Aim: The aim of the study was to explore final-year midwifery students' experiences of a perinatal psychosis, scenario-based simulation (SBS).
Simulation activity outline: A 1-day SBS learning activity with two scenarios of women exhibiting psychotic symptoms. Each scenario included a background narrative, actors' roles with partial scripts and comprehensive patient clinical information. Two midwifery students acted as assessment staff in each scenario whilst their colleagues took observer roles. Guided debriefing followed each scenario.
Method: The study was conducted in March 2020 at a UK Higher Educational Institute. It employed an exploratory, descriptive design to capture qualitative data from 11 final-year midwifery students who took part in the SBS. Data sources included semi-structured interviews and information shared during scenario debriefings. Data were thematically analysed following the seven-step process of Dahlgren and Fallsberg [2]. Ethical approval for the study was granted in July 2019 (LRU-18/19-13171).
Results: Three main themes emerged from the data. The SBS facilitated learning through different ways of knowing. Students drew on personal experiences to identify communication and care challenges, re-appraised assumptions they held about mental health and ethnicity and articulated the benefits of peer learning. Students held equivocal views concerning the adequacy of mental health content in existing curricula, and not all had encountered women with perinatal psychosis on clinical placements. Clinical environments were highly valued learning contexts for the observation of staff and the gradual, supervised application of practice skills. Both learning mechanisms were replicated in the SBS, which helped the students realize attributes and skills in themselves necessary for the care of women with perinatal psychosis. The SBS facilitated transformative learning through its realism and the development of skillsets not amendable to didactic teaching, e.g. teamwork and communication skills. Debriefing helped to cement learning in the minds of students.
Implications for practice: The SBS was an effective form of pedagogy that enabled invigorating and deep learning. It is recommended that other educators consider its use, particularly for conditions that students do not always encounter in clinical placements. Well-prepared, detailed scenarios are recommended to promote realism and each SBS should be followed by a structured debrief. Developments should be accompanied by evaluative methodologies to gauge their impact and further research is needed to better understand how SBS can be used more effectively throughout midwifery education.

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37 SIMULATION AS A PROACTIVE PATIENT SAFETY TOOL

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Background: Traditionally, *in situ* simulation has been used to improve patient care by identifying knowledge or skills gaps and improving teamwork and non-technical skills. However, there are little data demonstrating objective improvement in morbidity and mortality directly attributed to in situ simulation [1]. There is a growing recognition of the use of *in situ* simulation to detect latent safety errors (LSEs) [1,2]. These are errors of system, environment or teams which may be unrecognized until they are identified in the stressful and realistic conditions of a simulated scenario in a clinical environment. Currently, no standardized system is described to score type or severity of LSE limiting the reproducibility and application of this approach to harm reduction.
Aim: The aim of the study was to develop a tool to detect latent safety errors during in situ simulation which is fully integrated with existing Trust safety metrics.
Simulation activity outline: *In situ* simulation in a district general hospital across community and acute clinical areas.
Method: Multi-professional *in situ* simulation was led by an experienced facilitator. A pilot phase was limited to the Acute Medical Unit and informed the thematic classification of errors. Further *in situ* simulation took place in medical, surgical, emergency department and community hospital settings. Thematic analysis was completed using the framework of Trust incident coding (Radar Healthcare). During the simulation sessions, latent errors were identified and discussed in the debrief. A data collection proforma was developed using an iterative process over 12 months using Microsoft forms. This research was funded by Health Education England South West Simulation Network with the support of the local Somerset Simulation Team.
Results: During the pilot phase, 73 participants took part in 7 simulations on AMU. Facilitators identified 28 latent errors. Comparison with other sources of safety data (formal incident reporting and critical care outreach team data) showed that *in situ* simulation identified errors in oxygen and fluid management unrecognized by other data sources. In the second phase, 146 participants took part in 32 *in situ* simulations. Facilitators identified 82 latent safety errors and coded them into 18 error types (see Table 1). Work is ongoing to compare these to trust incident reports.

Table 1: Latent safety error by incident code

Theme	No. of latent errors detected	Radar incident code	Total by incident code
Oxygen use and equipment	12	Medical devices	43
Defibrillator use and equipment	13	Medical devices	
Fluid delivery and equipment	4	Medical devices	
Glucose monitoring equipment	2	Medical devices	
Other equipment	7	Medical devices	
Location of equipment	5	Medical devices	
Incorrect medication dose	1	Medication	5
Other medication issue	4	Medication	
Access to a locked area	3	Health and safety/ environment	11
Emergency call system issue	2	Health and safety/ environment	

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