Table 1: Continued

Theme	No. of latent errors detected	Radar incident code	Total by incident code
Noise	2	Health and safety/ environment	
Other environment	4	Health and safety/ environment	
Cardiac arrest algorithm	7	Care pathway issues	17
Getting help in an emergency	7	Care pathway issues	
Organizational	3	Care pathway issues	
Communication/teamwork	2	Communication/ documentation/IT	4
E-Obs issue	2	Communication/ documentation/IT	
Assessment of deteriorating patient	2	Patient safety	2
Total	82		

Implications for practice: We have identified three major outcomes: Shared learning: latent safety errors are rarely unique to one clinical area and have the potential to occur elsewhere in the Trust. Wider dissemination of latent safety errors at a directorate level allows proactive interventions to reduce patient harm. A monthly Simulation Safety Outcome Report shared with senior nursing staff at a directorate level is being evaluated. Responsive learning and staff engagement: latent safety errors were discussed at every debrief. Participants provided valuable suggestions often resulting in immediate local interventions. This internal resolution has engaged and empowered clinical staff in patient safety. Targeting resources: Integration of active and latent error data from numerous sources allows Trust safety management structures to target resources to improve patient safety and develop sustainable approaches to risk reduction. National standardization of coding active errors (incidents) and latent errors would broaden the use of *in situ* simulation as a proactive safety tool.

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130 IMPACT OF LOW-DOSE HIGH-FREQUENCY *IN SITU* SIMULATION ON INPATIENT DIABETES MANAGEMENT: A PILOT STUDY

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Background: Even in the presence of established institutional guidelines, failure of compliance by the clinical teams plays an important role in the control of diabetes. The identified gaps include contextual and biomedical knowledge, attitudes, clinical inertia, confidence and familiarity with existing hospital resources and guidelines with regards to hospital diabetes care [1].

Aim: We wanted to demonstrate the efficacy of low-dose high-frequency *in situ* simulation exercises through a pilot study in a ward setting to improve outcomes in patients with diabetes.

Simulation activity outline: The exercise was a 15-minute session, delivered during working hours to individual nurses. This consisted of a 5-minute scenario, involving a standardized patient followed by a 10-minute debrief. Modified Diamond-model debrief with an advocacy-inquiry model was used by the debriefer, a trained fellow in simulation, and overseen by an expert. The scripted scenario involved a patient with Diabetic Ketoacidosis (DKA), with learning outcomes of recognizing DKA, managing the patient and adhering to the institutional guidelines including management of hypoglycaemia. The scenario was individualized based on the roles of the participants. Pre- and post-questionnaires were given to the participants. The simulation was repeated twice in the second week and once in the third week.

Methodology: This mixed-method study was conducted in a UK teaching hospital, in a ward designated for patients with diabetes, as a part of a quality improvement programme. In the first week, patients with diabetes, admitted for DKA, were chosen and their blood sugar recordings, dysglycaemic episodes and adherence to guidelines were noted. Every week data were collected as in the first week. GNU pspp 1.0.1 [version 3] free software was used. The confidence scores were given as mean and standard deviation with confidence interval (CI) of 98.75%. A p-value of <0.0125 was considered significant based on the number of data points.

Results: The *in situ* simulation was delivered to a total of nine ward staff. There was a significant improvement in the confidence levels at the end of the session. The number of blood sugar recordings were 1.4 per person-days in the first week, 2.07 in the second week and 3.6 in the third week (Table 1). Hypoglycaemic episodes correctly identified were 4.76%, 6.9% and 14.29% in the 3 weeks, respectively. Sugars >14 mmol/L were identified 28.57%, 37.93% and 57.14%, respectively, for the 3 weeks. Qualitative analysis showed protocol adherence issues and latent medication errors in addition to positive changes with regards to handover and diagnosis of hypoglycaemia.

Table 1: Dysglycemic episodes and protocol adherence from medical records

Week	Age/ Sex	Patient	Days	Number of sampling	hypoglycaemic episodes	hyperglycaemic episodes	Treatment for hypoglycaemia as per protocol	Protocol adherence once sampled
1	40/F	1	5	9	1	3	No	Yes
	28/F	2	4	5	0	2	NA	No
	29/F	3	3	3	0	1	NA	No
	71/M	4	3	4	0	0	NA	No
2	64/M	5	2	3	0	0	NA	No
	72/M	6	6	18	0	10	NA	No
	31/F	7	2	3	1	0	No	Yes
	70/M	8	3	3	0	1	NA	No
	73/M	9	1	2	1	0	Yes	No
3	39/F	10	2	7	1	3	Yes	Yes
	68/M	11	2	6	0	0	NA	Yes
	77/M	12	4	15	3	5	Yes	Yes
	30/F	13	2	8	0	8	NA	Yes

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',