

met. The submitting author confirms that relevant ethical approval was granted, if applicable.

REFERENCES

1. Papapanou M, Routsis E, Tsamakidis K, Fotis L, Marinou G, Lidoriki I, et al. Medical education challenges and innovations during COVID-19 pandemic. *Postgraduate medical journal*. 2022;98(1159):321-7.
2. United Kingdom Foundation Programme Office (UKFPO). UK Foundation Programme Curriculum 2021. 2021. <https://foundationprogramme.nhs.uk/curriculum/> [Accessed 5/2/23]
3. Leighton, K, Ravert, P., Mudra, V., & Macintosh, C. (2018). Simulation Effectiveness Tool - Modified. Retrieved from <https://sites.google.com/view/evaluatinghealthcaresimulation/set-m>

EDUCATION

A91 INTEGRATING SIMULATION BASED EDUCATION TO TRAUMA & ORTHOPAEDIC TRAINING: A REGIONAL EXPERIENCE

Ryan Moffatt^{1,2}, Richard Napier^{1,3}; ¹Trauma & Orthopaedic Research Charity, Belfast, United Kingdom, ²NIMDTA, Belfast, United Kingdom, ³Belfast Health & Social Care Trust, Belfast, United Kingdom

Correspondence: moffattr@tcd.ie

10.54531/SASQ1430

Background and aim: In recent years we have seen an exponential increase in the use of simulation-based education (SBE) within surgical training. Early evidence supported initial integration of simulation to Trauma & Orthopaedic (T&O) training [1] with more contemporary evidence focused on refining training methods and technology usage [2,3]. We aim to assess the integration of established as well as novel SBE components within our T&O training programme in Northern Ireland.

Activity: Simulation sessions were introduced to the Northern Ireland (NI) T&O Core Curriculum in academic year 2022/23:

- Trauma Simulation Scenario Training: Pelvic trauma scenarios were delivered to all T&O specialist trainees as part of Core Curriculum teaching in a regional simulation centre. Multi-professional input was sought and delivered by Blood Transfusion Service (Major Haemorrhage Protocol training) and Urological micro-teaching session (traumatic urological injuries in setting of pelvic trauma).
- Arthroscopy Simulation Course: A knee arthroscopy course was developed in conjunction with industry for all T&O trainees in NI utilizing passive haptic feedback arthroscopy simulators. Pre + post simulation surveys were completed assessing educational value, engagement with SBE as method of teaching, desire for further SBE content and suggestions for topics of same. Focus groups of lead educators were set up to plan development of further SBE training within T&O curriculum.

Findings: Trainees reported increased confidence in management of pelvic trauma. Overwhelmingly positive response to integration of SBE sessions to core curriculum with 89% in favour of further multi-specialty simulation training sessions. There was a preference seen within feedback for a variety of SBE iterations with in-situ and operative/ procedural simulation being slightly preferred to scenario-based training. With majority of trainees requesting

procedural SBE training as topic for future sessions, Knee Arthroscopy Simulation Course was subsequently developed (to be delivered as part of Core Curriculum in May 2023).

From lead educator focus groups further simulation-based training sessions are planned for development in 2023/24 including shoulder arthroscopy simulation course, rare approaches simulation and advanced supracondylar simulation sessions. Feedback will be sought throughout to ensure training is tailored to needs of trainees as well as curriculum requirements. Recognition of benefits and scope of SBE training within T&O has prompted development of formal simulation trainee role as result of initial regional experience.

Conclusion: Our experience of integrating SBE training methods to T&O core curriculum has been hugely positive with demand amongst trainees high for a wide range of further sessions and courses.

Ethics statement: Authors confirm that all relevant ethical standards for research conduct and dissemination have been met. The submitting author confirms that relevant ethical approval was granted, if applicable.

REFERENCES

1. Tay C, Ankur K, Chinmay G, 'Simulation training: a systematic review of simulation in arthroscopy and proposal of a new competency-based training framework', *International Journal of Surgery*, 12(6), (2014), 626-633
2. Kalpesh RV, Amaury T, Marco C, 'Active vs passive haptic feedback technology in virtual reality arthroscopy simulation: Which is most realistic?', *Journal of Clinical Orthopaedics and Trauma*, 16, (2021), 249-256
3. Lebel ME, Haverstock J, Cristancho S, van Eimeren L, Buckingham G, 'Observational Learning During Simulation-Based Training in Arthroscopy: Is It Useful to Novices?', *Journal of Surgical Education*, 75(1), (2018), 222 - 230

CONTENT, QUALITY

A92 SUSTAINED QUALITY IN SIMULATION TRAINING - 'STEP-UP' TO IMT3

Lia Carnall¹, Roy Edward¹, Ben Atkinson¹; ¹Portsmouth Hospitals University NHS Trust, Portsmouth, United Kingdom

Correspondence: liacarnall.lc@gmail.com

10.54531/MTIJ3600

Background and aim: Following the introduction of the 'IMT3' year as part of Internal Medicine Training in 2019, a 'Step-Up' simulation day was developed in 2021. Positive feedback from candidates reflected its usefulness in preparing to work as a medical registrar [1]. The scenarios were conducted with the subsequent cohort of IMT3 doctors and feedback assessed for sustained quality of training.

Simulation is recognized as an important tool in medical education [2]. It is now specified by the Royal College of Physicians that trainees participate in simulation inclusive of human factors and scenario training [3].

Activity: The 'Step-Up' simulation day continues to consist of four progressive, high-fidelity scenarios that replicate a day in the life of a medical registrar. Each scenario occurs in the simulation lab for individual candidates, with peers observing via video-link in the debrief room.

