

Implication for practice: Considering the T2 (increased recognition of diabetic emergencies and adherence to protocol) and T3 (improved patient outcomes) outcomes, the methodology was recommended as a modality of training the nursing staff involved in inpatient care of patients with diabetes. Future programmes including multi-disciplinary teams, to explore teamwork and communication, are planned.

REFERENCE

1. Pichardo-Lowden A, Haidet P, Umpierrez GE. Perspectives on learning and clinical practice improvement for diabetes in the hospital: a review of educational interventions for providers. *Endocr Pract.* 2017;23(5):614–626.

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PILOT STUDY: VIRTUAL VS MANIKINS: SIMULATING REALITY IN MEDICAL EDUCATION

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Background: Immersive virtual reality (VR) has exciting potential as a training tool, providing opportunities for more independent learning, easier access and repeatability, and fewer cost implications ^[1]. But more evidence is needed regarding its utilization in teaching clinical decision-making, in particular, understanding where it fits with relation to simulation suites using high-fidelity manikins (SimS). To date, there appears to be only one other study that has investigated this question, but the comparative effects of the teaching modalities were potentially blurred as SimS was undertaken in groups compared with VR in single-player scenarios ^[2].

Aim: Use mixed methods to analyse the differences in confidence and competence in clinical decision-making between medical students trained using either VR or SimS scenarios; and the perceived value and experience of VR compared with SimS.

Simulation activity outline: To teach students through participating individually in acute medical scenarios (sepsis-based) in the VR and SimS environments. Volunteers were given time to familiarize themselves with each environment beforehand, and the scenarios and debriefing were replicated in each setting (content and timing) as much as possible.

Method: In April 2021, nine medical students (in their first clinical year) volunteered to take part in the pilot and were randomly allocated to experience either SimS or VR first, in a simulation centre attached to a university hospital. Each session ran as follows, with paper questionnaires used to collect data:

1. Baseline confidence and competence questionnaires;
2. Lecture on the topic (sepsis);
3. Familiarization followed by scenarios and debrief (Group A – VR, Group B – SimS);
4. Follow-up competence and confidence questionnaires;
5. Familiarization followed by scenarios and debrief (Group A – SimS, Group B – VR);
6. Comparison and general feedback questionnaires.

Data were transcribed into Excel® for analysis. This was a proof-of-concept pilot for a larger study that has ethical approval (MS IDREC Reference: R76053/RE001).

Results: Both the VR and the SimS groups increased their confidence (VR 3.75%, SimS 4.2%) and competence (VR 10.73%, SimS 11.44%) in relation to clinical decision-making.

Overwhelmingly, 89% of the students wanted to undertake the VR training before SimS, although 66% preferred SimS overall to VR. Participants described VR training as feeling safer, less pressured and allowing them to consolidate prior learning. This subsequently increased their confidence to tackle SimS training, which felt more stressful, challenging and true-to-life, with the added bonus that more could then potentially be gained from SimS. Each modality was felt to increase the students' confidence in clinical decision-making, while adding different aspects to the learning experience.

Implications for practice: This pilot indicates that a larger study would give more information on the best utilization of VR in medical student training. The data suggest VR training is a good introduction to and complements SimS training. Additionally, the increases in confidence and competence it induces make it an independently valuable tool, suggesting it could be a viable alternative where SimS is unavailable, e.g. due to lack of funds or a pandemic, where face-to-face educational opportunities may be limited.

REFERENCES

1. Pottle J. Virtual reality and the transformation of medical education. *Future Healthc J.* 2019;6(3):181–185.
2. Haerling KA. Cost-utility analysis of virtual and mannequin-based simulation. *Simul Healthc.* 2018;13(1):33–40.

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MAINTAINING SURGICAL SKILLS THROUGH SMALL-GROUP SIMULATION DURING COVID-19 [QUALITY IMPROVEMENT PROJECT]

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Background: The COVID-19 Pandemic has had a significant disruption to the provision of Surgical Training. Core and Improving Surgical Trainees (CSTs and ISTs) are noted to be a group profoundly affected due to the impact of the pandemic in reducing operative time, cancelled elective procedures and redeployment to other specialties ^[1,2].

Aim: We aimed to evaluate the benefit of Small Group Surgical Simulation teaching for CSTs and ISTs recently deployed in the Norfolk and Norwich University Hospital.

Simulation activity outline: Physical simulation models were designed with the use of animal tissue and/or surgical simulators (such as laparoscopic box trainers) to simulate surgical procedures appropriate for the grade of trainees.

Method: We designed a monthly Surgical Simulation Programme, which took place in the Surgical Skills Laboratory. Topics were selected from those suitable for Simulation from the Intercollegiate Surgical Curriculum Programme (ISCP) Core Surgical Curriculum ^[3]. Consultants and Senior Registrars from various Surgical Specialties were approached. Animal tissue and surgical simulators were used in conjunction, to simulate surgical environments as closely as possible with funding provided by NANIME (Norfolk and Norwich Institute of Multi-professional Education). Sessions were advertised to all CSTs and ISTs; however, due to COVID, restrictions on the number of participants were restricted to <10. Participants were asked to anonymously complete pre- and post-session surveys.

Results: Participants felt that the COVID pandemic affected opportunities to perform/assist or observe the surgical skills. Participant comments on COVID affecting opportunities included 'Reduced opportunities due to cancelled lists',