

Process Mapping – A Conventional Model

What is it?

Mapping the whole patient journey or diagnostic pathway, with a range of people who represent the different roles involved in the journey or pathway.

Mapping the whole patient journey will help you to look for opportunities for improvement by visualising how the whole patient journey currently works and identifying points of inefficiency. It can capture the reality of a process and identify duplication, variation, and unnecessary steps. It also sparks good ideas and helps a team to know where to start to make improvements that will have the biggest impact for patients and staff.

It is a great way of revealing the complete process – rarely does a single healthcare worker know all the processes / people involved in the patient journey. It will help staff understand how complicated the systems can be for patients and shows how many times the patient has to wait (often unnecessarily) and how many different people a patient meets.

Process mapping can be used to capture the reality of the whole patient journey and their experience at every stage. This can enable you to identify problem areas such as bottlenecks. Tackling these can help to remove unnecessary delays.

How to use it

Why should I process map the whole patient journey or diagnostic pathway?

It gives everyone a broader perspective of what is happening (rather than what they think is happening). It has the potential to improve team building because it promotes ownership of the process and increases staff involvement in design of processes. It is relatively a quick and cheap tool to utilise, the major cost being the time commitment of the individuals.

Where do I start?

To get you started, here are some things to think about when starting to plan a mapping session:

- ☐ What is the purpose of the session?
- ☐ Who will you invite to get a broad perspective of the process?
- ☐ Do you need to meet with clinical, managerial and service leaders beforehand to ensure that they feel involved in, and committed to, the process? Remember the 'process map' will only be as good as the list of people who attend, there will be gaps in it if some staff do not attend
- ☐ Which staff groups are involved in the relevant stage of patient care? Invite 15– 25 representatives of those groups to map the patient journey. Don't forget to include staff like porters and administrative staff who tend to have quite different and useful perspectives of patient and diagnostic pathways from clinical staff
- ☐ Where will you hold the session?

- ☐ What is the knowledge level of the audience? For example, when involving service users and carers, do they need additional preparation to feel comfortable contributing to the session?
- ☐ How long will the session last? Make sure you allow time for analysing the map and developing an action plan to test improvements
- ☐ Plan the follow-up sessions at the start
- ☐ Would it be useful to have an external/neutral facilitator to help run the session?
- ☐ Do you need to use an icebreaker? This can be useful if people do not usually work together

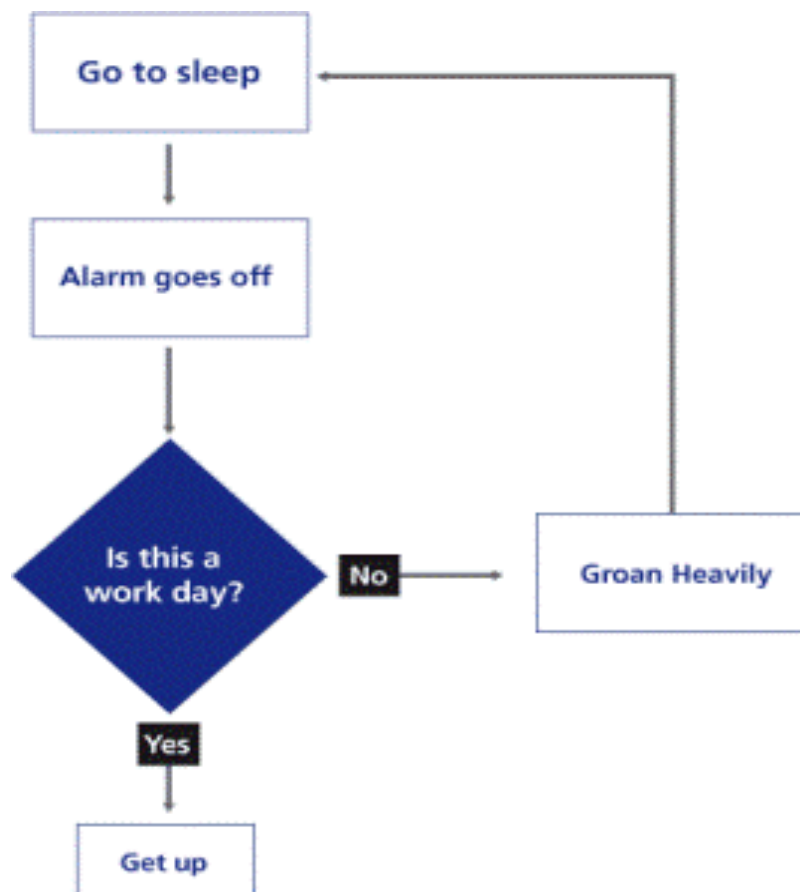
What should I map during the session?

