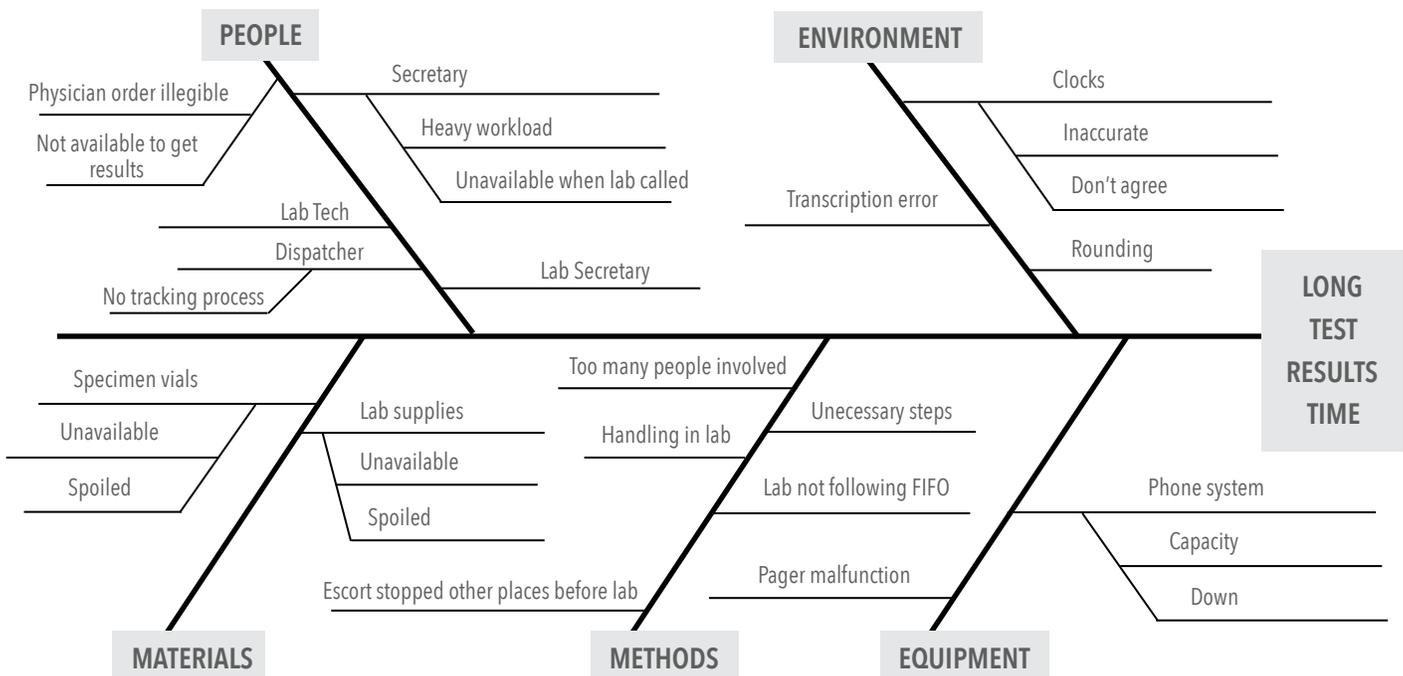
✓ FISHBONE / CAUSE AND EFFECT DIAGRAM

A tool to help create a common understanding of potential sources (root causes) that most significantly contribute to the problem in question.



[HTTP://WWW.HQONTARIO.CA/PORTALS/0/DOCUMENTS/01/01-FISHBONE-INSTRUCTION-SHEET-AC-EN.PDF](http://www.hqontario.ca/portals/0/documents/01/01-fishbone-instruction-sheet-ac-en.pdf)

