

**Aim:** The aim of the study was to compare the feasibility and acceptability of delivering an SBL programme for medical students virtually versus face to face.

**Method:** The existing SBL programme was delivered online while largely keeping the same content and format as for prior, face to face, cohorts. Feedback questionnaires from 136 face-to-face participants (F2F) from the 2019–2020 cohort and 131 virtual participants (V) from the 2020–2021 cohort were compared.

**Results:** Overall, the virtual course was still acceptable to most participants with 99% agreeing or strongly agreeing that the learning objectives were met and 98% indicating they would recommend it to a colleague. However, there was a decrease in Likert scale ratings across all domains in the V group. This was most apparent when examining the ‘strongly agree’ responses: the venue/remote format was suitable for the session 34% decrease, the course length was appropriate 30% decrease, the pace of the course was appropriate 20% decrease, the trainers were well-prepared 15% decrease, the presenters were engaging 10% decrease, the simulation was helpful and relevant 10% decrease, the content of the course was organized and easy to follow 5% decrease, the learning objectives were met 4% decrease. There was a small increase in responses in the strongly disagree and disagree categories.

**Implication for practice:** Providing the SBL programme using an online format was feasible while also being acceptable to most participants. However, participants did not rate this experience as highly as face-to-face teaching. An interesting finding is that participants rated the pace and length of the online course as less agreeable, despite the content and scheduling is the same as for the face-to-face group. Analysis of qualitative responses indicated that participants in the V group found it difficult to sustain concentration for the duration of the virtual session. This may relate to a newly emerging phenomenon dubbed ‘Zoom Fatigue’ (Lee, December 2020) which is related to the greater cognitive load required when participating in social interactions in a virtual environment. Based on these findings, face-to-face teaching should resume when practicable. The virtual delivery may be improved if the course length was reduced.

**Aim:** We aimed to evaluate the effectiveness of a redesigned simulation programme for TTF1 students, focussing on student satisfaction, confidence and attitudes across key domains.

**Methods:** Fifty-three TTF1 students attended a 1-day high-fidelity simulation training day, separated into cohorts of 10 students. Students completed a pre-course ( $n = 53$ ) and post-course online evaluation form ( $n = 49$ ) using Likert scales (0–5) and qualitative data. Students participated in at least one clinical scenario, while observers viewed the scenarios in a separate room. Scenarios were created to reflect likely clinical on-call tasks such as falls assessment, recognizing and managing the acutely unwell patient, bleep prioritization, and de-escalation of an agitated patient-actor. Debrief was undertaken using the Diamond Debrief model.

**Results:** In terms of confidence, there was an improvement across all core domains, namely diagnosing and managing acute medical emergencies (2.8 vs. 3.8), performing cardiopulmonary resuscitation (3.0 vs. 3.6) and working effectively with colleagues in the interests of the patient (3.3 vs. 4.2). 96% of students found that simulation was a valuable learning experience, allowing them to integrate theory with practice. 94% of students felt that the simulation allowed them to analyse their behaviours and actions and 88% found that scenarios resembled real-world situations. Attitudes towards simulation were positive, with 92% of students agreeing that simulation is a good way of learning technical and non-technical skills. Qualitative themes focussed on the real-world applicability of the scenarios, increased confidence in task prioritization, closed-loop communication and early escalation.

**Implications for practice:** We have demonstrated the benefit of integrating simulation training within the assistantship period and the value of creating novel scenarios directly related to future practice as a junior doctor.

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### EVALUATING THE EFFECTIVENESS OF A REDESIGNED SIMULATION PROGRAMME FOR FINAL-YEAR MEDICAL STUDENTS DURING THEIR ASSISTANTSHIP PLACEMENT

Azeem Alam<sup>1</sup>, Hollie Parker<sup>1</sup>, Catherine Mathews<sup>1</sup>, Thomas Simpson<sup>1</sup>; <sup>1</sup>Lewisham and Greenwich NHS Trust, London, UK

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**Background:** The transition to a foundation doctor is often a daunting process for medical students and, to prepare for this, students attend an assistantship placement in the final months of medical school. The transition to foundation year 1 (TTF1) programme is an 8-week placement where students shadow a junior doctor, taking on a vocational role, and attend various teaching activities including high-fidelity simulation. Evidence suggests that medical students transitioning to clinical practice feel unprepared for working on-call, managing acutely unwell patients and task prioritization, and are often unprepared for scenarios requiring expert communication techniques [1]. As such, we redesigned a simulation programme for TTF1 students using novel scenarios designed to focus on these key areas that students often struggle with.

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### RAPID TRAINING DURING A PANDEMIC: AN EVALUATION OF A COVID-19 VIDEO E-LEARNING PACKAGE

Sophie P. Maule<sup>1</sup>, Luciana Sowole<sup>1</sup>, Liam Dunnell<sup>1</sup>, Nick Szulc<sup>1</sup>, Wathik El Alami<sup>1</sup>; <sup>1</sup>SaIL Centre, Guy's and St Thomas' NHS Foundation Trust, UK

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**Background:** As COVID-19 hospital admissions rose in 2020, there was a requirement to prepare wards and staff to care for COVID-19 patients, especially given the rapidly emerging and frequently evolving guidance, and high levels of re-deployment (GMC, 2020). In one London Trust, this need for educational material geared towards ward staff resulted in a multi-disciplinary simulation education team being commissioned to produce an e-learning resource. We measured the effectiveness of the resource for ward staff as well as any improvement in learners' COVID-19 knowledge.

