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Rating teams' non-technical skills in the emergency department: A qualitative study of nurses' experience

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ABSTRACT

Introduction: Non-technical skills (NTS) teamwork training can enhance clinicians' understanding of roles and improve communication. We evaluated a quality improvement project rating teams' NTS performance to determine the value of formal rating and debriefing processes.

Methods: In two Australian emergency departments the NTS of resuscitation teams were rated by senior nurses and medical staff. Key measures were leadership, teamwork, and task management using a valid instrument: Team Emergency Assessment Measure (TEAM™). Emergency nurses were asked to attend a focus group from which key themes around the quality improvement process were identified.

Results: Main themes were: 'Team composition' (allocation of resuscitation team roles), 'Resuscitation leadership' (including both nursing and medical leadership roles) and 'TEAM™ ratings promote reflective practice' (providing staff a platform to discuss team effectiveness). Objective ratings were seen as enabling staff to provide feedback to other team members. Reflection on practice and debriefing were thought to improve communication, help define roles and responsibilities, and clarify leadership roles.

Conclusion: Use of a non-technical skills rating scheme such as TEAM™ after team-based clinical resuscitation events was seen by emergency department nurses as feasible and a useful process for examining and improving multi-disciplinary practice, while improving team performance.

1. Introduction

Over the last decade emergency medical response teams have been developed and are often referred to as medical emergency teams (MET) or a 'code blue' teams, with a focus on recognising and responding to the deteriorating patient [1,2]. The response teams comprise of nurses and doctors trained in Advanced Life Support (ALS), with additional specialist expertise, in order to manage the complexities of acute deterioration and cardiac arrest.

The National Safety and Quality Health Service (NSQHS) Standards require health services in Australia to have a system in place to respond to clinical deterioration in acute care and to review actions taken to improve the effectiveness of the recognition and response system [3, p. 32]. Thus, clinicians regularly undertake life support training. Advanced life support training is conducted annually for emergency clinicians in the acute hospital setting, either as a single or multi-professional exercise. Emphasis, however, remains linked to the technical skills pertaining to resuscitation management such as chest compressions, whereas the non-technical skills of communication, leadership and teamwork skills are less frequently covered [4]. Non-technical skills (NTS) remain an important component of rapid response team (RRT) and medical emergency team (MET) performance as these components reflect team cohesion and team collaboration [5].

Team leadership and support, however, has emerged as a recurrent theme in current literature. Leach and Mayo [6] found that effective RRT team performance related to non-technical skills, including: team structure, level of expertise, communication, and teamwork. Massey et al. [7] highlighted, clearly defined leadership as essential to the successful implementation of the emergency medical team. When leadership was absent, staff stress levels were raised and the resuscitation became chaotic. Andersen et al. [8] in a 2010 study of 11 ALS instructors, reported that an effective team leader should be clearly identifiable in the team, clinically relevant, communicate efficiently, delegate tasks to team members and gather information from team members and ward staff. Further, Benin et al. [9] reported that ward nurses' sense of security and empowerment was increased in relation to

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- How easy or difficult did you find the Team Emergency Assessment Form to complete?
- Were there any question items that you found difficult to rate?
- Do you think the tool is useful/did you find the tool useful? Does it relate to rural team skills?
- Can the tool reliably identify non-technical skills performance aspects (such as teamwork, task management, leadership)?
- How could the tool be improved?
- How could non-technical skills performance of medical emergency teams be improved?
- Does your department have any plans to improve non-technical skills performance of medical emergency teams- eg., in any quality-type study or audit?

Fig. 1. Semi-structured focus group interview questions.

the availability of the response team to assist with the patient's management. This study aimed to evaluate emergency personnel's perceptions and experiences of rating teams NTS performance as part of a quality improvement cycle.

2. Methods

2.1. Study design

This qualitative study explored the emergency personnel perceptions and experiences of using The Team Emergency Assessment Measure (Appendix 1, TEAM™) to rate team NTS performance in clinical resuscitation events. Emergency personnel were interviewed in three focus groups. A thematic analysis was conducted of the audio recorded transcripts.

2.2. Participants

Participants were emergency nurses from two regional emergency departments in the state of Victoria, Australia. Participants were chosen from these two sites following a 12 month period of live testing of the TEAM™ tool post resuscitation events. The study was aimed at regional emergency departments which had a similar number of resuscitation events, staffing mix and clinical expertise. A total of 17 nurses were interviewed across three focus group interviews. Although the Medical staff participated in the tool implementation phase of the study and were later invited to participate in the focus groups, none were available to participate on the scheduled interview days, hence only the nursing staff perceptions can be reported in this study.

2.3. Data collection

Emergency staff from two regional emergency departments received training on the use of the TEAM tool, the training consisted of an instructor facilitated practice session using the TEAM tool after watching three resuscitation videos in conjunction with a group discussion on scoring. Rating of each item was moderated among the participants for consistency and shared understandings. It was noted that the two participating rural hospital emergency departments did not have specific identified medical emergency team members, but that an ad-hoc team which was formed on demand, comprising of staff who were rostered on at the time.

Over a 10 month period from June 2014 to April 2015, ED staff were recruited to participate in the testing of the TEAM tool [10] which was previously found valid and reliable in simulation studies [11,12]. The study broadly followed the Plan-Do-Study-Act PDA cycle to improve care [13]. The findings from the first phase of research, published earlier [14], are summarized in Box 1.

Box 1. Phase 1 results summary.

In 104 team-based patient resuscitation events in Emergency Departments over 10 months, 57 staff from hospital A, and 55 from Hospital B completed 308 TEAM™ assessment forms. RNs provided 66% of tassessments and medical staff 33%.

- The median number of clinicans at each resuscitation episode was 6 (range 3–20) In several episodes staff commented too many people were present to allow efficient communication.
- The median age of patients was 62 (range 18-95 years).
- 89% of patients survived (survival = at least 1 h), and of the cardio—respiratory group, 13 survived and 8 were deceased.

Non-technical skills performance:

- The average *TEAM* score was high: 39 of a possible 44 points (87%) with no significant difference in scores between the two EDs.
- Doctors rated performance on the *TEAM* tool significantly higher than RNs. This difference was in the leadership domain.
- Leadership received the lowest ratings. By the project's final three months, leadership scores showed a trend of improvement in both departments.
- Staff awarded a 'global' performance score to the team (out of 10: overall median = 8). This score improved significantly by the final three months, with fewer episodes scored in the lowest quartle.

In June 2015 emergency staff were invited to participate in a 45–60 min audio recorded focus group interview to discuss the staff perceptions and experiences on resuscitation practice and teamwork. One group at hospital A and two groups at hospital B were facilitated by one of two research team members (JP, SC), both of whom were registered nurses but were independent of health service staff. A semi-structured interview technique was used to elicit responses and guide the discussion. The interview questions comprised of questions directed towards the useability of the tool, assessment of identification of NTS during resuscitation events and an evaluation of team clinical performance (Fig. 1). The audio recordings were then transcribed verbatim by a commercial provider. The conducted focus group interview findings will be presented in this paper.