

Flowcharting Guide for Understanding Demand and Capacity



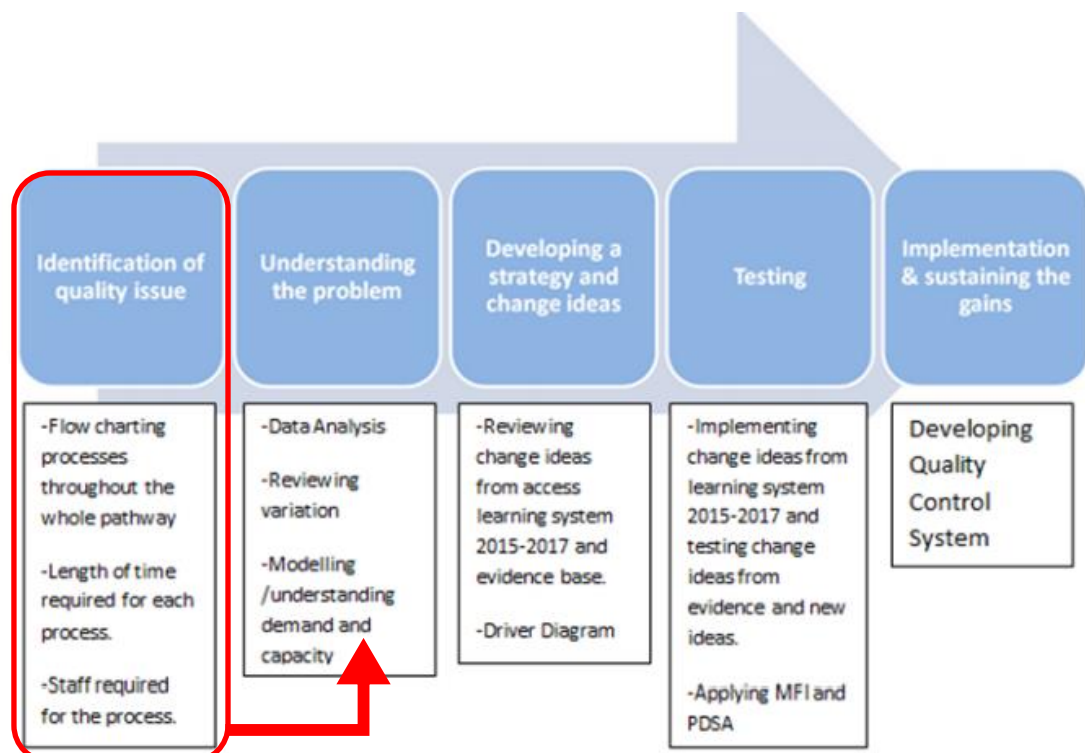


Contents:

This has been created for Improvement Advisors, QI Coaches and/or Project Teams to act as support/guidance when facilitating flowcharting exercises with the aim to develop a deeper understanding of demand and capacity through a service/pathway.

This guide includes the following:

- Important things to consider before flowcharting
- Creating a high level block diagram
- Understanding the flow of demand (new and existing) through the pathway and how to attach this to the high level block diagram
- Understanding the service/team capacity and how to attach this to the high level block diagram
- How data is used and recorded in relation to the pathway
- Detailed flowchart
- Bottlenecks, rework and delays
- Examples



***Note:** These Flowcharts are then used in the creation/adaption of the demand and capacity modelling.



Purpose of Flowcharting:

Flowcharts can be used in a variety of different ways:

1. Provides a visual picture of a system or pathway as it currently is
2. Defines the scope of work
3. Assists in better understanding of a problem by collecting key data and information
4. Helps identify changes that can be made whilst developing a deeper understanding of the context in which the changes are taking place.

