



Introduction of High-Fidelity Simulation into Undergraduate Physiotherapy Education

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INTRODUCTION

The critical care environment presents considerable challenges for physiotherapy student learning due to the dynamic nature of the environment with a complex and physiologically unstable patient population and consequently higher risks to patient safety. In addition, clinical placement capacity restrictions mean that some students may not have an opportunity to complete a critical care placement prior to graduation. Simulation provides the opportunity to increase student confidence, support student learning and add to the value of clinical education (Blackstock and Jull, 2007).

AIM

The aim of this project was to prepare students for cardiorespiratory clinical education experience by developing clinical reasoning and practical skills and a level of competence and confidence prior to real patient contact.

METHODS

Simulation was introduced into the RCSI BSc Physiotherapy curriculum during the academic year 2014-2015. Two case scenarios were developed in consultation with academic and clinical colleagues and subsequently discussed with the Clinical Skills and Simulation technician. Specific learning outcomes for each scenario were defined, encompassing a range of patient assessment and management skills.

There were three steps in the student learning process:

a) Pre-reading

Students were provided with links to relevant articles, clinical practice guidelines and lecture notes to be reviewed.

b) Clinical skills workshop

A clinical skills workshop was completed to enable students to practise clinical skills on low fidelity task trainers, interpret relevant clinical findings and apply to case study scenarios.



Figure 1: Equipment used in Clinical Skills Workshop

c) High-Fidelity Simulation session

On the day, students were orientated to the simulation room and provided with an opportunity to familiarise themselves with the Sim Man 3G High-Fidelity Mannequin. Each group comprised 4-5 students. One group completed the scenario, observed by second group. The observation group was facilitated by a second staff member and encouraged to identify actions undertaken or omitted for discussion during debriefing.

A facilitated debriefing session with all students took place immediately after the case scenario to encourage self-reflection, identify strengths and areas for improvement. The groups then rotated for a second simulation scenario and the entire process was repeated. Two questionnaires were completed by students to establish satisfaction with and evaluate the simulation experience.



RESULTS

All Second Year physiotherapy students completed a simulation session during the 2014-2015 and 2015-2016 academic years prior to undertaking a cardiorespiratory clinical placement. Student feedback has been universally positive with students reporting a greater understanding of the skills required and increased confidence levels prior to clinical placement.

The importance of the debriefing session was supported by responses indicating strong agreement that feedback received and reflection on the simulation scenario session enhanced learning and clinical reasoning.

DISCUSSION

Simulation is now formally included in the BSc Physiotherapy curriculum and has increased students' confidence and preparation for clinical placement. Simulation requires a significant investment of staff time and is costly. However, some of this can be ameliorated by replacing lecture time with the provision of pre-reading material and learning resources and subsequently using the time to conduct the simulation session. Challenges for the future include the measurement of learning outcomes and the assessment of transfer into clinical practice.

CONCLUSION

There are limitations to the simulation environment and opinion is divided on the issue of simulation replacing clinical time. Currently the substitution of simulation for clinical practice time is not supported.

References

Blackstock F, Jull G (2007) High-fidelity patient simulation in physiotherapy education. *Australian Journal of Physiotherapy*, 53:3-4

Ethical Approval

Ethical approval for the study was granted by the RCSI Research Ethics Committee