Measurement Plan

Team Service Planning Change Package

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Team Service Planning Measurement Plan

Team Service Planning is a multidisciplinary approach to defining, developing and delivering clinical capacity within a planned care service that can contribute towards reducing waiting times. It was developed by NHS Lanarkshire's Breast Service as part of the Scottish Access Collaborative.

This measurement plan is part of a Quality Improvement change package to help NHS boards use quality improvement to locally implement Team Service Planning. The change package is available at ihub.scot which includes additional resources such as a driver diagram, data collection template and information on change ideas.

Measurement approach

Data measurement helps determine if the changes make to a system are having the impact outlined in the Team Service Planning driver diagram. The measurement plan has three types of measures:

- Process measures related to the primary drivers if the driver diagram and demonstrate if the changes you make are starting to change how your system works,
- Outcome measures related to the aim to demonstrate the impact of your changes, and
- Balancing measures are used t determine if your changes are having an impact elsewhere in your system.

The data collection template in the Team Service Planning Change Package will help you collect and present data as run charts. More information about run charts and using measurement for improvement can be found in the QI Zone.

Measures

The table below lists the Team Service Planning process, outcome and balancing measures.

Type of measure	Links to	Measure name	Operational definition	Data collection guidance	Expected change
Process	Flexible capacity	Job planning	The percentage of staff with an agreed job plan in place, developed according to local processes/systems/guidance. Numerator: the number of staff with an agreed job plan in place. Denominator: the number of staff offering clinical sessions in the service.	This can either be collected monthly or at appropriate intervals e.g. coinciding with 6 month reviews. Monthly data will be responsive to staff turnover and will allow for instant feedback from efforts to improve, but may suffer from compliance issues if data collection creates a burden. Longer intervals will be responsive to a review process but won't offer ongoing intelligence due to long lead times and few data points.	Initiatives to improve job planning will result in an increased percentage if successful. This measure only checks that job plans have been done, not that they have been done well. You can add criteria to this measure to introduce an element of quality.

Type of measure	Links to	Measure name	Operational definition	Data collection guidance	Expected change
Process	Flexible Capacity	Skill Mix	The percentage of staff that possess all necessary skills to meet core demand. Numerator: the number of staff in the service that have all necessary skills (appropriate to their discipline e.g. Nursing/Medical/Surgical) to be able to offer appointments/procedures to patients presenting with “core” presentations. Denominator: The number of clinical staff in the service. Core demand: This is defined as the most common presentations to the service. A Pareto chart can help services to identify their core demand.	Identify the basic training that all staff in the service require (appropriate to their discipline e.g. Nursing/Medical/Surgical) to meet core demand, and keep a skills register to record this training at staff level. Intermittently review core demand and training needs and update the skills register as necessary.	Aim to maintain this at 100%. Regular changes of staff, for example student intakes, will require training drives. High staff turnover will make this hard to maintain at a level sufficient for flexible capacity management.

Type of measure	Links to	Measure name	Operational definition	Data collection guidance	Expected change
Process	Intelligence on Demand and Capacity	Optimising Capacity	The percentage of time available among clinical staff for direct clinical contact time. Numerator: the number of hours available for direct clinical contact time among clinical staff. Denominator: the total number of hours among clinical staff. The BMA defines direct clinical time duties as any work that involves the delivery of clinical services and administration directly related to them.	This can be gathered from job plans. If the Flexible Capacity measure is not at 100% then use only staff with job plans in the numerator and denominator. Job plans represent the ideal and not always the actual. The capacity calculator can be used instead to calculate how much capacity is available for direct clinical contact time given all other tasks that clinical staff are asked to do.	Competing priorities mean that 100% direct clinical contact time cannot be expected of any clinical staff. A reasonable average to aim for among all staff is 75% of total work time.

Type of measure	Links to	Measure name	Operational definition	Data collection guidance	Expected change
Process	Intelligence on Demand, Capacity and Activity	Demand-Capacity matching	Core capacity expressed as a percentage of the range in expected demand. Capacity is defined as the number of appointment slots that could theoretically be provided given the staffing and physical resourcing, for a single type of appointment e.g. new/return. Demand is defined as the expected range of appointments requested for that type of slot, e.g. in the case of new appointment capacity this would be net referrals, in the case of return appointment slots this would be number of return appointments offered plus number of patient-initiated reviews requested.	To calculate capacity for appointment slots, you will need to divide the time available for direct clinical contact by the average appointment time. Bear in mind that one hour of face-to-face contact can generate around 30 mins of clinical admin. To calculate the range in expected demand, you'll need to know your historical maximum and minimum demand, ideally seasonally adjusted (i.e. max/min for that time of year). Capacity as a % of the range = ((capacity – minimum expected demand) / (maximum expected demand – minimum expected demand)) *100.	Aim for 80% over any unit time (weekly or monthly recommended). Averaging below 80% will risk creating a backlog. Averaging below 50% means that there is not enough capacity to meet the median amount of demand. Negative percentages indicate that there is not enough capacity to meet even the minimum expected demand. Averaging above 80% means that there will likely be spare capacity relative to the demand – if you have a large backlog already, then this spare capacity can be utilised, but if not then it could be wasted.

