

Summary of the QI Frameworks and Principles Taught in the DPH QI 101 Program

Below is a brief summary of the QI framework and principles that will be taught in the DPH QI 101 program. Some of the terms may be unfamiliar, and that is okay. The purpose of this program is to teach you this information so that you become more familiar with it.

THE MODEL FOR IMPROVEMENT

The Model for Improvement (MFI) is the “QI roadmap” that provides a step-by-step guide for implementing QI projects (see Figure 1 below). It was developed by Associates in Process Improvement and is used by the Institute for Healthcare Improvement. It has been used successfully in healthcare and public health. The MFI is made up of three fundamental questions that drive improvement:

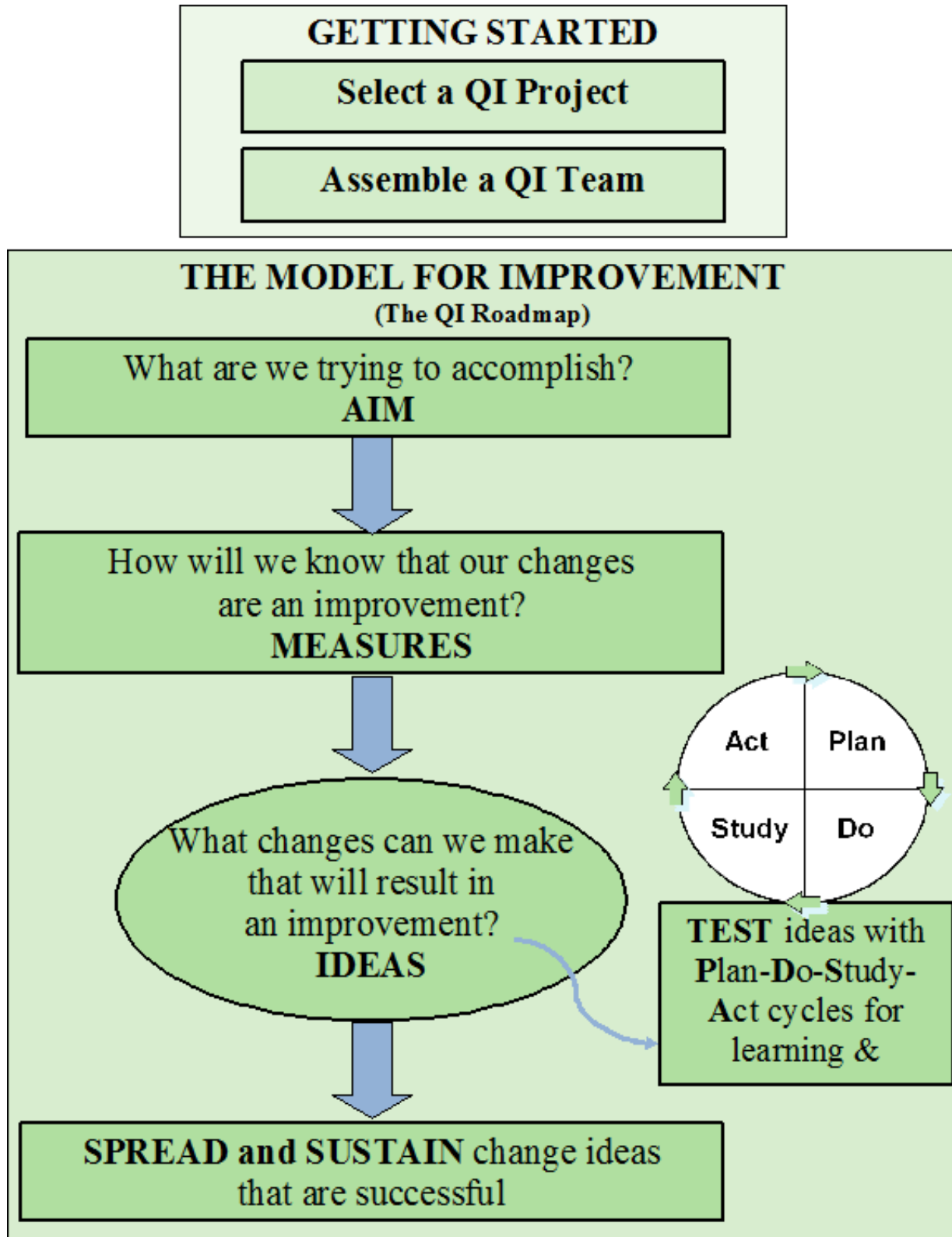
- **What are we trying to accomplish? (AIM)**
How many times have you been part of a project that lacks direction? Lack of direction and scope can lead to wasted resources, frustration, and even project failure. An aim statement acts as your compass to guide and focus your team’s efforts. It is an explicit statement of the desired outcome of your improvement project. It is **Specific, Measureable, Achievable, Relevant, and Time bound.**
- **How will we know that a change is an improvement? (MEASURES)**
When doing improvement it is important to show results and achievements towarded your desired goals-- in fact, you should make a direct connection from the goals in your aim statement to your measures. In other words, your measurable goals in your aim statement will determine your project measures. Measurement replaces personal subjectivity so that your team does not rely on the notion of “we think or we feel that things are better”. Instead you have data to show whether the changes you make are actually improving your process.
- **What changes can we make that will result in improvement? (IDEAS)**
These are change ideas that your team identifies as ways to improve your process. You will use the Plan-Do-Study-Act cycle to test your idea on a small scale before implementing them. There are many tools and strategies your team can use to generate change ideas. These include:
 - Observe the process and use a checklist to generate change ideas
 - Drill down to the root cause of the issue using the **5-Whys and Fishbone diagram**
 - Review **evidence-based guidelines**
 - **Brainstorm** and use **affinity diagrams** to organize ideas based upon prior observations and your current state value stream map
 - **Collect feedback from staff and clients** on ideas for improvement --usually those who are part of the process can identify innovative ways to improve

