

to assess their change in confidence when managing the scenarios. Each was asked to score their confidence in managing the scenarios numerically from 1 to 10.

Implementation outline: Delegate numbers were limited due to the COVID-19 pandemic with all 10 completing both questionnaires. There was an even distribution between first- and second-year SHOs. Two had received simulation training before, however very limited. In all 10 simulation stations, every delegate felt an increase in confidence on average by 45% (range: 38–56%, $p < 0.05$) on the 10-point scale. Positive feedback was received, with all delegates finding the day useful, it achieving what they hoped and stating they would recommend the course to a colleague. Both the SBAR and A to E tools were unknown to all of the SHO's, highlighting their lack of medical training as they are well-known tools within the medical community. SBE was demonstrated to increase the experience and confidence of SHO's managing and escalating common OMFS situations. This will increase the quality of patient care of these specific scenarios but the translatable skills will also enable more comprehensive care and handover in all aspects of the delegates roles. Simulation-based education is an invaluable method of training for clinical scenarios and needs to become more common place in Oral and Maxillofacial Surgery. Furthermore, Health Education England has commissioned the course to run on 3 days annually, providing simulation-based education for 40 SHOs in the Southwest Deanery undertaking a rotation within OMFS.

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A NOVEL 'VIRTUAL SIMULATION' FOR THE ADVANCED LIFE SUPPORT GROUP, MAKING A DREAM A REALITY: A BEGINNER'S GUIDE

Carl Leith Van Heyningen^{1,2}, Kate Denning², Sibi Joseph²; ¹Royal London Hospital, Barts Health, Whitechapel, UK²Advanced Life Support Group, Manchester, UK

10.54531/FCPL7280

Background: In the UK, it is a requirement for staff involved in paediatric critical care to remain up to date with advanced paediatric life support (APLS). To do so there is an expectation to participate in face-to-face courses on a four-yearly basis. The Advanced Life Support Group (ALSG), an organization dedicated to supporting professional education, sought to add to their resources in line with advances in online capabilities. With stakeholder input, the goal emerged to develop an engaging, interactive and entirely novel educational product. Here we present the pilot stages of our project.

Aim: The aim of this project was to produce an educationally effective and novel product that learners of APLS would engage with and enjoy.

Method/design: Stage 1 involved determining clearly defined learning objectives mapped to the APLS curriculum. At a round table with stakeholders, educationalists, and a technologist an outline of the project was formed and the scenario of a sick baby with bronchiolitis chosen for a pilot. Informed by literature on serious game design, a branching narrative was created. Stage 2 involved collating resources. A photoshoot at Leicester Royal Infirmary A&E (Accident and Emergency) created a set of images. A video shoot at the Royal London Hospital A&E generated a series of videos. These were then edited and used to create a Microsoft PowerPoint slide set. Voiceovers to text, sound effects to add a hospital atmosphere and questions were then added. Stage 3 involved taking this draft and translating it into an interactive final product utilizing Articulate Software.

This enabled its usage across smartphone, desktop, and laptop devices. Testing followed with anonymous online feedback informed by the 7Is framework^[1]. (Domains include; interaction, interface, instruction, ideation, integration, implementation, and improvement.)

Implementation outline: We launched the pilot version at the RCPCH (Royal College of Paediatrics and Child Health) Conference 2021. Feedback was collected from delegates and continues to be collected via online participants. It is hoped that ongoing quality improvement cycles will assist in assuring a finished fully functional online virtual advanced paediatric life support simulation for release in 2022. Further stakeholder review is pending. Thus far it has been met with universal approval, i.e. all learners questioned expressed that they would like to utilize this novel style of education again. The average duration to complete the virtual simulation was 15 minutes. All learners rated their knowledge and skills in APLS to be either unchanged/revised or improved. Finally, interactivity online was felt to need improvement by most participants. Interactivity is key if high levels of engagement are to be achieved. Future testing will determine whether any educational impact is maintained across time. The current pilot version can be accessed at the following webpage <https://2020courses.alsg.org/course/view.php?id=1869>.

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PLAY TO PREPARE WITH TECHNOLOGY-ENHANCED SIMULATION

Remi Paramsothy¹, Michael George¹; ¹Maidstone and Tunbridge Wells NHS Trust, UK²Hampshire Hospital NHS foundation trust, UK

10.54531/CBJJ3408

Background: Traditional simulation training within medical education has been well established for several decades and involves playing out emergency situations in a role-play format. This type of simulation training is typically located at hospitals and medical centres and requires considerable organization, costs, in-person attendance and allocated time away from clinical commitments. Technological transformation within healthcare education is growing and, in particular, there has been an increase in mobile applications (apps) to aid medical education. Coupling the two together has allowed 'gamification' to emerge and grow in popularity as a powerful tool to enhance learning retention.

Aim: The aim of this innovation project was to create a technology-enhanced simulation app for mobile devices to train in Advanced Life Support (ALS) for cardiopulmonary arrest, using game mechanics.