Type of measure	Links to	Measure name	Operational definition	Data collection guidance	Expected change
Outcome	Intelligence on Demand, Capacity and Activity, Service Infrastructure, Flexible Capacity	Actual activity	The percentage of capacity that was used to deliver direct clinical care. Numerator: Activity is defined as all booked appointment slots of a single type, regardless of whether the patient attended or not. Cancellations that are successfully reallocated should not be included as the capacity was utilised as activity; cancellations that aren't reallocated should be considered similarly to DNAs for the purposes of this measure (capacity that is not utilised as activity). Denominator: Capacity is defined as the number of appointment slots that could theoretically have been provided given the staffing, for a single type of appointment e.g. new/return.	Activity (appointment) data can be gathered from most if not all clinical booking systems. To calculate capacity for appointment slots, you will need to divide the hours available for appointments by the average appointment time. Bear in mind that one hour of face-to-face contact can generate around 30 mins of clinical admin.	A high percentage indicates that the service is efficient at allocating capacity. 100% indicates that all available capacity is used to deliver direct clinical care. This is almost unattainable, and if sustained, this should be balanced against a staff satisfaction measure to check that this is a rewarding experience and not causing stress from overwork. If this measure is over 100%, it indicates that staff are seeing patients beyond their available capacity. A low percentage indicates that there may be a bottleneck in capacity other than staff time, for example admin time or room/theatre availability.

Type of measure	Links to	Measure name	Operational definition	Data collection guidance	Expected change
Outcome	Flexible Capacity, Service Infrastructure	Staff Satisfaction	Identify an appropriate staff satisfaction measure and monitor on a regular basis.	Can be as detailed as a regular survey or as simple as dropping marbles into a jar at the end of a shift. You will want to monitor the same aspects of staff satisfaction over time, so keep it consistent. You can however change this measure once improvements have been sustained.	Better job planning combined with efficient service infrastructure and an informed workforce should lead to more autonomous, responsible and rewarding roles.
Outcome	Service Infrastructure, Flexible Capacity	Experienced waits	The median wait time that patients experienced for the appropriate interval (e.g. referral to first outpatient appointment, agreeing treatment to inpatient/day case procedure) in weeks. The median is the middle wait if all patients are arranged by length of wait (if there is an even number of patients then select a wait midway between the two middle patients). It will be important to understand whether you are looking at a single list, or a combination of lists, for this measure. For example, a pathway might operate separate lists for different regions, but measure the wait time for the pathway as a whole.	This information should be gathered as per national requirements for reporting waiting times. Understanding the service footprint will help you to understand whether you are looking at a single list, or multiple lists.	If looking at a single list, matching capacity to demand should lead to reductions in waiting times. If looking at multiple lists as one single list, then the data is much harder to interpret. As the individual lists will be of different lengths, then the measure will respond to how capacity is deployed across these different lists.

Type of measure	Links to	Measure name	Operational definition	Data collection guidance	Expected change
Balancing	Intelligence on Demand and Capacity	Reporting quality	The number of appointments that have missing information in clinical systems. Appointment: a booked appointment slot that occurs before the date of data extraction. Missing information: Information that should have been input to the clinical system shortly after the appointment occurred, e.g. attendance status ("Attended"/"DNA" etc), appointment outcome, clinical outcome.	This should be extracted at daily or weekly intervals (same day each week). Construct criteria for the minimum required information and build a report to extract. Bear in mind that staff are at liberty to reserve a time to do all their reporting in a single session, which may be on a certain day of the week.	If additional activity is realised but there is not sufficient capacity to deliver this, then something somewhere has to give. Clinicians may not be able to find the time to keep up-to-date records of their appointments.
Balancing	Flexible Capacity	Sickness Absence	The rate of absence due to sickness, expressed as a percentage.	This should be available via HR systems at a department-level, which can be further filtered down to smaller services and individual teams if necessary.	The rate of sickness absence can inform a service as to whether staff are experiencing reasonable workloads over an extended period of time.
Balancing	Flexible Capacity	Staff Turnover	The rate of staff turnover, expressed as a percentage. Numerator: the number of staff leaving the service over the time period. Denominator: the total staff establishment (staff in post plus vacancies) at the beginning of the time period.	Local HR systems should be able to provide staff turnover rates at a department-level, which can be further filtered down to smaller services and individual teams if necessary. It may be necessary to use longer time periods (e.g. single or multiple months) to produce an interpretable measure, as long runs of zero turnover will not work with run chart rules.	The rate of staff turnover can inform a service as to whether staff are experiencing reasonable workloads over an extended period of time.

Type of measure	Links to	Measure name	Operational definition	Data collection guidance	Expected change
Balancing	Service Infrastructure	Spend against budget	The budget variance over unit time. Numerator: Actual Expenditure minus Budgeted Expenditure for the time period. Denominator: Budgeted Expenditure	This data should be available via local Finance processes. A driver for the Team Service Planning involves devolving budget responsibilities to the Service Lead.	Increased expenditure against budget can indicate overreliance on bank staff.

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