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.

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157 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.

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

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10.54531/OHXV9347

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 specialities [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',

'Fewer elective cases so less opportunity ' and 'Affected in the Peak of COVID but it is improving. Following the session, 100% of participants found the sessions to be effective in improving confidence in performing the surgical skill and 87% found the sessions to be extremely effective. Participants found the teaching sessions to be useful due to the opportunities of 'Close supervision and direct feedback', 'Set of tasks', 'Practise with animal models', 'Having the tutor there to assist and help us' and '[Discussing] theory prior to learning the procedure'.

Implications for future practice: Surgical simulation provides opportunities for early-year trainees to learn and perform surgical skills during the COVID-19 pandemic. Small-group surgical simulation allows CSTs and ISTs to develop and practise skills under supervision of tutors, with trainees finding real-time feedback useful. In a post-COVID era, a surgical simulation teaching programme could provide an effective training opportunity to shorten the steep learning curve of core surgical training.

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84 USING THE TEAM TOOL IN HIGH-FIDELITY IMMERSIVE SIMULATION FOR INTERNAL MEDICINE TRAINEES: ASSESSING LEADERSHIP OF CARDIAC ARREST SCENARIOS

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Background: Non-technical skills (NTS) play a crucial role in cardiac arrest resuscitation performance, both in simulated and clinical environments [1]. Poor performance in these skills, particularly leadership, has been highlighted in acute medical emergency and cardiac arrest teams [2]. Simulation training aims to develop internal medical trainees (IMT) NTS in leading cardiac arrest teams, a role that is expected of them as they progress in their training.

Aim: This observational pilot study aimed to explore the leadership and team-working behaviours of IMT1 doctors in a simulated cardiac arrest scenario, to identify strengths and areas for improvement to focus future training.

Simulation activity outline: The Scottish national IMT1 boot camp involves a variety of high-fidelity immersive simulation scenarios across the 3-day course. Trainees are in groups of six with one IMT taking a lead role in each scenario. This study assessed a scenario of shockable rhythm cardiac arrest. All group participants are involved as the cardiac arrest team, with the original 'hot seat' participant expected to take the role of team leader, unless otherwise agreed by the team. The scenario is followed by a facilitated debrief around leadership in cardiac arrest.

Method: Following ethical approval from NHS Education for Scotland and written participant consent, videos of the cardiac arrest scenario were observed by the research team. Leadership and team behaviours were scored using the validated Team Emergency Assessment Measure (TEAM) [1]. Field notes including general observations of the three main TEAM categories (leadership, teamwork and task management) were also recorded. Participants completed a pre- and post-course questionnaire, including rating their confidence in leading cardiac arrests.

Results: Seventeen videos involving 102 trainees were reviewed and scored using the TEAM tool. The average overall TEAM score was 6.19/10. Scores for each of the 11 NTS domains ranged from 2.13/4 to 3.25/4. IMT1s scored highly on adapting to changing situations and monitoring and reassessing, but poorly on team leader displaying direction and command and leader maintaining a global perspective. When leadership scores were high, overall team performance was also high. General observations from field notes found the team often did not allocate a leader until cardiac arrest occurred. The leader often struggled to remain hands-off with a lack of assertiveness and poor communication between the leader and team. One hundred and fourteen IMT1s completed a pre- and post-course questionnaire. Average pre-course confidence in cardiac arrest team leadership was 3.8/7, and among the lowest of all situations rated. This improved to 5.35/7 post-course, but compared with other situations, remained low.

Implication for practice: This pilot study found leadership to be a key component in managing cardiac arrest for IMT1s, influencing overall team performance. Particular areas for improvement include hands-off leadership, leader assertiveness and whole team communication, which could be the focus of future educational interventions. Scenario participation and facilitated debrief improved overall confidence, but further focussed leadership and team training is required as IMT1s transition into the leadership role.

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