A WELL-DESIGNED MULTIDISCIPLINARY DIFFICULT AIRWAY MANAGEMENT SKILLS AND DRILLS DIFFICULT AIRWAY PROGRAMME FOR ENT, ANAESTHESIOLOGY, PERI-OPERATIVE AND ENT NURSES

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Background Simulation-based training is an excellent modality to practice complex airway emergencies while avoiding any harm to patients and can be used to improve the technical and non-technical skills required for difficult airway management. It is most effective when used to train teams that include all disciplines involved in the care of these patients as human factors issues, including poor communication and teamwork, contribute to adverse outcomes in up to 40% of difficult airway cases.1

Summary of work A collaborative multidisciplinary airway simulation programme was developed by a multidisciplinary team that included ENT, Anaesthesia, Perioperative Nursing Departments and the Irish Centre for Applied Patient Safety and Simulation (ICAPSS). A two-part programme was developed that focused on addressing the learning needs of all disciplines. The first part was three complex airway scenarios completed by teams of four learners comprised of ENT and anaesthesia doctors and nurses. The second part was a technical skills workshop supported by subject matter expert feedback. Skills included were cricothyroidotomy, percutaneous tracheostomy, fiberoptic intubation, high-flow nasal oxygen therapy and rigid bronchoscopy. All disciplines attended and participated in both parts of the programme.

Summary of results Post-workshop evaluation was overwhelmingly positive. All participants (n = 17) agreed or strongly agreed that the workshop improved their ability to use skills related to the topic and that the knowledge and skills that they learned will be useful to them in their job. All participants agreed that the workshop was enjoyable and that it addressed their learning needs.

Recommendations The success of the programme highlights the need and the acceptability of this type of high impact training and how involving a multidisciplinary team at the development stage ensures buy-in and participation. The developers plan to deliver the programme more frequently to maintain team skills in managing difficult airway cases in a collaborative team setting.

REFERENCE
airway obstruction however was the lack of appropriate ENT equipment in theatre following anaesthetic induction.

**Recommendations** Working directly with the on-call ENT team we have developed a clear pathway and identifiable trolley to include both anaesthetic and ENT emergency paediatric airway equipment. This universal (Make Airways Safe) MAST trolley is now standardised in ED and emergency theatres, minimising delays in that could potentially jeopardise the care of the critically ill child.

We are replicating the MAST trolley in neighbouring DGHs covered by the same ENT on-call team. Our aim is to generate a standardised regional equipment trolley, increasing patient safety in time-critical airway emergencies.

**REFERENCES**


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**Tuesday 5th November, 16.00–17.20**

**P17 DEVELOPING UNDERGRADUATE PHYSIOTHERAPY SKILLS IN ASSESSING THE ACUTELY ILL PATIENT USING HIGH FIDELITY SIMULATION**

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10.1136/bmjstel-2019-aspihconf.122

**Abstract**

**Background** It is essential for physiotherapy students approaching qualification to be confident to use a structured framework for assessing acutely ill patients. Previously, teaching this structured assessment was delivered in a classroom setting. Students may have also gained clinical experience of using a framework on clinical placement. Allowing students to practice using the framework in high fidelity simulation scenarios is considered to be a safe and realistic learning environment.

**Summary of work** 13 students completed 6 simulated scenarios, supported by facilitated debriefs with a multi-professional faculty. A brief was constructed to simulate a physiotherapy referral, followed by a 15-minute practical simulation and a 40-minute facilitated debrief.

Data collection was performed in 4 phases. Phase 1 before teaching and placement, Phase 2 before simulation, Phase 3 after simulation and Phase 4 a focus group (2 weeks post simulation). Students were asked to rate their self-confidence using a 5-point Likert Scale in relation to 11 statements. Students were also given the opportunity to give free text responses. A focus group explored their views of using simulation as a learning opportunity, the scenario content and recommendations for future development.

**Summary of results** Comparison of data between Phase 1 and 2 suggested traditional teaching methods did not generate improvements in students’ self-reported confidence in the clinical management of acutely ill patients. In contrast, comparison of data between Phase 1 and Phase 3 showed significant improvement in students’ self-reported confidence. This positive impact was most notable in relation to the students’ knowledge of their role in assessing the patient (+43.6%), making management recommendations (+45.7%) and their clinical reasoning (+47.1%). The quantitative data strongly supported the qualitative data from Phases 3 and 4. Students described the benefits further simulation experience would bring throughout their course for both physiotherapy specific and inter-professional learning.

**Discussion and conclusions** The addition of simulation training to the traditional education programme increased students’ self-reported confidence. Further follow up data is required to explore the potential for confidence decay. Students identified the benefits simulation could bring to their learning at all stages in their course within both a single and inter-professional context. Further work is needed to investigate the feasibility of scaling up student physiotherapy simulation training and the use of inter-professional simulation scenarios to assess and manage acutely ill patients.

**P18 INTEGRATING SIMULATION-BASED EDUCATION AND PRECISION TEACHING TO IMPROVE PHYSICIANS’ PERFORMANCE OF LUMBAR PUNCTURE IN CLINICAL PRACTICE**

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10.1136/bmjstel-2019-aspihconf.123

**Background** Lumbar puncture (LP) for cerebrospinal fluid (CSF) is an invasive procedure used for diagnosis and treatment and is performed by doctors of various specialties. Unsuccessful LPs can result in adverse patient outcomes such as prolonged pain and immobilisation; while traumatic LPs can complicate the interpretation of CSF white cell counts, render the tap non-diagnostic and necessitate additional testing. Rates of unsuccessful and ‘traumatic taps’ can be as high as 30%.

Simulation technology may provide an approach to improving the competency of doctors in this task.

This study aimed to describe the application of precision teaching (PT), an instructional methodology used to produce behavioural fluency, to simulation-based skills training. Behavioural fluency refers to accurate and speedy responding that does not deteriorate with time, is resistant to distraction, and persists in novel contexts.

**Summary of work** A Randomised controlled trial was conducted with senior house officers in a large teaching hospital. The intervention group (n=10) received fluency training targeting the performance of LP. A control group (n=11) received training as usual. The performance of the two groups at baseline and post-test will be compared. Further post-intervention evaluations will be conducted to assess skill retention, stability and transference to the clinical environment. Laboratory data will be assessed in order to compare rates of ‘bloody taps’ in LPs conducted in hospital settings among trained and untrained doctors.

**Summary of results** This study is ongoing. To date, three participants have achieved fluency, requiring an average of six trials on the LP simulator and 132 minutes of fluency training to reach the pre-defined fluency criterion for the LP skill. Stability trials have been completed by two of the fluent participants. Both trials demonstrated that fluency remained stable in the presence of distraction.