

Simulation for medical students - are they learning what we think we're teaching?

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Background

The GMC states in Tomorrow's Doctors that Medical Schools should provide opportunities for simulation and behavioural debriefing to understand the importance of team working in patient care¹. Students at Warwick Medical School attend two simulation sessions at UHCW during a six week acute block. These teaching sessions have clearly defined learning objectives (see table below). Currently there are no learning objectives specifically regarding simulation within the Warwick Medical School Curriculum.

LEARNING OBJECTIVES IN SIMULATION	
Technical Skills	Non-Technical Skills
A-E assessment Use of therapeutic medical devices (i.e. airway devices, oxygen masks, nebulisers) Venesection Arterial sampling Drug prescribing Data interpretation (ECG, arterial blood gases, laboratory bloods) Diagnostic medical devices (BP, temperature, BM's, SATS, cardiac monitors, ECG machine)	Team-working Communication (direct verbal, telephone referral, written, use of notes) Leadership Prioritising tasks Appropriate delegation Clinical decision-making Appropriate escalation (consult other team members or guidelines, call senior, call 2222)

Aim

The aim of this study was to identify whether student's learning in simulation is aligned with the learning objectives of the session.

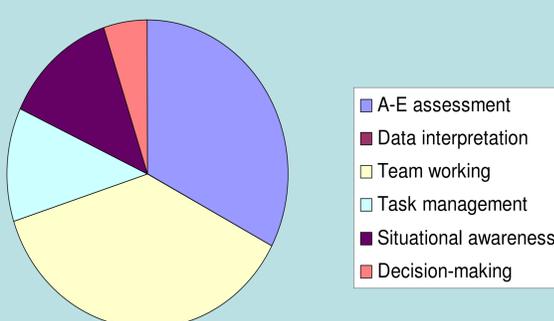
Methods

- Responses to "Name two things that you learnt from this session" were collated from written feedback obtained in August 2012 to February 2015.
- The answers were collated by four teaching fellows and divided into pre-set categories through consensus discussion.
- Categories for non-technical skills were based on the ANTS (Anaesthetist's Non-Technical Skills) framework².
- Categories for clinical skills were decided after a review of 30 sample feedback forms.

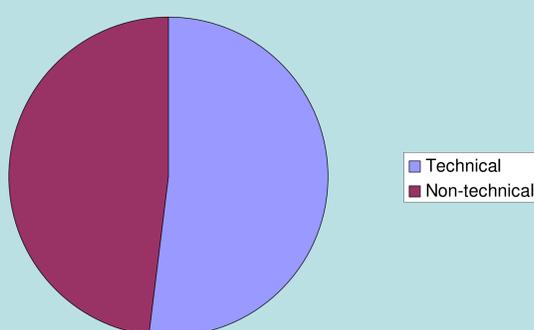
Results

- Over 650 feedback forms were analysed
- 1250 learning outcomes were listed by the students
- 68% learning outcomes matched the learning objectives
- **Non technical skills** comprised of 47% of all student learning outcomes
- The majority of additional learning outcomes listed by the students were related to **treatment specific management** and **specific technical skills**

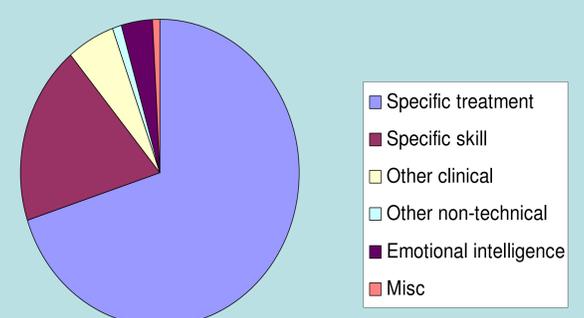
Faculty-specified learning objectives listed by students



Spread of Learning outcomes Between Technical and Non-technical Skills



Additional learning outcomes listed by students



Conclusion

- The majority of students listed learning outcomes that aligned with the learning objectives.
- Students also listed other unintended learning outcomes mostly in relation to management of specific acute presentations. This may reflect their current level of training and lack of exposure to acute medicine.
- Team-working was the most common non-technical outcome listed by the students. This likely reflects the fact that team-work is a novel skill at this stage in their training.
- The design of simulation-based training for undergraduates should take these factors into consideration.

Action points

- Appropriate case selection of common medical emergencies
- Feedback during facilitated debrief should stress the importance of team work at every session
- Consider inclusion of non technical skills in simulation within the refreshed Warwick Medical School curriculum

References

1. General Medical Council. Tomorrow's Doctors: Outcomes and standards for undergraduate medical education. GMC, 2009.
2. Fletcher G, Flin R, McGeorge P, Glavin R, Maran N & Patey R. Anaesthetists' Non-Technical Skills (ANTS): Evaluation of a behavioural marker system. *British Journal of Anaesthesia*, 2003; 9: 580-588.

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