IN PRACTICE

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MASTERING MEDICAL EMERGENCIES: EMBEDDING A SIMULATION-BASED EDUCATIONAL PROGRAM TO ENHANCE MEDICAL STUDENTS' ABILITY TO MANAGE A RANGE OF ACUTE MEDICAL EMERGENCIES

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10.54531/LJYC8854

Introduction: Resident doctors are expected to have the knowledge and skills required to manage common medical emergencies. Medical students report anxiety and under-preparedness for such situations [1]. There is a lack of understanding as to why this is and how students could be better prepared for this transition. This study aims to evaluate the educational impact of a simulation-based educational curriculum in a novel cohort of medical students from multiple year groups and two universities.
Methods: Sessions were offered weekly for 30 months (over 120 sessions) in a non-clinical teaching space and included the management of curriculum-based emergency presentations. Each session involved initial pre-teaching simulated scenario(s), followed by a teaching session (a blended approach with workshops, quizzes, didactic teaching and small group working) and concluded with further simulated scenarios to consolidate the learning. Specific skills training was embedded throughout (e.g., interpretation of ECGs, X-rays, lab results and prescribing). These sessions were open to all students on placement in Causeway Hospital (a rural District General Hospital) and included students from Queens University Belfast and Ulster University. Sessions were evaluated in a voluntary, anonymised, online post-course questionnaire.

Results: An average of sixteen students (8–24) attended each week with a 75% feedback response rate. Data was collected on over 3600 individual simulation encounters. Students consistently reported increased confidence in the assessment, recognition and management of unwell patients. Students particularly enjoyed the opportunity for 'hands-on' skills acquisition reporting that this helped to contextualise their learning and addressed potential gaps in their knowledge base. The blended approach to teaching using simulated scenarios at the beginning and end of sessions was rated extremely highly as students felt they left the sessions having consolidated their learning. Students felt the scenarios were highly realistic and could see the relevance to their imminent role as a resident doctor. Students spoke positively of the psychological safety created in the sessions and this was attributed at least in part to the consistency of faculty members skilled in simulation-based education. Students also viewed the opportunity to engage in simulated scenarios with students from other year groups and university positively as they felt this reflects the 'real world' where teams are made up of individuals with different skills and knowledge bases.

Discussion: This program provides a safe, highly-valued educational experience for participants and has been highlighted amongst the student body as being an example of excellence in simulation-based education in the Northern Ireland.

Ethics Statement: As the submitting author, I can confirm that all relevant ethical standards of research and dissemination have been met. Additionally, I can confirm that the necessary ethical approval has been obtained, where applicable.

REFERENCES

1. Monrouxe L, Grundy L, Mann M, John Z, Panagoulas E, Bullock A, et al. How prepared are UK medical graduates for practice? A rapid review of the literature 2009–2014. BMJ Open. 2017;7:e013656. doi: 10.1136/bmjopen-2016-013656.