

**Method/design:** Through a focus group including parents/caregivers of children receiving LTV via a tracheostomy, who are already at home, we aim to co-produce this project, with the patient voice and experiences at its core. We plan to undertake the SBE with one or more parents/caregivers in a location separate from the clinical setting, that is designed to replicate their home environment as best as possible<sup>[1]</sup>; present will be one facilitator from Simulation Services (SS) and one clinical expert from the LTV team. We have written a bank of scenarios, including accidental decannulation, ventilator failure and respiratory arrest requiring cardio pulmonary resuscitation and phoning of the emergency services. However, scenarios will be chosen and individualized to suit each family's needs. We will debrief in a separate room and this will be led by the SS facilitator, with the expert from the LTV team invited in to support with their clinical knowledge.

**Implementation outline:** Over the next 4 months, baseline data will be collected with a Likert scale of confidence ratings for each of the planned scenarios, prior to the SBE. We will collect these data again immediately after the SBE, and then again at 3 months. We will also ask, at both of these time points, if there is anything additional that the parents/caregivers would have wanted from the SBE and how it can be improved. These data will allow us to evaluate and develop the programme for future families through a plan-do-study-act cycle approach. To understand where SBE fits within the wider education provided to parents/caregivers, we will ask them which elements of their education they have found most useful, and why.

## REFERENCE

1. Thrasher J, Baker J, Ventre K, et al. Hospital to home: a quality improvement initiative to implement high-fidelity simulation training for caregivers of children requiring long-term mechanical ventilation. *J Pediatric Nurs.* 2018;38:114–121.

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## PARAMEDIC ONLINE SIMULATION: A NOVEL APPROACH

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**Background:** In response to an initial lack of opportunity for frontline ambulance placements during the early stages of the COVID-19 pandemic, a university lecturing team developed a novel, interactive online simulation format for student paramedic education.

**Aim:** The technique aimed to provide the students with the opportunity to continue to practice and refine their questioning and clinical decision-making abilities, even without having a physical patient present.

**Method/design:** The subsequently developed format was designed to help ensure continuing development of newly acquired clinical assessment principles. Case-based scenarios took the students through key stages of a pre-hospital patient encounter. These were carefully created to resemble the real-life setting as closely as possible.

**Implementation outline:** The Blackboard Collaborate teaching platform was utilized in conjunction with pre-designed slides on Microsoft PowerPoint to facilitate the learning activity. Open access images of specific scenes, hazards, people and medication were selected to create visual cues and context for the initial stages of the call, with pre-recorded sounds enhancing this experience. Students were encouraged to use microphones and the chat functionality of Blackboard to interact with their simulated patient, who was played by a lecturer, and responded

in real time. Simulated monitors and pre-recorded heart and lung sounds were utilized to provide students with clinical information in a similar timeframe and format to real-life clinical encounters. On the basis of the information gathered, students then devised clinical treatment plans and delivered virtual 'handovers' verbally. Debriefing immediately followed the scenario, with self-reflection from participating candidates actively encouraged and supported. Spectating students were then invited to provide their observations on the scenario itself, including facilitation of peer review. All scenario debriefs further contained specific learning points for discussion and exploration, helping to ensure learning was meaningful, with a strong relationship to contemporary issues in paramedic practice. Students reported a high level of satisfaction with this technique, repeatedly describing it anecdotally as both engaging and useful to their clinical development. Facilitator learning has included refinement of techniques and strategies, along with widening participation with other professions. Subsequently, the format has been employed in teaching a range of different healthcare professions, along with being used for online inter-professional learning events between student paramedics, nurses, and midwives, and registered pre-hospital clinicians alike.

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## MAKING VIRTUAL A REALITY DURING A PANDEMIC: IMPROVING LEARNING OPPORTUNITIES IN MEDICAL EDUCATION THROUGH VIRTUAL REALITY SIMULATION

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**Background:** William Osler was the first to be credited with taking medical students out of the lecture theatre and to the bedside<sup>[1]</sup>. However, the COVID-19 pandemic has not just taken medical students out of lectures but also away from the bedside. Virtual reality simulation (VRS) can provide students with a computer-generated environment where users interact with virtual surroundings and patients in any location<sup>[2]</sup>. To mitigate the gap in clinical experiences we created an education package using VRS for medical students during the initial phases of the pandemic.

**Aim:** Could VRS provide a meaningful learning opportunity during the first wave? Could we elicit the strengths and weaknesses of virtual simulation in medical learning?

**Method/design:** We used the Oxford Medical Simulation (oxfordmedicalsimmulation.com) VRS platform where the learner manages an acutely unwell patient with specified learning objectives (opting for the 2-D to make it accessible to students at home). Scenarios were grouped, accompanied by didactic learning resources and released on a weekly schedule. Data were collected with consent on the number of scenarios accessed, performance score and student feedback.

**Implementation outline:** The VRS course ran for 5 weeks (access extended to 11 weeks). In total, 224 students expressed an interest in accessing the VRS platform. Of the 224 students, 64 accessed the scenarios (50% first-year students). The students accessed 821 scenarios. The average score on all first attempts of scenarios was 75%; second attempts 78% and third attempts 90% (Figure 1). Qualitative feedback: 'I like...the