

Quality Improvement Basics: Swim Lane Process Mapping

Slide 1 Objectives

After completing this module, participants will be able to

- Discuss the purpose of a swim lane process map
- Describe the key steps in building a swim lane process map
- Build a swim lane process map

Slide 2

Swim lane diagrams are another type of flowchart. They show a process from start to finish.

The swim lane diagram differs from a basic flowchart in that processes and decisions are grouped visually by placing them in lanes – much like a swimming pool. Parallel lines divide the chart into lanes, with one lane for each person, team, department, or other organizational unit you select. Each lane is labeled accordingly. The lanes show who is responsible for each step in the process.

This diagram style allows people to see their responsibilities within an organization efficiently. Swim lane diagrams are a good way to visualize the hand-offs that are occurring between people and departments. It helps people understand how their role fits with the system's other moving parts. That means you can look at how responsibility can be handed off from one party (or even organization) to the next more effectively.

Swim lane diagrams are a very useful tool in complex organizations where individuals or teams interact across department boundaries to do their work. This is almost always the case in health-related organizations, as most work processes involve interdisciplinary teams or rely on input from a number of departments.

Swim lane diagrams can vary in length depending on the process being studied.

Slide 3 Simplified Swim Lane Diagram Example

Here is an example of a basic simplified swim lane diagram showing key steps involved in applying to volunteer at a hospital.

The lanes reflect activity by the volunteer, the volunteer coordinator, and human resources.

As reviewed in the process mapping modules, shapes represent activities or decision points. Circles represent start and endpoints. Squares or rectangles represent action steps. Diamonds represent decision points. And arrows direct the flow of events.

In diagrams with horizontal lanes such as this, each subsequent step generally should be one step further to the right.

Walking through this diagram shows that the volunteer first submits an application. It is sent to a volunteer coordinator who reviews the application and determines if the individual is a desirable candidate. If not, the volunteer coordinator reaches out to the candidate to provide feedback and let them know they have not been selected, and the process ends. If the volunteer coordinator determines the applicant is desirable, they forward the application to human resources for additional review. If human resources determine the applicant is desirable, a background check and health screening is completed. If the applicant is cleared, the volunteer coordinator is notified, and they then reach out to the volunteer to accept their application and set up an orientation. If the applicant is not found to be desirable by HR or does not back the background check and health screening, the volunteer coordinator is notified by HR and reaches out to the applicant to provide feedback and let them know they have not been selected.

For this team's purpose, they have kept the flow chart at a fairly high level. In this example, the process begins and ends in the Volunteer swim lane, as represented by the three red ovals, but that is not always the case.

Slide 4 Steps In Swim Lane Process Mapping

Steps in swim lane process mapping

- As with any type of process map, first decide on the process you will map – identify your starting point and ending point. This helps you define the clear scope of the process you will map.
- Identify the participants who are (or should be) involved in the process you're diagramming. It bears repeating that that you cannot process map well unless you involve the people who care about and are involved in the process. Involving those doing the work is an essential component of process mapping.
- Decide how you will create your process map. Will you be together in a conference room where you can use sticky notes on a wall or whiteboard? Or will you be doing this virtually, using apps such as Miro, Mural, or Lucid Chart that can be used for this purpose?
- Identify who should be included and represented in the different lanes. Create your lanes – indicating the person (role), team, department, or organizational unit that makes sense for your process and the level of detail you wish to depict. Get started – you can revise as you go along and learn more about the process.

Slide 5 Steps In Swim Lane Process Mapping Continued

Indicate each step in the process from start to finish, moving from lane to lane based on who owns each step. Again, use standard flowchart symbols and arrows to show the direction of movement and to depict the process's progression. Keep adjusting or refining as the team works through the process.

- Note any problem areas, delays, or duplications that you may want to address later.
- Have participants and leaders verify the accuracy of the process you mapped.

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- Save your document for future reference – if you have done this on a wall, capture an image of it. You may want to convert or transfer the diagram to an electronic format such as Google Quora or Microsoft Visio – or in applications such as Microsoft Word, PowerPoint Google Docs, or Slides.