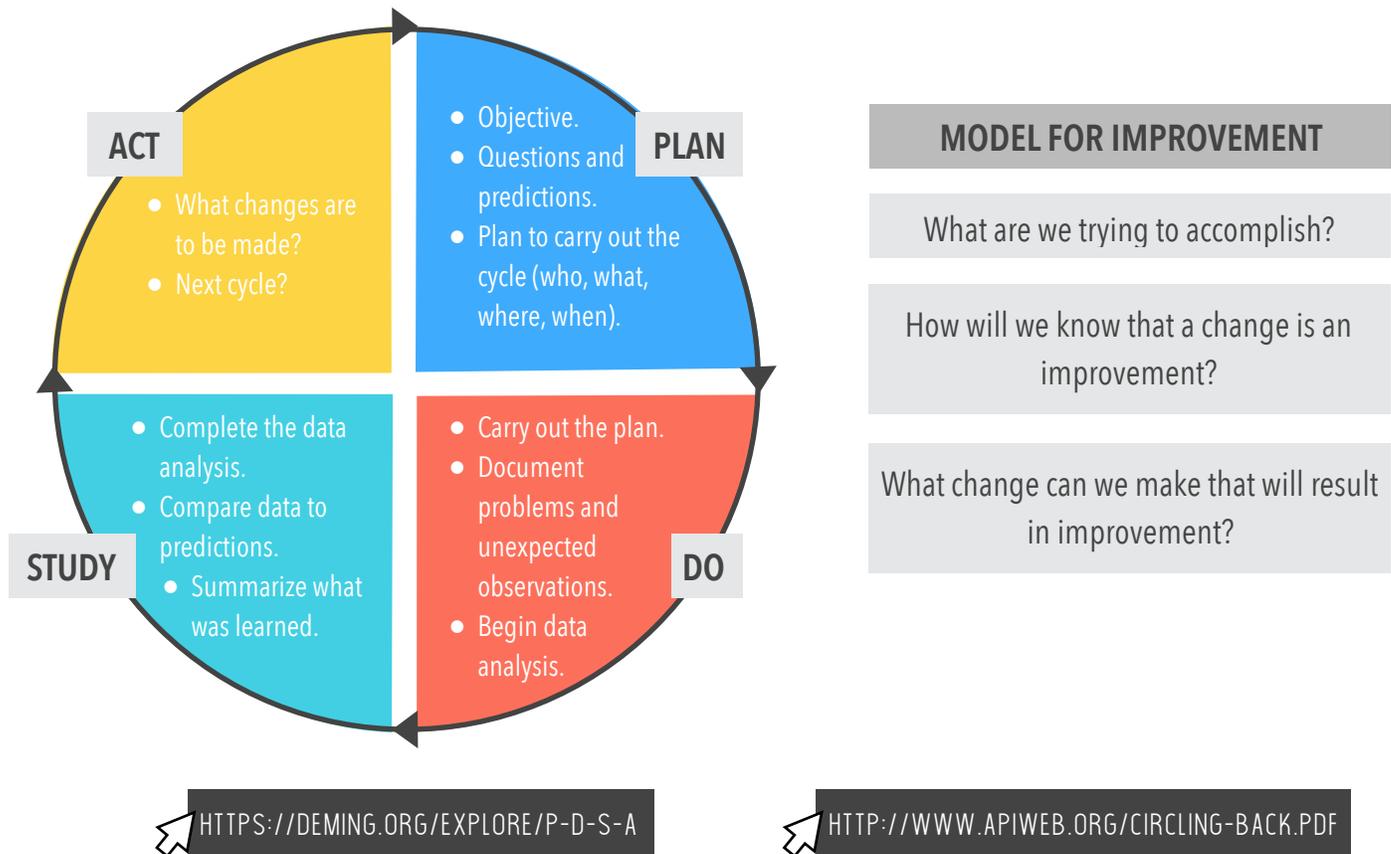
A cause and effect diagram, also known as an Ishikawa or "fishbone" diagram, is a graphic tool used to explore and display the possible causes of a certain effect. Use the classic fishbone diagram when causes group naturally under the categories of Materials, Methods, Equipment, Environment, and People.



[HTTP://WWW.IHI.ORG/RESOURCES/PAGES/TOOLS/CAUSEANDEFFECTDIAGRAM.ASPX](http://www.ihl.org/resources/pages/tools/causeandeffectdiagram.aspx)

✓ PDSA CYCLE

The PDSA Cycle (Plan-Do-Study-Act) is a systematic process for gaining valuable learning and knowledge for the continual improvement of a product, process, or service. These four steps can be repeated over and over as part of a never-ending cycle of continual learning and improvement.



