Table 1:

Categories	Number of LST (89)	Examples
Facility	9	Theatre recovery was too congested to deal with any emergencies involving mother or baby – layout was changed, and equipment rearranged to create more space for essential staff and equipment
Workflow	11	Patient pathway, in and out of theatre was not compliant with infection control recommendations – pathway was changed, sterile and non-sterile areas were clearly marked to meet strict recommendations
Personnel	5	Number of anaesthetists on-call was insufficient to cover multiple sites within the hospital – the on-call anaesthetist numbers were increased and working pattern made more efficient
Processes	26	Blood bank was located far from theatres resulting in significant delays in procuring blood – blood processing and procurement process were modified to reduce delays
Equipment	34	Multiple items identified as either faulty/incompatible/missing were removed or replaced by new ones
Technology	4	Paging system was inefficient and emergency calls were missed –existing system scrapped, and new system installed to ensure reliable communication.

Our experience confirms that simulation can identify Latent Safety Threats (LST) prior to a major move to a new facility [2]; the team identified problems that had not been identified by existing committees. Scenario-based clinical systems testing allowed for pre-emptive process optimization and risk mitigation thereby improving patient safety, quality and staff preparedness.

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115	**ON-CALL BLEEP SIMULATION FOR FINAL-YEAR MEDICAL STUDENTS**

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Background: A common concern amongst final-year medical students is the on-call shifts as a Foundation Year 1 (FY1) doctor. With a large focus on knowledge, clinical and communication skills, and practical procedures, there is little in the medical curriculum to cover the non-technical skills required whilst on-call such as prioritization. A novel teaching programme was devised to help develop students' confidence and preparedness for these shifts. This *in situ* simulation allowed the students to fully immerse into the role of an FY1 whilst experiencing the stressors of being on-call in a safe, risk-free environment.

Aim: The aim of this course was to prepare final-year medical students for their on-call duties as FY1 doctors. This includes developing confidence with the technical aspects of on-calls such as managing the acutely unwell patient, as well as the non-technical skills expected from bleep-related tasks such as responding, prioritization and escalation.

Method/design: A total of five sessions were delivered from September to December 2020 for final-year medical students. Twelve simulated on-call 'activities' were designed mirroring real tasks commonly encountered as an FY1 on-call. These activities were spread across the hospital involving the medical wards as part of the *in situ* training. The training utilized bleeps, simulated patient notes, simulated handover, mannikins for part-task procedures and actors. The students were briefed on how to respond to bleeps and the expectations of the training. Debriefs were carried out following the training facilitating reflections and relevant teaching on the various encountered activities. Students who took part in the training completed a pre- and post- course survey with a Likert-scale questionnaire to evaluate their confidence in the skills required of being on-call.

Implementation outline: A total of 17 students completed the on-call bleep simulation. Only a third of the candidates had used a bleep prior to the session. Pre-course, 66.6% of candidates responded feeling not confident about being on-call as an FY1. Encouragingly, following the simulation, 100% felt more confident about being on-call. During the open feedback sessions, students valued the use of hospital wards, practicing procedures under time pressure, and performing handovers. This on-call bleep simulation was very well received and improved students' confidence and preparedness for being on-call as an FY1 from August 2021. Students commented on how invaluable this training was. This on-call bleep simulation will continue to be implemented as part of the final-year teaching provided at the trust.

25	**UNMUTING REGIONAL PAEDIATRIC SIMULATION TRAINING THROUGHOUT THE COVID-19 PANDEMIC**

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Background: The National Health Service endured significant strains during the COVID-19 pandemic to the point where all face-to-face training had to be paused. Our team delivers simulation-based training face to face and offers support for those returning to work, stepping up to senior roles and addressing important aspects of general paediatric care such as acute mental health crises and end of life care.

Aim: The aim of the study was to deliver our courses virtually without compromising the quality of content.

Method/design: Initially, we reviewed all scenarios to appraise whether they could be delivered online. Scenarios that involved acute clinical decisions were recorded with the faculty acting as the candidates. This also allowed scripting to ensure that key discussion points could be raised within the debrief. Scenarios mainly involving communication skills with standardized patient role player were retained, and briefs were adapted so that the candidates were aware that the scenarios began when the actor appeared on screen.

