redesigning**care**

right care **right** time

What is mapping?

Mapping is the visual representation of the material and information flow for a specific value stream. It is about 'learning to see' your processes.

It is a Lean Thinking tool that has been mainly applied in industry. There have been several attempts to translate this tool for health care. We are still learning what works best in a health care setting.

Definitions

In health care, we define 'material flow' as the movement of the patient through the value stream and 'information flow' as the communication or transfer of information that occurs to enable the patient to move to the next step. It is standard to draw two types of maps:

> a **current state map,** which describes the current processes within the value stream

> a **future state map**, which describes the ideal value stream processes you are working towards.

Why draw a map?

Mapping can help you to:

> communicate what the process is like now and create a shared understanding of where the issues are

> diagnose the actual problem rather than what is perceived to be the problem

> provide a common language for talking about processes

> see the flow of patients across departments and divisions

> form the basis of an implementation plan.

Getting started

We suggest using the following steps to produce a current state map.

1. **Big picture map**:
   This involves inviting staff to attend a mapping session.

   It is usual to select high-volume patient groups for mapping. It is essential to invite front-line staff to this session as well as senior staff. It is also vital to define the beginning and end points of the map.

   We draw the steps the patient goes through, who is involved and roughly how long the patient waits between each step. We also draw the flow of information about the patient.

   Any additional issues that arise are recorded on a separate sheet. This session is NOT about finding solutions.

2. **Value streams**:
   Once the big picture map has been completed it becomes easier to identify smaller groups of patients that appear to go through similar processes (ie: potential value streams).

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3. **Tracking**:

Once the value stream of patients has been identified, we need to collect real-time data about that group. We track several patients through the hospital, looking at the time each process step takes, the waiting time between each step, the bottlenecks, the different staff groups and departments involved and any issues/qualitative information about the current process.

4. **Current state map**:

We then use the tracking data to construct a current state map.

This may include a 'process data' map, We draw the steps the patient goes through, the average and range of how long those steps took, who is involved and the average and range of how long the patient waits between each step. We also draw the flow of information about the patient.

This may also include a 'spaghetti diagram' of where people or a process moves around a geographical location.

This information is then presented to the original mapping participants for feedback and discussion.

Where to next?

Developing the future state map

Once a current state map has been completed, it is important to develop a future state vision. In terms of implementing that vision, it is then often easier to break the map into smaller sections and develop project teams to work on re-designing a each section. Lean Thinking offers a number of tools to develop your future state.

References

We recommend the following texts:

> "*Learning to See"*(2003) Rother and Shook.LEI, USA

> "*The Complete Lean Enterprise*" (2004) Keyte and Locher, LEIUSA

> "*Value Stream Management for the Lean Office"* (2003) Tapping and Shuker. Productivity Press, USA.

For more information

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