

Aim: The aim of the study was to meet IPE graduate outcomes and to explore the significance of human factors in clinical practice.

Method/design: Prior to the online seminar, students were allocated into their scenario groups to prepare notes on the non-technical skills, with directive guidance from an observational tool using an ABCDE approach. Within the seminar, students worked collaboratively in small inter-professional groups to discuss their observations and prepare a presentation, guided by the debrief diamond structure of description, analysis and application [1]. Facilitators debriefed after each presentation on the NTS observed [2] to explore why they occurred, and reflect how this impacted on the assessment and management of the patient and what students could apply to their own practice.

Implementation: Evaluation of findings demonstrated achievement of the key 'take aways' associated with live simulation and attainment of learning outcomes (Figure 1). The ABCDE observational tool demonstrated good usability and enabled effective analysis. Students asked that it should be adapted to include the patient in the descriptors and faculty observed students were more critical in their analysis of their peers compared with face-to-face debriefs. The long-term aim is to incorporate virtual seminars into the IPE programme to complement the learning in the face-to-face FPS. Innovations in the FPS programme will include using the scenario footage and the observational tool for pre-simulation briefing material, and the tool for directed observation during live scenarios and additional structure to debriefs. The scenario and debrief footage and the observational tool will also be used for facilitator training.

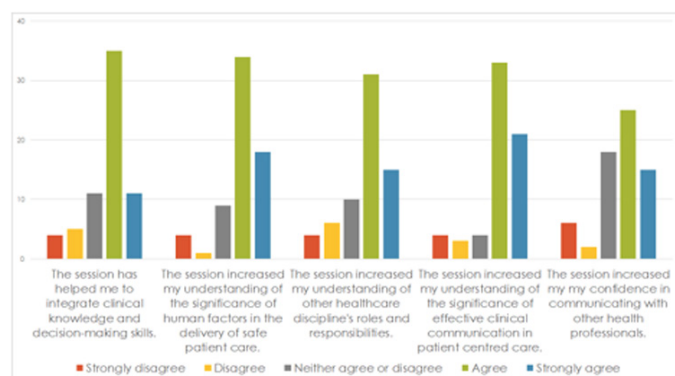


Figure 1:

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STREAMING HIGH-FIDELITY ECMO SIMULATION FROM A MOVING AMBULANCE

Thomas Hayes¹, Aldwin Bernasol¹, Lindsey Pulford¹, Rachael Bedingfield^{1,2}; ¹Newcastle Upon Tyne Hospitals Foundation Trust, Newcastle Upon Tyne, UK²North East and Cumbria Transport and Retrieval (NECTAR), Newcastle upon Tyne, UK

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Background: The Trust needed to offer extra-corporeal membrane oxygenation (ECMO) [1] patient transport training in the form of high-fidelity multi-disciplinary simulation utilizing a moving ambulance. ECMO circuits and monitoring would be controlled using Chalice's Parallel Simulator [2]. The

simulation would be broadcast to the simulation centre for observation and debrief. We developed a simulation and AV streaming solution for this.

Aim: The aim of the study was to deliver high-fidelity ECMO simulation in a moving vehicle while simultaneously allowing candidates and faculty to watch the scenarios take place remotely.

Method/design: A custom video-over-IP system was used to run three camera feeds and a patient monitor output. A laptop captured this in a quad-view format and streamed it to a dedicated video streamer. This was then networked locally via a router with a secondary laptop which displayed the stream. The router was connected to a mobile 4G modem, allowing the secondary laptop to share this video stream via Microsoft Teams (MS Teams). In addition, a USB audio interface and microphones ensured intelligibility while the vehicle was in motion.

Implementation: Teaching groups were made up of 3-4 candidates from the ECMO team and 3-4 candidates from patient transport. Scenarios outlined a paediatric patient, currently on ECMO, being transferred to a specialist hospital in the region via ambulance. One or two candidates from each service would take part in the scenario and the remaining candidates would view the simulation in the centre debrief room. A technician in front of the ambulance controlled the simulator and monitored the streams. The lead ECMO specialist nurse spoke to the technician from the simulation centre via a mobile phone link. The role of a consultant was played by a member of the transport faculty on the ambulance. This allowed the faculty to oversee and prompt when necessary. Using MS Teams meant the stream could be shared with the debrief room at the centre, the control room, and with other interested parties outside of the centre. This created a unique learning experience where all candidates could see each scenario and play an active role in debrief when the ambulance returned to the centre. Successful delivery of this course will improve patient safety during potentially complex ECMO transfers. We hope to invite more remote participants via MS Teams to view the simulations and take part in the debrief, increasing learning opportunities for ECMO and transfer staff.

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VIRTUAL COMMUNITY OUTREACH SIMULATION PROGRAMME

Andrew Boulton¹; ¹National Health Service UHBW, Bristol, UK

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Background: The community outreach programme paused during the global pandemic as schools were closed and we were unable to go into schools and colleges to use simulation-based training to educate and inspire young adults to consider a career in the National Health Service. Now that schools and colleges are open it is still difficult to go into schools and colleges due to COVID-19 restrictions. We needed a way to continue to reach out to these schools and colleges using simulation to educate and inspire young adults.

