

IMPROVING SURGICAL TRAINING: ADDING NON-TECHNICAL SKILLS TO SIMULATION TRAINING FOR SURGEONS

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Background: The launch of the new Improving Surgical Training (IST) programme in 2020 introduced an exciting opportunity to develop a high-fidelity simulation course designed specifically with surgeons and their training in mind. Surgical simulation is often thought of as task-focussed training, with little emphasis on non-technical skills, especially in junior years of training. This created an opportunity for the formation of a bespoke high-fidelity course immersing IST trainees into surgical scenarios involving an extended surgical team and incorporating elements of technical and non-technical skills.

Methods: Following a review of the curriculum [1], core training areas were identified. Index procedures and critical conditions appropriate for core-level training were selected to create the scenarios. Furthermore, a surgical simulation faculty was developed whereby consultant surgeons conducted faculty development training, enabling them to support the core simulation faculty. Three scenarios were piloted in a half-day course which was subsequently rolled out to all current IST trainees at the Trust. Key elements incorporated include:

1. Environment – immersion within environments where surgeons work such as theatres, surgical wards, and emergency departments.
2. Surgical issues – each scenario centres around a surgical complaint.
3. Non-technical components – often overlooked in traditional surgical simulation [2] but pertinent to the working life of a surgeon.
4. Multidisciplinary Team – scenarios must incorporate surgeons working within extended teams.

To ensure high-fidelity, a combination of simulation manikins and faculty were used as patients and other characters, with all tasks being carried out in real-time.

Results: An initial pilot session ran with Deanery and non-Deanery trainees and a mixed simulation faculty including senior surgeons. Three sessions were delivered to a total of twelve trainees attending from a range of different surgical specialties. Feedback demonstrated satisfaction with the course given an average score of 4.67/5 and relevance of course content to current job role average of 4.5/5. 100% of trainees rated session content as either 'Good' or 'Excellent'. Trainees enjoyed how 'realistic' the scenarios were and appreciated that they 'gave a feel of real-life situations and a framework to resort to in difficult day-to-day situations'. Recommendations for improvement included wanting more scenarios and further opportunities to explore human factors.

Conclusion: Overall feedback was overwhelmingly positive with appreciation of the role of human factors and non-technical skills in surgical training. The results provide a convincing argument for continuing the programme and developing a programme for second year IST trainees to aid transition to registrar training.

REFERENCES

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'DID THAT REALLY JUST HAPPEN?': USING SIMULATION TO IDENTIFY AND RESPOND TO MICROAGGRESSIONS IN THE CLINICAL ENVIRONMENT

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Background: In a recent survey of 80 final year medical students at The University of Edinburgh, 35% reported being the victim of, while 46% reported witnessing microaggression while on clinical placement. It has been established that microaggressions in the clinical environment have a negative impact on victims as well as patient care^[1]. It is therefore vital to educate our future clinicians to identify microaggressions and respond to them appropriately. Active Bystander Training (ABT) is a framework that has been designed for this purpose and has been successfully implemented in the clinical environment [2]. **Activity:** We delivered a 90-minute simulation-based session using the ABT framework for final year medical students. In the session, we used two real life examples of microaggressions from our local context. The first example involved racism while the second involved homophobia. We used a combination of shadow-box simulation and immersive simulation to recreate these scenarios. Prior to attending this session, students attended an online teaching session that covered the basic principles of ABT. We began the session with an emphasis on psychological safety and student wellbeing. Participants were then given a short reminder of the principles of ABT. They then watched a video re-enactment of the first scenario. This was followed by a structured debriefing in small groups. Next, in small groups participants were given scripts and assigned roles to take part in an immersive simulation for the second scenario. This was then followed by a second structured debriefing. At the end of the session, there was an opportunity for participants to share their own experiences of microaggressions in the clinical environment. We also signposted students to wellbeing services.

Results: 150 final year medical students participated in the session and gave feedback (Table 1). The session was well received with an average overall score of 4.67/5. 94% of participants reported that the workshop had a positive impact on them. Key themes that emerged from the free text feedback were that participants found the ABT framework useful, they found the session empowering, there was an appetite for more sessions like this during their medical training, and they identified the importance of allyship and victim support.

Conclusion: This intervention demonstrates that simulation can be used as an effective modality to empower clinicians to identify and respond to microaggressions in the clinical environment.