The aim of process mapping is to make things clear and to provide insight. The best map is the simplest map that provides that insight.

Start with a high level map

It can be very useful to start with a high level process map of say five to ten steps which you set a time limit to achieve eg 20 minutes. This helps to establish the scope of the process, identify significant issues and frame the more detailed map. For example the map representing steps for 'getting up in the morning' below has been drawn entirely using only a box and an arrow.

- ☐ The box represents the task or activities of the process
- ☐ The arrows represent the direction of flow of the process
- ☐ If you need to, you can also use a diamond shape to indicate a question, or decision point, for example:



Creating detailed maps

For complex processes you may follow the simple process map with a more detailed process map, identifying all steps and re-work loops. It is also helpful to establish roles and relationships within the more detailed process map. This detailed map can be used again in a later phase to show off the impact of your improvement and redesign work.

What questions should I ask when analysing the map?

- ☐ How many steps are there?
- ☐ How many hand-offs are there, are any of these unnecessary?
- ☐ Could some tasks be carried out by one person instead of several people?
- ☐ Is there any duplication of work?
- ☐ Are there any bottlenecks?
- ☐ How much error correction / rework is being carried out?
- ☐ What is the approximate time between each step?
- ☐ Which tasks help to achieve the purpose and which ones do not, can those that do not add value to patients be removed?
- ☐ Are we doing the right things in the process?
- ☐ Are we doing things in the right order?
- ☐ Is the right / best person doing it?
- ☐ What information do we give to patients at what stage and is the information useful?
- ☐ Should some tasks that are performed in another process be performed here?

Tips for doing process mapping

1. Using the right materials to physically produce the map makes life easier, here are some suggestions: Mapping paper (lining wall paper is cheap and effective)
 - ☐ Marker pens
 - ☐ Post-it notes
 - ☐ Flip charts (to hold your idea and issue parks and display the ground rules)
 - ☐ Sellotape
 - ☐ Blue Tack
2. Remember that there is almost certainly someone in your organisation who has facilitated a process mapping session before if you are new to this, so don't hesitate to ask for help and use their experience.
3. Involve stakeholders right at the beginning – planning ahead enables you to give people plenty of notice.
4. Don't map everything. When some people find out about process mapping they spend the next two years mapping every process in their organisation. Only map the process that you have chosen to improve.
5. Let your process map cross-functional boundaries. You want to see the whole, end-to-end process, not just the piece of the process inside your department. Improving one department or section does not always improve a service that flows through several departments. It is always much more important to manage the interactions between departments than it is to manage the actions inside each department.
6. The people who work in the process should be involved in the mapping.

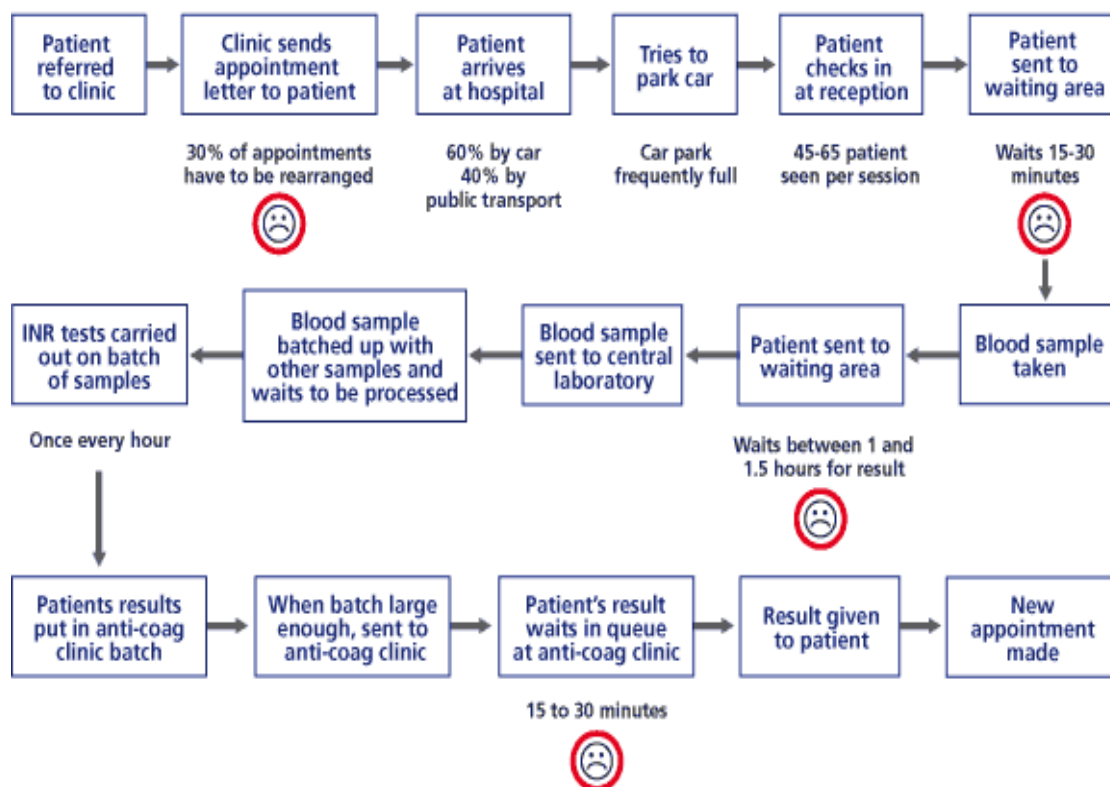
7. Always map what actually happens in the current process rather than what you would like to be happening, or what should be happening according to the book.
8. Having a structured agenda helps run the session smoothly and kept us to time.
9. Having an external facilitator helped to deal with potentially tricky situations where personalities and views were clashing.
10. Planning the session near lunchtime may enable more people to attend.