Aim: The aim was to continue the outreach programme but virtually, via live streams and some pre-recorded simulations. Aiming to help to increase awareness of the different careers, routes into the National Health Service and skills required to work in healthcare. 'A virtual learning environment is intended not simply to reproduce a classroom environment -'on-line', but to use the technology to provide a new way of learning', Britain and Liber [1]. By continuing to provide the outreach simulation project I hope to be able to engage with a larger number of learners at a single time.

Method/design: Streaming live simulations sessions with tutor groups from schools and colleges via platforms such as Microsoft Teams and Zoom using a variety of simulation scenarios. These simulations will be mainly focussing on human factors with some teaching on specific subjects depending on the need of the learners. Example: Virtual work experience for young adults interested in medicine. We plan to mock up our simulation centre to replicate an accident and emergency department and have three admissions of different severity. We will be streaming this to two schools simultaneously and they will have the chance to help prioritize the three patients and explain their choice. The simulations will display good teamwork, good communications skills and leadership. One of the simulations will not include these skills and display poor communication, this will be intentionally included in a simulation for the learners to identify.

Implementation outline: Feedback forms will be given to all learners to complete asking them if the session has inspired them to consider a career in the National Health Service, feedback will then be used to adjust the way we deliver the virtual side of the outreach programme and perfect the programme so we can continue to educate and inspire young adults.

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HOW THE COVID-19 PANDEMIC HAS CHANGED DEPARTMENTAL TEACHING IN A TERTIARY HOSPITAL

Sarah Powell¹, Eirini Kasfiki^{1,2}, Andrew Blackmore^{1,2}, David Wright^{1,2}; ¹Hull University Teaching Hospitals NHS Trust, Hull, UK²Hull Institute of Learning and Simulation, Hull, UK

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Background: Pressure from the COVID-19 pandemic on healthcare has had a detrimental effect on the delivery of teaching to junior doctors. During a time when teaching is needed more than ever the constraints of a pandemic have made this challenging. Parallel to this patient safety remains a cause for concern in healthcare systems worldwide [1]. Incident reporting is recognized as a key tool for improving patient safety and learning from such incidents is a fundamental part of improving patient care and safety [1]. The need to address recurring significant incidents (SIs) on the Acute Medical Unit (AMU) at Hull Royal Infirmary (HRI) was identified. With the pandemic placing pressure on departments to rethink teaching an opportunity to develop a simulation-based induction video integrating lessons learnt from SIs presented itself. Incorporating technologies like Video Reality 360 (VR360) into traditional teaching methods have shown to produce a more effective teaching tool in the medical education field [2].

Aim: The aim of the study was to create an educational programme for the acute medical unit to allow flexibility of learning whilst incorporating key lessons from significant incidents.

Method/design: Our initial approach was to gain an understanding of the problem by consulting the multi-disciplinary team. We spoke with a range of healthcare professionals working on the acute medical unit to identify concerns relating to SIs: in particular, the governance lead was key in this. Following this, we consulted junior doctors using questionnaires to explore the challenges they faced working on AMU. The design of the scenarios is based around two SIs per scenario for a total of five scenarios and all scenarios were based around the management of common conditions seen on AMU. We opted for an interactive ward round style teaching with a particular focus on key skills such as prescribing and taking bloods. With the help of our colleagues at Hull Institute of Learning & Simulation (HILS) the scenarios were filmed in 1 day and later edited to produce a short video.

Implementation outline: We have designed and created a VR360 teaching programme that combines with departmental induction allowing junior doctors to access learning from anywhere in the world and immerse themselves on AMU. Feedback has been positive so far and we hope to expand this simulation-based learning to allow to include additional topics.

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AN EVALUATION OF 'REMOTE CONSULTATIONS': A SIMULATION-BASED EDUCATION INTERVENTION

Stephanie Mansell¹, Lauren Geddes¹, Abigail Greenwell¹, Michaela Whiltshire¹, Nikeesha Gopal², Deep Shah²; ¹Royal Free London NHS Foundation Trust, UK²University College London Partners, London, UK

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Background: The COVID-19 pandemic necessitated an increase in virtual consultations with a disruption to the management of long-term conditions. Ongoing virtual consultations are required to assist with demand, patient experience and environmental impact. In both primary and secondary care, there has been no formal education provided to the workforce on how to conduct virtual consultations. Anecdotally this is affecting staff experience and well-being, patient experience and, could impact on the effectiveness of the consultation in aiding self-management. There is also an inherent risk of missed or incorrect diagnosis in virtual consultations, which could be mitigated with adequate training of the workforce.

Aim: The training aimed to promote the development of clinical practitioners in a safe environment and to expose these participants to the key aspects of remote consultations. Additionally, the course aimed to encourage independent reflection of participant knowledge, skills, behaviour, attitudes and service quality provision in relation to simulated remote consultation scenarios.

Simulation activity outline: We provided a combination of didactic and simulation-based education (SBE) on virtual