

## Abstract booklet

### Content

Welcome	2
Climate conscious conference	3
Keynotes	4
Conference committee	7
Oral presentation abstracts	8
Workshops abstracts	56

## Abstract booklet

### Welcome

Dear delegate,

a warm welcome to our inaugural KN Cheung and SK Chin InterSim conference 2023. We are delighted that you have chosen to take time out from your busy schedule to attend our conference. As educators, we strive to develop competent and compassionate health and social care professionals to provide the highest standards of care. Simulation plays a vital role in helping to develop the necessary skills to provide excellence in 21<sup>st</sup> century healthcare and social care. Through the constructed realities of simulation-based education, we offer important learning opportunities that transform learners to be best prepared for practice.

Today, we will have the opportunity to gain insights to the rich and diverse range of simulation practice that is occurring locally and beyond. Given the complexities of modern health and social care – never more than ever do we need to nurture and support collaborative practice. Therefore, this year we have chosen the conference theme of ‘Getting Better, Together: Interprofessional education in simulation’.

The KN Cheung and SK Chin InterSim simulation centre has been operational since August 2022, with its official opening just last week on the 30<sup>th</sup> May. Our centre strives to promote excellence in the education of healthcare professionals through an inter-professional simulation-based approach that drives safe, effective and collaborative care now and in the future. We hope you get a chance to explore InterSim during the conference.

My rule of thumb for conferences is three fold; ‘meet at least one new person’, ‘develop at least one new skill’ and ‘create at least new idea for a project’. We hope you achieve this goal. Most importantly we hope you enjoy the day. Please don’t hesitate in contacting one of team if you have any issues and questions. Importantly if you have any accessibility requirements – please do let us know.

We hope you enjoy the conference.



Gerry Gormley (Interim Director of InterSim) and on behalf of the conference organisation team



**QUEEN'S  
UNIVERSITY  
BELFAST**

**KN CHEUNG  
SK CHIN  
INTERSIM  
CENTRE**



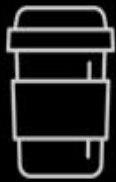
# INAUGURAL INTERSIM CONFERENCE

9<sup>th</sup> JUNE 2023

A climate conscious conference



PAPER  
FREE



REUSABLE  
CUPS



FOOD  
WASTE  
COMPOSTED



GREATER  
VEGETARIAN  
OPTIONS



PRIZES MADE  
FROM RECYCLED  
WOOD



CARBON  
OFF  
SETTING



UNUSED FOOD  
DONATED TO  
LOCAL CHARITIES



REUSABLE  
CONFERENCE  
LANYARDS

## Abstract booklet

### Meet our keynote presenters.

#### Walter Eppich



Walter is Professor and Chair of RCSI SIM, the Centre for Simulation Education and Research RCSI University of Medicine and Health Sciences, Dublin, Ireland. With a clinical background in paediatric emergency medicine, Walter studies the intersections between simulation and workplace learning with a focus on interprofessional collaborative practice, team reflection, healthcare debriefing, and team adaptation. He earned a PhD in Medical Education from Maastricht University. He has co-authored over 100 peer-reviewed articles and book chapters. He collaborates with team and organizational psychologists to study team processes both in and outside of healthcare. In 2018, he travelled to Antarctica

to perform ethnographic field observations and in-depth qualitative interviews to investigate how Antarctic research teams adapt to ever-changing conditions in extreme environments. His research program seeks to delineate the contribution of workplace talk and team interactions to learning and performance.

## Abstract booklet

### Enda Young



Enda is a negotiation, mediation and conflict resolution specialist with over twenty years' experience as a practitioner and in delivering training, talks and lectures. He helps people get better at dealing with conflict. Enda is the Managing Director of Mediation Northern Ireland and the founder of the negotiation programme at the William J Clinton Leadership Institute at Queen's University Belfast. He is a tutor for the programme on negotiation at Saïd Business School at University of Oxford and he has been trained at the Program on Negotiation at Harvard University.

Enda holds an MA in "Theory, Culture and Identity" and a BEng in Mechanical Engineering from Queen's University Belfast. He is a certificated mediator with the International Mediation Institute (IMI) and the Mediators' Institute of Ireland (MII), an accredited Executive Coach with the Academy of Executive Coaching (AoEC), a member of the Association of Coaching (AC) and a member of the International Coaching Federation (ICF). He is a Rotary Peace Fellow, a member of Mediators Beyond Borders International and an ambassador for the Institute for Economics and Peace. He is a Director and one of the Co-founders of FactCheckNI, the first independent fact-checking organisation in Northern Ireland and a Director and Trustee of Lighthouse a suicide prevention Charity. Enda was named as one of the top 40 under 40 in Northern Ireland in 2019 by Business First.

He has worked with some of the world's largest companies and international NGO's. and he has delivered talks and training throughout the UK and Ireland and internationally in: Malaysia, the United Arab Emirates, Switzerland, Germany, Thailand, Brazil, Romania, Turkey, South Africa, the Czech Republic, Canada and the United States.

## Abstract booklet

### Lisa Morrison



Lisa was the Lead Peer Trainer at the SHSCT Recovery College and worked locally and regionally on mental health policy and change initiatives. She now runs her own Training and Consultancy, bringing her extensive lived and learned experience to educate about the value and importance of trauma informed approaches, both for people needing, and those working in services. She believes hope and healing is nurtured in compassionate relationships.

## Abstract booklet

### Conference committee

The conference was only possible with the collective efforts of our conference committee to whom we extend a heartfelt thanks for all of their support and efforts

- Gerry Gormley (InterSim, QUB)
- Gillian Luke (InterSim, QUB)
- Sarah Andrews (InterSim, QUB)
- David Hardy (InterSim, QUB)
- Kevin Campbell (InterSim, QUB)
- Davina Carr (Centre for Medical Education, QUB)
- Andy Spence (Centre for Medical Education, QUB)
- Colin Hughes (School of Nursing and Midwifery, QUB)
- Sarah O'Hare (Centre for Medical Education)
- Paul Murphy (Drama Department, QUB)
- Alison Smart (School of Nursing and Midwifery, QUB)
- Billiejoan Rice (School of Nursing and Midwifery, QUB)
- Paula Houton (Centre for Medical Education, QUB)
- Mike Williams (Centre for Medical Education, QUB)
- Lorna Lawther (School of Nursing and Midwifery, QUB)
- Janine Stockdale (School of Nursing and Midwifery, QUB)
- Sharon Haughey (School of Pharmacy)
- Briegeen Girvan (School of Pharmacy)
- Paul Hamilton (Centre for Medical Education, QUB)

**Abstract booklet**

**Oral presentation abstracts**



## Abstract booklet

### POINT OF VIEW SIMULATION

#### Oral presentation 1

*Dr Debbie Rainey, Dr Billie Joan Rice, Miss Alison Smart*

**Immersive Simulated Dementia Training** As the incidence of dementia is raising many health care professionals will care for a patient with this disease. It is imperative that these patients receive patient centred care. Care of a patient with Dementia is taught within the undergraduate healthcare curriculum. Education around Dementia is generally taught using the traditional methods of teaching in which the student is generally passive in their learning (Sharkey et al, 2019). The aim of this innovative learning experience was to build on the current curricular teaching and learning activities at QUB by introducing an immersive simulated dementia experience, with the aim to increase the students knowledge, understanding and empathy for patients living with dementia.

The experiential simulated dementia experience was designed to resemble the virtual dementia tour, developed by Beville (2002), integrating the simulation cycle of pre brief, psychological safety simulated experience and debrief (INASCAL, 2021).

The simulated experience enabled the student to fully immerse into a “close reality” experience of living with dementia. Students experienced for themselves what it may be like to live with the condition daily and the difficulties often encountered. In the simulation, students’ senses were distorted by wearing reduced vision glasses, wearing large gloves to reduce dexterity, headphones played various everyday sounds to reduce hearing and cause over stimulation of the hearing.

The students were then requested to carry out several tasks, such as tidying plates and cutlery or folding clothes to sit in chair read a magazine or lay on a bed. Which lasted for 8 -10 minutes.

The student group size was 8 -10 for the session with 2 lecturers who were trained in simulation debrief, supporting and debriefing the students. The teaching strategy was evaluated from the students experience of how they felt it impacted on their learning of providing patient centred care for patients with dementia. The students evaluated this experience as one of the best learning experiences they had ever been involved with. They realised why different people reacted in different ways to everyday experiences. They recognised that during the experience they felt disorientated, stressed and scared and could link this to what they have seen in practice. They felt that this experience would in the future make them re-think how they care for patients with dementia. Some of the students stated that this was the most powerful learning experience they have ever had and that they will never forget it.