Important things to consider before flowcharting:

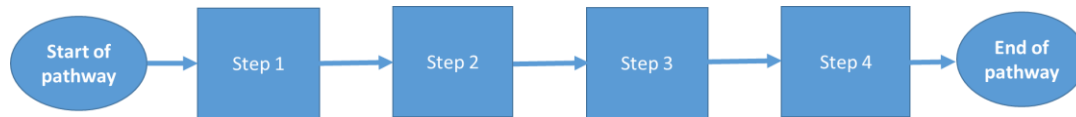
1. Do you have the right people in the room?
 - It is important to ensure that you have as many key people in the room as possible, particularly those who are involved/have knowledge of the system you are focusing on. Individuals may not always agree on the processes or the sequence in which the processes take place, it is important to acknowledge this and find a way to record this within the Flowchart.
 - Don't just focus on clinical processes; it is important to include all processes and include administrative staff as well and frontline clinicians who use the system/processes every day in this exercise.
 - Do all individuals understand the purpose of conducting this exercise and why it is a necessary stage in understanding flow? It is important to discuss this prior to starting the flow charting exercise. You may require a "parking lot" to help keep the group focused on the purpose outlined at the beginning.
2. Do you have the right materials for the exercise:
 - Sticky notes (multiple colours or different coloured pens)
 - Flip chart paper and markers
 - Spare piece of paper for a parking lot (this helps keep everyone focused on the task of flowcharting the pathway).
3. Are there any commissioning or performance targets connected to this pathway? It is important, where relevant/necessary to ensure that the flow work aligns with these targets.
4. Are there elements of the pathway that the team do not have influence over/the permission to change? It is key to include/connect these with the flowchart but recognise that they are external/out of scope of influence.
5. Whiteboard video on high level block diagrams and more detailed flowcharts on link below:

<https://qi.elft.nhs.uk/collection/the-science-of-improvement-on-a-a-whiteboard/>



Understanding the whole pathway using a High Level Block Diagram

Step 1: The first step involves working with the team to create a high level block diagram. This should look at the processes/steps of the pathway in the broadest sense; you do not need to focus on the intricate detail at this stage.



The start of the pathway could be the following:

- When the service user enters the pathway the team is focusing on or the start of the pathway for the team/service.
- The point of time when the service user feels that the pathway has begun and/or gets in contact with a service/referrer.
- When a team's particular part of the pathway begins e.g. screening/assessment identified service user requires x pathway.

The end of the pathway may be similar to the following:

- Discharge from service/case load
- Transfer to another team
- A process itself for example Assessment or treatment if the pathway was focused on referral to assessment or start of treatment.

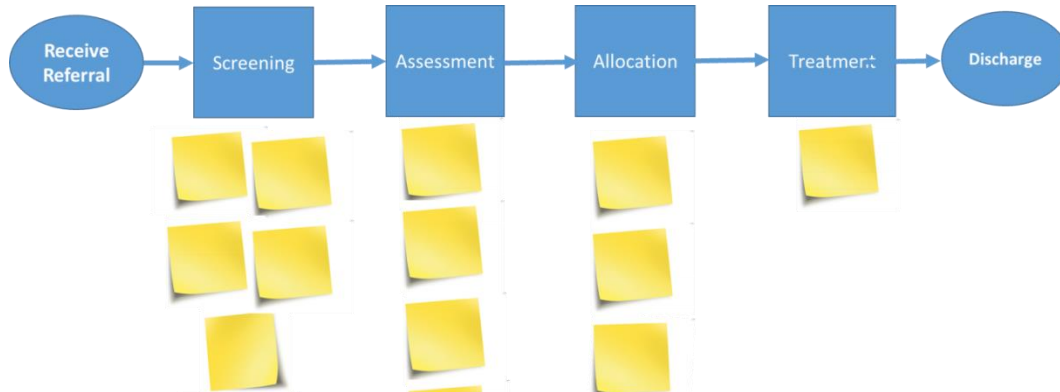
Step 2: List the key steps that fall under each block using sticky notes, one step per note (at this stage this does not need to be in sequential order). It is important to include both clinical and administrative tasks, meetings and/or any contact with other services.

***Note:** You can combine step 1 and 2. If the team identifies the first block, they can then go on to list all of the steps before moving onto the second block in the pathway.

Step 3: Review the flowchart and identify whether anything is missing. Add a * to any of the sticky notes where the team feel that the process is not clear and/or the team are not in agreement about the process.



