

**Table 1:** Latent threats found at the Southwest Ambulatory Orthopaedic Centre

Domain	Latent Threat	Action
Safety	Major haemorrhage protocol.	Additional equipment needed to manage vascular injury at a remote site was documented and ordered. Protocol from base hospitals amended to reflect remote location. Correspondence telephone numbers updated.
	Ward toilet door inadequate to retrieve a patient in the event of collapse.	Ward door rehung and lock modified.
	Problems with the emergency bell: <ul style="list-style-type: none"> <li>• Emergency bell in theatre was obscured by a desktop computer.</li> <li>• Bell unable to silence once activated</li> <li>• Emergency bell was not audible to on call junior doctor at night.</li> </ul>	<ul style="list-style-type: none"> <li>• Desktop computer moved to ensure good visibility of alarms.</li> <li>• Clinical lead liaised with estates to provide instructions which will be readily available in the relevant locations.</li> <li>• Clinical lead to ensure bell operational to alert important team members of an emergency during all hours.</li> </ul>
Equipment	Front of neck emergency airway access kit: Supporting staff have been trained for this emergency procedure with different equipment, reflecting usual practice at their base Trust.	Highlighted the need for additional equipment at current time, ongoing training to be delivered to ensure emergency protocols are standardised and regular visiting staff are aware of the options available.
Drugs	Need for further drugs to support critical incidents.	Generation of additional drugs list for managing team to order with the pharmacist.
	Obtaining and citing emergency equipment, e.g. anaphylaxis pack, malignant hyperpyrexia box, local anaesthetic toxicity box.	The team liaised with base trusts to ensure standardised equipment was available for critical incidents and agreed a permanent location for these.
General	Double doors into theatre opened fully, automatically, and unpredictably.	Estates team notified to deactivate door. Internal format of anaesthetic room reconfigured to ensure no inappropriate visibility of operating rooms.
	Found need for a chair for waiting patient in the anaesthetic room and that it needed to be on left side wall so they could not see into theatre.	Decided how to orientate the anaesthetic machine and trolley because of practising set up and testing different formations.
	Time delay in patients arriving to theatre from ward due to mobility issues.	Poorly mobile patient needing wheelchair to get to theatre in a timely way – one provided because of sim.
	Lack of music playback facilities in theatre fundamental to successful day case, minimal sedation anaesthetic techniques.	Clinical leads alerted to source additional equipment.
	Reduced team communication anticipated due to stringent zoning of clean and less clean areas.	Clinical leaders made aware to explore solutions.
Resource planning	Ability to manage patients at remote sites.	Transfer pathway adopted and amended by members of the visiting teams.

**Results:** Stakeholders reported preliminary and subsequent simulations as beneficial. It was stated that early simulation supports the discovery of 'hidden problems' informing timely modification of pathways and/or site design (Table 1). Identifying problems early during infrastructure delivery allowed for proactive discussion, smoother change management, time for re-simulation, and supported any infrastructure amendments to adhere to target timelines. Successful, rapid ingress through and egress from building entrances, and simulating real-time joint replacement surgery ensured confidence in proposed target timeframes. Directed corporate messaging with invested parties to highlight the success of the system testing reinforced wider assurance in the facility.

**Conclusion:** High-fidelity in-situ simulation is a powerful, flexible and resource-inexpensive tool within clinical capability development. It permits agile but rigorous testing and analysis of systems within novel sites early in the development process, while changes are still possible. This capability can rapidly expose unrecognised or latent threats such as an inefficient clinical configuration, or a compromise in procedural space without posing risks to patients [2]. In performing targeted simulation ahead of when 'traditional' systems testing is usually performed, safety and quality improvements can be understood at more financially viable stages of capability generation and allow operational leaders to achieve timely decision-making.

## REFERENCES

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## INTRODUCING FOUNDATION ON-CALL UNDERGRADUATE SIMULATION (FOCUS) TO POST-FINAL MEDICAL STUDENTS IN PREPARATION FOR FOUNDATION YEAR 1

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**Background:** The transition from medical school to foundation practice can be anxiety provoking as the pressure to balance medical and surgical quandaries with the human factors of handovers, task management, and team working can be complex [1]. Often it is the latter human factors that are hard to teach that can make shifts challenging. Students rarely practise skills of prioritisation, handover, and utilisation of team members before starting work. This leads to unsatisfactory practice and increased stress levels among the workforce with a compromise to patient safety [2]. The aims of the Foundation Undergraduate On-Call Simulation (FOCUS) was to increase the students' confidence and understanding of these tasks which form the basis on an On-Call shift for a foundation doctor.