## Abstract booklet

### Oral presentation 2

*Dr Michael Williams, Miss Chloe Wagstaff, Prof Gerry Gormley*

#### **EmpathEyes: Investigating the impact of virtual reality simulating visual impairment on parents of children with visual impairment**

**Introduction** Parents of children with visual impairment (VI) face many challenges in life and are often unaware of the full extent of visual impairment on their child's vision. Angel Eyes are an NI-based charity which exists to support families of children with VI. Angel Eyes have developed a virtual reality (VR) application, called EmpathEyes, which simulates different types of visual impairment to participants through a headset. EmpathEyes uses a 3-dimensional virtual environment with layered visual effects to simulate for participants what having a visual impairment is like. This app is unique, providing more functionality and realism than other reported means of simulating VI through VR (1) (2). The aim of the study was to use a phenomenological approach to capturing the immediate impacts on carers of children with VI of using the app.

**Methods** Ethics committee approval was gained. Carers of children with VI were recruited opportunistically from Angel Eyes' lists of carer contacts. Participants were carers: each attended for a testing session. They were given an EmpathEyes demonstration, tailored to information they provided on their child's vision profile. Participants were then interviewed about their experiences following the VR demonstration. Transcripts of interviews were then analysed for themes.

**Results** Five themes emerged; (1) "It all makes sense now": peering through their child's eyes, (2) "A flood of emotions": real, not virtual emotional response from parents, (3) Seeing into their child's future, (4) Increasing critical consciousness about their child's needs and (5) Motivated to make a change.

**Discussion** This study provides an insight into the experiences of carers of children with visual impairment in Northern Ireland. The immediate impact was real, often emotional and potentially will change carers' behaviours in their interactions with their child and with others involved in their child's life. EmpathEyes gives parents of children with visual impairment an opportunity to "see through" their child's eyes. It has the potential to be used as an educational tool on visual impairment for parents, teachers and medical professionals.

## Abstract booklet

### Oral presentation 3

*Dr Kathryn Fee, Miss Aislinn McAleenan, Prof Gerry Gormley*

#### **Enhancing person centredness...by design: introducing engineering students to point of view medical simulation**

Utilising simulation models is customary in engineering education and practice. However, with computational simulation there is a level of detachment from the most important stakeholder - the end user. While empathy is one of the first stages of the design thinking process, it can be difficult to give students the opportunity to observe and consult with potential end users, particularly when it comes to product development for biomedical applications, where individual needs and abilities are personal and vary significantly. In medicine, person-centred rather than computational simulation has been utilised for several decades. This is now recognised within biomedical engineering education. It has been documented that experiences gained through clinical immersions promote user-centred design processes in students.

Through person-centred medical simulation activities, the aim is to nurture engineering students to develop empathy in design to enhance their ability to design devices for all individuals.

A three-hour, person-centred, ageing simulation workshop was designed for the MEng Stage 4 Biomaterials and Medical Device module. Students were split into groups of 5-7. Each group was given a different scenario. Using GERT ageing suits and other devices, volunteers carried out several tasks based on their given scenario. The remainder observed, identifying challenges that the individuals faced.

Following a structured and evidence based debrief which focused on how they felt, what challenges they faced, etc., each group had to isolate a specific challenge and come up with design concepts to solve that problem.

Throughout students had the opportunity to apply their critical thinking skills. They had to identify a problem and implement an appropriate design solution to meet the needs of the individuals in the scenario. Students stated it was “eye-opening to see the difficulties people with these impairments go through on a daily basis”. When asked how the use of ageing simulation has influenced their outlook/approach to engineering design, students said it “really helped me think more empathetically, to take into account the needs of all types of people” and “it has given me a fresh perspective on design, and how an optimal design can work for everyone”. Furthermore, 100% of those who completed the feedback survey stated they “enjoyed the design challenge”, and they “would recommend the workshop to other students”.

This workshop brought a different dimension to both the module and the student’s way of thinking. It challenged the students in their abilities as engineers while emphasising the importance of empathy in design.

## Abstract booklet

### Oral presentation 4

*Miss Milda Karvelyte, Dr Janet Rogers, Prof Gerard J Gormley*

#### **Learning from the point-of-view simulation of illness experiences for healthcare professions: a scoping review of the literature.**

**Introduction:** Healthcare professionals (HCPs) who experienced ill-health were noted to demonstrate more empathic care approach towards their patients. Simulation can provide participants opportunities to feel aspects of illness in a supported and safe setting. Until 2020 no overarching review was provided analysing the impact/extent of this practise on empathic skills.

**Objectives:** Establish from the evidence base the overall knowledge about simulation-based learning methods of creating illness experiences for HCPs and the impact on their empathic skills.

**Methods:** Arksey and O'Malley's methodological framework informed our scoping review of articles relevant to our research question. Three databases (Medline, Embase and Web of Science) were searched in November - December 2020 and a sample of 516 citations was exported to Covidence Systematic Review Software© for screening. Following review and application of our exclusion/inclusion criteria - 77 articles were selected by February 2021 to be included in the review.

**Outcomes:** Of the 77 articles, 52 [68%] were based in the USA, 37 (48%) were qualitative in nature and 17 (22%) used a mixed-methods model. Majority of articles within the scope (87%) reported positive impact and a range of emotions evoked on learners. For example, loss of independence throughout paralysis or impairment simulations, left the majority of participants feeling vulnerable "somebody they did not want to be, something negative". Often learners gained a greater sense of not only imagined empathy but also activated desire to demonstrate empathic care towards their patients in the future. For instance, providing more time, ensuring conveyed information is well understood and maintaining eye contact. However, a few studies noted more negative effects and additional debriefing was required post-simulation. For instance, auditory hallucination studies reported a decreased willingness to help or interact with individuals with a mental illness; they did not engender goodwill or a desire to have contact, but rather facilitated social distance and negative emotions, as well as an increase in attitudes regarding forced treatment. A sense of suspicion and less positive attitudes toward older adults was likewise observed in some simulations of old age. Learners were observed to internalise perceived experiences of illness and critically reflected on their empathetic role as healthcare providers.

**Conclusions:** A wide range of simulation methods and techniques, instilling an embodied emotional experience, appear to have a positive impact on empathy and could be argued as offering a complementary approach in healthcare education; although, the long-term impact remains largely unknown.

## Abstract booklet

### Oral presentation 5

*Dr Elaine Nelson, Dr Andrew Spence, Prof Gerry Gormley*

#### **Stepping into the shoes of older patients: a scoping review of simulating ageing experiences for healthcare professional students.**

##### **Introduction**

Ageing simulation suits and equipment give Healthcare Professional (HCP) students the opportunity to experience what it might feel like to be an older person with a disability or illness associated with ageing. An ageing simulation experience where students have to complete Activities of Daily Living (ADL) tasks can highlight the challenges that an older person may face as they strive to maintain their independence.

**Objectives** We undertook a scoping review with the aim of establishing from the evidence what is known about simulating ageing experiences for HCP students and its impact on attitudes towards older patients.

**Methods** We applied Arksey and O'Malley's framework (1) to achieve relevant articles, which met the inclusion criteria for our scoping review question. Four databases (MEDLINE, Embase, Web of Science and Cumulative Index to Nursing and Allied Health Literature) were searched. This resulted in 114 citations. After screening these articles and applying our exclusion criteria, we had 14 articles selected for inclusion.

**Outcomes** Of the 14 studies, 8 (57%) originated from the United States of America and seven (50%) used a mixed-methods model. Thirteen (93%) studies involved medical or nursing students from varying years of study. One (7%) study had HCP students from multiple disciplines plus multiple years of study. There were two types of simulation experience identified: workshop based and the use of an Ageing Game. Sensory impairments simulated included visual and hearing impairments, mobility issues and specific illnesses like Parkinson's disease, stroke and diabetic neuropathy. Managing medications, managing finances and functional ability were the most common ADL simulated. The majority of studies reported a positive impact on knowledge in geriatrics plus attitudes and empathy towards older people. Negative emotions were reported, most commonly frustration over the inability to do a normally easy task.

**Conclusions** Teaching in geriatrics should be compulsory on all HCP undergraduate curricula and be a positive experience promoting successful ageing while raising awareness of ageism. As recognised trainers, we must attract and inspire HCP students into geriatrics as a future career. Future research should include interprofessional education, bringing HCP students together early as an undergraduate, throughout training and into postgraduate working to gain experience as part of collaborative Multidisciplinary Team working. The use of ageing simulation is an ideal teaching technique to facilitate this.

## Abstract booklet

### Oral presentation 6

*Miss Chara Banks-McGovern, Dr Diane Wilson, Prof Gerard J Gormley, Dr Grainne P Kearney*

#### **Examining within simulated and real patients personal space: bringing clarity to the blurred lines**

**INTRODUCTION** The physical examination is an integral part of medicine. Yet any examination has the ability to encroach upon a patient's personal space. Failings in communication during examinations can lead to examinations being misconstrued as inappropriate advances towards patients. Society has grown intolerant to the unsolicited breaking of personal boundaries following the #MeToo movement; medical education needs to reflect this same intolerance in their professional studies and practice - including working with simulated patients (SPs).

**OBJECTIVES** This study aimed to gain insight into the lived experiences of medical students when working within the boundaries of a individuals' personal space in their training, including working with SPs. This builds on previous research from the perspective of the simulated participants. This knowledge could guide further teaching of physical examinations skills to minimise any breakdown of trust in this vital interaction.

