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STEP BY STEP: A THREE-STEP APPROACH TO FACULTY DEVELOPMENT

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Background: The Clinical Skills and Simulation Centre (CSSC) at Edge Hill University (EHU) was opened in September 2019 to enhance and standardize simulation-based education across all programmes in the Faculty of Health, Social Care and Medicine. Before the CSSC opened, academic staff had not received any formal guidance in using simulation-based education. With the impact of the pandemic, a three-step blended simulation faculty development approach was created to assist and support faculty in their understanding and in the delivery of simulation^[1,2].

Aim: The aim of the study was to enhance, encourage and standardize the use of simulation-based education through the delivery of a three-step faculty development programme.

Method: The following are the three-step approach to faculty development:

- Step 1: The introduction of simulation sessions is specifically designed and focussed on the newly appointed academic faculty and is embedded in the staff induction programme.
- Step 2: Writing simulation scenarios, drop-in sessions are run once a month and are available to all academics from the faculty. They focus on designing and writing simulation scenarios.
- Step 3: Shadowing and feedback. At this stage, faculty are offered support during their simulation session. The experienced simulation facilitator leads the first part of the event with the faculty member running the second part supported by the facilitator observing and providing feedback after the session.

The evaluative methods included two approaches, quantitative incorporating Likert questionnaires, for evaluations, and qualitative focus groups, for faculty. Approximately 1700 student and faculty evaluations were obtained, and seven faculty members participated in the focus groups. These were obtained and conducted between June 2020 and August 2021.

Results: Evaluations are obtained from students and from faculty who are involved in the sessions. In addition, ethical approval has been obtained to carry out focus groups to identify the challenges and benefits that faculty have found in delivering simulation. Feedback from the evaluations and the focus groups were very positive. Examples include:

The simulation team have been extremely supportive and always are. It makes my role so much easier and I appreciate all their hard work.

We had 450 students over a fortnight, everyone worked so hard and were very supportive, especially to staff who had not facilitated simulation for some time.

Data from June 2020 to August 2021

The session:

- Was beneficial for my learning, 87.74%
- Archived the learning outcomes, 91.37%
- Did the session meet your expectations? 87.32%

Implications for practice: We will continue to offer a blended approach and, from August 2021, a 1-day simulation facilitation programme will be offered to potential adjunct clinical faculty.

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FAST TRACK SIMULATION-BASED EDUCATION FOR COVID-19 DEPLOYMENT

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Background: COVID-19 created pressure on healthcare institutions to quickly prepare for maximum capacities. To meet the critical care capacity challenges, non-critical care nurses and overseas short-term temporary contracted nurses needed to be urgently deployed to the critical care units. That quick deployment and recruitment process raised concern about competence and patient safety; therefore, the deployed nurses were upskilled using fast track simulation-based education (SBE). SBE is an effective method to manage quick, focussed upskilling training, helping to improve patient care and safety^[1].

Aim: The aim of the study was to explore the effectiveness of the COVID-19 SBE upskilling program on perceived satisfaction, confidence and competence of deployed nurses.

Method: Upskilling of 1200 non-critical care nurses was conducted using SBE between 14 March and 1 June 2021 during the country's second wave of COVID-19. Training consisted of completing a mandatory 2-hour online critical care introductory module that included information on COVID-19 (the disease, pathophysiology), the critical care environment, critical care scope of service and infection control strategies. The online module was followed by 4 hours of in-person SBE using a demonstration and return demonstration approach. Considering the urgency of the situation and time constraints, skills were selected and prioritized according to patient safety and included care of the patient receiving mechanical ventilation, invasive line monitoring and care, recognition of deterioration, proning, and assessment of patient response to interventions. Post SBE, a survey was administered to collect data on the perceived satisfaction, confidence and competence of the nurses being deployed.

Results: The majority of the nurses reported confidence in their new skills (97%), while 96% perceived themselves as competent after successful completion of SBEs. The nurses were highly satisfied with the training effectiveness (92%), and 99% believed that they were able to successfully achieve the learning objectives. Specifics about perceived competence and confidence per survey item will be reported in the presentation. The SBE upskilling programme was evaluated as an effective way to learn how to manage critically ill patients.

Implications for practice: Nurses perceived themselves as confident and competent after participating in SBE. However, competence confirmation will be evaluated either in further SBE or through actual competency assessment in the clinical setting by trained competency validators. Nurses

could perceive themselves as confident and competent but still perform incorrectly. Fast track SBEs should not be used to confirm full competence due to the inability to provide repetition of skills practice.

