

Quality Improvement Basics: Introduction to Process Mapping

Slide 1 Objectives

After completing this module, participants will be able to

- Explain what process mapping is
- Describe how process mapping supports quality improvement
- Identify appropriate team members to participate in creating a process map

Slide 2 Key Concepts and Definitions

Before we explain process mapping, let's define a few key concepts.

First off, 'what is a process'? A process is a standard sequence of steps that are followed to complete a task or produce a result. Generally, something prompts a process to start and an output or result marks the end of the process.

A process map details how the process works by determining "Who/ Does/What/ When". It describes the combination of detailed steps, tasks, events and/or decision points that support the process.

Slide 3 What and Why of Process Mapping

Process mapping is a method to visually display how work is done. One of the primary benefits of process mapping is discovering the gaps between what we believe is happening based on policies, procedures, and protocols versus what is actually happening – that is, how team members are carrying out the work.

The power of process mapping lies in building a common understanding through a visual representation. The visual helps a team see the larger scope of the process and facilitates drilling down into the specifics of individual process steps and tasks. There are always "ah-ha!" moments of discovery when we start to diagram and analyze how work gets done in our organizations. You may have been carrying out the work for years and have an 'aha' discovery about some part of the process you are engaged in or learn about a surprising or impactful step in a process for which someone else is responsible. This shared understanding allows the team to clarify how the process works and to identify gaps or breakdowns in processes or better ways to do the work. The team can then propose modifications that can be made to drive improvements and better outcomes.

To develop an accurate map of how the process is working, a non-blaming culture is needed so people feel comfortable describing what is actually happening, and if what is happening is different than what is written in policy or protocol, why is it happening that way. It could be that the team has found a better or more efficient way to complete the steps, or there could be barriers to the process as outlined in current policies that need to be addressed. If the team fears describing what is actually happening, the exercise of process mapping may not yield helpful information.

Slide 4 Identify Opportunities to Improve

Once you start diagraming your processes and identify how each step is carried out and by whom, you then can analyze the process and identify opportunities for improvement:

- Are there bottlenecks or sources of delay? What factors may be slowing your process or bringing it to a halt?
- Do staff find themselves having to do rework or repeat steps in the process due to errors that occur?
- Is there role ambiguity? Is there always a clear understanding of who should be performing a task?
- Do any of the tasks get repeated unnecessarily? Sometimes repetition is necessary, such as repeating a blood pressure check for confirmation. We are looking for tasks without a valid reason for repetition.
- If there is a long cycle time for a step or process, is there a reason it is taking so long to perform? And think about what impact this has on the patient.
- Are there steps that are skipped? If so, why? Have staff found them unnecessary, or are there barriers to performing those steps (such as time or resources)?
- Is there a lack of adherence to standards? Are there best practices that are not being observed that negatively impact the optimal outcomes we are seeking? If yes, learn more to understand why this is happening – does the team have new information? Are there barriers to adhering to standards?
- Finally, are we lacking any information needed to carry out tasks or steps in the process?

Slide 5 Process Modifications

Process modifications may involve tweaks to your existing process – for example, maybe you rearrange the order of steps or simplify steps to improve workflow, add a cognitive aid or a software enhancement, or keep the same process but relocate supplies to make it easier for folks to not skip steps. Or, changes might be more complex and involve a physical plant change, standardization of equipment, reduction of distractions, or redesign of the workflow – such as moving from a paper system to a fully automated system. The end goal may be the same, but how the tasks will be executed is fundamentally different.

As discussed in the QI Basics module Introduction to Quality Improvement: Processes and Systems, processes are part of our larger ‘system.’ A system is the environment in which processes are implemented. A system is a combination and relationship between various processes, the people involved, organizational culture, environmental factors, equipment (such as electronic health records), and available resources.

With systems thinking, we recognize that a change in one process can cause changes elsewhere in the system. So, as you process map and identify potential changes, anticipate how those changes will impact the broader system. You will also want to consider how factors in the systems impact the process’s ability to be implemented. For example, are there sufficient resources in terms of people, technology, or supplies?

Slide 6 Process Mapping and The Model for Improvement

Process mapping helps us to identify potential answers to the third question in the Model for Improvement: “What change can we make that will result in improvement?”

Once we have mapped the current process and understand how the work is actually carried out, we can discuss what changes are needed. We can modify the current state process map to create a future state process map reflecting the proposed changes. This is part of the Plan step of the PDSA cycle. The team will test the modified process during the Do phase of the cycle, which will provide data, feedback and experience to inform the Study phase when the team reviews the results of the effort and take Action to either adapt, adopt, or abandon the process modifications. It is unlikely that the first attempt at a future process design will be perfect, setting your team up for a second round of PDSA rapid cycle testing after making adaptations based on what was learned in the first cycle.

Slide 7 Who is involved in process mapping?

Process mapping is a multi-disciplinary team activity. Involving those doing the work is essential to developing an accurate process map, and team engagement from the beginning helps create buy-in as we change how we do our work. Those who do the work know the intricacies of the individual steps and tasks and are best suited to make recommendations for improving the process to support the goals of the improvement initiative.

Slide 8 In Summary

Process mapping is a method to visually display how work is done – answering who/does/what/when.

It creates a shared understanding of how work is actually being carried out so that teams can identify breakdowns, workarounds, and gaps in processes that result in undesirable outcomes.

Process mapping is a team activity and must include people who do the work being analyzed.