

of departmental opening. The participants were instructed to treat the scenarios as real, including the manner in which they called for help. Any equipment required came from the department and if single use, it was exchanged for training equipment. The participants then undertook a hot debriefing before feedback was gathered about both the educational value of the scenarios as well as any issues identified within the new department.

**Results:** In total there were 38 multidisciplinary participants including nurses, operating department practitioners, and doctors from 6 different specialties. The feedback from the sessions was positive with an average ranking of >4 out of 5 in 8 out of the 9 measured domains, including; realism, enhancement of knowledge, and usefulness of in-situ simulation in a new environment. We also identified greater than 50 problems spanning all 5 of the categories from the 'SHEEP' model [3]. Approximately 60% of issues were resolved within the 8 weeks, whilst the remaining are on the risk register and awaiting review at a stakeholder level.

**Conclusion:** In-situ simulation is an excellent mechanism for carrying out clinical systems testing of new environments due to the fact that it simulates realistic events which are prone to the same errors as the real events, without the risk of patient harm. Once the source of an error is exposed the debriefing can help to identify methods to minimise the risk of future reoccurrences. At the same time, with appropriate planning, the scenarios can also provide an opportunity to deliver multidisciplinary training.

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## JUST-IN-TIME IN-SITU SIMULATION FOR HIGH STAKES SUCCESS IN VIRAL HAEMORRHAGIC FEVER (VHF)

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**Background:** Success of just-in-time in-situ simulation to find new ways of working, test processes, and uncover latent error to promote patient and staff safety is well documented from the COVID-19 pandemic [1,2]. We used just-in-time simulation in a unique situation where imminent transfer of a critically unwell patient with VHF was required to our high-level isolation unit (HLIU). The Trexler isolator tent is custom made for treating high consequence infectious diseases (HCID), requires specific training. Staff provide care by 'stepping' into 'suits' in the plastic walls. Transfers into the tent are time-critical to reduce potential exposure risk to staff. This was the first time ever an intubated, ventilated patient was to be transferred into the tent.

**Methods:** Simulation, Infectious Diseases, and Intensive Care teams collaborated within a few hours' notice to simulate in-situ the mechanism of transferring a patient (using a Laerdal SimMan 3G) intubated and ventilated with multiple drug infusions running, headfirst from a transport

trolley into the foot end of the isolator tent. This was repeated subsequently in several Plan-Do-Study-Act (PDSA) cycles to refine the process and reduce transfer time taken. There were multiple pauses as problems, latent threats, and potential failure points were identified, and time outs to discuss solutions.

**Results:** Transfer teams informally reported increased confidence being able to troubleshoot and rehearse the transfer process before patient arrival. Key learning related to leadership, communication, highlighting safety steps, and sharing mental models between teams such as airway management, significance during transfer and ergonomics of airway-trained personnel positioning in the tent. This was written up as a visual aid for the transfer team. Environmental latent threats found included safe ventilator mounting, IV pump management, emergency drug preparation, and allowed for enhanced consideration of the practicalities of caring for an intensive care patient in the HLIU tent. The actual transfer of the patient went smoothly and without incident. Further simulations were run during the patient care episode to rehearse and potential anticipate airway and ventilation management issues.

**Conclusion:** Just-in-time in-situ simulation provided a valuable opportunity to rehearse a high-stakes, never done before activity, and facilitated identification of environmental latent threats before patient arrival. It created a shared mental model between different specialties of patient needs contributing towards an increased situational awareness and ability to forward plan and project, ultimately increasing patient and staff safety.

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## SUCCESSFULLY DELIVERING A NEW, TRUST-WIDE IN-SITU SIMULATION TRAINING PROGRAMME TO MULTIDISCIPLINARY TEAMS IN THE CLINICAL ENVIRONMENT

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**Background:** Simulation-based education is well established as a teaching strategy but is often taught in dedicated simulation centres. In-situ simulation had previously been less prominent as a teaching tool within the Trust due to lack of awareness of its benefits and versatility. The aim of

this project was to utilise in-situ simulations to increase knowledge and implementation of Trust processes, encourage self-reflection, collaboration, and communication within the clinical teams [1].

