

Introduction

The importance of non-technical skills (NTS) for improving safety and efficiency in healthcare is well established, with a variety of behavioural marker systems (BMS) evolving to provide structure for the training and evaluation of these behaviours [1].

Endoscopy Non-Technical Skills (ENTS) is a bespoke BMS developed to support trainee endoscopists in the UK. 14 years after initial publication it is viewed as a valid, reliable and effective tool for appraising individual and team non-technical skills with frequent utilisation in research, education, skills training and practice. [2]

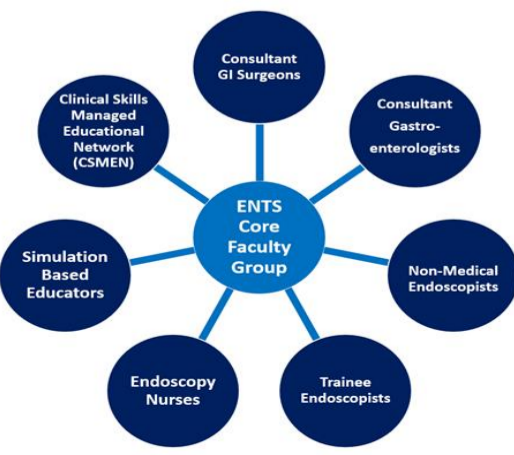
The recent Improving safety and reducing error in endoscopy’ report identifies inconsistencies in the delivery of ENTS training, highlighting a need for a Nationwide simulation-based approach [3].

We detail the method adopted by the NHS Scotland Academy (NHSSA) National Endoscopy Training Programme (NETP) to address this need.

Methods

We recruited experts from clinical practice, education and simulation to form a core faculty group with two aims, to collaboratively develop a national ENTS immersive simulation programme and oversee its implementation, delivery, and evaluation.

Faculty development was supported by completing CSMEN simulation faculty e-learning resources and a 2-day introduction to simulation course.



Key features of the NHSSA ENTS Programme-



To maximise access for Scottish remote and rural areas we plugged into the CSMEN network to take training ‘on the road’, delivering across 6 centres accessible to 12 mainland health boards with delegate attendance from all regions. The need to travel and variance in facilities required that sim faculty be small and course resources be portable.



A compact Simbionix simulator was used to add a sense of realism and provide the endoscopist and wider team with a focal point representative of a procedure in process. This had the somewhat unintentional benefit of competing for cognitive load providing examples of diminished situational awareness.



The ENTS group contained diverse representation (see diagram). All were equally trained and involved in scenario development and content delivery. Mixed discipline delegate groups were selected to support a team approach to simulation. We believe this diversity of perspective helps capture the multifaceted complexity of team systems, opens a discourse, flattens hierarchy and shares perspectives, promoting safer team based, patient focussed care.



Intended Non-Technical Skill Learning Outcomes (INTLOs) were mapped to the established ENTS behavioural marker system. This presents key concepts in a relatable and practically demonstrable way while providing observable behaviour cues to structure reflection and debrief.

Five scenarios were developed, based on patient safety incidents / non-technical skill breakdowns commonly encountered in endoscopy practice.

Intended learning outcomes and potential observable behaviours were mapped to the ENTS BMS to ensure each domain was represented within the simulation curriculum and to provide cues to facilitate discussion during debrief.

A handbook introducing participants to ENTS was provided as pre-reading and didactic micro-teaching sessions were developed to introduce key concepts and build upon learning.

The Scottish Centre Debrief model (SCDM) was used to structure the debriefing process. Participant evaluation was performed through anonymised pre-and post-course questionnaires which looked at the experience of SBLE and confidence rating regarding awareness of each aspect of endoscopy non-technical skills.



‘Travelling light’

Integration of haptic simulator to challenge ‘cognitive load’

Inter-professional education- Team based development, delivery, and delegates

Use of the ENTS behavioural marker system

Faculty evaluation was delivered through iterative feedback, appraisal and meta-debriefing from senior simulation faculty.

Results

The programme was successfully developed and delivered to 84 delegates, across 6 Sim centres.

Participants report positive experiences of simulation, improved knowledge of non-technical skills, and confidence in recognising areas for improvement in practice. Emerging evidence from regions with prior attendance report improved safety briefing processes and increased utilisation of tools shared within the course. Wider impact evaluation is planned.

Conclusion

This method provides an effective way to onboard clinical faculty, facilitate mixed-discipline co-development and integrate an established BMS to scenario development and debriefing processes with potential transferability to other fields.

References

1. Prineas S, Mosier K, Mirko C, Guicciardi S. Non-technical skills in healthcare. Textbook of patient safety and clinical risk management. 2021:413-34.
2. Ravindran S, Haycock A, Woolf K, Thomas-Gibson S. Development and impact of an endoscopic non-technical skills (ENTS) behavioural marker system. BMJ Simulation & Technology Enhanced Learning. 2021;7(1):17.
3. Joint Advisory Group on Gastrointestinal Endoscopy. Improving safety and reducing error in endoscopy (ISREE) implementation strategy.