**METHODS** This qualitative study employed hermeneutic phenomenology to explore the lived experiences of medical students when working within patients (both simulated and real) personal space. Data was collected from seven medical students in Queen's University Belfast (QUB) through semi-structured interviews. This data was thematically analysed using Template Analysis in a reflexive approach.

**OUTCOMES** Four main themes were constructed from our analysis (1) Transitioning into a privileged position; (2) Negative role modelling: emphasising the physical; (3) Consent: a dynamic and fragile state; (4) A simple act or a complex performance?

**CONCLUSIONS** This study provided a unique insight into the lived experiences of medical students when working within an individual's personal space. The physical examination is a complex process influenced by a multitude of mediating factors. Medical educators need to reflect this complexity in teaching, mirroring societal interest around the boundaries of consent. The perspective gained from medical students has potential to shape this learning. Students need a pedagogical and psychological safe space to develop their interpersonal skills and to prevent adoption of the "clinical gaze" (i.e. when the clinical aspects of care are separated from the patient as a whole.) Insights from this research have already begun shaping education in QUB in which educators are focusing on developing the pedagogical space needed to create more consciously engaged doctors. Based on this study, students are provided with student-centric guidance on how to approach patients (whether real or simulated) personal space and in partnership with that person, to enter this space for their benefit of their professional training and practice.

## Abstract booklet

### Oral presentation 7

*Dr Daire McGrath Dr Gerard Gormley, Dr Helen Reid, Dr Paul Murphy,*

### **Medical students lived experiences of online Forum Theatre as a form of learning in consulting with victims of domestic abuse**

#### **Introduction**

Domestic abuse (DA) is a prevalent problem in today's society; Over 2.4 million adults in England and Wales experienced DA in 2019 (Office for National Statistics, 2019). DA can have significant impact on its victims. Health care professionals (HCPS) have an important role in the care of DA patients. Therefore, it is important that HCPs are adequately trained in recognising DA features and supporting victims during/following disclosure. One area that significantly requires improvement is domestic abuse teaching in medical students, as shown in a cross-sectional study carried out across UK medical schools, 52% of medical students who received DA training reported it only lasted between 0 and 2 hours (Potter LC et al, 2018). In this study, we aim to gain a deep understanding of medical students' lived experiences of online Forum theatre (FT) in consulting with DA victims.

#### **Methods**

A multidisciplinary team developed an online FT exercise, which involved a simulated consultation between a GP and DA victim. Spectators are invited to take the place of an actor or guide the actor and decide what action to take, thus helping to change the outcome of the scene. A qualitative approach was conducted, involving hermeneutic phenomenology, to explore participants' lived experience of the FT exercise. Following the online FT experience, medical students were interviewed, and interview transcripts were analysed using a template analysis approach.

#### **Results**

Five themes were developed through our analytical process: 1) "Almost being there - but not quite": the realistic experience of FT; 2) "Taken on an emotional journey" 3) "Opening and controlling a privileged space"; 4) "Small things matter": cultivating and maintaining rapport and 5) Critically reflecting on future professional self.

#### **Discussion**

This study provides an in-depth view into a medical student's experience of online FT. Online FT has the potential to provide a novel DA teaching method for medical students. By providing students with a unique opportunity to step into a GP's shoes in a DA consultation, students can practice how they will handle a DA scenario, without any potential consequences, helping them to improve their consultation skills.

## Abstract booklet

### TECHNOLOGY ENHANCED SIMULATION

#### Oral presentation 1

*Mr Toan Pham, Dr Paul Hamilton, Prof Gerry Gormley, Mr David Hardy, Dr Davina Carr*

#### **From concept to production: A screenplay for crafting educational Highly Immersive Virtual Environments (HIVEs) for simulation learning**

**Introduction** Simulation is a potent learning method. Beyond technical-skill development, other dimensions of learning are important including situational awareness. Increasingly, technology is being utilized to enhance context in simulation. One such technology is Highly Immersive Virtual Environments (HIVEs) (1). HIVEs permit learners to be immersed in a physical room and provide an enriched auditory, olfactory and visual context/backdrop; affording learners “bodily” experiences as a scenario unfolds - i.e. a tacit experience that is entangled with place. The possibility of contexts that can be produced in HIVEs is potentially limitless. As HIVEs gain traction in simulation, evidence needs to guide how best we optimize such technology in learning (2). In our project, a cross-discipline team devised a process for development HIVE content.

**Description** A 6-point plan was co-constructed to guide developing HIVEs content:

- 1) Team assembly: A diverse team with content experts, educationalists, technical experts, and end users (learners) should be formed to ensure a learner-centric project.
- 2) Define the educational purpose: Central to any effective HIVE content production - is to consider the educational purpose that it will serve. The effectiveness of the HIVE learning activity will hinge on its alignment to the intended educational purpose i.e. “Content with intent”
- 3) Create the story board: Developing a storyboard for the HIVE content is crucial for refining and enhancing its impact. As ever important to be mindful of making the scene as timeless and consider diversity in its content.
- 4) Filming preparation: Attention should be given to preparing to capture the content, including location scouting, risk assessment, permissions, AV equipment preparation, props, and planning for other factors like weather.
- 5) Filming day: Further risk assessment should be carried out, and the scene should be set up. Consent should be gained, and footage should be captured and played back to ensure it's correctly captured - otherwise try again! Equipment should be broken down, and the location should be left as found.
- 6) Post-production: Footage should be reviewed and edited to align with the educational purpose. Content should be trialed in the HIVE, and feedback should be sought and used to enhance future content.

**Discussion** This co-constructed process provides a route map of how to best generate HIVE content, that is grounded in learning. Developing high quality HIVE content will help enrich learning and allow the sharing of content with colleagues in the simulation community.



## Abstract booklet

### Oral presentation 2

*Prof Tim Brown, Mr Stephen O'Neill, Prof Frank Lyons*

#### **An Immersive Model Simulating Massive Surgical Haemorrhage.**

**Introduction** Non technical skills in the operating theatre (surgical human factors) relate to human and individual characteristics in the operating theatre which influence behaviours that affect patient safety and surgical outcomes. An important element of human factors to overcome is “startle effect” or “amygdala hijack”. Startle effect is induced by the experience of a sudden, catastrophic event which induces a stress response. The psychological outcome of this phenomenon is characterised by loss of situational awareness, tachypsychia and difficulty in making decisions. When this happens to an operating surgeon in cases of unexpected, massive haemorrhage, there is a threat to patient safety. A surgeon in “startle” must act to arrest haemorrhage whilst in a psychological state that is complicated by a difficulty in developing rational thought processes. Poor decision making whilst in “startle” may lead to inappropriate surgical manoeuvres that can attenuate the harm of the bleeding patient. The airline industry has recognised the concept of startle and trains pilots in a simulated environment to help them recognise the signs of startle in themselves but also has developed checklist strategies to overcome the human errors which are evident in decision making whilst pilots are in startle.

**Aims:** To develop an immersive simulated environment of massive, unexpected surgical haemorrhage in a patient undergoing elective laparoscopic nephrectomy. Virtual reality immersive simulation was used to limit unnecessary use of live animal models.

**Methods:** Ethical approval was obtained from the UK Home Office. A single porcine model was anaesthetised and prepared for laparoscopic surgery. The renal vessels of each kidney were dissected out. Both renal arteries were sequentially and deliberately transected with laparoscopic shears causing massive and catastrophic haemorrhage. 360-degree camera and sound recording was obtained which recorded the human factors at play within the theatre environment and the actions of the surgical team. The right renal arterial injury was managed inappropriately to simulate a surgical team suffering from “startle effect” and represents a simulation of “what not to do”. The left renal arterial injury was managed according to best practice and represents a “successful management” strategy to deal with “startle effect”. The image and sound capture were collated and edited and developed for presentation via a Virtual Reality headset.

**Conclusion:** A successful and realistic immersive virtual reality model of surgical haemorrhage has been developed and has multiple potential applications in the field of training to ameliorate and overcome surgical “startle effect”.

## Abstract booklet

### Oral presentation 3

*Miss Alison Smart, Miss Outi Lastumäki, Miss Sanna Sandström, Prof Kateryna Metersky, Prof Michelle Hughes, Miss Caitlin Cosgrove*

#### **Developing an International Virtual Gaming Simulation on a Patient with COPD & Complex Medication Profile**

**Introduction:** Virtual Gaming Simulations (VGS) can help facilitate the theory practice gap for healthcare students. VGSs are high fidelity, 2D immersive simulations using videos of simulated participants. Users engage in clinical decisions making throughout the simulation (Verkuyl et al, 2019) The authors identified a gap within undergraduate nursing education and created a VGS focused on preparing nursing students in caring for a client with acute exacerbation of chronic obstructive pulmonary disease (COPD) with complex needs.

**Objective:** Develop an international VGS that provides an opportunity for students to assess and plan nursing actions to a client admitted to the hospital for acute COPD exacerbation.

