

and difficult airway' followed by 'vascular access'. We used interactive lectures and pre-recorded demonstrations. A full-day course was then organized for new trainees in March 2021. We included additional sessions on 'Newborn Infant Physical Examination' (NIPE), 'chest drain insertion' and 'journal club', including sign posting to the Critical Appraisal Skills Programme (CASP). Interaction was encouraged to facilitate peer bonding. A Paediatric Trainee Committee representative also joined to outline the support available for trainees. We followed a similar structure to the first course but added live simulation demonstrations of equipment and techniques.

**Results:** Seventeen trainees attended the full-day course. A number of candidates rating the sessions as extremely useful were 16 for 'Stabilization of the premature infant' and 'intubation and difficult airway', 14 for 'Human Factors' and 'NIPE', 12 for 'vascular access' and 'chest drain insertion' and 11 for Journal club. Trainees commented positively on the videos, equipment demonstration, level of interactivity and overall usefulness of the course. Nine trainees commented on desire for additional face-to-face training.

**Implications for practice:** After balancing the safety and learning needs of trainees, we adapted an established face-to-face skills day for virtual delivery during the COVID-19 pandemic. Whilst we recognize that virtual training is not a substitute for doing, we were able to maintain essential education during highly pressured times. Feedback demonstrates that our virtual teaching programme was well received and useful. It also emphasizes the value of actual practice and the urgency to restore hands-on training as soon as possible.

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## USING IN SITU SIMULATION TO RESPOND TO CRITICAL INCIDENTS IN EMERGENCY MEDICINE

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10.54531/XAZQ2961

**Background:** *In situ* simulation (ISS) has been shown to be an effective tool in delivering education to the inter-professional team in the Emergency Department (ED) <sup>[1]</sup>. ISS has also been utilized to drive quality improvement <sup>[2]</sup>. Using our local ISS programme, we provided a response to critical incidents involving patients within the ED. This has allowed identification and improvement of individual, team and system failures and has led to enhanced learning and departmental improvements to reduce risks of further incidents.

**Aim:** The aim of the study was to describe how simulation has improved learning and development from critical incidents.

**Method:** A simulated case is built around specific clinical incidents. Four were identified having occurred within the timeframe: missed abdominal aortic aneurysm, ischaemic limb, digoxin toxicity and ruptured ectopic pregnancy. The aim is to use ISS as a tool to educate colleagues about these presentations and as a way of checking that there are no system issues in managing such cases. Our ISS process involves either an 'actor' or a low-fidelity manikin with an 'app' providing a monitor. All equipment is sought and used in real time to attempt to simulate as close to real life as possible. The scenario utilizes junior doctors, nurses, healthcare assistants, trainee nurse associates and students. A senior

team member is included if required. The participants are both briefed and debriefed, and learning points are disseminated via email placed on the 'MYED' Facebook group as well as the 'MYEDSim' 'padlet' page.

**Results:** The ISS was run between October 2020 and May 2021. A total of 23 participants answered the nine questions on the post-ISS feedback form from the four incidents. Results are summarized in Figure 1. The participants were asked to record learning points from the sessions and suggestions for improvement. Key themes appear to be communication, team working and location of equipment in the department.

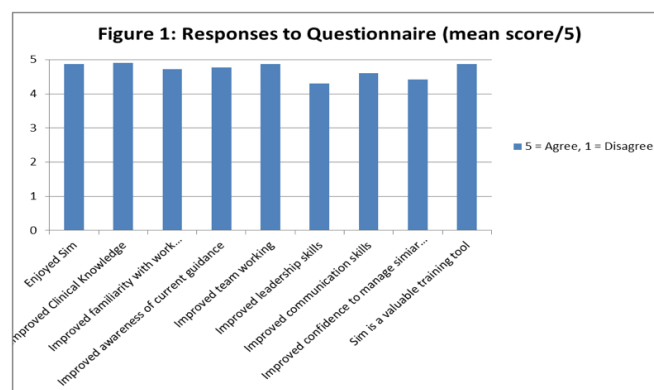


Figure 1:

**Implications for practice:** By running simulations of critical incidents, we have identified deficiencies in areas within individual's knowledge, factors shaping inter-professional team working and system failings from the wider trust which contribute to these events. This has led to wide dissemination of learning and knowledge sharing on various departmental social media/communication platforms and has allowed development and modification of clinical guidance and pathways within Mid-Yorkshire NHS Trust to reduce risks of further incidents occurring.

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## VIRTUAL SHINE (SIMULATION TO HELP IN NEONATAL EMERGENCIES): ADAPTING SIMULATION THROUGH THE COVID-19 PANDEMIC

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**Background:** It is well established that simulation can help individuals and teams improve their clinical skills and confidence in managing medical emergencies <sup>[1]</sup>. In our region, a full-day simulation course on common neonatal emergencies was established in 2018 for paediatric trainees. It consists of four scenarios and two workshops. It is designed for eight candidates who are split into two groups so that each has an opportunity to 'lead' a simulation. The Diamond Model is used for debriefing. The course has been running 3-4 times per year and receives consistently excellent feedback. During the COVID-19 pandemic, the course was suspended.