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LEARNING FROM COVID-19 AND SUPPORTING STAFF USING HUMAN FACTORS AND SIMULATION

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Background: The full impact of working in the COVID-19 pandemic surge on NHS staff is yet to be understood. Simulations were run to explore the staff experience following the second COVID surge. From these, it was clear that the staff had powerful stories to tell. A series of further simulation sessions were then delivered, designed to allow staff to explore their experiences and assist with organizational learning within the trust debrief strategy.

Aims: Firstly, to use simulation to recreate working with uncertainty and unfamiliar staff as a platform within the debrief to explore their experiences of working during the pandemic surges. Secondly, to employ a human factors framework, SEIPS model ^[1], within a simulation debrief to build a system picture of work-as-done ^[2] by staff throughout the organization. This was then used to feed back to leadership to influence care processes and staff and patient well-being for potential future surges.

Method: Simulation sessions, open to all staff, were advertised throughout the organization. In total, 8 sessions were delivered for 38 staff. Multi-disciplinary attendance was encouraged, and a wide range of staff groups participated. During the session, staff were given a brief presentation on human factors, a simulation pre-brief and a pre- and post-simulation questionnaire. A simple patient deterioration scenario unrelated to COVID-19 was used to maintain psychological safety. A system-focussed debrief using the PEARLS model took place after the scenario. Insights shared by candidates were captured by a facilitator and anonymously grouped into the six SEIPS themes.

Results: Pre- and post-questionnaires show a general theme of improved confidence post-simulation. Findings were reviewed and the impact on care processes and staff, patient and organizational outcomes were summarized. Information captured within the SEIPS framework showed recurring themes that were condensed into four main categories: psychological trauma and burnout, communication, re-deployment and training, and infection control and PPE.

Implications for practice: It was clear from facilitating sessions that staff were concerned about patient experience but were also suffering their own trauma from working through the surge. Feedback from participants was positive, emphasizing their sense of validation in sharing their experiences and of feeling part of the hospital community. Staff also had experiences to share about what had helped them and where things could be improved. These insights were synthesized into practical recommendations for managing future pandemic surges that were fed back to the wider organization.

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NO TIME TO TRAIN? THE USE OF SIMULATION TO DEVELOP A PATHWAY AND DELIVER TRAINING FOR EMERGENCY SURGERY IN MATERNITY DURING THE COVID-19 PANDEMIC

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Background: The COVID-19 pandemic presented healthcare workers with a challenge to provide safe clinical care while protecting staff and coping with an evolving situation. The use of simulation to devise and test emergency pathways is well recognized in the literature ^[1]. However, this pandemic presented the world with a very tight timeline to deliver, let alone test potential pathways. This was further complicated in maternity units where workload remained the same during the preparatory phase.

Aim: Recognizing the need to test a safe pathway, with a limited evidence base, we sought to test the hypothesis that a combination of table-top and *in situ* simulation could be used to devise a protocol and train teams in a tertiary maternity unit during the first phase of the pandemic.

Methods: This programme involved three phases: pathway development, safety testing and team training. The initial phase was a simulated table-top scenario of a parturient requiring a Category 1 Caesarean delivery under general anaesthetic. This pathway was then used to create a structured simulation scenario to test its suitability. The debrief sessions for each explored three themes: (1) pathway feasibility; (2) timing and (3) feedback.

Results: The table-top simulation took place on 11 March. Team-specific outcomes highlighted the logistics of early senior escalation and the rationalization of staff and equipment in theatre. We also recognized deficits in the amount and correct use of personal protective equipment (PPE). Staffing levels and limitations in communication were also key findings. The subsequent *in situ* simulation took place 2 days later. The baby was delivered within the 30-min guideline (28 min) and overall, the pathway was safe to use. It was then modified and used to train teams over the subsequent weeks, reaching 151 staff. Feedback from candidates was powerful: 'I feel safer coming to work'.

Implications for practice: The initial phases of the COVID-19 pandemic provided a fertile ground for team consolidation and planning that promoted collaboration in one of the most multi-professional areas of any hospital: the maternity unit. Involvement of all teams meant that deficits in training could be identified early, and changes could be adapted rapidly. The simulations also demonstrated to staff that it was possible to safely deliver a baby within the timeframe. Recognizing that this was not an isolated problem, we shared our resources publicly helping teams in the USA, Laos, Australia and UK to develop their own protocols. Importantly, it improved our response to the second wave.