**Methods:** The VGS was developed by the international partners, a student advisory team, following each country's healthcare guidelines. INASCAL Standards of Best Practice were used as a guideline to inform the development of the simulation. The VGS is hosted on Pressbooks open platform for accessibility and created in H5P branching tool to incorporate interactive elements to increase student engagement. Students have an opportunity to use clinical judgement to act on the patient's history, assessment and diagnosis. The VGS engages students in complex clinical reasoning and decision making when providing a patient-centered, holistic approach to care with members of the interprofessional team.

**Outcomes:** The VGS can provide an excellent experiential and interactive learning opportunity for students to demonstrate clinical judgement, reasoning, decision making and reflection within a safe environment (Lapum et al., 2018). This presentation will discuss the development process of the VGS and learning that took place.

## Abstract booklet

### Oral presentation 4

*Dr Lorna Dysart, Ms Amanda Jackson, Dr Amanda Willis, Dr Stephen Adair*

### **Evaluation of a Virtual Reality (Simulated Clinical Treatment) program for Undergraduate (Year 2) Dental Students**

**Introduction:** Traditional teaching in operative dentistry involves the use of phantom heads/jaws incorporating single-use plastic teeth to enable students to develop clinical skills in a Clinical Teaching Laboratory (CTL). Training on plastic teeth lacks fidelity in comparison to normal/abnormal tooth substance resulting in a potentially unpredictable transition from pre-clinical practice to clinical patient work. CTL equipment and the phantom heads are expensive to maintain, especially when in constant use throughout the academic year. The Simodont® Dental Trainer units provide dental training in a 3D virtual reality environment (a “virtual reality phantom head”) to enable students learning of dental procedures. High fidelity haptic feedback (feeling) is provided through the drill hand piece, so students have an exact feeling of the objects and materials they are working on during the training. The Northern Ireland Medical and Dental Training Agency (NIMDTA) invested in 10 of these innovative dental simulators (Simodont®) at a cost of £35,000 each. We recently negotiated access to the Simodont® suite to run a pilot study with 55 second year dental students (2BDS).

**Objectives:** To assess how contemporary virtual reality (VR) technologies (Simodont) could be utilized to support clinical skills training for 2BDS students. To evaluate the perceptions of 2BDS students on this VR technology. To extrapolate any further potential applications for this technology in undergraduate clinical skills training.

**Methods:** A range of standardised tasks were undertaken by each student and automatically graded as a pass or fail by the Simodont trainer using set criteria. These selected tasks were analogous to those carried out by 2BDS students in the CTL. Cavity preparation dimensions and iatrogenic damage were measured and scored. To obtain student feedback on Simodont, an anonymized questionnaire was completed by 2BDS students at the end of the VR teaching sessions. The 2BDS students had no previous knowledge/ use of the Simodont Training Unit.

**Outcomes:** 93% (51 students) felt the training session improved their visual-motor skills.  
95% (52 students) felt using Simodont in the future would improve their preclinical skills.  
95% (52 students) thought of Simodont as a useful educational tool in UG dental training programs.

**Conclusion:** VR simulation provided additional ways to enhance the training within the undergraduate program. It is clear the majority of 2BDS students found Simodont helpful in preclinical dental skills training. Using this Simodont technology has shown to be beneficial and more sustainable for 2BDS students' progression from simulation to reality on patient clinics.

## Abstract booklet

### Oral presentation 5

*Dr Siobhan Smyth, Dr Fionnuala Jordan, Dr Yvonne Finn, Prof Nadin Dütthorn, Miss Luisa Grodeck*

### **The use of Virtual Reality Simulation (VRS) into final year of the Undergraduate Nursing Education Programmes**

#### **Introduction**

The presentation introduces Virtual Reality Simulation (VRS) scenarios developed as part of an ERASMUS+ funded trans-European project – “ViReTrain, Virtual Reality Training for Health Professionals”. It includes three scenarios with the special perspective of their development countries, interpreted in an international way. All scenarios are based on authentic cases from clinical practice and are embedded in a module.

Immersion and presence are key concepts related to the use and implementation of a VR set-up. VRS helps increase students' confidence by providing them with a safe environment, which allows for trial and error, an opportunity not afforded with real patients. VRS can enhance the link between theory and practice for students, through repeated exposure to virtual patient scenarios, and practicing of clinical competencies to meet the needs of these virtual patients.

This VR educational intervention speaks to the complexity of care by calling attention to and addressing the emotional aspects of communication and interaction.

This presentation will be for Nurse Educators, Health Professions Educators, Clinical Simulation Educators, Nursing Programme Directors/Leads and attendees interested in VRS.

#### **Objectives:**

- Presentation on educational concept informing the VR scenarios
- Introduction to VR modules and scenarios
- Discussion the Valve Index VR kit
- Overview of the educator's handbook

#### **Methods**

This VRS educational intervention activity speaks to the complexity of care by addressing the emotional aspects of communication and interaction.

#### **Outcomes**

This ViEeTain project shows the development of the educational concept, the modules and the scenarios, the development of the educators handbook and the use of the hardware to run the VRS.

#### **Conclusions**

This project describes an innovative educational concept and related modules with VR scenarios, which can provide immersive learning opportunities for senior nursing students. The VRS scenarios can be integrated into a nursing curriculum, to train that competencies of student nurses needed for the complex demands of changing nursing practice.

## Abstract booklet

### Oral presentation 6

*Dr Brendan Noonan, Ms Megan McCarthy, Mr Billy O'Mahony, Mr Eoghan Cooke, Prof Josephine Hegarty, Dr David Murphy, Ms Nuala Walshe, Dr Mohamad Saab*

### Virtual Reality Simulation in Nursing and Midwifery Education

**Introduction:** Virtual reality (VR) includes a variety of computer based applications commonly associated with immersive, highly visual, 3D characteristics that allow the participant to look about and navigate within a seemingly real or physical world (Lopreiato et al. 2020). VR simulation offers students the opportunity to acquire clinical and psychomotor skills in a safe and interactive environment. There is little evidence on the use of clear theoretical and pedagogical models to inform the design and use of VR in virtual learning environments (Fowler 2015). Moreover, the evidence on the feasibility of incorporating this innovative learning and teaching technology in nursing and midwifery education is lacking.

**Objectives:** To describe the usability of VR simulation among nursing and midwifery students, as well as their level of satisfaction with VR simulation, and explore their experiences of engaging with VR simulation.

**Methods:** Participants were recruited using convenience and snowball sampling and engaged in a 20-minute virtual reality simulation scenario of their choice. They then completed a 21-item survey comprising a sociodemographic questionnaire, the System Usability Scale, a satisfaction questionnaire, and open-ended questions. Quantitative data were analyzed using descriptive statistics, and qualitative data were analyzed using deductive content analysis.

**Outcomes:** Forty-three students participated in this study. The mean (SD) System Usability Scale score was 75.87 (13.7), indicating that virtual reality simulation was acceptable. Almost all participants were either “extremely satisfied” or “somewhat satisfied” with virtual reality simulation, which was perceived as informative and enjoyable, fostering safe and self-directed learning without causing patient harm. Participants recommended using virtual reality simulation to practice clinical skills, prepare for clinical placements, and learn about rare clinical situations.

**Conclusions:** The space for VR needs to be primed a priori, particularly given that the development and deployment of VR simulation are resource heavy. The undertaking of a pilot study is recommended to help identify the most effective means of leveraging VR simulation and mitigate unforeseen problems. Virtual reality simulation, although novel and engaging, becomes futile if not underpinned by a strong pedagogy and aligned with learning outcomes. Key stakeholders including students and educators need to be trained in VR use prior to implementing VR simulation.

- Reference
1. Lopreiato JO, Downing D, Gammon W, et al. The Terminology & Concepts Working Group. Healthcare Simulation Dictionary. 2nd ed. Rockville, MD: Agency for Healthcare Research and Quality; 2020: <https://doi.org/10.23970/simulationv2>
  2. Fowler C. Virtual reality and learning: where is the pedagogy? *British Journal of Educational Technology*. 2015;46(2): 412 - 422.

## Abstract booklet

### Oral presentation 7

*Prof Tim Brown*

#### **Feasibility study to examine the use of replica 3 dimensional anatomical models as an adjunct to fully autonomous surgical consent.**

**Introduction:** It is mandatory on a statutory and ethical level to provide a fully autonomous and educated consent process setting out an individual patient's potential course of therapy. In addition, there is a statutory requirement that this process specifies the material risks attached to that treatment as well as all other alternative therapeutic options and their inherent risks. This process requires time, dialogue and certainty that the clinician is satisfied that the patient undergoing treatment understands the risks as they have been explained. The judgment in the Montgomery vs Lanarkshire Health Board, 2015 case describes: "This role [consenting] will only be performed effectively if the information provided is comprehensible. The doctor's duty is not therefore fulfilled by bombarding the patient with technical information which she cannot reasonably be expected to grasp, let alone by routinely demanding her signature on a consent form."