**Aim:** The aim of the study was to adapt the SHINE course for virtual delivery.

**Method:** We replaced live simulations for pre-recorded scenarios. We filmed these on the labour ward and our simulation room with members of our Neonatal Unit, instructing 'candidates' to act in specific ways which would bring out learning objectives. The videos were edited to optimize quality. We delivered the course via Zoom, playing the videos followed by a live debrief. The workshops remained the same. We increased participants to 12, split them into two break-out rooms. We ran the course twice during the peak of the pandemic. We evaluated self-rated confidence pre-attending and post-attending the course.

**Results:** We ran the course with four members of faculty instead of eight required face-to-face. We encountered minor technical difficulties which were easily resolved. Twenty-four paediatric trainees of various grades attended. Candidates rated their confidence managing scenarios from 1 (very low) to 5 (very high). The average score before the course was 2.8 and improved to 3.9 after the course. 81% (22) candidates agreed/strongly agreed that the workshops were well structured and educational, 96% (23) agreed/strongly agreed that they had enough opportunities to interact and 81% (22) agreed/strongly agreed that the virtual environment worked well. All candidates agreed/strongly agreed that the video debrief sessions were well structured and educational and that the virtual learning environment was safe and supportive. All trainees would recommend the course to colleagues.

**Implications for practice:** SHINE is a well-established sought-after course. We were able to continue this training virtually during the COVID-19 pandemic. Whilst we recognize that there is no replacement for hands-on experiential learning, we have demonstrated that virtual simulation is possible, effective, highly valued by trainees and has the advantage of being less resource intensive and accessible to more candidates. We propose that virtual simulation training should be offered where face-to-face teaching is not possible.

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## INTRODUCING A VIRTUAL WARD ROUND IN TIMES OF COVID-19

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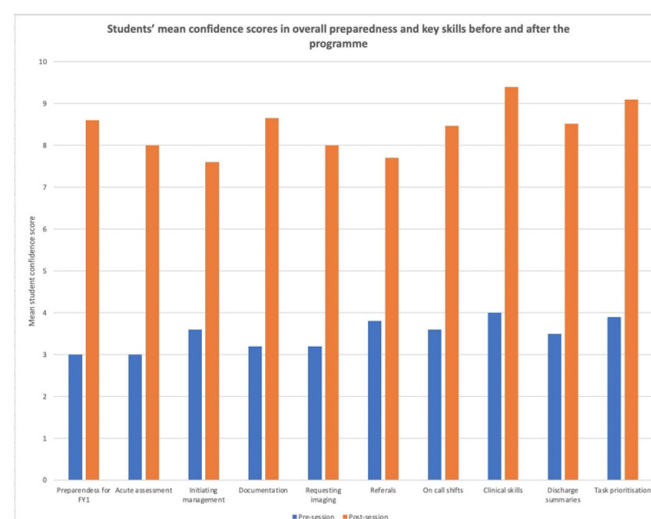
10.54531/PWAC7112

**Background:** Many medical students feel unprepared for starting as FY1 doctors, and often report low confidence in taking responsibility for patients and working independently, and lack self-assurance in common FY1 skills, including assessing unwell patients and initiating management, task prioritization, referrals, documentation, ordering imaging and on-call shifts. These skills are developed during clinical placements; however, access to these opportunities during placements has diminished due to COVID-19 and concerns around patient safety. Simulation-based teaching allows students to take responsibility and work within complex clinical environments without posing a risk to patients<sup>[1]</sup>. Previous studies have shown that simulated ward rounds improve students' clinical skills<sup>[2]</sup>. This study aimed to evaluate whether a new simulated mock ward round with tasks would improve final-year students' general preparedness for FY1 and confidence across common FY1 tasks.

**Aim:** The aim of the study was to evaluate whether simulated mock ward rounds increase final-year medical students' overall confidence and feeling of preparedness for starting as FY1 doctors.

**Method:** In total, 20 final-year medical students took part in the programme in two whole-day sessions. This was comprised of a simulated ward round of 10 patients. Students acted as FY1 doctors on the ward and carried out jobs, reviewed patients who deteriorated and had a number of tasks such as updating families, ordering radiology, initiating management and discharge summaries. Students' confidence and preparedness was measured using pre- and post-course questionnaires. The questionnaires consisted of a 10-point Likert scale for students to rate their confidence in key skills and overall preparedness for FY1 (1 = not at all confident, 10 = completely confident). These scores were matched and analysed using the Wilcoxon signed-rank test. Additionally, there was blank spaces for feedback on the course which were analysed thematically.

**Results:** Pre- and post-course questionnaires demonstrated that students felt significantly more prepared for FY1 after the course ( $p < 0.001$ ). There was also a significant improvement in nine other domains deemed important for FY1 that students had reported low confidence in (see Figure 1). Qualitative data revealed that students appreciated the programme. They stated its superiority to other educational methods such as shadowing or didactic teaching sessions.



**Figure 1:** Students mean confidence score in overall preparedness and key skills before and after the programme.  $P < 0.001$  for all domains.

**Implications for practice:** Simulated mock ward rounds can be used as an adjunct to clinical placements to increase medical students' confidence about starting work, and to teach them valuable skills regularly utilized by FY1 doctors.

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## REMOTE AND BACK AGAIN: AN EDUCATOR'S TALE OF SIMULATION

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10.54531/BOXZ8545