Teaching Medical Students to Recognise and Respond to Clinical Deterioration using Simulation – The RADAR Course.

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Introduction:
Patients who are admitted to hospital are entitled to assume that the care they will be given is effective and safe, and in 90% of cases this is the situation (Vincent, Neale and Wołoszynekow, 2001). However, there is evidence to suggest that in some cases avoidable or preventable cardiac arrests are still an issue (NCEPOD, 2012). In all of these studies suboptimal care was identified as contributing to morbidity or mortality. Suboptimal care is defined as a lack of knowledge regarding the significance of clinical findings relating to dysfunction of airway, breathing and circulation or problems related to system failures that inhibits care delivery. (Massey, Atkin & Wendy, 2008, p128). McQuillan, Pitkington, Smith et al (1998) identified that suboptimal care had five major components:
1. failure of the organisation,
2. lack of knowledge,
3. failure to appreciate clinical urgency,
4. lack of supervision and
5. failure to seek advice.

The Recognising Acute Deterioration: Active Response (RADAR) course was designed to address points 2-5 of the above statements with undergraduate medical students within the University of Dundee. This poster discusses the results of one cycle of Action Research undertaken to evaluate the RADAR course.

Aims and Outcomes:
The purpose of this study was to explore with medical students the impact of simulation-based learning on their confidence in recognising and responding to a clinically deteriorating patient. The research question was ‘Can medical students’ confidence in recognising and responding to clinical deterioration in adult hospital patients be increased using simulation? The Learning outcomes for the session were:
1. Demonstrate patient assessment using the ABCDE approach
2. Demonstrate how to record and calculate a SEWS* score (*Standardised Early Warning Scale).
3. Discuss the importance of early qualified clinical help during an acute/patient deterioration episode.
4. List the contents of SBAR and discuss importance of using this communication tool in early rescue of acutely ill patients.

Method:
A mixed methods action research approach was taken to the development, implementation and evaluation of the RADAR Course. A questionnaire was distributed to a whole cohort of medical students (165) and a small group of volunteer student nurses (22). Students completed the questionnaire following the RADAR Session.

Results:
Data from the students’ response to the first section of the questionnaire which was based on 10 statements focusing on the composition and experience of the RADAR sessions was very positive. There were statistically significant changes reported by all of the students’ which demonstrates that the RADAR sessions are educationally relevant and are operational in terms of content, process and students perception. Due to the huge amount of data only that gained from the free text questions is demonstrated here.

Conclusions:
In terms of learning, the students reported that the use of SBAR, non-technical skills, ABCDE and communication were rated the highest. The most interesting aspects were rated as simulation, non-technical skills, ABCDE and SBAR which combined with the response from the students that they would not change anything during the sessions is positive and demonstrates that RADAR is achieving the aims and outcomes. This study showed that the combination of simulation using simulated patients, moulage (make-up) and situated learning within a realistic hospital ward setting can increase students’ confidence in recognising and responding to clinical deterioration.

Take-Home Message:
RADAR is designed to give medical and nursing students the opportunity to learn together to recognise, record, respond and rescue patients who experience clinical deterioration. The combination of technical and non-technical skills learned and practiced prepares students for the real world of clinical practice. Whilst RADAR is relatively expensive in terms of personnel, moulage etc: the learning and increased confidence in students should outweigh the costs.

References:

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