10.54531/BBYA1836

Background: *In situ* simulation (ISS) has previously been shown to be an effective tool for identifying system issues in healthcare [1]. Since the commencement of weekly inter-professional ISS in the Emergency Department (ED) at Mid-Yorkshire NHS Trust in October 2020, we have run 50 ISS sessions involving 225 participants and identified several system issues. These have subsequently been addressed through debriefing, feeding learning points back to the wider department and working with the management team to resolve practical issues.
Aim: The aim of the present study was to describe how ISS has been used to identify and address system issues in an ED setting.
Method: Each week a simulated case is selected to address specific clinical presentations and to bring out a range of clinical and non-clinical learning points. The scenarios are run in the ED using a low-fidelity mannequin and a monitor 'app'. The scenario is run in real time, participants are required to locate and identify real kit; medications are required to be collected and additional help/senior advice is to be sought in the way that the participants would do in normal practice. After each scenario, there is a debrief, facilitated by the ISS team, in which the participants discuss and identify learning points as well as errors and systemic issues drawing both on the scenario and wider clinical experience. These points are collated and written up in the 'MYSIM' (an infographic sharing learning points) and distributed through a range of channels to all ED staff. Where practical solutions are required, the team feeds these back to the relevant senior nursing staff or management team to address these issues.
Results: Table 1 demonstrates the system issues that we have identified and addressed so far through ISS.

Table 1: System issues identified and addressed so far through ISS

Theme	Issue	Solution
Medication	Idaricizumab unavailable in ED	Pharmacy restocked ED
Equipment	Lack of infusion pumps	ED pumps electronically tagged and returned to department
Environment	Lack of familiarity with Resus	Simulation familiarizes with environment and participants encouraged to take time to familiarize with the environment following the session
Culture	Reluctance to push the emergency buzzer	Encouraged in debriefing over several sessions' behaviour change noted in subsequent sessions

Implications for practice: By running ISS, we have identified and addressed a number of system issues, which, through shared learning, has seen changes within the ED and ISS continues to be a valuable tool for improving patient safety.

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111 USING VIDEO TELECONFERENCING FOR AN EFFECTIVE REMOTE SIMULATION COURSE IN TRANSFER MEDICINE

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10.54531/CIYV5037

Background: Critically ill patients require transfer within and between hospitals – a necessity amplified by ITU capacity pressures during the COVID-19 pandemic. This rising demand highlighted the need for dedicated transfer teams. Alongside establishing and expanding a cross-sector transfer team, we necessarily needed to meet growing training requirements. Transfer medicine is a core competency for intensivists, anaesthetists, ITU nurses and pre-hospital staff, with simulation recommended in the respective curricula. However, COVID-related restrictions alongside demands on staff's time, limited opportunities for face-to-face training. We overcame these challenges by developing an online simulation-based course. Teleconferencing has previously been received favourably and rated highly for educational benefit [1]. Our innovative programme uses e-learning and interactive video teleconferencing to combine the requirements of distanced learning with the benefits of simulation.
Aim: The aim of the study was to test the efficacy of and response to remote simulation-based training in transfer medicine.
Method: Before attending the online simulation, multi-disciplinary participants completed 3 hours of interactive e-learning hosted online via the platform Rise. This incorporated case-based discussions, practical assignments and filmed presentations. Simulation utilized Zoom teleconferencing to immerse participants in clinical transfers. We used high-fidelity, pre-recorded scenarios made with a mannequin simulator and high-definition video. The participants observed the simulated transfer of critically ill patients (Figure 1). Scenarios paused at set intervals facilitating debriefing utilizing electronic whiteboards and interactional tools available in Zoom to elicit learning. The course was delivered twice. Each cohort completed a pre- and post-course test to assess learning of the intended learning objectives.

Figure 1: Example screenshot of online simulated scenario with participants observing

Results: A total of 21 multi-disciplinary participants completed training: 43% doctors and 57% nurses. 100% of respondents (18) rated the course 5/5 on the Likert scale when asked 'how much did you enjoy the course' and 100% would recommend the course to colleagues. All rated the course extremely relevant to their practice. Average assessment

scores pre- versus post-course improved by approximately 20% (74.3% to 94.4%) (Figure 2).