Each scenario requires the candidate to perform a medical assessment of an acutely unwell patient, facilitated by use of the computerized manikin (SimMan Essential), whilst

simultaneously tackling difficult conversations with a live actor and managing interruptions from a bleep. Participants also had the opportunity to lead simulated cardiac arrests with peers forming the cardiac arrest team.

Debrief and teaching continued to be provided by a qualified simulation facilitator alongside a specialist registrar or consultant. Feedback provision was moved to an online format and accessed via a QR code to be more environmentally conscious and to readily allow analysis and storage for future comparison. In order to assess sustained quality, the same five aspects of the day were assessed by participants on a ten-point Likert scale: relevance, pitch, clarity, usefulness and overall quality. Scores of 1 reflected strong disagreement and 10 of strong agreement. Free text feedback allowed candidates to suggest topics for future sessions or identify valuable learning points.

Findings: Thirteen IMT3 or equivalent doctors participated in this round of 'Step-Up' simulation with 100% feedback rate. As in previous rounds median and modal scores were 10 in all 5 domains, ranging from 7 to 10. Free text feedback recorded multiple requests for further simulation sessions.

Conclusion: 'Step-Up' simulation was demonstrated previously to be a useful tool in progression to IMT3. Overall quality and usefulness were sustained year-on-year and simulated challenging discussions were highly valued by participants.

Therefore, this programme will continue for future cohorts, with ongoing monitoring of sustained quality and development of new scenarios to provide increased frequency of simulation training.

Ethics statement: Authors confirm that all relevant ethical standards for research conduct and dissemination have been met. The submitting author confirms that relevant ethical approval was granted, if applicable.

REFERENCES

- Roy Edward, William Gubbins, Hannah Pleasance, Megan Rowley, Benjamin Giles, Benjamin Smalley. 'Step up': utilising simulation to assist in the transition from medical senior house officer to registrar. *International Journal of Healthcare Simulation*. 2022;2(Supplement 1):A52-A52.
- Buist N, Webster CS. Simulation training to improve the ability of first-year doctors to assess and manage deteriorating patients: a systematic review and meta-analysis. *Medical Science Educator*. 2019;29(3):749-761.
- Joint Royal Colleges of Physicians Training Board. Internal Medicine Stage 2 Curriculum. August 2022 [cited April 2023]. Available from: <https://www.jrcptb.org.uk/documents/internal-medicine-stage-2-curriculum>

DESIGN

A93

ADDRESSING PATIENT-SAFETY THEMES AND FOSTERING COHESIVE TEAMWORK THROUGH WEEKLY MULTIDISCIPLINARY IN-SITU SIMULATION IN AN ACUTE CARE UNIT

Joseph Ziegler¹, [Lisa Stevens](mailto:lisa.stevens9@nhs.net)¹; ¹Homerton University Hospital, London, United Kingdom

Correspondence: lisa.stevens9@nhs.net

[10.54531/KQZC9713](https://doi.org/10.54531/KQZC9713)

Background and aim: The Acute Care Unit (ACU) is the busy admissions ward at the trust. Many junior doctors rotate through the ACU for their acute medicine training and the department frequently welcomes newly-qualified nurses or nurses new to the NHS. All staff are involved in managing acutely unwell admissions with a range of presentations.

In this dynamic environment, ensuring time is dedicated to teaching is an important part of staff development. In addition, it is important to create opportunities for team-building between disciplines, and evidence shows that this improves outcomes for patients [1].

Teaching for different professional disciplines is often delivered separately. Whilst sometimes preferable, we recognized the department could benefit from simulation sessions involving all members of the clinical team to represent realistic clinical practice. The aims were to:

- Address recent clinical incidents
- Practice managing common medical emergencies as a multidisciplinary team
- Build a greater sense of team between the ACU staff.

Activity: We designed and implemented a programme of weekly multidisciplinary in-situ simulation on ACU. Sessions involve a range of nursing and medical staff and students and are delivered in an empty bed space on the ACU. Simulations focus on clinical scenarios that might reasonably arise in the department. We use iSimulate technology and re-use the simulation suite's equipment to reduce resource burden and maintain sustainability.

Feedback is collected after each session to quality assure and improve the sessions, and 2 further quality improvement reviews completed to explore how to maximize engagement and learning. This has led to coordination of scenarios with the established weekly seminar-based departmental teaching, to consolidate learning across settings and this is reinforced with a 'learning point of the week'.

Findings: Sessions have been successfully delivered on a near-weekly basis throughout the year, despite significant clinical pressures. This has been achieved through coordinated efforts from the simulation team, ACU fellows and registrars, charge nurses and Practice Development Nurse.

We estimate to have reached more than 50 colleagues, with typically 4-8 attendees per session. We have rotated through 15 different scenarios and counting, covering key topics including various medical emergencies, violence and aggression, and 'soft signs' of deterioration.

The programme has been well received, and feedback has specifically commented on the benefit of simulation in a multidisciplinary and in-situ setting.

Conclusion: We demonstrate it is possible to maintain an effective regular simulation programme in the department to support patient safety initiatives and team working.

Ethics statement: Authors confirm that all relevant ethical standards for research conduct and dissemination have been met. The submitting author confirms that relevant ethical approval was granted, if applicable.

REFERENCES

- Manser T. Teamwork and patient safety in dynamic domains of healthcare: a review of the literature. *Acta Anaesthesiologica Scandinavica*. 2009 Feb;53(2):143-51.

DESIGN

A94

STARTING FROM SCRATCH, CREATING A SUSTAINABLE MULTI-PROFESSIONAL STUDENT SIMULATION PROGRAMME

Ben Hester¹, [Shona Hill](mailto:shona.hill@somerset-nhs.uk); ¹Somerset NHS Foundation Trust, Crewkerne, United Kingdom