**Methods:** We designed and delivered a one hour simulated on-call shift for 42 medical students during their post-finals assistantship at the Mid Yorkshire NHS Trust. The simulation was modelled on a shift covering medical wards out of hours at Foundation Year 1 level and included the use of a high-fidelity manikin with a review an acutely unwell

patient. The sessions ran throughout the day and evening facilitated by three clinical fellows in medical education. We were able to run the session with two students partaking simultaneously on parallel wards which allowed for a joint debriefing.

**Results:** We saw an increase in confidence across all areas including handover, task management, and working within a Multidisciplinary Team (MDT). Before FOCUS, only 13 students felt somewhat confident compared to 27 after. Ten students felt no confidence in escalating to seniors before FOCUS. Nine out of these ten students felt somewhat confidence afterwards. We received very positive qualitative data with one student stating FOCUS was the 'best prep I've had for FYI'. **Conclusion:** FOCUS is a new programme created for post-finals medical students that was designed and introduced in 2022. Having received excellent feedback, we have plans to expand the course to more students in the coming year. We also wish to offer adaptations of this course to students in earlier years to promote improvement of the skills required to practise a safe and efficient on-call shift. We would also encourage other Trusts to adopt this programme where possible as the impact on confidence of post-finals students is significant and will lead to reduced stress and anxiety levels in newly qualified junior doctors.

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#### HUMAN FACTORS-CENTERED SIMULATION FOR POSTGRADUATE MEDICAL TRAINEES

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**Background:** 'Human factors' training is now explicitly referenced in the new Internal Medicine Trainee (IMT) curriculum [1]. The typical IMT scenario is based on deterioration of clinical conditions. The focus is usually the medical management of a certain condition with non-technical skills being discussed incidentally and sometimes superficially during the debriefing. The aim of this course was to see whether a course designed primarily to raise awareness of human factors and the non-technical skills that are part of the arsenal to reduce risk, would be well received by IMT trainees and whether we could truly deliver 'human factors training' [2] to this cohort.

**Methods:** The course consists of seven scenarios each written with a human factors or non-technical skills focus. For example, the opening forum theatre has the aim of illustrating the effect of stress, emotion, and workload on clinical performance. The format allows different behaviours to be 'tested' in the same environment to see the effect choice of behaviour can have. Other non-technical skills explored include workload management, communication of adverse outcomes, and conveying uncertainty. All IMTs within Wessex were invited to attend one of 4 courses, with a maximum number of twelve participants. The scenarios are run in a 'carousel' format with a group debriefing after 3 scenarios.

The course was delivered using actor role players who were invited to the debriefing allowing direct two-way feedback. Evaluation was completed using a questionnaire based on Kirkpatrick's model.

**Results:** There were 39 attendees across 4 courses. 100% of candidates enjoyed the course and would recommend it to colleagues. 85% said their opinion of SBE was improved by the course with none feeling worse about simulation afterwards. All felt that the course provided a good introduction to human factors.

Only one responder gave a technical skill as their most significant learning. The remainder all gave non-technical skills responses which are exemplified by this direct quote: 'Really good course. I thought the use of 'real' patients made the experience so much more valuable. Was completely different to most other simulation I have done before which is invariably managing a deteriorating manikin patient which usually evolves into an arrest scenario. Found this actually useful for daily life on the job.'

**Conclusion:** This course represents a new approach to IMT simulation. It has been well received and adaptations and extensions to the course are already being planned.

#### REFERENCES

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#### COMPREHENSIVE COMMUNICATION SKILLS TRAINING (CCST) FOR WARD STAFF

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**Background:** Care provision depends as much on the communication skills of care providers as their clinical skills. In 2021, a 420-bedded acute hospital received feedback from a fifth of bereaved families through its 'Your Views Matter' bereavement survey (n=145). 80% rated end of life (EOL) care as good/very good. However, 1 in 10 rated it as poor/very poor. In all but two cases, poor communication was identified as a defining factor. Despite communication being a theme in complaints, communication skills training (CST) was not available to ward staff (WS). Using actor role players (ARP) in simulation has been found to be realistic and valuable to learning [1]. The need for development of a standardised CST course for the 637 ward nurses and 273 nursing assistants was paramount. We established a one-day, level 2, accredited Comprehensive CST (CCST) course specifically for ward staff which sits between Basic CST and Advanced CST. We envision that the CCST course becomes highly regarded across the Trust/region and a priority for WS.

**Methods:** We translated bereaved relatives' lived experiences into simulations to inform learning (Table 1). Two ARPs simulate the experiences of a fictional inpatient Bobby Day, as he approaches the EOL and those of his wife Bridgette. Uniquely, throughout the day the course follows Bobby through his final hospital journey allowing participants to become emotionally invested in his and his wife's experience. Simulations address specific communication skills through both forum theatre and fishbowl. Following each simulation,