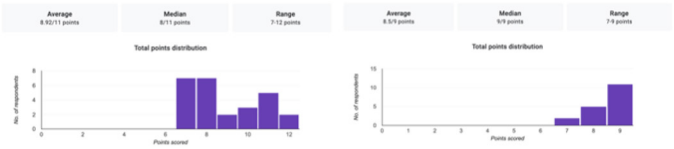

Figure 2: Results of pre- and post-course knowledge assessments

Implications for practice: We developed an effective and well-received remote simulation transfer course to deliver training to a wide-reaching audience. Participants were enthusiastic about the innovative and interactive approach, finding the online course enjoyable and relevant to their clinical practice. Results suggest the course effectively increased learning. The flexible nature of online remote provision allows for delivery at scale, to meet a rising demand. Further evaluation will establish the extent at which this training translates to performance, such as a reduction in adverse events in transfer practice.

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92 IMPROVING KNOWLEDGE AND HUMAN FACTORS SKILLS DURING A PANDEMIC: A MULTIMODAL COVID-19 EDUCATIONAL PROJECT

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10.54531/HPSH4431

Background: Following a rise in COVID-19 cases and hospitalizations in autumn 2020, the resultant pressures on general medical wards galvanized the simulation education team at a London teaching hospital to create a multi-disciplinary educational programme aimed at ward staff caring for the surge in COVID-19 patients. This was especially important in the context of rapidly evolving clinical guidance and recognition of the importance of human factors in re-deployment of staff, thus a multimodal educational project was initiated to develop ward staff knowledge and human factors skills.
Aim: The aim of the study was to ascertain the effectiveness of the multimodal COVID-19 educational project in improving ward staff knowledge and human factors skills.
Method: In October 2020, the team began creating the project – comprising e-learning to improve staff knowledge, *in situ* simulation training and an in-centre human factor course, all based around the care of patients with COVID-19. With rising COVID-19 cases and subsequent suspension of face-to-face teaching, an online format for the human factors training was created incorporating scenarios from the *in situ* simulation. Data were collected via SurveyMonkey with pre- and post-surveys for each facet – six key learning outcomes for e-learning and the Human Factors Skills for Healthcare Instrument (HuFSHI) for the other elements – with free-text boxes for qualitative feedback.
Results: e-Learning surveys were completed by 108 learners with a significant difference ($p < 0.01$) in self-reported pre- and post-survey scores across the six domains. Learners demonstrated mean improvements across all areas of the HuFSHI for the *in situ* (N = 9), human factors course (N = 15) and online format (N=46). Results were comparable between face-to-face and online formats. Learners found all formats useful (e-learning 99%, *in situ* 100%, human factors 100%, online 98%).
Implications for practice: In a limited time frame, the simulation education team implemented a multimodal educational project that improved both ward staff knowledge and human factors skills amidst the second wave of the COVID-19 pandemic. Moreover, following restriction of face-to-face delivery, the project was successfully converted into a purely online format. This ability to be flexible and adapt accordingly is one that needs to be widely adopted going forwards, especially during these unpredictable times. Further challenges included staff release for training, time pressures, managing emotive discussions using the online modality and COVID-19 safety measures. A 6-month follow-up survey is planned to evaluate the benefit to staff's clinical work and will be included at the presentation.

149 UPDATES TO THE HEALTHCARE SIMULATION DESIGN STANDARD OF BEST PRACTICE

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Background: Offering high-quality and purposeful simulation-based educational (SBE) activities to learners requires careful planning [1]. To improve SBE practice across all healthcare professions and for learners at all levels of experience, the International Nursing Association for Clinical Simulation and Learning (INACSL) has outlined a set of standards recently rebranded as the Healthcare Simulation Standard of Best Practice Practice™ (HSSOBPTM) that were initially published in 2013 and recently revised in 2021. Involving individuals with a range of relevant expertise, revisions to these standards have occurred every few years, including expanding the topics covered as developments in this domain have occurred and the use of simulation has expanded.
Aim: The aim of this abstract was to present the changes made to the Simulation Design Standard in comparison to its previously published version [2].
Method: From 2019 to 2021, a group of simulation educators and researchers representing multiple specialities, simulation societies and geographic areas (the authors of this abstract) met regularly via a videoconferencing platform to review and revise the Simulation Design Standard based on their review of the latest literature and their individual experiences. The team identified several aspects that would benefit from being updated to make this key standard more explicit and applicable to all types of simulation modalities. Drafts of the standard were reviewed on multiple occasions by peer reviewers and the society's leadership until the latest version was approved for publication.
Results: An updated version of the Simulation Design HSSOBPTM will soon be published by INACSL in the