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Table 1: Reported impact of attending ABT simulation on final year medical students

Type of Impact	Number of Students	Percentage of students
Positive	141	94.0%
Mixed – both positive and negative	7	4.7%
Negative	0	0.0%
None	2	1.4%
Total	150	100.0%

2. York M, Langford K, Davidson M, Hemingway C, Russell R, Neeley M, Fleming A. Becoming active bystanders and advocates: teaching medical students to respond to bias in the clinical setting. *MedEdPORTAL*. 2021 Aug 19;17:11175.

A NOVEL METHOD OF IMPROVING ATTENDANCE: SWITCHING TO ONLINE BOOKING FOR FY1 AND FY2 SIMULATION SESSIONS

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Background: Prior to 2021 within West Hertfordshire Healthcare Trust, mandatory simulation sessions were pre-allocated to foundation trainees. If sessions clashed with trainees' schedules, trainees would be expected to liaise with simulation faculty to rearrange verbally or via email. This created a significant burden on the faculty as there was no dedicated administrator or time. Moreover, this caused trainee burden on those unable to attend, and a significant proportion did not re-book these sessions. This impacted the efficiency figures for the simulation centre. We aimed to have rigorous adherence to the schedule and wanted the simulation programme to be efficient and work to full capacity. Within this service improvement innovation, the objective was to establish a better method of booking trainees into simulation sessions aiming to alleviate the faculty burden and provide flexibility for the trainees.

Activity: For the 2021–22 academic year, an online booking system for simulation was established. This was achieved using the Acorn 2 system. Trainees were then permitted to book a date that suited them for their mandatory training, and re-book if their commitments clashed with the booking schedule. This innovation removed the use of faculty as a medium for booking and rescheduling, freeing them to provide more simulation activities by alleviating this administrative burden. Datasets were compared between the 2020–21 and the 2021–22 academic year to determine the extent to which this innovation improved learner attendance within our simulation programme.

Results: Within this study we found that overall, there was a greater level of attendance from trainees following implementation of the new system than prior to this. We found 6% more simulation sessions were attended (from 87% attendance 2020 – 2021 to 93% attendance 2021 – 2022), and of those not attended, 20% more were rescheduled compared with the previous system (from 41% in 2020 – 2021, to 61% in 2021–2022).

Conclusion: It is evident from this innovation that a significant impact can be made on learner engagement when we allow trainees flexibility to self-determine their learning timeline. This is echoed within the literature, as adult learning theories emphasise learner led learning and learner driven orientation of their own learning narrative [1, 2]. By placing the onus on trainees, we de-burdened them of the stress of trying to re-allocate their clinical commitments whilst attributing greater accountability to the trainees. Overall, we believe this leads to greater faculty and trainee wellbeing and engagement in simulation-based learning.

REFERENCES

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STRATEGY FOR PHARMACY SIMULATION-BASED EDUCATION (SBE) IN NHS SCOTLAND – FACULTY DEVELOPMENT

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Background: New General Pharmaceutical Council (GPhC) Initial Education and Training (E&T) Standards for Pharmacists set the ambition from 2026, all pharmacists will be prescribers on registration [1]. There is an increased requirement for simulation-based education (SBE) to support trainees and newly qualified pharmacists to develop key skills required for prescribing, particularly around confidence and tolerance of ambiguity. There is a need to provide this training in a 'safe space' without harm to patients. Development of a Pharmacy Faculty for SBE is crucial to creating a safe learning environment and facilitate increased delivery of quality simulation in pharmacy education.

Methods: In October 2021, NHS Education for Scotland (NES) recruited 3 Regional and 1 National Pharmacy Simulation Leads who were tasked with implementing SBE within pharmacy teams across Scotland and developing faculty. Training is based on the Clinical Skills Management Educational Network (CSMEN) [2] 3-tiered approach.

Tier 1: Awareness to Simulation for Educators: an e-learning and bespoke in person 'Pharmacy SIMstart' course was developed and delivered to introduce the concept of SBE to pharmacy teams.

Tier 2: Introductory programme for Simulation-Based Learning Educator: an e-learning and existing 2-day in person 'Introduction to Simulation – Making it Work', run by the Scottish Centre for Simulation and Human Factors (SCSHF) was made more widely available to pharmacists.

Tier 3: Advanced programme for Simulation-Based Learning Educator (in development).

E-learning was accessed using the TURAS Learn system (a centralised digital platform developed by NES for products and services). Health boards were asked to identify staff who would be supporting trainees locally to attend the course relevant to their needs. The NES Pharmacy Simulation Leads linked with SBE medical education teams and simulation centres to allow Faculty to develop these newly acquired skills.

Results: Attendees (Table 1) at these training events were from: