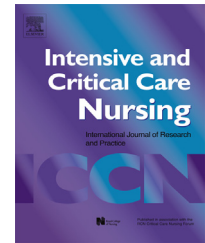




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ORIGINAL ARTICLE

Tasks completed by nursing members of a teaching hospital Medical Emergency Team

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KEYWORDS

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Rapid Response Team;
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Nurse education

Summary

Objectives: To assess tasks completed by intensive care medical emergency team nurses.

Research design: Prospective observational study.

Setting: Australian teaching hospital.

Main outcome measures: Nursing-related technical and non-technical tasks and level of self-reported confidence and competence.

Results: Amongst 400 calls, triggers and nursing tasks were captured in 93.5% and 77.3% of cases, respectively. The median patient age was 73 years. The four most common triggers were hypotension (22.0%), tachycardia (21.1%), low SpO₂ (17.4%), and altered conscious state (10.1%). Non-technical skills included investigation review (33.7%), history acquisition (18.4%), contribution to the management plan (40.5%) and explanation to bedside nurses (78.3%), doctors (13.6%), allied health (3.9%) or patient/relative (39.5%).

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Technical tasks included examining the circulation (32%), conscious state (29.4%), and chest (26.5%). Additional tasks included adjusting oxygen (23.9%), humidification (8.4%), non-invasive ventilation (6.5%), performing an ECG (22%), and administering fluid as a bolus (17.5%) or maintenance (16, 5.2%), or medication as a statim dose (16.8%) or infusion (5.2%). Self-reported competence and confidence appeared to be high overall amongst our MET nurses.

Conclusion: Our findings provide important information on the tasks completed by Medical Emergency Team nurses and will guide future training.

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Implications for Clinical Practice

- Non-technical skills are important skills for nurses to possess for conduct in a Medical Emergency Team call.
- Communication and clinical assessment skills are particularly important.
- Nurses who participate in Medical Emergency Teams calls need to be skilled in transportation.

Introduction

Clinically important patient deterioration is reported to occur in approximately 10% of admissions to acute care hospitals (Brennan et al., 1990; Jones et al., 2013; Schimmel, 1964; Story et al., 2010; Wilson et al., 1995). There is evidence that ward staff may not consistently recognise the signs of this deterioration, leading to a failure to rescue a deteriorating patient (Buist et al., 1999; Hodgetts et al., 2002; McQuillan et al., 1998).

Around the world, there have been a number of initiatives to improve the recognition of, and response to clinical deterioration, many of which involve critical care nurses. In the United Kingdom, critical care outreach (CCO) nurses provide a proactive approach to patient deterioration by conducting surveillance, receiving referrals from ward staff and following up patients discharged from the Intensive Care Unit (ICU) (Endacott and Chaboyer, 2006). In Australia, there is a similar role which has been termed the Intensive Care Liaison Nurse (ICU-LN) or Intensive Care Nurse Consultant (ICNC) (Elliot et al., 2012; Endacott and Chaboyer, 2006; The Australian ICU Liaison Nurse Forum, 2012).

A more reactive solution to the recognition and response to patient deterioration is the Rapid Response Team (RRT) (Jones et al., 2011). This approach involves the use of pre-defined triggers for activation, which are based on derangement of vital signs, as well as other important clinical conditions such as seizures, bleeding and uncontrolled pain (Jones et al., 2011; The ANZICS CORE MET Dose Investigators, 2012). Wood and others revealed that approximately half of the RRTs in 15 North American hospitals were nurse-led RRTs (Wood et al., 2009). In Australia, most RRTs are physician led and many of the team leaders are based in the ICU (The ANZICS CORE MET Dose Investigators, 2012).

A Medical Emergency Team (MET) is a physician led RRT which possesses all of the following competencies (DeVita et al., 2006): (1) ability to prescribe therapy; (2) advanced airway management skills; (3) capability to establish central vascular lines; and (4) ability to begin an ICU-level of care at the bedside. The vast majority of MET studies have focussed on the effect of implementing a MET service on the outcome

of hospitalised patients, including cardiac arrest, unplanned ICU admission and unexpected death (Jones et al., 2011, 2013).

In Australia, there is variability in the nature of nurses who participates within the RRT/MET. Although most involve ICU nurses, in some hospitals the nurse may be from the coronary care unit or emergency department (The ANZICS CORE MET Dose Investigators, 2012). There is also overlap between the roles of the ICU MET nurse and the ICU-LN. Thus, Elliot and co-workers revealed amongst 25 hospitals that operated both a MET and an ICU-LN in Australia, the ICU-LN was a member of the MET in 68% of hospitals (Elliot et al., 2012). Green et al. similarly revealed that 21.7% of the 123,236 patient reviews occurred in association with a RRT review (The Australian ICU Liaison Nurse Forum, 2012).

Qualitative studies have been conducted to increasingly define the roles and scope of practice of CCO and ICU-LNs (Chaboyer et al., 2004; Elliot et al., 2012; Endacott and Chaboyer, 2006). These roles fall within the frame work developed by Manley and include "expert practitioner, consultant, educator, and researcher" (Endacott and Chaboyer, 2006). To our knowledge, no study has focussed on a quantitative assessment of the roles of nurses who participate in an ICU-led MET. Such information is important to guide education and training strategies for nurses involved in the MET response. The purpose of this study was to conduct a prospective audit of the tasks undertaken by nurses from the MET during a routine call. One of the aims of our study was to assess the self-reported confidence and competence of the ICU MET nurse shortly after the MET call was completed.

Methods

Ethics approval

Approval was obtained from the hospital research and ethics committee (approval number H2012/04642). The need for informed consent was waived by the committee as the data was considered audit in nature.

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