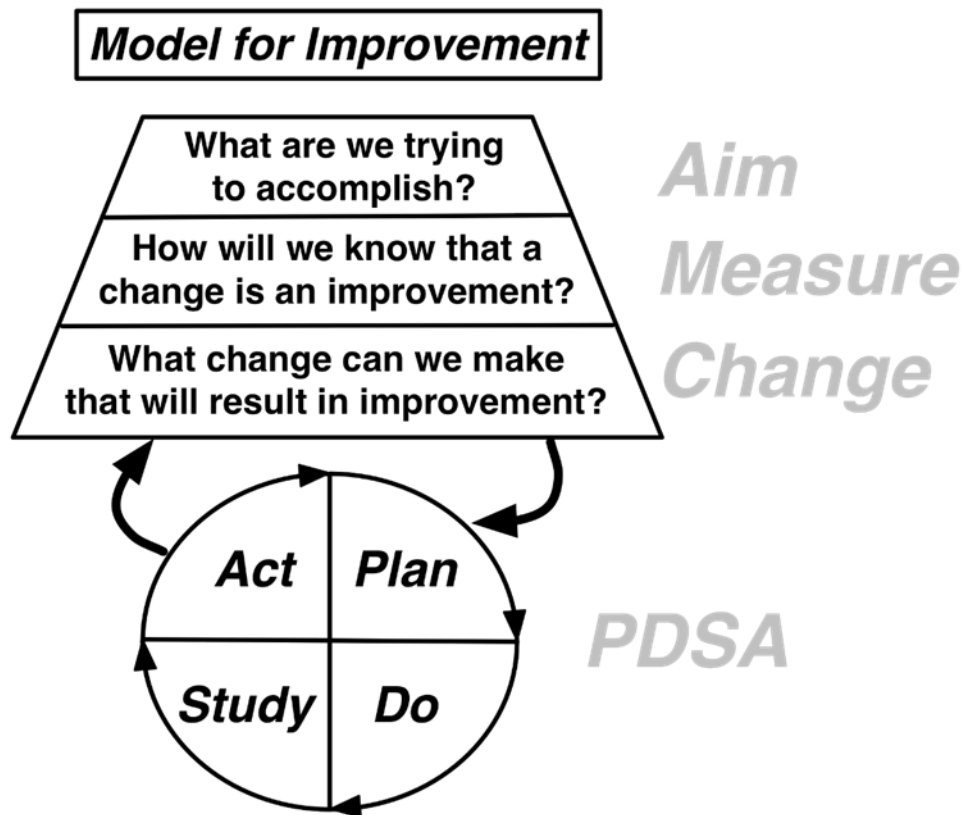


Quality Improvement Project Sequence of Events (How-to guide)

This document is intended to be a step-by-step guide to completing a QI project. For any questions regarding the QI process/methodology, please don't hesitate to contact Claudia (cjarosz3@uwo.ca, or 519.661.2111 x 81099).

Some things to keep in mind before you get started:

The Model for Improvement



Langley, Nolan, Nolan, Norman, Provost;
The Improvement Guide, 1996

"Every system is perfectly designed to get the result that it gets." – Paul Batalden

"If you always do what you always did, you'll always get what you always got." – Jackie "Moms" Mabley

1. Find a gap (What are you trying to accomplish?)

- Start by thinking about what needs to be improved. Is there a particular process that you find annoying or inefficient? Have you ever thought "this could be done better"?
- Other spots for project inspiration:
 - Health Quality Ontario has a list of indicators of primary care performance that may give you some project inspiration. They also have an "indicator library" which you can sort by "primary care" to find relevant measures (<http://indicatorlibrary.hqontario.ca/IndicatorByCategory/EN>)

- Health Quality Ontario also puts out what they call MyPractice reports, which your preceptor should have access to. This report compares their practice to their associated family health team (if applicable) and the average of all Ontario practices
- The resident project day website (https://www.schulich.uwo.ca/familymedicine/postgraduate/current_residents/curriculum/academic_program/resident_project/resident_project_day.html - scroll down to the Abstract booklet archive) – you can see projects from previous years. It is possible to do a project that has already been done at your centre. *Note: prior to 2015, QI was not implemented in the curriculum, so the 2015-2018 abstract books will likely be the most useful.