The use of surgical imaging and technology is widespread within all aspects of surgical care. Images that are commonly used to outline a potential surgical problem are those acquired from Computed Tomography (CT) or Magnetic Resonance Imaging (MRI) scanning. Images acquired are then interpreted and reported on by expert radiology doctors who describe findings. These findings are then interpreted by a surgeon whose role is to educate their patient in preparation for individualised treatment options. Comprehending images from CT and MRI scanning requires training and experience. Without training and experience, it is very difficult to translate 2 dimensional axial or sagittal CT or MRI images into an understandable anatomical mental reconstruction and is often incomprehensible to the untrained observer. Patients are commonly shown their own CT and MRI images during the consent process. Comprehension of 2 dimensional images can be confusing, is a failure of autonomous consent and violates the philosophy underpinning the statutory and ethical requirements of consent.

**Aims:** A pilot study to improve patient understanding of their condition using exact replica, 3-dimensional, reconstructed anatomical models as an adjunct to autonomous consent.

**Methods:** Axial imaging modalities were digitally segmented and sent for 3-Dimensional printing (Axial 3D). Patient specific replica 3-Dimensional anatomical models of patients complex surgical problems were created and used as educational adjuncts to aid the consent process in the outpatient clinic.

**Conclusion:** High fidelity 3-Dimensional reconstructions of anatomical problems were accurate. Anecdotally, there was a high satisfaction and improvement in understanding of patients using 3-Dimensional models as an adjunct to their personalised consenting process.

## Abstract booklet

### Oral presentation 8

*Miroslav Voborsky, Dr Victoria Meighan, Prof Walter Eppich, Dr Claire Condron, Adam Roche, Dr Ger O'Connor*

### Developing a clamshell thoracotomy model for multidisciplinary simulation training

#### Introduction

In Ireland's National Emergency Medicine Training Programme, high fidelity simulation is firmly entrenched. Trainees in emergency medicine frequently travel to RCSI SIM in Dublin to take part in high-fidelity simulation scenarios with a variety of on-site ED clinicians, nursing staff and advanced paramedics.

Teamwork, human factors, and patient and clinician safety are the main topics of these training days. The High Acuity Low Occurrence (HALO) procedures are part of the "Trauma Lead" module, which provided the possibility to develop an in-house clamshell thoracotomy model for these multidisciplinary simulation sessions.

#### Objectives

The aim was to develop a cost effective in house clamshell thoracotomy trainer, which is fixed to the chest of a high fidelity manikin, allowing ergonomically safe thoracotomy procedure for emergency medicine team as part of the complex management of the penetrating chest scenario.

#### Methods

A healthcare simulation technician (MV) and a consultant emergency physician (VM) worked collaboratively to develop the model. VM has participated in numerous EDTs as the primary operator and an assistant and has hands on experience of the technical, ergonomic and critical thinking components the procedure requires. Spiral model to guide the evolutionary design and manufacture using the concepts of functional fidelity in developing this task trainer played key role in the model development.

#### Outcomes

This novel model simulates a clamshell thoracotomy, which provides learners an anatomically correct and ergonomically safe approach when performing & practising the procedure. The chest wall comprises five main components to simulate the various anatomical structural layers; all made of synthetic materials and is re-usable for multiple training days.

#### Conclusion

In this innovation, we sought to develop high fidelity thoracotomy trainer to accompany non-technical skills practice for multidisciplinary simulation based education. This provides emergency clinicians with unique opportunity to practice HALO procedures in safe learning environment.

## Abstract booklet

### SURGICAL AND ANAESTHETIC SIMULATION

#### Oral presentation 1

*Dr Emma-May Curran, Dr Victoria Meighan*

#### **Can Multi-disciplinary Simulation Based Training Reduce Time To Delivery Of Blood Products During A Massive Transfusion**

**Introduction** Haemorrhagic shock is the one of the leading causes of death in trauma patients and early recognition of blood loss, haemorrhage control and rapid massive transfusion is lifesaving. Efficient delivery of blood products is essential to the care of trauma patients and is dependent on excellent multi-disciplinary teamwork and communication.

**Objectives** In our institution, a Dublin based Designated Trauma Unit, we sought to investigate the effect of multi-disciplinary simulation based medical education on time to delivery of blood products in massive transfusion.

**Methods** Four multi-disciplinary team (MDT) simulation based medical education training sessions were held between 2020 and 2022. The MDT included prehospital National Ambulance Service, emergency department medical and nursing staff, porters, health care assistants, surgical and intensive care doctors and blood bank staff. Each simulation was based on a major trauma and used a standardised massive transfusion protocol.

To evaluate the efficacy of the MDT simulation based training, a retrospective review was carried out which analysed the; i) Activation of the massive transfusion protocol, ii) time to issue pack one, and, iii) time for pack one to be collected from the lab.

**Outcomes** Prior to the MDT simulation-based education the average time from activation of the massive transfusion protocol (MTP) to the blood arriving in the emergency department was in excess of 40 minutes. After conducting the training, the time decreased to 32.8 minutes. The average time from activation of the MTP to issuing pack one was 13 minutes and from issuing the blood to delivery to the emergency department was 20 minutes which was a significant improvement on the pre-training times.

**Conclusions** We demonstrated a reduction in time to delivery of blood products associated with regular MDT in situ simulation training. Deliberate practice of the massive transfusion protocol improved teamwork and communication which lead to reduction in time taken for the delivery of critical blood products.



## Abstract booklet

### Oral presentation 2

*Dr Midhun Mathew, Dr Ogulcan Yilmaz*

#### **Can simulation-based training help surgical trainees perform better on surgical ward rounds? A scoping review**

**INTRODUCTION:** Surgical ward rounds are an important part of hospital care as they allow members of a multidisciplinary team to make patient-centred choices (1). See one do one teach one form of clinical education as explained by Halstead's paradigm, is a traditional teaching method and can negatively impact patient care if it remains solely in its current form (2). It is also deficient in teaching inter-personal aspects of ward rounds such as communication with patients and colleagues. Simulation can aid the transition from learning medicine to applying it by allowing practice and repetition in a safe setting that simulates real-life scenarios. Simulation provides trainees with a safe, high-fidelity environment that enhances the retention of information and allows junior doctors to gain transferrable skills which can then be used in the clinical setting (3).

**OBJECTIVES:** The aim of this study is to review the literature and describe evidence for improved surgical ward round competence through simulation-based training.

**METHODS:** A comprehensive search of Medline and Google Scholar databases for studies on surgical ward rounds and simulation between 2013 & 2021 was performed using the following Boolean operators: Surgical ward rounds, Teaching rounds, Simulation-based training OR High-Fidelity Simulation Training, Simulation training AND surgery. The inclusion criteria included exclusively surgical trainees who must have participated in simulation-based surgical ward rounds. Randomised controlled trials, review articles, simulation studies, interview studies, comparative studies, and clinical audits were included. Eleven studies were chosen for this review and was reported according to the PRISMS-ScR protocol.

**OUTCOMES:** The review suggests that simulation training is an economical and feasible addition to surgical training. It draws light on the fact that adequate ward simulation training allows surgical trainees to engage in impactful interactions with patients and colleagues. It also allows trainees to develop verbal and non-verbal skills through these simulative scenarios. Furthermore, it can develop their abilities to organize the entire interaction in the real ward setting. This improvement will lead to more effective patient/doctor communication, which has a favorable impact on patient safety.

**CONCLUSION:** This review concludes that majority of the surgical trainees feel simulated ward rounds are educationally useful and the skills acquired are easily transferable to real settings. The reduced working hours and decreased hands-on practice in today's hospital settings have escalated the need for an alternative source of training. Using simulated surgical ward rounds effectively provides practice and non-judgmental feedback on the performance of the trainees.

## Abstract booklet

### Oral presentation 3

*Mr Ahmed Mohamed, Dr Sarah Berry, Mrs Collette Donnelly, Mrs Evelyn Irvine*

#### It's a wrap! Protecting gastroschisis bowel

##### INTRODUCTION

Gastroschisis is a congenital defect of the anterior abdominal wall defect characterised by the herniation of abdominal contents through a defect usually located on the right side of the umbilical cord. (1) Team-working, collaboration and clear communication between the obstetric, neonatal, and paediatric surgical teams are critical to achieving optimal outcomes in GS. (2) A national cohort study of all surgical units in the UK and Ireland identified primary closure as the most common intended surgical management for antenatally detected cases of simple gastroschisis. (3) A local retrospective audit in our department identified a higher rate of staged gastroschisis repair in the last 10 years with 66% of patients requiring initial silo placement, when compared to 36% national average. (3) Local data also demonstrated that patients with silo placement took longer to achieve full feeds, prolonged TPN, delayed discharge, and increased complication rates.

**OBJECTIVES** To create an interprofessional simulation programme for the preparation and management of a gastroschisis delivery, resuscitation, and initial stabilisation. Aims of this project are to improve awareness of optimal stabilisation management, the efficiency of bowel wrapping and clear communication amongst the multidisciplinary team with the overall goal of improving the rate of primary closure and outcomes in our unit.

**METHODS** A gastroschisis simulation model was created using vegan sausage casings, jelly, and food colouring to create the bowel. The simulation programme focused on; team education of optimal GS management, team and delivery room preparation, primary resuscitation and bowel wrapping with cling film. Following a lecture on gastroschisis management and a demonstration of delivery room stabilisation, participants were divided into teams of five, given a scenario, asked to prepare equipment, allocate roles and work in sync to achieve effective resuscitation and stabilisation of the newborn. Pre and Post simulation feedback was collected and the course was adapted using a PDSA cycle.

