

The assessment unit is at the heart of patient flow

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Blog post



1 Improving patient flow

Improving patient flow is the primary objective of the operations of a hospital. Flow means that the patients are not experiencing disruption or delay to their treatment and no patient is waiting for a bed or waiting for test results or waiting for a review. Improving patient flow is best achieved by identifying, addressing and eliminating the apparent disruptions to flow.



A common mistake is to assume that flow will improve when the capacity of each step in the process matches its load. The dice game, which is explained in chapter nine of 'Pride and Joy' highlights this point. A system that matches capacity with demand will be a system of wandering and interactive bottlenecks that is a nightmare to manage; one where management attention will be splintered into addressing the latest crisis.

In order to ensure patient flow improves it is vital to answer the following two questions:

1. *Of all the patients I could work on next which one should I work on next?* Clearly, in a truly life-threatening situation clinical need will drive this decision but for most of the time a patient-centred, clinically led alternative is needed. This point is important across the whole system but is paramount in the assessment unit as it is the divergent point in the overall flow. Working on patients in the wrong order will lead to bad multi tasking, mis-synchronisation and wasted capacity not just in the assessment unit but throughout the rest of the downstream system.
2. *Of all the areas I could improve which area will have the greatest impact on the performance of the system as a whole? Which task/resource combination is most often causing the most delay to the most patients? Failing to answer this question is a decision to promote chaos. Improving non-bottlenecks is not just a waste of time but often damages the performance of the system as a whole.*

Much is written today about the troubles of A&E departments in achieving their four-hour A&E access target. An understanding of the critical logistical role that the assessment unit(s) plays in improving the flow through the entire hospital can hold the key to a breakthrough in A&E performance and the productivity of the overall bed capacity.

2 A logistical connection between A&E and the rest of the system

Assessment units have two distinct functions. Firstly, the vital role of clinical assessment of patients to decide if they need an admission or can be safely discharged or referred to a subsequent outpatient appointment. But equally it has a logistical purpose which is central to the flow of patients – not just through the whole hospital but across the whole health system. This is because in many instances it is obvious to us all that this is the link in the overall chain that is trying to absorb the largest disruptions to a patient's flow.

Typically, when an assessment unit is full, patients at risk of breaching the A&E target are admitted directly to a ward – sometimes any ward. The effect on the system's capacity is devastating. A review of patients who should have gone to the assessment unit but went directly to a ward instead will show that their assessment takes longer and the length of stay for those patients who required no further treatment was most likely double (if not more) than if they had gone to the assessment unit first and then home. Equally an assessment unit is for assessing and not treating patients. All too often they become another ward as there is no bed for them to be transferred to in the rest of the hospital.

3 Decoupling admissions and discharges

There is a fundamental difference between the speed and time with which beds are required throughout the day for patients being admitted, and the speed and timing within the day of patients being discharged from the wards. Rather than trying to force an inappropriate match between the time at which patients need a bed and when patients can be safely discharged, the logistical purpose of the assessment unit is to provide a successful mechanism for connecting these two links of the chain together.

4 Aggregating the variation

While there is little variation in the daily demand for beds, there is great variation in the mix of patients. On one day there can be a demand for many similar beds but on another day the demand can be for many different types of beds. Hour by hour within a day this is accentuated. This means that unless there is sufficient 'protective capacity' in the assessment unit, the only way to guarantee bed availability for every different type on every different ward would be to hold enough protective capacity at each ward to cope with the maximum potential demand on that ward. But from a logistical perspective, the assessment unit can aggregate the variation in demand of all of the different patient requirements. So in total there is much less overall capacity required. This logistical function is vital and when it is too small it will be necessary to carry protective capacity on each and every ward, which, as we already know, increases operating expenses and inevitably results in some wards on any one day having too few beds and others too many.

So, saving a few beds in the assessment unit costs much more for the rest of the hospital.

5 What size should the assessment unit(s) be?

On any one day there is a mathematically correct answer for the number of beds needed in an assessment unit, but suffice to say, if you establish the correct size of your assessment unit(s), it will free up a lot of capacity elsewhere and will have a positive impact on quality of care, improve patient flow and lessen fluctuation in the demand for resources at ward level. Rather than trying to establish the correct size it is more effective to put in an approach called dynamic buffer management. This constantly monitors the space and time requirements of the assessment unit, highlights which task-resource combination within the assessment unit is most often causing the most delay and helps focus internal improvement efforts whilst also identifying which wards' lack of bed availability is most often causing the most disruption to the most admitted patients. Once again, by connecting together these important links in the overall chain, improvement efforts are focused and result in immediate improvements in the overall system performance and A&E targets can be met with less overall capacity in the system.