Background: Between November 2020 and May 2021, 61 simulation sessions were run either face-to-face or remotely for foundation-level doctors and pre-registration pharmacists. A total of 346 participants attended. Thirty-three sessions were face-to-face (185 participants) and 28 were remotely via Microsoft Teams (161 participants). The content was the same for both modalities.
Aim: The aim of the study was to discern whether there was a difference in learning points and confidence scores between face-to-face and remote participants.
Methods: Participants were asked to rate their confidence (see Table 1) before and after the course. They were asked to provide their main learning points and what they gained from the course. Confidence scores were compared and assessed for change. Responses were compared between face-to-face and remote.

Table 1: Confidence score change on Likert scale 1–5.

Q. no.	How confident do you feel...	Change	
		F2F	REM
1	...that your clinical knowledge is appropriate for your role	+0.67	+0.89
2	... to manage a patient who is peri-arrest	+1.03	+1.27
3	...to manage a patient with a NEWS2 >7 and/or is deteriorating	+0.93	+1.23
4	...that you possess the skills required to communicate information to the rest of the MPT	+0.81	+0.83
5	... that you possess sufficient strategies to raise concerns when necessary	+0.51	+0.64

Results: All participants reported increased confidence. Table 1 shows that the changes were comparable, with the changes in the remote participants all being marginally higher than in face-to-face. The distribution of learning points for remote and face-to-face participants was identical. For both modalities, the top two points were communication and escalation. The dominant theme in remote was escalation and communication in face-to-face. Remote participants were positive about the course, in their free-text responses, 'most innovative use of technology I have seen during COVID' and 'My hands are sweating, I can't believe how real that felt' a common theme in the comments was that they would rather do the course face-to-face.
Implications for practice: While not preferred, remote simulation appears to deliver equivalent learning and is a suitable alternative when face-to-face is impossible. The main difference seen was in communication skills, which is concurrent with Cheng et al. [1] related to the difficulties of communication in a virtual debriefing.

REFERENCE

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55 INTRODUCTION OF A CARDIAC ARREST PROFORMA THROUGH *IN SITU* SIMULATION TRAINING

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10.54531/CTWH8920

Background: The use of *in situ* simulation (ISS) within the Emergency Department (ED) has been widely accepted and has shown to be a valuable teaching tool [1]. At Mid-Yorkshire NHS Trust, we have been running weekly ISS since October 2020. Within the ED, systems and protocols are frequently audited, guidelines often change, and it can be challenging to disseminate this information. After identifying a clinical need for a cardiac arrest proforma, we considered how best to introduce it. We decided to utilize our weekly ISS to provide a valuable learning opportunity.
Aim: The aim of the study was to evaluate the effectiveness of using ISS as a learning opportunity to disseminate and trial the introduction of a new cardiac arrest proforma.
Method: We ran the scenario on two separate occasions involving 11 participants. The simulation involved a low-fidelity manikin and a simulated monitor app. Real equipment is used and the simulation is run in real-time – learners were encouraged to manage the patient as they would in real life. Learners include doctors, nurses, healthcare assistants and student nurses/doctors. Learners are briefed prior to the simulation; in this particular case, the learners were informed that we would be utilizing a cardiac arrest proforma and encouraged to use this. The learners are then debriefed using a promoting excellence and reflective learning (PEARLs) framework and discussion amongst themselves is central to the debrief framework [2]. The purpose of this simulation was multi-faceted; firstly, to discuss the team's management of cardiac arrest and learning around this and, secondly, to discuss the use of the proforma to improve teamwork and patient care. Learners were asked to complete a feedback form.
Results: Feedback obtained from this simulation concluded that it was a valuable learning opportunity. Figure 1 shows the results of learner responses (n = 11). The scale included was 5 (strongly agree) to 1 (strongly disagree) – an average of responses is included within the graph.
Implications for practice: Using ISS to trial our proforma allowed us to implement it within the ED. Collating feedback allowed us to make amendments to our proforma based on multi-disciplinary opinions. As well as recognizing that ISS can be used to achieve this purpose, it also provided a valuable learning opportunity. ISS can be used in future to introduce new guidelines, distribute vital information and provide learning.

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6 ASSESSMENT OF THE CREATION OF A NEW COURSE

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10.54531/EQFR8807

Background: Although commonly used in the clinical environment, insertion of peripherally inserted central catheters (PICC) is not routinely taught to clinical staff. As the procedure requires knowledge in relevant anatomy, sonography skills, and understanding of complications management, it requires dedicated time for teaching. In 2018 no PICC line insertion courses were found in London County.

Aim: The Harefield educational team has therefore created a PICC line insertion course delivered by a multi-disciplinary faculty. This course aimed to increase understanding and confidence of PICC insertion.
Method: Using Miller's pyramid of clinical competence, the course was structured to provide learners with the knowledge and understanding of the procedure through interactive lectures and demonstrations, before progressing to hands-on practise in the workshops using high-fidelity models to increase dexterity and confidence [1]. Five editions of the course were delivered over 16 months with a total of 65 participants. Pre- and post-course questionnaires were conducted to assess the course's effectiveness in achieving its purposes.
Results: The results have shown the achievement of all the course objectives such as increased understanding of indications, relevant anatomy, equipment uses, complications and their management relating to the procedure. With increased confidence in the theoretical and practical aspects of PICC insertions, we hope the course attendees will have better performances in practicing the procedure, thus reaching the highest level of clinical competence on Miller's pyramid.
Implications for practice: As soon as face-to-face teaching will be allowed again, the PICC insertion course will be resumed as proven well-received and effective.

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121 THE RAPID INFUSER CHALLENGE: APPLYING GAMIFICATION TO IMPROVE PERFORMANCE

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10.54531/TXRK1878

Background: Major haemorrhage causes systemic shock with resultant coagulopathy. The Belmont Rapid Infuser© (BRI) is one example of a rapid infuser device to deliver intravenous fluids and blood products to patients as part of emergency resuscitation. We are a simulation team based in a busy trauma unit and anecdotally our staff did not feel confident in using our BRI.
Aims: We aimed to quantify how confident our nursing staff were in using the BRI, before and after delivering a simulated patient scenario asking them to transfuse blood products using the BRI. We also aimed to quantify whether a simulated scenario could reduce the time taken to use the BRI. We aimed to create an enjoyable environment and use aspects of gamification[2] within the training.
Method: A self-evaluation questionnaire was circulated to establish pre-scenario confidence. Candidates observed a demonstration of the set-up and use of the BRI. Candidates were read a scenario brief and asked to use the BRI to infuse 500 ml of simulated blood product at 200 ml/minute. Once they had completed the scenario, their time was recorded, they were asked to again self-evaluate their confidence and were invited to attend again at a later date to 'compete' against their previous time.
Results: Pre-scenario data confirmed what was suspected; there was a wide variation in confidence in using the BRI across the sample. Early data suggest that the simulation was able to significantly increase staff confidence in safely using the BRI and repeated attempts led to a significant reduction in time to safely transfuse.
Implications for practice: Positive participant feedback included recommendations for further hands-on deliberate practice. We hope the training can be expanded to also include members of the medical team. Further research is needed to explore the use of gamification to support simulation-based medical education within urgent care.

16 EXPLORING THE BENEFITS OF TEACHING ULTRASOUND-GUIDED VASCULAR ACCESS TO PAEDIATRICIANS

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10.54531/FRSW1996

Background: Paediatric vascular access can be notoriously difficult due to small vessels and patient cooperation. Studies have shown ultrasound (US) guided technique to be a more successful method in experienced hands, especially in children with difficult access [1]. US-guided vascular access is well established within adult medicine; however, at present there is no standardized practice in paediatrics with many clinicians not gaining any US experience, unless undertaking acute sub- specialist placements [2]. In some cases, children are transferred to tertiary centres where there is more US expertise [2]. To enable the best patient care within their local setting, US skills should be routinely taught to all paediatricians.
Aim: To date, there have been no studies exploring the experience and significance of US-guided vascular access training amongst district general hospital (DGH)-based UK paediatricians. We aimed to evaluate this within our DGH.
Methods: Small-group US vascular access simulation sessions were led by our accredited and experienced paediatric advanced nurse practitioner (ANP). Participants learned to map veins and practiced US cannulation technique on the gelatinous 'phantom' model. A questionnaire asked attendees to evaluate confidence levels before and after sessions, and open-space for qualitative comments.
Results: Thirty-eight paediatricians attended sessions; of whom, 75% had never conducted US vascular access and 96% did not feel confident. Following sessions, 100% of participants felt significantly more confident and would attempt this on real patients (Figure 1). Qualitative comments showed that they valued sessions: 'good opportunity to practice vein mapping and cannulation on gel model'. All participants felt that this should be taught routinely within paediatric training. Five participants used this new skill in real patients, following the sessions.

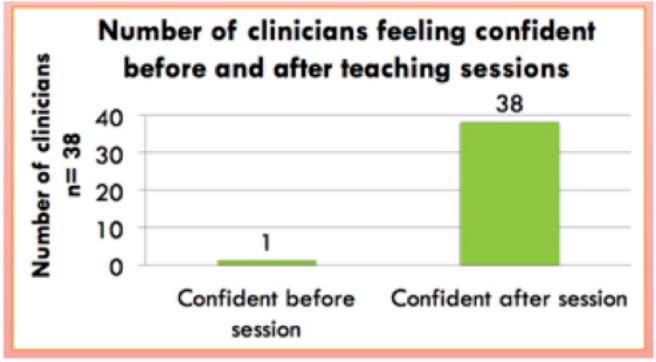

Figure one: Confidence level pre and post sessions n=38

Figure 1: Confidence level pre- and post-sessions, n = 38