**OUTCOMES** Pre-simulation: 56% of participants had no previous training or clinical experience of the management of gastroschisis and 78% did not feel confident in providing delivery suite management and stabilisation. 100% of attendees felt the simulation training improved their confidence of initial management and stabilisation of gastroschisis and all would recommend this course to their peers.

**CONCLUSION** Simulation-based interdisciplinary team training can serve as a channel for the acquisition and maintenance of clinical skills and is crucial to improving the management of complex neonatal conditions.

## Abstract booklet

### Oral presentation 4

*Mr Mark Evans, Dr Gemma Clements, Dr Corinna Clarke, Mrs Paula Ryan, Mr David Curry, Dr Ajit Dhillon*

### **Simulated uro-oncology multi-disciplinary team meetings: a novel training approach.**

#### **Introduction**

Multi-disciplinary team meetings (MDTM) provide a space for clinicians, nurses and allied health professionals to discuss individual patient treatment recommendations, an ideal place for trainee learning. An aging population and plethora of management options has increased both medical complexity and caseload. Cancer Research UK reported greater than half of MDTM case discussions are less than two minutes duration, resulting in a pressure of activity that does not lend itself to teaching or trainee engagement. We aim to simulate MDTMs focused on urological cancer as a vehicle for Urology Specialist Trainee (ST) learning and acclimation with local procedure.

#### **Materials and Methods**

2 MDTMs were undertaken on the urology ST mandatory teaching days. The first focused on bladder and the second renal cancer. In total 28 real cases representing a range of complexity, were prepared with patient consent. Documentation mimicked the original MDTM. A radiology ST was recruited to present the imaging for the first MDTM. During the second MDTM a radiology, oncology, pathology ST and specialist uro-oncology nurse were recruited to their respective roles. The simulated MDTMs were undertaken with trainees tasked to present cases and generate outcomes which could then be compared with their authentic counterparts in the subsequent debriefing session. A mix-methods feedback questionnaire was emailed to participants after each session.

#### **Results**

8 participants attended the bladder session and 7 the renal. Participants ranged from ST3 to ST7. The questionnaire response rate was 87%. Prior to the first session no trainee had experienced a similar session. 100% of respondents felt that the teaching was grade relevant and addressed curricular topics. Suggested improvements after the first MDTM were inclusion of a guideline re-cap and introduction of more trainee MDT members, which were addressed in the second session. Participants particularly enjoyed the realism, inclusivity and interaction with other specialties and nursing specialists. Respondents now felt more confident to present at real MDTMs.

#### **Conclusion**

Simulated MDTMs are a well-received novel teaching modality, promoting multi-disciplinary learning and drive acclimation. Given the prevalence of MDTM in clinical practice this teaching method is widely scalable. Future developments include exploring MDTM streamlining through translational simulations.

## Abstract booklet

### Oral presentation 5

*Mr Conor Hamilton, Ms Daphne Martin*

#### Simulation in Endoscopy Nursing

Endoscopy Practice is dependent upon good team working and this is evident in emergency situations. Emergencies are rare however, endoscopy nurses need to have to knowledge and skills to act in these situations. Simulated practice allows nurses to work together in the knowledge that they are within the safety of a non-clinical environment. Simulation exposure improves non-technical skills and increases situational awareness. The short course in endoscopy nursing provides students with a connected approach to learning of which simulation is one pedagogical approach. Students engage in both role play and high-fidelity simulation. This provides an immersive experience of patient experience and team member roles essential in the provision of person-centred care in an endoscopy emergency.

## Abstract booklet

### Oral presentation 6

*Mrs Oonagh McCloy, Mrs Daphne Martin, Mrs Nimmy John*

#### **Simulation in Anaesthetic Nursing- A Safe Space**

Simulated practice experience was fundamental to the curriculum planning process for the CPAD short course in anaesthetic nursing. The AAGBI (2018) indicate that there must be dedicated assistance to the anaesthetist and the practitioner must be educated to a national standard. At QUB, this programme meets these standards. The three module, 60 credit course allows registered nurses to study theory, and practice their knowledge and skills in anaesthetic nursing, enabling them to be competent anaesthetic assistants. In fulfilling the delivery of content, simulation provides the opportunity to practice new skills and demonstrate knowledge and understanding in a safe environment (Coyle, Martin & McCutcheon, 2020).

Using INACSL Simulation Standards of Best Practice (2021) to design the simulation scenarios, they meet the programmatic goals and provide an effective simulation-based experience for the students.

Students engage in role-play and high-fidelity simulation for anaesthetic clinical situations, whereby they ensure the theatre environment is prepared for anaesthetic procedures and emergencies that can occur in this area of practice, e.g. Trauma, Local Anaesthetic Toxicity, Bronchospasm and Laryngospasm. Within the theatre environment, the ways to identify some emergencies are not as evident as in other settings with awake patients, and so these simulated experiences build on both the technical skills and non-technical skills related to human factors required to manage such events (Coyle, Martin & McCutcheon, 2020). There is also a focus on airway management of adult and paediatric patients and care and management of patients with high BMI.

To ensure the simulated experiences are acknowledged for their relevance and importance, the exposure is reflected upon in two written accounts, an exam, OSCLER and are directly linked to their clinical skills portfolio. This assessment approach allows for a connected learning experience and application of University learning into clinical practice.

We have recently identified an area of interdisciplinary teaching with our midwifery colleagues that would benefit from simulation. Our next step is to carry out simulated emergency experiences with our post graduate anaesthetic nursing students and post graduate midwifery students. Utilising the CAVE, a highly immersive virtual environment, we aim to create the obstetric theatre environment to enhance the immersive simulated experience and help our students gain confidence and competence in all aspects of care in these emergency situations in a safe environment.

## Abstract booklet

### Oral presentation 7

*Dr Daniel Hollington, Dr Neal Morgan*

#### Student Simulated IV Fluid Management and Prescribing - A SaFEr way to learn together

**Introduction** IV fluids are high risk medicines with a reported risk of morbidity or harm of 20% when used incorrectly. A 2020 RQIA report identified significant non-adherence to NICE guidance (CG174: IV fluid therapy in adults in hospital) and a Regional Education and Training Task and Finish Group was established, tasked with producing a training package capable of competency assessment of doctors, nurses and pharmacists managing fluids. The SIVMAP (Simulated IV Fluid Management and Prescribing) program was developed to focus mainly on prescribing. Content was carefully mapped to the key learning themes of CG174 across a 6 station circuit and whilst educationally successful its 2:1 faculty to learner ratio was unsustainable.

**Objectives** To provide a sustainable, effective simulation-based learning programme to support IV Fluid training with a model that could be adapted to numerous high risk prescribing themes, empowering learners and supporting inter-disciplinary team working.

**Methods** Recognising euvoaemic simulated actors added minimal fidelity we developed Student SIVMAP. This utilised SIVMAP's case materials (admission booklet, charts etc.) alongside detailed GoogleForms that hosted faculty-prep, assessment and debrief. Model answers and specialist insight were embedded within each form. This facilitated Student SIVMAP's "Student as Faculty Educator (SaFE)" dynamic, whereby participants alternate between stations as faculty and learner. Participants were sent links to prep for their faculty roles in advance, one senior faculty led the simulation. After successful undergraduate pilot work Student SIVMAP was delivered at 2022 Southern Trust F1 induction with all 40 Foundation Year1 trainees and numerous nurses participating in three half-day sessions. Feedback on changes to "self-reported confidence" and "sense of preparedness for independent practice" was recorded throughout.

**Outcomes** Pilot work showed 75% of students preferred the Student as Faculty Educator dynamic; citing it was more engaging, less tiring, helped consolidate their learning and provided useful insights into their peers thought processes. Both pilot and induction sessions successfully empowered semi-autonomous interdisciplinary team learning and were delivered with a faculty to learner ratio between 1:12-21. Averaging results from all 6 induction stations 89% of medics reported feeling more/much more confident (range 77-100%) and 87% of nurses reported feeling more/much more confident (range 86-90%). Preparedness for independent practice scores averaged 7.0/10 for medics and 6.8/10 for nurses. The model helps direct further educational focus and sharing all faculty links post-simulation supports real-world clinical practice.

**Conclusions** Student SIVMAP presents a novel effective sustainable model for multi-disciplinary education and training, especially high risk medication management.

## Abstract booklet

### Oral presentation 8

Jamal Ross

#### **Cadaver-less anatomy: New paradigms in Neurosurgical Simulation Training**

**Aims** Neurosurgery is one of the most unforgiving surgical specialties and thus junior doctors are rarely afforded opportunities to practice and gain new skills in the OR, in the interest of patient safety. In many instances, junior doctors become passive observers and are delegated very simple tasks that do not enrich their understanding or lead to skill acquisition. We set out to use the VARK model of learning which encompasses, visual, . Auditory, reading and kinaesthetic stimuli (Fleming., 1987) to create a cadaver-less Neuroanatomy simulation platform that improves accessibility, minimises cost and environmental damage, whilst ensuring that trainees get a more immersive and tailored surgical experience, without posing harm to patients.