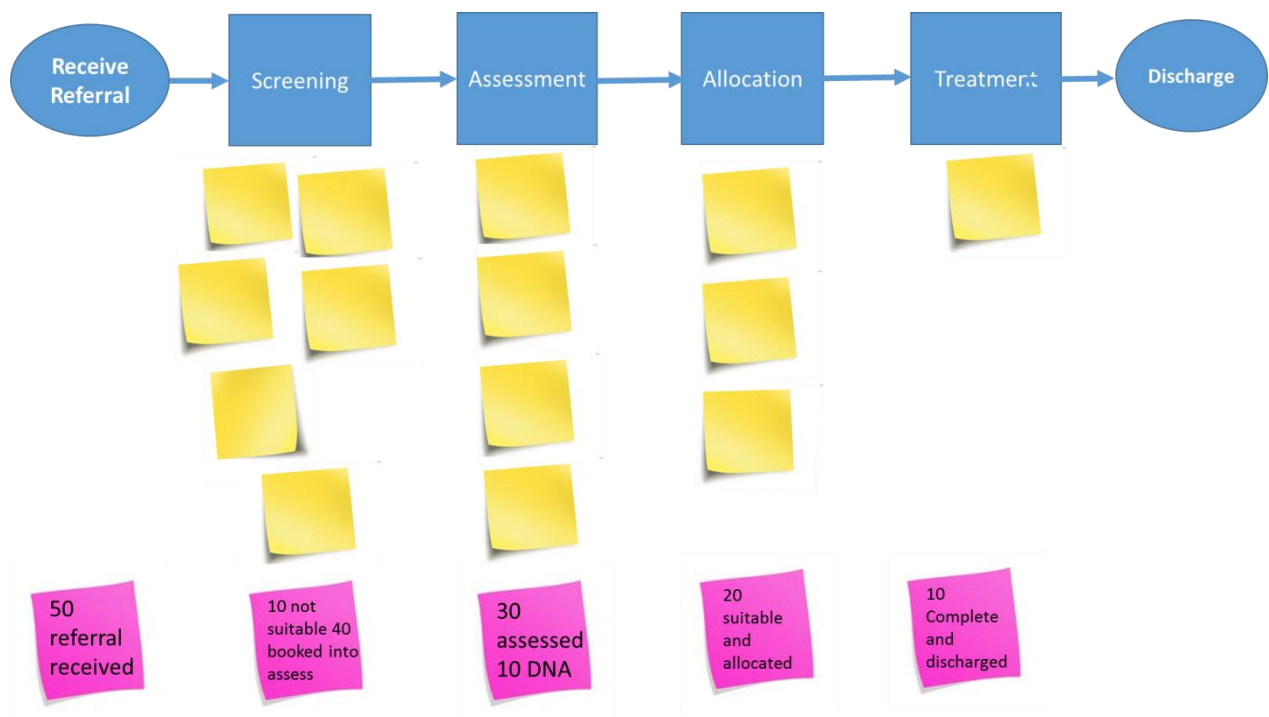
Step 4: Place the sticky notes in sequential order under each of the high level blocks.



Understanding the flow of demand through the pathway

The next stage is to focus on how demand flows through the pathway. You can map this onto the same flowchart by using different coloured sticky notes and/or a different coloured pen.

Ask the team to identify **new demand/new referrals** (per week or per month if weekly data not available). Start by doing this at a high level and identify whether this demand is filtered/reduced as it moves through the pathway. This will provide you information on the dropout rate between each high level block.



It is also helpful at this stage to identify existing demand within the system. Existing demand is also known as those who are waiting/already within the system for example a waitlist for assessments. It is key to collect information on the total number of service users on the wait list and the average length of time they are waiting.

It is important to add in information on the % DNAs (non-attendance) and % cancellations (trust or service user) and also add a sticky note for the total number of discharges (whether this is discharge from the caseload, team and/or whole service).

Note: The high level blocks for your teams pathway may differ from the example above but the processes should still be similar, for example if the team are focusing on caseload management the pathway may include; screening/accepting referrals, allocation, caseload, discharge, follow up etc....



Understanding the use of capacity through the pathway

You can also add the **capacity** information to the flowchart again by using a different coloured pen or set of sticky notes.

