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EMBEDDING HUMAN FACTORS IN FOUNDATION TRAINING THROUGH SIMULATION: A SYSTEMS-BASED APPROACH

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Introduction: The UK Foundation Programme Curriculum [1] requires understanding of patient safety and incident management. While the NHS Patient Safety Incident Response Framework [2] advocates a systems-based approach, training often emphasises non-technical skills without deeper exploration of system-wide factors. To address this gap, the Simulation Team at University Hospitals of North Midlands (UHNM) integrated human factors teaching into one of the three simulation sessions they provide for Foundation doctors. The goal was to equip trainees with the tools to analyse incidents and appreciate how changes to the wider work system can affect patient safety.

Methods: We created a course to enhance Foundation doctors' understanding of human factors, with a focus on the SEIPS (Systems Engineering Initiative for Patient Safety) model [3] and Safety-II thinking. A mix of twelve Foundation year one and two doctors participated in each session, which included two interactive workshops and five simulation scenarios.

- Workshops: The first introduces systems engineering and Safety-II principles; the second focuses on the practical application of the SEIPS model.
- Scenarios: These span various clinical situations-from discharge errors to never events-each is designed with a specific human factor learning outcome. Debriefs emphasise how work systems might be improved rather than focusing on individual performance, differentiating this session from other sessions that consider clinical management.

Results: To date, 107 of 160 Foundation doctors have participated, with full attendance by July. Preliminary feedback from those that have attended shows:

- 100% of participants reported understanding how to apply a systems-based approach to incident investigations.
- 100% felt confident using the SEIPS model to evaluate system changes.
- 100% stated the session would influence their clinical practice.
- Qualitative feedback indicated increased awareness of human factors and their influence on patient safety.
- The session received an average rating of 4.92 out of 5.

Detailed analysis will be conducted upon course completion.

Discussion: This simulation-based approach centred around patient safety scenarios has enabled trainees to analyse errors through the lens of system design rather than individual fault. It has fostered reflective dialogue on patient safety issues and how work systems can be improved. It has highlighted the need for a stronger training of human factors amongst Foundation trainees. A follow-up of the longer-term impacts is planned for the current Foundation Year 1 doctors when they return for simulations in Foundation Year 2.

Ethics Statement: As the submitting author, I can confirm that all relevant ethical standards of research and dissemination have been met. Additionally, I can confirm that the necessary ethical approval has been obtained, where applicable.

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