Furthermore, there are often inequalities in surgical training across the UK which creates disparities in competencies amongst junior doctors, which needs to be addressed and mitigated. We believe that surgical simulation is therefore an underutilised tool in medical and surgical education and should be integrated very early into training to enable doctors to acquire the necessary tactile and cognitive skills required to excel within their chosen surgical discipline.

**Methods** This study was conducted in two phases. In the first phase, we conducted a needs assessment survey among junior doctors to identify their knowledge and training needs related to neuroanatomy. In the second phase, we provided simulation training in neurovascular anatomy using augmented reality, 3D printing and a procedural exercise on Transnasal Transphenoidal approach to the pituitary. Data was gathered from interviews with 30 participants comprised of medical students, junior doctors and surgical trainees. Participants took our neurosurgery skull-base course where they were able to explore the skull base in a mixed reality setting whilst having tactile models with pathological findings. Real patient's CT and CT-A scans were converted into digital assets that were 3D printed within hours and posted to the recipients around the world. We devised a kinaesthetic way for students to learn advanced skull-base surgical anatomy as well as procedural skills that are transferable to the operative realm.

**Results** Kinaesthetic learning was deemed more intuitive than textbook learning by 93% of participants. 80% of trainees felt like they understood a more critical part of surgical anatomy, namely spatial relationships. This mode of training was extremely cost-effective whilst reducing solid waste and energy consumption. Equivalent operative demonstration of these principles would have caused approximately 750-1250kg CO<sub>2</sub>e , with major procurement of anaesthetic agents. Moreover, we found that our simulation had more educational value than cadaver dissection as trainees performed better in retention of anatomical structures when compared with our cohort who partook in cadaver dissection alone.

## Abstract booklet

**Conclusion** There is a significant challenge ahead to ensure that surgical trainees acquire the necessary skills to progress in their careers. We find that surgical simulation is an underutilised method for training surgeons and can bring a more sustainable future to surgical training. We also found that simulation was far superior to cadaver dissections which, based on our findings, provided little educational value to trainees. From this study we have found repeatability and task decomposition to be particularly important for refining newly acquired psychomotor skills, both of which are not possible in the OR or in Cadaver labs. Surgical simulation is a powerful tool that can help to reduce inequalities and disparities in surgical education across the UK.



## Abstract booklet

### INTERPROFESSIONAL SIMULATION

#### Oral presentation 1

*Dr Davina Carr, Prof Gerry Gormley, Miss Alison Smart, Dr James Reid*

#### **“Visiting Uncertainty Together” - an immersive home visit simulation for final year medical and GEMS (Graduate Entry Masters Students) nursing students**

**Introduction** Newly qualified healthcare professionals are required to be able to care for patients who are acutely unwell in a variety of settings, including the patient’s home. Patients who require urgent care in their own homes are at risk of acute deterioration. Differentiating acute deterioration from self-limiting conditions is challenging, even for experienced clinicians. Preparedness for practice is directly linked to opportunities for experiential learning and there are many barriers facing healthcare students accessing suitable experiences of acute care in all clinical environments: one being the patient safety culture that can counterproductively reduce students’ active contribution to patient care. Furthermore, students are offered few opportunities to confront their own professional uncertainty on clinical placements.

**Objectives** Simulation has been used in healthcare education as an adjunct to experiential learning in clinical environments since the 1950s. At present, the utilisation of immersive simulation in primary care for healthcare students is less common than other clinical environments. Simulation in primary care offers many opportunities for senior students to gain opportunities to develop skills in assessing patients who are acutely unwell, in recognising the gravity of these situations and in initiating prompt management plans that minimise further harm to patients. Decision-making when there is clinical uncertainty or ambiguity requires situated cognition and students should be offered suitable opportunities to reflect on the multitude of factors influencing the process of shared decision-making between clinicians and patients. Being able to successfully manage clinical uncertainty and ambiguity has a significant impact on healthcare resources and staff wellbeing.

**Methods** Faculty at Queen’s University aspired to address the lacuna of experiential learning opportunities to manage uncertainty in acute, critical and emergency care by developing a simulated home visit scenario on an “Acute Care Course” for final year medical and GEMS nursing students. Students were presented with an authentic simulated scenario where students had to assess a simulated patient and agree a suitable management plan within a short timeframe.

**Outcomes** Debriefing discussion between students, faculty and simulated participants focused on the cognitive, emotional and ethical impacts of uncertainty and how recognising, accepting and navigating uncertainty influenced the clinical decision-making process and potentially, patient outcomes and healthcare experiences.

**Conclusions** A simulated interprofessional home visit is a valuable learning activity for healthcare students to participate in decision-making when there is clinical uncertainty. It encourages students to make their clinical judgments explicit and have a curiosity and understanding of the reasoning of others.

## Abstract booklet

### Oral presentation 2

*Dr Billiejoan Rice, Prof Marian Traynor*

#### **Development of a summative assessment method for interprofessional simulation and other interprofessional education (IPE) activities.**

**INTRODUCTION** Collaborative learning is recognised as essential in ensuring the delivery of safe and effective healthcare. It is fundamental to creating the healthcare teams of the future. Central to this is the early exposure of healthcare students to multiple healthcare professions to begin the process of thinking and practicing in a more interprofessional way. Importantly, how the interprofessional experience is assessed is crucial to the success of collaborative learning. This was the background the development of an Interprofessional module within the School of Nursing & Midwifery at QUB.

**OBJECTIVES** (1)To collaborate on the development of additional IPE workshops to supplement an established interprofessional simulation model.

(2)To develop an assessment component for the interprofessional activities, including interprofessional simulation.

(3)To evaluate the process.

**METHODS** Drawing upon the expertise associated with the implementation of a highly successful Interprofessional simulation programme, an interprofessional education (IPE) group was established with representation across the faculty. From the outset, there was a need to have a shared understanding of the module and its complexities, and to work together to collectively support the pedagogy, shaping student learning and assessment, and providing the best educational experience. The team collaborated on sourcing and establishing IPE workshops, developing reflective questions, as well as working on designing and integrating an online video within a digital platform, and streaming all students to one interprofessional workshop. An evaluation questionnaire was created using Microsoft Forms. The 17-item questionnaire incorporated three Likert scales, plus two either/or answers, and two questions on digital device/browser. The questionnaire had ten qualitative “free response” questions to allow candidates to elaborate, expand, clarify, or illustrate their answers.

**OUTCOMES** The collaboration with staff across the Faculty of Medicine Health & Life Sciences resulted in the establishment of four additional IPE workshops to complement an established six. Total number of IPE workshops n=10. These workshops were positively evaluated by both students and staff and one workshop contributed to a national IPE award. Importantly the video-based, reflective, summative assessment submitted following participation in the IPE workshops were of a high standard with students reflecting on the importance and value of having the opportunity to engage with other professions and on how the IPE simulated workshops adding to their learning.

**CONCLUSIONS** Interprofessional opportunities that utilize a reflective video-based assessment contribute positively to the student experience and is a welcome addition to the undergraduate nursing curriculum.

## Abstract booklet

### Oral presentation 3

*Dr Lorna Lawther, Ms Katrina McCullough, Ms Lisa Robinson, Ms Pauline Topping, Ms Esther McClurg, Ms Rebecca Barr*

### **Facilitating Interprofessional Simulation Based Education - the experience of the Midwifery Education Simulation Working Group**

#### **Introduction**

There is a need to create a culture of learning and support in maternity care services to enhance interprofessional working relationships to optimise maternity care for women and families (Kirkup, 2022; Ockenden, 2022). Interprofessional Simulation Based Education (ISBE) can support this requirement however the ability to develop ISBE is constrained by the lack of facilitators who are skilled in the design and implementation of high quality theoretically designed simulation (Forstronen et al, 2020). Practitioners require support and experiential learning to become facilitators. The QUB Midwifery Education Simulation Working Group (MESWG) was established in QUB in 2019 and oversees the implementation of the simulation strategy for midwifery education within the curricula. The clinical working group members have been given support to develop transferrable knowledge, skills and practice in facilitating Simulation Based Education. This has the potential to impact on ISBE in maternity care settings in NI.

#### **Objectives**

To present the experiences of members of the QUB MESWG and the impact on ISBE in maternity services in HSC Trusts in NI.

#### **Methods**

A reflection on the impact of the MESWG on personal and professional learning and initiatives that have been implemented in ISBE in maternity services in their Trust as a result.

#### **Outcomes**

Membership of the MESWG has created impetus to drive change in how ISBE is implemented in practice. Supporting undergraduate midwifery students and connecting with midwifery academics experienced in SBE, has enabled skills acquisition in co-design, co-facilitation of SBE and shared learning with other clinical colleagues. This has influenced SBE in practice and enabled a network of support, thereby increasing the quality of the learning experience for the interprofessional team.