✓ FAILURE MODES AND EFFECTS ANALYSIS (FMEA) TOOL

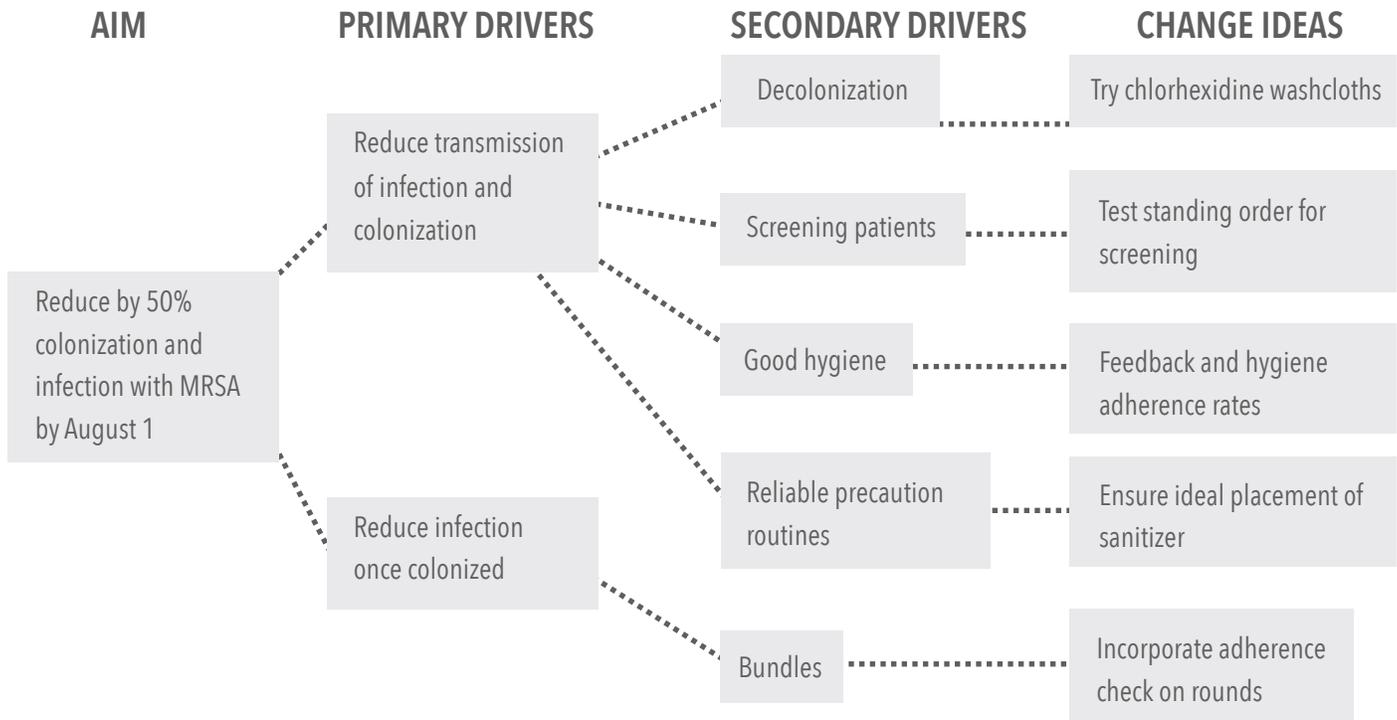
Failure Modes and Effects Analysis (FMEA) is a systematic, proactive method for evaluating a process to identify where and how it might fail and to assess the relative impact of different failures, in order to identify the parts of the process that are most in need of change. FMEA includes review of the following:

- Steps in the process
- Failure modes (What could go wrong?)
- Failure causes (Why would the failure happen?)
- Failure effects (What would be the consequences of each failure?)

[HTTP://WWW.IHI.ORG/RESOURCES/PAGES/TOOLS/FAILUREMODESANDEFFECTSANALYSITOOL.ASPX](http://www.ihl.org/resources/pages/tools/failuremodesandeffectsanalysisitool.aspx)

✓ DRIVER DIAGRAMS

A driver diagram is a visual display of a team's theory of what "drives," or contributes to, the achievement of a project aim. It shows the relationship between the overall aim of the project, the primary drivers ("key drivers") that contribute directly to achieving the aim, the secondary drivers that are components of the primary drivers, and specific change ideas to test for each secondary driver.



[HTTP://WWW.IHI.ORG/RESOURCES/PAGES/TOOLS/DRIVER-DIAGRAM.ASPX](http://www.ihl.org/resources/pages/tools/driver-diagram.aspx)

✓ QI CHARTER TOOL

A tool that sets out the purpose, scope, measures and targets for success. It identifies key members of the QI team and specifies the time and resources to be invested, as well as the potential payoff. It provides focus and promotes success.

[HTTP://WWW.HQONTARIO.CA/PORTALS/0/DOCUMENTS/QI/QI-CHARTER-TOOL-EN.PDF](http://www.hqontario.ca/portals/0/documents/qi/qi-charter-tool-en.pdf)

Quality Improvement Charter TOOL

Project title:	Organization or site:
Executive Sponsor:	Team Lead(s):
Team members:	
Benefit to clients/patients/residents:	
Problem statement: (What's wrong with quality in the organization?)	
Aim statement: (What are we trying to accomplish? Over what time? Numerical target for improvement.)	
Measures: (How will we know if we are improving?)	
• Outcome measures	
• Process measures	
• Balancing measures	
Change ideas: (What can we do that will result in improvement?)	
Business case: (Are the organization and/or health system costs reduced by addressing the problem?)	
Link to Organizational Strategy:	
Project term: (Start and finish dates)	Project budget: