[1]. Before VR, the most realistic patient-less simulation environments utilised high-fidelity manikins (HFSim). These are effective in teaching management of numerous medical and surgical presentations, but limited by cost and logistics [2]. This is the first study to assess the efficacy of VR, compared to HFSim, in teaching medical students' clinical decision-making.
Methods: This ethically approved study utilised mixed methods to investigate:

- Whether VR is as effective as HFSim at increasing students' clinical decision-making competence and confidence;
- The perceived value and experience of each; and
- Where VR training should be placed temporally in relation to HFSim.

Sub-analyses explored whether outcomes were influenced by gender.
Students were randomly allocated to experience a simulated scenario in either VR or HFSim. After consenting, participants:

1. Completed baseline assessments of competence and confidence;
2. Received sepsis revision and familiarisation with the relevant environment;
3. Individually undertook an acute sepsis scenario with debriefing;
4. Completed follow-up confidence and competence assessments;
5. Undertook a second scenario in the alternate environment; and
6. Completed questionnaires regarding experiences of VR and HFSim, and preferred initial environment.

The collated data was analysed using the t-test in Excel®.
Results: The study recruited 50 participants. Key findings were:

1. No difference in baseline confidence between VR and HFSim groups;
2. Statistically equal increase in confidence and competence regarding decision-making (confidence after VR +17% and HFSsim +19%, competence after VR +17% and HFSsim +15%). See Figure 1;
3. Participants' preference was for HFSim (71%, due to greater realism; increased pressure; and verbal communication);
4. Participants' preference was to undertake VR before HFSim (80%, because less stressful and useful earlier in training); and
5. 100% recommended both environments (complement each other and different knowledge gained from each).

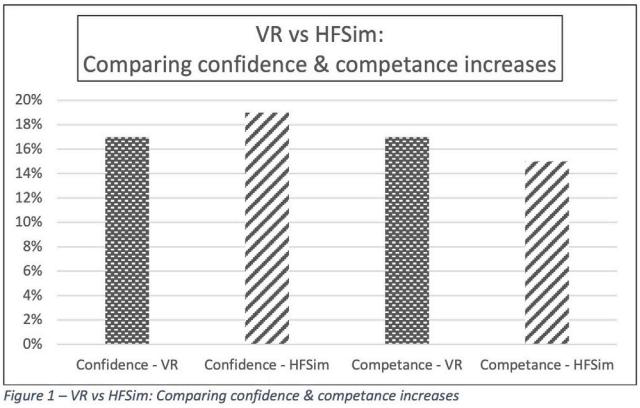

Figure 1 – VR vs HFSim: Comparing confidence & competance increases

Figure 1: VR versus HFSim: Comparing confidence and competence increases

Sub-analysis revealed same outcomes with gender aggregation.
Conclusion: Interim results suggest, regardless of gender, equivalent increases in confidence and competence are achieved in teaching clinical decision-making with either VR or HFSim. VR appears to have a natural place in the progression of teaching between theory and HFSim. Evidence suggests that teaching 'expert-thinking' should begin early in training [3]. VR simulation is a safe and more moderate technique through which this can be introduced.

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SIMULATION IN EVENT MEDICINE

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10.54531/CIHX7374

Background: Medical care at sporting events presents unique challenges. Often, the event is at a novel venue and services operate from temporary structures by a team who may have not met. Our interprofessional team includes doctors, nurses, physiotherapists, and first aiders providing high-quality and safe care whilst learning from each other. British Medical Association guidance [1] on medical care at sporting events suggests specific courses and education prior to an event, but does not address learning or practice at the event itself. We think in-situ simulations are essential to encourage team bonding, interprofessional learning, and promote patient safety in unfamiliar environments. In-situ simulation has been demonstrated to achieve this in the Emergency Department [2]. We have extrapolated this to the sporting event medicine setting and use simulations as part of the briefing process at our events. We anecdotally found that simulations increased the confidence of staff and identified potential barriers to patient safety. Therefore, we formally explored the experiences of staff and identified the value of our innovation of running simulations specifically in the sporting medicine setting.
Methods: Between April and June 2022 participants were invited to provide feedback via an anonymous survey (gaining qualitative and quantitative data) after three simulations at sporting events. Simulations were facilitated and debriefed by an Emergency Medicine consultant with significant experience at sporting events and in simulation. The scenario was a collapsed athlete on the finish line of the event who required moving to the medical facility and then later into an ambulance. This allowed debriefing around clinical aspects as well as human factors and non-technical skills.
Results: Twenty-five respondents provided feedback (Figure 1). Qualitative results demonstrate that our innovative approach is 'invaluable' and 'promotes safe and effective working'. One participant stated that it 'should be part of the

team culture to run skills drills and simulations at all events' suggesting that it has not been the case at other events. It was highlighted that the pre-simulation briefing could be improved.

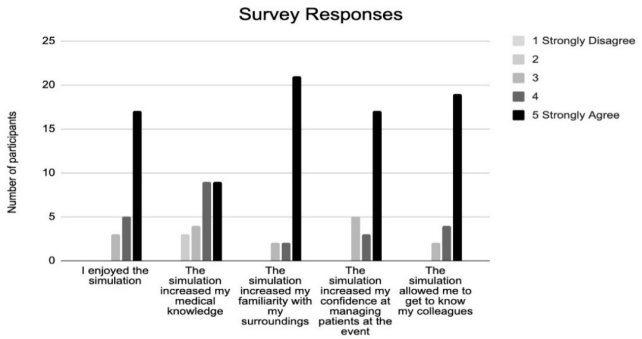

Figure 1: Responses of survey participants

Conclusion: In-situ simulation is useful and valued in the sporting event medicine setting. There has been largely positive feedback from participants showing that our simulations should continue (and be improved upon), and invites further study on the impact of simulation in this environment. We suggest that it should be part of the briefing of clinical staff at all sporting events.

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INTRODUCING MELISSA, THE TRAINING AND SIMULATION BUS. USE OF A MOBILE SIMULATION FACILITY TO IMPROVE ACCESS TO CLINICAL SKILLS TRAINING BY BRINGING THE CLASSROOM TO THE WORKPLACE

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10.54531/JRXL3251

Background: MELISSA (Mobile Educational Learning, Improving Simulation and Safety Activities) is a refurbished double decker bus which aims to provide equitable access to training, healthcare, and wellbeing promotion for both workforces and the public across the North East of England and North Cumbria [1]. One objective of the MELISSA project is to bring simulation and clinical training opportunities to rural and difficult to reach teams that would otherwise be required to travel long distances to static facilities at one or more main hospital sites.
Activity: MELISSA facilitated the delivery of a face-to-face staff development week and over a period of six months (in association with North Cumbria Integrated Care (NCIC)). Six further one day training sessions were carried out at various remote sites across North Cumbria. These training sessions aimed to provide opportunities for staff to acquire sign-off for clinical procedural competences in line with Nursing and Midwifery Council (NMC) standards [2]. The Nursing and Midwifery Council requires nursing staff to evidence updates to their clinical skills and complete refresher training every three years. The trainers for the sessions are local educators to the NCIC.
Results: The training covered practical skills for competency sign off including Blood Transfusion Administration, Verification of Expected Death, Care and Management of Central Venous Access Devices, Venepuncture, Cannulation, and Urethral Catheterisation. During the Staff Development week, 239 competencies were completed. A further 315 signoffs were completed over the course of the six remote site sessions. Positive feedback for the MELISSA project from faculty include increased accessibility for staff to attend essential training and minimising time lost due to travel. In evaluation, attendees also strongly commented on the benefits of not needing to travel significant distances and to multiple educational venues to complete the same training package that can be completed using MELISSA. Other positive feedback includes reduced time needed away from work, minimising impact on their personal lives, time, and travel costs.
Conclusion: Utilisation of MELISSA to bring training and practical sessions to staff at their own workplace in rural areas has allowed NCIC to facilitate completing over 500 competencies by staff and provided the refresher training as required by the NMC in a six-month period. Due to the personal benefit to individuals and the success of the format, MELISSA will continue to support NCIC in delivering these training days across North Cumbria going forward at least once per month.

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#GETONBOARD. DEMONSTRATING THE VERSATILITY OF A MOBILE SIMULATION TRAINING AND PATIENT FOCUSED EDUCATION FACILITY SERVING THE NORTH EAST AND NORTH CUMBRIA

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10.54531/XZVA9439

Background: MELISSA (Mobile Educational Learning, Improving Simulation and Safety Activities) is a mobile resource that has been designed to deliver healthcare education and training across the North East and North Cumbria. The double decker bus represents a partnership between the North East Simulation Network, I Can Prevent Delirium, Health Education North East Faculty of Patient Safety (FPS), and the Find Your Place in the North East and North Cumbria campaign. The main aim of the project is to provide equitable access to training, healthcare and wellbeing promotion for both workforces and the public. The facilities on board MELISSA include simulation equipment, a range of manikins, a bespoke audio/visual system including a separate control room, interchangeable display boards, and an expandable classroom space.