Remember, the purpose of a process map is to learn - to better understand a process and what in the system is impacting the process.

Process mapping also allows for the entire team to see the process and help identify where opportunities exist for improvement. Being able to visualize the steps, decision points, timing, and relationships between steps promotes process and system thinking in team members and in the organization. With process mapping, there are always “Ah-ha” moments!

Slide 6 Swim Lane Diagram Example

Here is another example of a swim lane diagram.

In this example, we see the process of an annual exam at a clinic, specifically focused on identifying patients for prediabetes screening. The participants are segmented into their own ‘swim lanes’ (the patient, front desk or reception, medical assistant, and the physician or nurse practitioner).

When space allows, it is ideal to show progression from left to right, but you can be creative in how you depict the workflow as long as it is easy to follow. As we work through this flow, you will see that when the process is handed off to the physician or nurse practitioner, the map moves all the way to the left again to allow space for the steps that fall within their lane.

The process here starts in the upper left with the circle indicating the patient comes into the clinic for the exam. We follow the patient on their journey through the clinic, where they interact with each of the roles in the lanes and see that there are several decisions or questions (diamonds) that need to be answered and direct the patient through a different set of steps depending on the yes/no answers. The process is completed at the bottom right, where the circle indicates that the exam or encounter is complete, and the patient leaves the clinic. This is an example of a process that is contained within a single organization. The process map helps us understand which roles (the boxes in the left-hand column) are responsible for particular steps related to the prediabetes screening for a patient.

Even if the example steps don’t quite resonate with you, you can get the idea of how the swim lane map shows which roles are responsible for steps in the process, and you can visualize the hand-offs that are occurring between people and departments. It shows how each role fits with the system’s other moving parts.

Slide 7 Social Needs Referrals

Our final example is multi-organizational and depicts the process of referring individuals to various services based on identified health-related social needs. In this example, the four lanes include the Primary Care Clinic, food shelf, housing assistance, and transportation services. The

process map starts when a patient comes to the clinic for an annual exam. The patient checks in at the front desk and is given a health-related social needs screening. After the clinician completes the patient exam, the process map directs the clinician to answer three questions – did the patient screen positive for food needs? If yes, make a referral to the food shelf. The next question is, did the patient screen positive for housing needs? If yes, make a referral to housing assistance. And finally, did the patient screen positive for transportation needs? If yes, make a referral to transportation assistance. Then, the clinician finishes the patient exam.

The other three lanes depict what each service organization does upon receiving a referral, including connecting with the client to discuss needs, signing the client up for appropriate services, and closing the referral loop with the clinic.

As with the previous module, it is important to note that these examples are simplified for the purposes of this course and demonstrating the concepts related to swim-lane process mapping. In this case, the steps in the process are very high-level, and each organization will likely require its own process map to depict its operating procedure for processing referrals received from the primary care clinic. However, hopefully, you can see how swim-lane process mapping can be a useful tool for clarifying understanding of roles and how processes between organizations are interconnected.

Slide 8 In Summary

A swim lane process map shows processes and decisions placed in lanes that depict who is responsible for each step in the process as they progress over time. This allows people to see how their roles and responsibilities fit within the system's other moving parts. It shows hand-offs that are occurring.

Key steps in swim lane process mapping include being clear about the scope of the process that will be mapped, involving the people who do the work, identifying the lanes – such as roles, departments, or organizations - that will be depicted in the workflow, mapping the work and decision points using standard flow chart symbols, noting opportunities for potential discussion, verifying your process map is accurate, and saving it for future reference.

The power of process mapping (whether swim lane or the standard method) lies in the creation of a visual representation of a process that your team can discuss in order to improve understanding of how the current process actually works and identify how the process might be improved. Remember that systems impact how processes work – so if the process isn't working as intended, you must also examine what is happening in the system (resources, leadership, equipment, and more) to impact the process. You can also use process mapping to develop a new process to be tested using the Plan-Do-Study-Act model.