

Abstract

SG-iSRRS1068

Bringing Critical Care to the wards – the SMART way

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Objectives:

The Singapore General Hospital Medical ICU Acute Response Team (SMART) was introduced in February 2018 as part of patient safety initiatives. The multi-disciplinary team – comprising an intensivist, acute-care advanced practice nurse and respiratory therapist, is activated upon recognition of a deterioration in vital signs and the primary physician's request for escalation of care. This study is a description of SMART's experience since initiation.

Methods:

A retrospective review of SMART activations from February to September 2018 was performed with data on patient demographics, indication for activation, interventions and outcomes.

Results:

A total of 315 referrals (male 54%, age 64±15 years) were received, with a baseline Charlson Comorbidity Index of 6 (3-7) and APACHE II score of 21 (16-27). Time from activation to review was 10.6±6.4 minutes. The most common indications were respiratory failure (37.5%), hemodynamic instability (36.2%) and airway support (9.5%). SMART performed interventions by bedside in 227 (72.1%) activations: fluid resuscitation and vasopressor support (27.9%), targeted ultrasound (20.0%), endotracheal intubation (15.6%) and acute non-invasive ventilation (6%). SMART also engaged in discussions on goals of care with patients, their carers, and primary physicians with a limitation of medical therapy established in 8.2%. After SMART's review and interventions, 112 patients (35.5%) did not require escalation of care to the ICU/high-dependency unit and remained in the general ward (GW). Overall in-hospital mortality for all patients was 35.9%, with no difference between patients who had escalation of care and those managed in the GW.

Conclusions:

SMART aims to assist in management of deteriorating patients by ensuring prompt intervention and resuscitation, allowing for early stabilization and right-siting of care. This potentially reduces the need for escalation of care in a monitored unit, allowing patients to be adequately managed in the GW. Further review and analysis will be conducted as part of SMART's service improvement.

