

Structural Changes Increasing Emergency Department Efficiency Can Increase Hospital NEAT Performance.

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Background

A Hospital's performance against the NEAT (National Emergency Access target) is known to be dependent on both several factors, including pre-hospital, ED, inpatient and community performance. In an ideal world, all of these features of the system would be improved at the same time. This, however, is rarely practical.

Aim

The aim of this study is to assess if structural change in one part of the system, in isolation, can have a measurable effect on the overall NEAT figure for the Hospital.

Methods

Flinders Medical Centre is an 580 bed tertiary centre located in Southern Adelaide. Its Emergency Department is a regional trauma centre which sees over 200 patients a day, with a 42% admission rate. For a period of three months, there was a change to the ED model of care to allow front loading of patient care by a senior medical officer during the hours of 8am to 4pm, Monday to Friday (except public holidays).

This change was facilitated by increasing the number of senior medical officers on the day shift from three to four during these times. The referral process was also streamlined, with acceptance by the inpatient registrars for all referrals being the default and on referral by that registrar if it was felt the patient need to be admitted under another team.

Measurements of ED efficiency were the following process measures: time to be seen after arrival in the ED, Time to discharge if not admitted, time to decision to admit if admitted to an inpatient unit, and time to arrival in the ED short stay ward if admitted to the Emergency Department.

Results

The results can be tabulated as follows:

ED Presentations

Feb – May 2014	Feb – May 2013	Feb – May 2012
Average 1477 presentations per week or 211 per day	Average 1382 presentation per week or 197 per day	Average 1240 presentations per week or 177 per day

ED Performance

	Feb - May 2014	Feb - May 2013	Feb - May 2012
Average percentage of patients seen within target time	71	67	61
Average percentage of patients who are discharged from ED within four hours	76	67	66
Average percentage of patients with a decision to admit within three hours of triage	53	38	37
Average percentage of all patients leaving the ED within four hours (NEAT target)	56	49	50
Average percentage of admitted patients who are admitted within four hours	31	22	26

It can be seen that there is a large increase in ED efficiency , of the order of 20%, with a small but significant effect on the overall NEAT target for the hospital.

Conclusion

It is seen that structural changes increasing ED efficiency can increase overall performance of a hospital against NEAT, but changes in other elements of the system need to happen for a more significant effect to.

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