

Aim: The aim of the study was to identify the mechanisms used in simulation-based education that support development of collaborative practice skills of undergraduate students.

Method: The simulation-based learning scenario was iteratively developed, delivered and evaluated over 3 years. Staff reflection and content analysis of 3 years of feedback from anonymous evaluation questionnaires, and a sample of student assignments, were used to identify aspects of simulation delivery that supported students' development of collaborative practice.

Results: Although students consistently report anxiety about participating in the simulation, they also identify it as one of the most intense but helpful learning experiences of their on-campus degree programme. The use of trained, experienced actors, indistinguishable from service users maximizes student engagement. Effective pre-briefing reduces student anxiety and provides an opportunity to add complexity via the written brief. The student roles as observers and/or participants (in a familiar role) improve students' experience and support students with diverse needs. Assigning clear staff roles improves delivery and cost-effectiveness. Combining the two approaches to debriefing students was necessary to allow reflection-in-action and -on-action. Thorough debriefing is essential, challenging and requires planning and practice.

Implications for practice: Simulation is an effective pre-qualifying education tool. Adequate pre-briefing, effective debriefing styles, and clear assignment of staff roles aid in effective delivery. Simulation scenarios need to be carefully constructed and delivered to ensure that all students remain within their optimal learning zone and to support students with diverse needs.

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INTRODUCTION OF EMERGENCY DEPARTMENT *IN SITU* SIMULATION

Catherine Holmes¹, Andrew Matson¹, Clare Mulqueen¹, Demi Thompson¹; ¹Mid Yorkshire Hospitals NHS Trust, Wakefield, UK

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Background: *In situ* simulation (ISS) is an effective way to deliver inter-professional education in the Emergency Department (ED) ^[1]. Since October 2020, we have been running regular inter-professional ISS in both EDs in Mid-Yorkshire NHS Trust. We used personal experience, systems and processes from other EDs in West Yorkshire ^[2] and the literature to assist with initiating this.

Aim: The aim of this study was to describe the process to set up an ED ISS programme and share our challenges and successes.

Method: We run a variety of cases including paediatric and adult on a broad topic range (anything that can be seen in the ED), e.g. medical, surgical, trauma, psychiatric and maternity emergencies. We prepare the case beforehand and ensure that we have the appropriate staff and equipment. A vital aspect to ISS is ensuring the ED is safe. Embedding the attitude that this is 'just another patient' has been key. We use a low-fidelity manikin and a simulated monitor app. All participants are briefed, everything is in real-time to closely simulate real life. After the simulation, a debrief takes place. Feedback is sought from all and a certificate is provided. From 14 October 2020 to 5 May 2021, we have run 39 ISS with 138 inter-professional ED participants.

Results: Figure 1 demonstrates feedback given by these participants (largely positive).

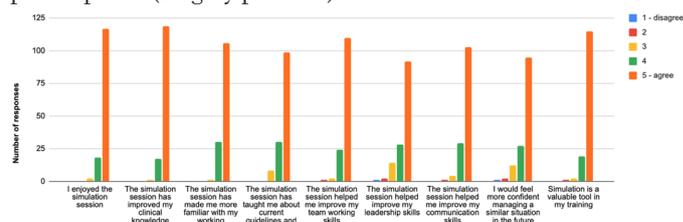


Figure 1: Participant feedback

Implication for practice: Although challenges exist, it is achievable and effective to run an ISS programme in a busy ED. While this was set up with the education of staff as the primary objective, it has become clear that ISS is also important in identifying system problems, testing new pathways and providing an educational response to incidents in the department.

Aspects of our programme that have worked for us include:

- Picking a regular day weekly (early morning best for ED).
- Having an inter-professional debriefing team helps to engage all professions.
- Ensuring senior departmental support.
- Build slowly to more complex simulations.

Challenges we have found are:

- Changing culture/attitudes – most support simulation once they have taken part/seen it happen regularly – persevere with it!
- The ED is busy – we cannot change this but can be flexible.
- Too many observers put the learners off and reduce learning. We have reduced observer numbers and have a sim 'uniform'.
- Some participants have difficulty engaging with the manikin/low-grade technology – a good briefing can help.

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USING A SIMULATION ENVIRONMENT TO ASSESS THE USABILITY OF A NOVEL MEDICAL DEVICE DURING THE COVID-19 PANDEMIC

Carla Sa-Couto^{1,2}, Abel Nicolau^{1,2}, Carolina de Sousa³, Nuno Cruz^{4,5}; ¹CSB-FMUP Biomedical Simulation Center, Faculty of Medicine of University of Porto, Porto, Portugal²Center for Health Technology and Services Research (CINTESIS), Faculty of Medicine of University of Porto, Porto, Portugal³Centro Hospitalar Universitário de São João (CHUSJ), Portugal⁴INESC TEC – Institute for Systems and Computer Engineering, Technology and Science, Porto, Portugal⁵Faculty of Engineering, University of Porto, Porto, Portugal

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Background: It was a recognized challenge of lack of ventilators needed to face COVID-19 worldwide. Although ventilators are sparse, self-inflating manual resuscitators are widely available in-hospital services, providing a rapid response to respiratory depression. Based on this, a device (PNEUMA) ^[1] was designed to be a temporary solution for emergency use, allowing positive pressure ventilation through a standard self-inflating manual resuscitator, without the need for healthcare