**Aim:** The aim of the study was to quantify the effectiveness of an e-learning package in improving learners' COVID-19 knowledge.

**Method:** In November 2020, an e-learning package was created, comprising a video series documenting the journey of a patient with COVID-19 covering admission to discharge

(filmed from the patient perspective). This was integrated with content highlighting key aspects of COVID-19 care, ending with a mandatory assessment with an 80% pass mark. The e-learning was disseminated to hospital staff (doctors, nurses and allied healthcare professionals) with data collection via SurveyMonkey® from November 2020 for 3 months. Pre- and post-surveys were included to investigate the average improvement of learners and the impact of the resource on learner self-efficacy through self-rating on six learning outcomes. Free-text options in the post-survey allowed qualitative feedback, aiding continual resource development.

**Results:** In total, 108 learners, about half of whom were doctors, completed both surveys, with a significant difference ( $p < 0.01$ ) between the pre- and post-learning results and an overall improvement in learners' knowledge after completion of the e-learning (Table 1). The greatest improvement was in 'Discharge requirements' (94%) and 100% of learners passed the assessment. The majority found the resource useful, and none reported finding the resource difficult to use. Most positive feedback referred to the format, resources, content and audio-visual aspects.

**Implications for practice:** E-learning can rapidly disseminate learning, at a time when most feel the pandemic has had a mixed or negative impact on learning opportunities (Dean E, 2020; GMC, 2020). The e-learning is continually updated with new evidence, with plans to expand access across London. An iterative process was undertaken with updates in response to learner feedback due to the speed at which the resource needed to be developed, for example, turning resources into PDFs for home access. The e-learning remains live given rising COVID-19 cases. Further work is required to investigate the effectiveness of this resource across London and how beneficial it has been for clinical work.

**Table 1:** Average pre- and post-learning scores of learners' self-reported knowledge and percentage improvement

Key learning outcome	Pre-learning mean (out of 10)	Post-learning mean (out of 10)	p-value	Percent improved
Recognize symptoms	7.2	9.0	<0.01	73
Understand TEPs*	6.7	8.8	<0.01	73
Treatment options	5.8	8.7	<0.01	89
Features of deterioration	6.3	8.7	<0.01	83
Escalation protocol	5.0	8.6	<0.01	93
Discharge requirements	4.6	8.2	<0.01	94

\*Treatment escalation plans.

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## PLUGGED IN SIM-VR 360 SIMULATION WITH HEADSETS: HOW DOES IT WORK?

Tim Mason<sup>1</sup>; <sup>1</sup>North Devon District Hospital, Exeter, UK

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**Background:** Simulation is a technique employed to produce an experience without going through a real event<sup>[1]</sup>, with different methods used to do this within a medical simulation. Virtual reality (VR) is the simulation of the world through a computer or device. VR has been used for procedural training and within medical education for a number of years<sup>[2]</sup>.

**Aim:** We had used 360 videos for remote simulation and debrief for over 3 years but as face-to-face sessions started to reoccur, we wondered whether we could use these videos to engage learners using VR headsets for short immersive sessions with a targeted debrief.

**Methods:** We used unscripted 360-degree scenarios of Paediatric emergency simulations, loaded onto Oculus-Go VR headsets. Between November 2020 and May 2020, we ran sessions for the paediatric and obstetric teams in North Devon district hospital, where groups of up to five learners watched a scenario, followed by a debrief led by a facilitator. We explored its acceptability, immersion and whether the debrief enriched the session through collecting feedback.

**Results:** We engaged 50 participants over 14 sessions. The majority of sessions occurred on night shifts. Twenty-nine staff including doctors, midwives, healthcare assistants and nurses gave feedback. All participants enjoyed the experience and wanted to do it again: 90% felt immersed and 97% enjoyed the debrief. A small minority found the experience strange and one had to stop watching because of motion sickness.

**Implications for practice:** Virtual sim with headsets is time-efficient, requires no bedspace and was engaging enough to be requested during out of hours shifts. Feedback proved it to be immersive, safe and enjoyable. It is cost-effective (not needing large numbers of staff or expensive manikins) and the experience reproducible. It was accessible for those who had previously been scared of simulation as they did not feel 'judged' and therefore may be a valuable adjunct to engaging those who have not in the past. Debrief was vital and allowed active discussion of learners' own experiences as well as an exploration of the medicine prompted by being immersed in the scenario. Virtual simulation using headsets and 360 videos gives learners an experience without going through the real event and we feel that it is a valuable tool for engaging teams in simulation education. Through this project have established standards that could help others engage in projects such as this.

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