Simulation-based interprofessional education for the identification, escalation, and management of the deteriorating patient

Background

All healthcare professionals involved in the patient's care have a responsibility to actively identify, escalate and manage clinical deterioration within the acute healthcare setting.

Interprofessional practice has been shown to improve outcomes for acutely deteriorating patients through timely and appropriate identification, escalation, and management of patient care. However, traditional methods of education for healthcare professionals within acute healthcare settings have not provided opportunities for disciplines to collaboratively learn together. Interprofessional education offers a means for all healthcare professionals to learn together, from, and with each other.

A transformation from discipline-specific education to more collaborative healthcare training to build collaborative teams and relationships is required for effective interprofessional practice to occur in the acute healthcare setting. Innovative approaches are required to future-proof the delivery of interprofessional education across all disciplines within acute healthcare settings.

Modern technology such as mixed reality avails the opportunity for healthcare professionals to join interprofessional education simulations (sometimes remotely) and interact in the same holographic scenario.

Methods

A pre-post-experimental study consisting of surveys at three timepoints was designed. The theoretical framework of social constructivism underpins this research.

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Deb Newman is a Registered Nurse who has clinical experience within the acute health care system, most recently in the improvement of the management of deteriorating patients across Northern NSW LHD. Deb used a pre-post experimental study to evaluate the effectiveness of interprofessional education using immersive mixed reality technology to influence healthcare professionals' collaboration in the identification, escalation, and management of the deteriorating patient within the regional acute healthcare setting.

Results

Perceptions of interprofessional practice were assessed pre-post program using the Students Perceptions of Interprofessional Clinical Education - Revision, Version 2 (SPICE-R2). A Wilcoxon Signed Rank Test demonstrated significant improvement in total SPICE-R2 scores for nurses (p=.025) and allied health (p=.010).

Engagement in interprofessional practice within work teams was assessed using the Jefferson Teamwork Observation Guide (JTOG). The Wilcoxon Signed Rank Test revealed a statistically significant increase in the overall JTOG score at follow-up (p = <.001), and four of the five JTOG subscales; roles and responsibilities (p=.005), communication (p=<.001); values and ethics (p=<.001); and teamwork (p=<.001).

Conclusion

The findings of this study support the ongoing use of a simulation-based interprofessional education to enhance healthcare professionals interprofessional practice in the identification, escalation, and management of the deteriorating patient.

Keywords

Patient deterioration, interprofessional education, interprofessional practice, teamwork, communication, collaboration, mixed reality, simulation.