

Abstract

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Are high hospital and intensive care unit (ICU) occupancy rates associated with more medical emergency team activations?

¹Lydia Deng Haiping, ¹Mashithah Mansor, ²Wang Xiqin, ³Roshni Gokhale, ⁴Augustine Tee

¹Medical Intensive care Unit, Changi General Hospital, Singapore

²Medical Intensive Care Unit, Changi General Hospital, Singapore

³Internal Medicine, Changi General Hospital, Singapore

⁴Respiratory and Critical care medicine, Changi General Hospital, Singapore

Objectives:

The Medical Emergency Team (MET) at Changi General Hospital currently operates with the support of Intensivists, intensive care unit (ICU) trained nurses and respiratory therapists.

Problem- It was hypothesized that when hospital and ICU bed occupancy rates (BOR) are high, it causes an increase in the number of MET activations. A rise in the hospital BOR means difficulty in securing a discharge bed for ICU patients, leading to a high ICU-BOR. As a result, more patients end up lodging in the emergency department (ED) for a ward bed. With primary teams needing to care for inpatients and ED lodgers an increase in hospital admissions and proportional deteriorations might lead to an increase in MET activations.

Methods:

All data on MET calls, ICU and hospital admissions, ICU and hospital BOR were collected from July 2015 to June 2018 and analyzed using Pearson's correlation coefficient.

Results:

The total number of MET activations were 69/month. Hospital admissions and ICU admissions were 4112/month and 103/month respectively over the same period.

The mean (+/-SD) Hospital BOR and ICU BOR was 85.4 (+/-2.3) days and 62.7(+/-) 9.3 days respectively. The correlation between number of hospital and ICU admissions and MET activations as well as correlation between hospital and ICU BOR and number of MET activations was weak

Conclusions:

ED patients are assigned priority for inpatient beds according to severity of illness in order to ensure safe care. The hospital advocates a "before 12 noon" discharge policy for existing inpatients, catering for peaks in ED admissions to wards. These minimise the effect of high BOR on MET activations. Ongoing regular review by primary teams helps preempt deteriorations but also helps establish early end of life decisions reducing the need for MET activations.