2. Is it really a gap?

- Define your outcome measure: what exactly are you trying to improve? This must be measurable!
 - **Tip:** when determining your outcome measure, use a denominator to put things in perspective (i.e. per patient, per day, per week, etc.)
- Measure a baseline. You must provide **real data** here.
 - **Tip:** It's ideal to have 20 or more data points over time for your baseline. This will allow you to perform more sophisticated QI analysis – more on this under step 10.

3. Literature

- Perform a literature search and write a literature summary similar to the way an introduction to a paper would be written
- Please write this in your own words with proper citations and at least 5 references

4. Root cause analysis

- How did this become a problem in the first place?
- You may use a number of QI tools to display this:
 - Cause and effect diagram (i.e. fishbone diagram)
 - Driver diagram
 - Pareto analysis
 - Process map
 - 5 Whys
 - Some other visual?

5. Aim statement (What are you trying to accomplish?)

- Must be specific: include what you will improve, how much your improvement you're aiming for, and by when you hope to achieve your goal
- **Tip:** your outcome measure, baseline, and aim statement must all be in alignment. Your baseline is a calculation of your outcome measure in the weeks leading up to your PDSAs, and your aim statement is how much you're going to improve your outcome measure for which target population by what timeline.

6. Family of measures (How will you know that a change is an improvement?)

- Define your process measures. Process measures are used to figure out if the system is performing as designed, and if you're on track to improve. You must have at least 1 or 2 of these for each PDSA.

- Define your balance measures. Balance measures are like trade-offs. In solving one problem, are you making something else worse?
- **Tip:** when determining measures, use a denominator to put things in perspective (i.e. per patient, per day, per week, etc.)

7. Change ideas (What change can we make that will result in improvement?)

- These should be derived from your root cause analysis (cause and effect/fishbone diagram, driver diagram, Pareto chart, etc.). Ideally, your change ideas should be targeting the things that are contributing to the issue in the first place (i.e. causes of the issue)
- Prioritize one change idea as the one you'll start with. Why should you start with this one?

8. Plan your first PDSA

- Start with a small change. Small sample size is perfectly acceptable, and even expected, in the first PDSA. There's a concept in QI where you start with one – one change with one patient at one visit in one day. Plan for this to be small – do not have your first PDSA run for one month with 50 patients!
- Note: This is where your proposal finishes.

9. Start with implementing a small PDSA

- Actually make your change, and measure (all of your measures) to see how it goes.
- **Tip:** It is ideal to have more than 1 data point for each PDSA (the exception is your first PDSA which may only include 1 patient, at which point, 1 data point is acceptable).
- **Tip:** Be sure to measure frequently – every day, every other day, is ideal. This may not be feasible, but having real-time information for where your data is at can really help to make sure your changes are efficient and you're not wasting time.

10. Plot data on a run chart (and control charts)

- QI is about showing improvements over time, so you will graph the data points with your outcome measurements on the y-axis and some sort of time measurement on the x-axis such as hours, days, weeks, or consecutive patients. This way, your data will tell the story of how your outcome changed over time. Measuring frequently, as mentioned in a **Tip** for step 9, will help to ensure that your final graph (and improvement story) doesn't have only 4 data points on it.
- You **MUST** graph your data on either a run chart or a control chart.
- **Tip:** When you have more data points, it enables you to do more sophisticated QI analysis, and to determine if the changes you're seeing in the data really are due to the change you made, or whether it's random variation
- **Tip:** Ask Adrienne if a Run chart is right for your project, or if you should be using a control chart.

11. Continue PDSAs

- What should you do next? Your results from your first PDSA should guide you for what modifications you should make for you next PDSA. These cycles should be iterative.
- Ensure your measures are appropriate for each PDSA – process and balance measures can shift depending on what the change idea is. For example, if your first few PDSAs are about increasing dialogues with patients, and then once that is working efficiently, you decide to try a patient education pamphlet, you could add a process measure that

measures the number of patent education pamphlets you hand out. This measure wouldn't have been appropriate for the previous PDSAs, but would be appropriate for the next PDSA.

- **Tip:** Just because you may not have had 100% success in the first PDSA, doesn't mean that you should give up on that change idea. How can you tweak the first change idea from the first PDSA to hopefully induce more change?

12. Write up at the very end

- Filling in the rest of your QI project form constitutes the final write-up of the project.

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