Before you can start the QI process you must first **Select your QI Project and Team**. **Selecting the right project** is important. If the project is the first for your agency it is important to choose one that will be successful and produce results that gain buy-in from others in the organization. (It does not have to be a large project; sometimes smaller projects that produce results have a great impact.)

Selecting the right team is important for successful implementation of your QI project. It is much easier to embrace change when you are involved in helping fix the problem rather than being told how to fix it. Choose your team members based on their knowledge of, and involvement in, the processes that will be affected by your selected improvement project. We recommend a core team of 4-6 individuals, though

you may need additional "ad-hoc" team members to contribute at times. Team selection should be linked to your QI project. Try to create a diverse (age, gender, race etc.) and multi-disciplinary team.

Figure 1: The Model for Improvement
(The "QI Roadmap")



LEAN METHODOLOGY

Lean methodology and tools are used to help your team identify and test your change ideas. Lean is a continuous process improvement methodology that focuses on identifying and eliminating non-value added or wasteful activities. Value is defined from the perspective of the community/populations we serve. By knowing what your community/population values helps one to identify the value-added steps or those activities which are truly needed.

The Lean Model is a simple set of principles that are easy for all to grasp. The basic steps of implementation are as follows:

1. Identify activities that add value
2. Establish the sequence of flow of the process (value stream)
3. Eliminate or reduce activities that do not add value
4. Create a more organized work flow
5. Create a continuous improvement culture which strives to eliminate waste

Lean uses highly effective and proven set of tools and practices. However, Lean is more than just a set of tools or improvement practices found in the workplace. It is also a fundamental change in how people within an organization think and what they value, thus transforming how they behave. At its core, Lean is about respect for people.

Kaizen Events

Kaizen improvement events are one of the tools used in Lean to create and implement change. They are about empowering and unleashing the creative power of people on the front-line, who are the ones that actually perform the work, to create a more effective and efficient process. By focusing on creating the right process, one will achieve the right results. Kaizens are formalized, focused rapid improvement events conducted over a fixed duration (usually two, three, or four days) that organizations use to achieve dramatic improvements and progressively shift their culture. Cross-functional teams are formed and trained to indentify waste and “see the flow” of a process. The teams learn to make improvement in a methodical way as they design, test, and implement solutions, monitor improvements, and then make adjustments as needed. By empowering those who know the work intimately to design the new process, the process becomes highly efficient, with excellent buy-in and ownership from staff. Elevated employee morale is most often a by-product of a Kaizen, as many times the new processes eliminate activities that often frustrate those who perform the work. After an event, the success becomes infectious as employees share their excitement with others in the organization thereby establishing a pool of ambassadors creating a shift in culture. The Kaizen Event activities include:

Day 1

- Map the current process (Value Stream Map)
- Prioritize waste observations for improvement
- Create sub-teams to address top waste issues (minimum 2-3 people per team)
- Divide and Conquer

Day 2, 3, 4

- PDSA Process (each waste activity)
- Make changes to process
- Perform pilots or tests of change
- Evaluate/verify the change and make corrections as needed
- Quantify the results
- Repeat the above cycle until the team meets goals
- Daily: meet with sponsor(s) and stakeholders to review progress, share next day’s plan, seek guidance