Examples

Below is an example of a high level map followed by a detailed process map which looks at the anticoagulant blood testing process carried out in a major hospital:



THE ANTICOAGULANT BLOOD TESTING PROCESS



 Effect on the patient

What next?

Using the process map to initiate re-design

Once the process map has been drawn the next step is to identify where the process can be improved by re-designing or removing elements of it.

The key to success here is to keep the patient at the centre of your plans and to consider the potential for a ripple effect through the organisation. Getting your part of the system right does not help the patient if another part of their journey is made worse as a result. Testing your ideas for improvement will help to show you potential unwanted side-effects of your changes. To help you understand the potential impact of a change, you may use the PDSA cycle.

Here are some suggested change ideas for this phase of work:

- ☐ Co-ordinate the patient process of care
- ☐ Pre-plan and pre-schedule care at times to suit the patient
- ☐ Reduce the number of times a patient has to travel to visit the hospital or surgery, including the number of outpatient appointments (see 10 high impact changes)
- ☐ Reduce unnecessary waits and times when work is piled up
- ☐ Pool similar work together by sharing staff and resources, reduce the number of queues
- ☐ Extend staff roles this may be undertaken as a role redesign exercise
- ☐ Undertake capacity and demand work to help you understand and deal with your bottlenecks

Additional resources

Websites:

- ☐ The Continuous Improvement Toolkit offers a wide variety of background information and training resources concerning service improvement.
- ☐ The NHS Institute for Innovation and Improvement's website holds the updated Improvement Leaders' Guides, including the process mapping, analysis and redesign Guide.
- ☐ The East Midlands Improvement Network encourages users to produce a simple map to illustrate the patient journey.
- ☐ The NHS Institute's Service Transformation team provide a range of materials relating to the application of lean principles to healthcare. Their area of the Institute's website includes a presentation on lean, which covers the principles of lean, and some examples of the application of lean in health, including value streams, eliminating waste, improving flow and mistakes versus defects.

Background

The technique described here originates from the manufacturing industry.

Our knowledge about how to apply process mapping approaches to improve health services is developing all the time. The foundation of this guide originates from the NHS Modernisation Agency, the National Clinical Governance Support Team and the learning and experience of work by NHS Organisation. At present, there is strong

influence from Lean and Six Sigma approaches to mapping pathways, procedures and work processes in health care.

The other strong influence on health services is the development of evidence based clinical pathways. These are being developed as standardised pathways, using evidence developed by organisations like the National Institute for Clinical Excellence (NICE).

Mapping has been used to illustrate the world and how things work pretty much since the beginning of time. Humans navigate by maps, as well as using them to illustrate and make sense of the world. Different maps have different perspectives and uses - which all combine to give us a more balanced overview of any given situation.

Acknowledgements / sources

The foundation of this guide originates from the Improvement Leaders Guides, NHS Institute for Innovation and Improvement.

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