Implementation outline: Participants were recruited using newsletters and subsequently directed to a website to collate email addresses where invites to the virtual meeting space and

pre-course material were sent. The scenarios were combined with contracting rules and links to interactive polls to form a presentation that could be shared on the screen throughout the day. Links to post-course feedback surveys were also included to evaluate participant satisfaction of the course design. From October 2020 to May 2021, we delivered eight virtual teaching sessions to a total of 67 multi-professional candidates ranging from nursing staff, police officers and doctors. Candidates were asked whether the course addressed their learning objectives or whether the course had increased their knowledge and 53 (79%) candidates 'strongly agreed' with these statements. Including those who 'agreed' with these statements, 66 out of 67 (98%) of the candidates perceived this course addressed their learning outcomes or improved their knowledge. The results from the evaluation of these courses indicate that the adaptation of our face-to-face courses have not impaired the quality of the content and have been beneficial to the targeted audience. Despite the challenges that online teaching can pose, we have overcome these by ensuring that we contract behaviour to ensure psychological safety, included interactive aspects such as live word clouds and polls and used a modality of learning such as the use of role players and modified scenarios to guide debriefs and learning.

| 118 | **SIMULATION FOR NOVICE ANAESTHETISTS: ADDRESSING TRAINING GAPS CREATED BY A GLOBAL PANDEMIC** |

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Background: It is well documented that the COVID-19 pandemic is having a huge impact on doctors in training. Much of novice anaesthetists' training is delivered during high turnover, elective theatre lists of low-risk patients [1]. List cancellations and staff redeployment have significantly reduced these opportunities [2]. In our department, amendments to standard operating procedures within theatres have created further training barriers. Supervisors find it challenging to offer anything more removed than direct supervision due to difficulties accessing the clinical environment in emergencies. These constraints drove us to find alternative methods of providing this practical experience.

Aim: The aim of the study was to create a trust-wide high-fidelity simulation course for novice anaesthetists, focussing on confidence building and preparation for on-calls, together with clinical and non-technical management of specific anaesthetic complications.

Methods/design: A pre-course questionnaire aided a learning needs analysis and informed the learning objectives. Poor confidence due to lack of training was a common theme. Issues identified included limited case numbers, exposure to common emergencies and difficulty progressing to more distant supervision. Using a standardized scenario authoring platform (IRIS) we collaborated with a multi-professional faculty group to design a 1-day simulation course. To ensure an authentic learner experience, scenarios were designed for delivery in a high-fidelity simulation suite using Laerdal SimMan3G with LEAP software. Familiar clinical equipment, such as a Datex Ohmeda anaesthetic machine, was used and

access to typical cognitive aids provided to mirror a real theatre environment.

Implementation outline: Initially, participants prepared for an anaesthetic induction following standard operating procedures, including performing the World Health Organisation Surgical Safety Checklist. They then carried out this uncomplicated induction with the assistance of a trained Operating Department Practitioner. This aided in embedding good clinical practice and promoted patient safety. A second scenario followed, during which an emergency unfolded. The group observed each scenario through a video link and contributed to a consultant-led debrief. To assess course impact participants completed post-course questionnaires. Confidence universally improved after the course. Every attendee found the course useful and was highly likely to recommend it to a colleague. For several participants, this provided their first experience carrying out an emergency anaesthetic induction without direct supervision. In this setting, simulation has been used as a valuable tool to supplement clinical exposure where there were significant barriers to traditional training methods. We intend to further develop this course to become an integral part of novice anaesthetic training within our trust.

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| 94 | **PHYGITAL SIMULATION FOR A LARGE GROUP OF LEARNERS IN A REGIONAL TEACHING** |

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Background: Over the years, knowledge-based simulation has been a valuable way of delivering certain content of the syllabus in medical education. There have been challenges to undertake any form of educational activities during the COVID-19 pandemic due to a global shutdown [1], let alone face-to-face teaching. Digital education has endeavoured to fill this gap via the increased use of different online platforms to prevent the spread of COVID-19. Nonetheless, one facet of educational strategy that has remained challenging to provide online is teaching and learning with simulation. Currently, a phygital [2] method of teaching is being utilized; some learners are with the instructor in the classroom (physical presence) and others are online (digital presence.) The inclusiveness and participation from the online audience have been seen to be poor.

Aim: The aims of the study were to deliver an inclusive and effective simulation session to a large cohort of trainees in emergency medicine and to provide an immersive learning environment to learners by enhancing their feeling of being present in the simulation hub.

Method/design: We delivered a phygital simulation with the aid of digital technology in a way that encouraged participation from all attendees. We sought to overcome known challenges of simulation teaching during the peak period of COVID-19 and identified newer challenges unique to the situation and suggestions for future improvements or simulation.