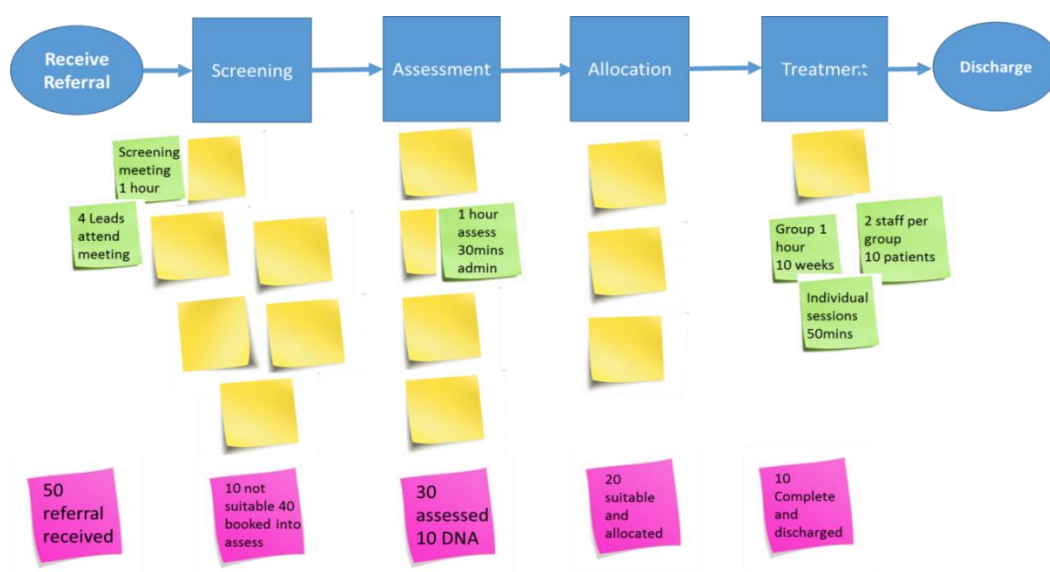
Key Questions to ask to understand capacity:

Staffing:

- Who does what? Do you have to have a certain amount of experience or be in a more senior role to do certain processes? How are processes allocated between the team? Are they equally distributed? Does it vary depending on the day? (Weekday vs weekend).
- For meetings, how long does each meeting last for? Who attends? How many staff in total attends each meeting? How often do the meetings take place, set day of the week?
- For groups, how many facilitators? How frequently does it take place, how many service users per group? How long would a service user be part of the group for?

Time allocated to each process vs real time:

- How much time does each step/part of the pathway take? Don't just focus on the process alone but also think about how long it takes for related tasks e.g. the administrative tasks, write up, follow up and/or documentation.
- Is there any variation in this time, e.g. certain staff members assess quicker or take a longer length of time to assess? Time is dependent on complexity, severity or type of treatment/intervention. It is important to capture all of the variation.



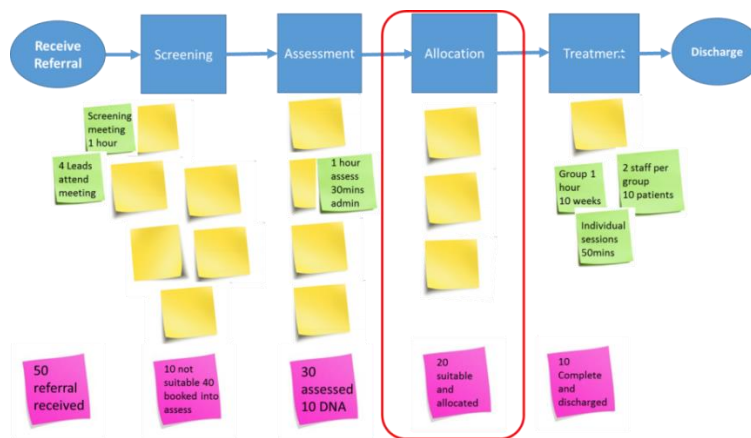
***Note:** It doesn't matter which order you add demand or capacity to your flowchart.

How is data used and recorded in relation to the pathway (Measurement)

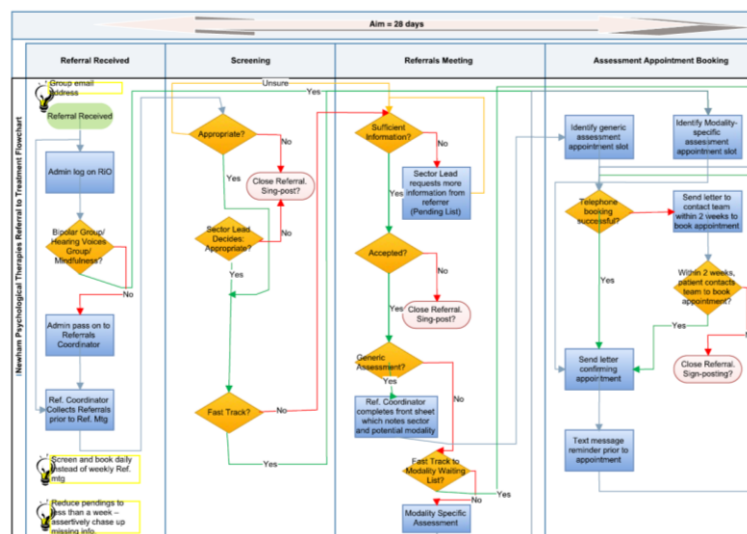
It is important to collect information on what systems the teams currently use to record data and information within the pathway they are mapping. How do they currently know how the processes/parts of the system are performing? For example, how do they record data/information on new referrals, caseloads etc. The administrative and Operational staff will play a vital role in confirming how data is recorded/coded, so it is vital to involve them in this work.