**Methods:** As part of a year-long collaborative project between our nursing education and simulation teams, an in-situ simulation programme was designed for delivery to established teams. Simulation topics came from various sources including local patient safety agenda, patient safety incidents, curricular requirements, and educational priorities. The simulations were undertaken in their native clinical setting and sessions were supported by subject-matter experts to ensure accuracy and appropriate complexity. These sessions were aimed to reach all members of the multidisciplinary team with the focus on nursing workforce and allied healthcare professionals. Over a period of four months, thirty sessions were delivered, at approximately thirty minutes per session, in five clinical areas. These sessions encompassed key priorities including care of the deteriorating patient, falls, end of life care, and tissue viability. This included a pre-simulation discussion and a debriefing immediately after.

**Results:** Feedback was gathered from the 113 participants using a post-course survey, featuring both quantitative and qualitative questions to analyse pre- and post-simulation experience, confidence, and knowledge of how to care for patients with a focus on the identified key priorities. The results collected showed a 25% increase in confidence partaking in simulation again, 10% increase of confidence working and communicating within a multidisciplinary team, 14% increase in confidence assessing patients, and 6% increased awareness of personal/professional limitations. The main themes reported by participants were increased awareness of Trust protocols and incident reporting, improved value of self-reflection through the debriefings, and increased awareness of effective team communication to support patient safety. Additionally, the delivery of more regular sessions would aid with exploring different topics in greater detail and further solidify their knowledge. Participants valued the provision of live actors and authentic learning experiences in the workplace.

**Conclusion:** In-situ simulation is an effective method of delivering multidimensional, realistic scenarios allowing participants the opportunity to continuously explore various clinical priorities and human factors. Regular, reoccurring simulation sessions in the clinical setting would prove more effective in improving patient safety along with staff's confidence and competence.

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## CALL THE SIM TEAM – A TALE OF BUILDING A SIMULATION FACULTY IN A SMALL DISTRICT GENERAL HOSPITAL

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**Background:** For many years, simulation-based education (SBE) at Walsall Manor Hospital (WMH) was carried by a one-man simulation technician, with intermittent input from department facilitators. Inadvertently creating SBE dis-equality across departments. Studies have demonstrated that formalized SBE plans improve training [1] and clinical outcomes [2]. We aimed to create standardisation and equity in SBE across departments by formulating a SBE training and delivery plan and governance structure at WMH.

**Methods:** In the Autumn 2021, WMH started standardising SBE across the Trust in order to improve both the undergraduate and postgraduate standard of education [3]. The team grew to incorporate five multidisciplinary members; SIM technician, SIM lead (consultant), SIM nurse, SIM project support, and SIM technician support. With further expansion to now include speciality simulation leads in emergency medicine (EM) and paediatrics. Currently there is active recruitment for speciality leads in other departments. The SIM staff were appointed already holding simulation education related qualifications and/or experience. In addition, staff attended the University of Stafford foundations in simulation and debriefing courses. The governance process has been developed and implemented around the appointment of simulation speciality staff, formation of simulation courses, and simulation delivery. Furthermore, collection of attendance, feedback forms, certificates of participation and attendance have been made mandatory element of simulation delivery. In addition, there has been internal and external investment in increasing simulation equipment, including paediatric manikins and immersive technology.

**Results:** In seven months, achievements have included: a range of simulation-based training events, the implementation of in-situ simulation in acute medicine, simulated sessions for final year medical students, the development of a simulation Foundation Year 1 and 2 curriculum, successful construction and running of mock royal college of physicians viva examination, multiple medical procedure courses, the re-introduction of Ill Medical Patients' Acute Care Treatment (IMPACT) course, and simulation sessions for student nurses. SBE activities were delivered by and to a multidisciplinary team.

**Conclusion:** Putting together a simulation team and formalizing the governance process around SBE delivery has increased the number of educational activities for both undergraduate medical/nursing students and postgraduate doctors and allied health care professionals. Feedback scores have been good to excellent and multidisciplinary work in EM has improved. The SIM team will continue to promote, implement, embed, and sustain SBE within the Trust to bigger and bolder activities.

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