Method/design: A technology-enhanced simulation mobile app called 'SimPL' has been created to facilitate technology-enhanced learning on mobile devices. It allows the user to run physiological observations on a simulated patient. This has gained popularity on the Apple and Google Play Store amongst healthcare professionals. We now want to build on this and start by simulating ALS for cardiopulmonary arrest. A minimum viable demo that healthcare professionals can use to run an ALS scenario is being developed. The aim is to allow healthcare professionals to run through an interactive ALS scenario and give the user flexibility to make any decision they want regarding intervention and see how the patient

responds to it. It provides real-time, haptic and constructive performance feedback to the intervention being carried out. **Implementation outline:** The use of technology-enhanced simulation for healthcare education is a novel area and with the fast acceleration of game mechanics development, there is scope for medical education to be delivered in this way. The technology-enhanced simulation app will be launched on the Apple and Google Play Store to all healthcare professionals around the world. Feedback will be gathered from users to allow further developments of the product. The overall outcome is to produce a network of mobile apps to deliver medical education in an interactive, engaging and easily accessible way to help clinicians prepare for emergency medical situations anytime, anywhere.

44 **A 3-WEEK VIRTUAL OBSERVATIONAL CLINICAL PLACEMENT FOR PRE-REGISTRATION PHYSIOTHERAPY STUDENTS USING SIMULATION TEACHING AND LEARNING PRINCIPLES**

Robyn Stiger¹, Katy Baines¹, Mark Williams¹, Joanna Pierce¹; ¹*Oxford Brookes University, Oxford, UK*

10.54531/VMXE8374

Background: Clinical placement capacity was highly affected by the COVID-19 pandemic. Key issues in January 2021 included: international travel restrictions, high infection rates, reduced clinical educational capacity and the requirement for many individuals to self-isolate for 10 days. A contingency plan was necessary to maintain student progression, enabling them to join the workforce without delay. It was important to ensure that any placement contingency met the required module learning outcomes and standards, centring around non-discriminatory practice and confidentiality, professional and personal behaviours, communication, policies and legislation, health and safety, reflection, evidence of learning, critical incident review and personal development. Given the pressures of lockdown during the pandemic, student experience and well-being was an important consideration.

Aim: The aim of the study was to investigate whether the learning outcomes of a clinical placement experience can be met through a virtual observational placement model adopting simulation principles.

Method/design: The virtual placement experience was led and facilitated by academic faculty staff from Oxford Brookes University who were trained in simulation delivery. It was delivered in partnership with clinicians from Oxford Health NHSFT, Healthshare Oxfordshire, Great Western NHSFT, Warwick Physio & Rehab, the Bosworth Clinic, Oxford University and Oxford University Hospitals NHSFT. The placement lasted 3 weeks, with a week in three core areas (Cardiorespiratory, Musculoskeletal and Neurology).

Implementation outline: Eight pre-registration MSc physiotherapy students attended the placement from the outset, increasing to 15 students over the placement period due to student self-isolation requirements. A variety of simulated and real observational opportunities were provided, including live-streamed in-/outpatient face-to-face patient assessments/treatment appointments, community virtual follow-up appointments, pre-recorded assessments/treatment interventions and community-based virtual rehabilitation classes, and patient record keeping.

Clinical reasoning discussions were delivered following each observational opportunity, using an advocacy-inquiry debriefing approach by the academic faculty ^[1,2]. Student assessment was equivalent to a face-to-face observational placement, including a presentation discussing the skills they had observed and developed (Figure 1). Qualitative and quantitative student and faculty feedback were collected pre- and post-placement. Identified opportunities included: (i) exposure to a variety of observational areas of practice enhances the curriculum; (ii) enhanced learning due to additional time for peer, clinician and academic facilitated debrief; (iii) enhanced student experience particularly for international students or those having to self-isolate. This clinical placement experience was highly rated by students with potential for wider implementation. The use of advocacy-inquiry debriefing and additional support provided by the academic faculty warrants further investigation to maximize student learning opportunities on clinical placement.



Figure 1:

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65 **PUTTING IT INTO PRACTICE: A SIMULATION-BASED EDUCATION PROGRAMME FOR PARENTS**

Jessica Smith¹, Abigail Tyer¹; ¹University Hospitals Bristol and Weston NHS Foundation Trust, Bristol, UK

10.54531/XZNW3865

Background: The Paediatric Long-Term Ventilation (LTV) team are increasingly discharging children home with LTV via a tracheostomy. As a result, more parents are being asked to play the role of a nurse. They receive training, prior to discharge, in highly skilled tasks to enable them to care for their child's long-term health needs at home. Whilst Simulation-based Education (SBE) is widely used in the education of health professionals, it is not currently part of the educational programme for these parents/caregivers.

Aim: The aim of the study was to undertake a quality improvement project to produce an SBE programme for parents/caregivers of children being discharged home on LTV via a tracheostomy. The main objective was to improve the safety of patients through improving the confidence of parents/caregivers in managing and escalating emergencies prior to their discharge.