Detailed Flowcharts

The high level block diagram will help you to select an area to focus on, being a block that you have identified as being a problem area/area of concern.



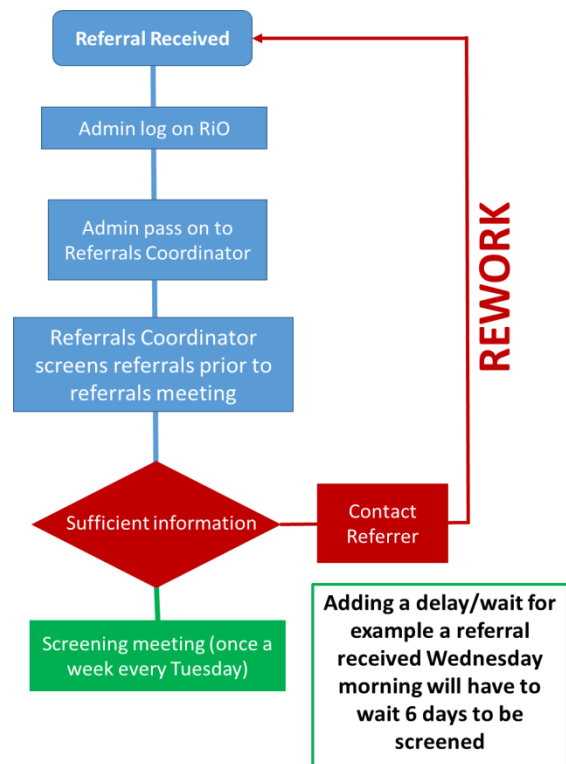
The detailed flow chart looks at the more intricate detailed processes in sequential order.



Identifying bottlenecks, rework and delays

Whether using a high level block diagram or a more detailed flowchart it is important to identify and note the following:

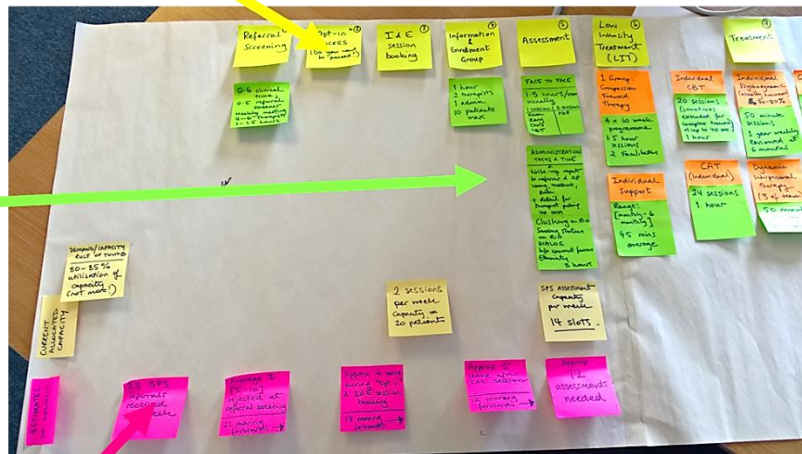
- **Rework:** where a process has to be repeated or where the process cannot continue without going back a step e.g. insufficient information on a referral form.
- **Bottlenecks:** where do the queues/delays form e.g. not enough room space to run the number of required sessions, certain processes requiring more senior staff
- **Processes that cause delays/batching:** grouping things together for example running groups and/or a weekly meeting to screen all referrals.



Example: High level block diagram including demand and capacity information/data

High Level Blocks: Main stages/steps in the pathway.

Staff required and time taken for each detailed process.



New Demand/ New referrals and drop out rate between each step