#### **Conclusions**

Creating a culture of learning and support requires consideration of the implementation strategies that can be used including up-skilling clinicians to facilitate ISBE. This can contribute to interprofessional respect, understanding and a positive working and learning environment and ultimately improve maternity care for women and families.

## Abstract booklet

### Oral presentation 4

*Dr Billiejoan Rice, Dr Janine Stockdale*

#### **InterSim and learning to take a systematic approach to interprofessional simulations**

##### **Introduction**

Interprofessional simulation-based learning enables healthcare professionals to learn with, from, and about each other. Therefore, it is a powerful modality for conducting educational opportunities which brings together healthcare professionals from diverse backgrounds (Benishek et al, 2020). With the opening of the KN Cheung InterSim centre at Queen's University Belfast in 2021, came new opportunities for healthcare students to learn alongside other disciplines for the first time. Nonetheless, interprofessional education is not without challenges (Marion et al., 2023).

##### **Aim**

Using a nursing and midwifery as an example, this presentation outlines the challenges and solutions related to pre-registrant students taking part in an interprofessional simulation.

##### **Method**

While two distinct professions, nurses and midwives do share some knowledge, skills and professionalism as outlined by the Nursing and Midwifery Council. However, when it comes to designing simulation that meets the learning requirements of both professions, the differences in philosophy, knowledge, skills and learning goals outweigh the similarities. To align and integrate the learning goals for both professions, a co-design template that focused on the motivational impact of designing interprofessional simulation was developed and applied.

##### **Outcome:**

This presentation provides a copy of the designed template and suggests top tips for using it when designing and implementing interprofessional scenario-based simulation.

**Conclusions:** Interprofessional simulation has many benefits however, to ensure that it meets the needs of all professions, there is a need for a systematic, co-design approach. Using an agreed template provides this opportunity.

## Abstract booklet

### Oral presentation 5

*Dr Saema Saeed, Dr Victoria Meighan, Dr Emer Kidney, Ms Sandra Hartigan*

#### **Introduction of Multi-Disciplinary Simulation Training in Obstetric Emergencies**

**Background:** Obstetric emergencies are very stressful for emergency physicians working in non obstetric hospitals. Obstetric emergencies require high quality time critical care from a multi disciplinary team. Following major incident debriefing after an obstetric emergency presentation, it was discovered our team felt stressed by these presentations because of lack of familiarity and training in obstetric emergencies.

**Aims:** The aim of our simulation training was introduce a blended learning training session including multidisciplinary simulation based medical education to reduce health care provider fear and stress and to improve confidence in dealing with obstetric emergencies.

**Method:** We designed a blended learning obstetric emergencies training day for a multidisciplinary team (MDT) which included the National Ambulance Service (Prehospital), Emergency Medicine medical and nursing staff, hospital porters, health care assistants, Obstetric and Gynaecology medical and nursing colleagues, Paediatric medical and nursing colleagues and Intensive care doctors. The simulations were focused on Eclampsia and Cardiac arrest in pregnancy and included two MDT simulation based medical education training sessions.

The scenarios had specified learning outcomes including technical and non technical skills training. Each participant was asked to complete a standardised questionnaire afterwards and provide feedback on the training day. The structured simulated scenarios lead participants through patient handover, assessment, investigation and management decisions, followed by a structured debrief. Clinical results, equipment and live monitoring are used to increase the fidelity of the simulation.

**Results:** Data was presented on survey responses from the 25 attendees (n=25, with a 100% response rate). It was a first ever simulation based training day on obstetric emergencies for 68% attendees. The course improved candidates' confidence (88% positive response) in dealing with these emergencies with all scoring above 8 on a linear scale on having learnt new skills and improving their clinical knowledge (22% rating it 10). 88% recommended regular training days annually. 84% found the training day very applicable to practice with 100% recommending it to other colleagues. 21 attendees stated they were very likely to apply skills learned in practice. Qualitative feedback included: "Good broad interactive session on a subject we often do not see in our ED" and "Fantastic, clinically relevant course."

**Conclusions:** Simulation is an established mode of acute medical education, and has a demonstrable benefit when applied to emergency medicine training. MDT simulation based medical education reduces stress and fear related to dealing with obstetric emergencies particularly for multidisciplinary teams in non-obstetric hospitals.

## Abstract booklet

### Oral presentation 6

*Dr Shona Keogh, Dr Victoria Meighan*

#### **The use of simulation-based training to assess and improve patient handover between prehospital and emergency personnel.**

**Intro:** Handover of patient information between prehospital healthcare providers and emergency physician in high stake emergency situations is imperative for high quality patient care and patient safety. It is essential that handover is used appropriately as it is effective tool in allowing a shared mental model of a patient's condition. (Owen et al., 2009) Error cannot be eliminated from the handover process, however training in handover between teams reduces the incidence of error and risk. Read back is a critical safeguarding communication technique for reduction in risk. We sought to determine if simulation-based training in read back technique reduced the incidence of errors in patient information.

**Methods** We performed twelve multi-disciplinary based medical emergency simulations between 2021 and 2022 focusing on handover of information between the National Ambulance prehospital providers and the emergency physician in the role as team lead. Standardised handover information was delivered using the IMIST Ambo acronym. The IMIST AMBO acronym stands for Identification, mechanism, injuries, signs, treatment and trends, allergies, medications, background and other information. Six of the scenarios were designed to have a failure to handover critical information which would subsequently be delivered if a read back was performed and the use of questioning to ascertain if any information was missed following a read back.

The simulation model was multidisciplinary and involved prehospital providers from the national ambulance service, medical and nursing staff from the emergency department, and intensive care doctors.

**Results** There was a reduction in missed information when read back communication technique was performed as part of the clinical handover information between the prehospital and emergency team. Read back ensured hand over of

1. Dangerous mechanism of injury
2. Prehospital assessment and diagnosis
3. Prehospital interventions
4. Prehospital medications
5. Relevant medical history, medications and drug allergies

**Discussion** The handover process between prehospital teams and emergency department staff has been sparsely investigated previously. Handover is not just the delivery of information but also a dynamic task that involves critical thinking and clinical judgment. (Lee & Lim, 2021)

Multidisciplinary simulation based medical education is a useful tool in both assessing and practicing communication techniques. It offers the opportunity for multi-professional learning, encourages teamwork and ensures critical information is communicated. We demonstrated a reduction in error in communication of vital information which is directly applicable to patient care.

## Abstract booklet

### Oral presentation 7

*Dr Davina Carr, Mr Wesley Sterling, Prof Gerry Gormley*

#### **“Better Together with Medical Student Teachers” - Delivering large scale simulation for resuscitation training in partnership with Medical Student Teachers**

**Introduction** Although Out of Hospital (OOH) cardiac arrest (CA) is a rare event, it is of significant public health concern. Early, effective bystander intervention improves survival (Dick-Smith et al., 2021). Basic Life Support (BLS) is an essential skill for all healthcare students (Binkhorst et al., 2020). However, novice healthcare students can experience the tension of low resuscitation self-efficacy (RSE) (Dick-Smith et al., 2021) and a moral duty to act when faced with a CA. Simulation based education is a feasible and acceptable component of BLS training for healthcare students but is resource-intensive from a staffing perspective to ensure adequate time for deliberate practice and constructive feedback (Dick-Smith et al., 2021).

**Objectives** With mounting evidence indicating that near-peer facilitators can train novice healthcare students in resuscitation skills to a standard at least equivalent to senior staff (Harvey et al., 2012 and Binkhorst et al., 2020), Queen’s University looked to this pedagogical methodology to meet not only to challenges with staffing but to enhance the learning experience.

**Methods** Clinical academics with experience in resuscitation training developed a “Train the Trainer” course for medical students. All Medical Student Teachers (MSTs) who attended demonstrated effective resuscitation training skills. Paired MSTs facilitated resuscitation training for groups of twelve. Deliberate practice of resuscitation skills with formative feedback was prioritised. Six staff members supported MSTs.

**Outcomes and Conclusions** Post-course evaluation revealed that delivering resuscitation training in partnership with MSTs enhanced the learning experience for novice medical students and also had wider benefits. First-year students valued the approachability, expertise and vicarious experiences offered by MSTs. They praised the content and format. Students with previous resuscitation training were comparable in their ratings and comments. The psychologically safe environment, paired with social and cognitive congruence of participants, maximised learning and resulted in students reporting enhanced RSE. MSTs recognised many benefits: resuscitation skills revision, enhancement of teaching and communication skills, portfolio development and enjoyment. Many were motivated by future professional roles and altruism. They gained confidence from the experience. Almost three hundred students were trained in BLS in one day at a significant cost reduction on previous models. Staff recognised that this approach offered additional benefits to novice students: role modelling, socialisation of new students within the university and the sharing of informal information. Staff-student relationships were enhanced and there was a greater sense of community. Some MSTs continue to facilitate resuscitation training on a voluntary basis in their local communities.

## Abstract booklet

### **SIMULATION IN PRACTICE**

#### **Oral presentation 1**

*Dr Chris Boyle, Dr JulieAnna Rankin, Dr Lorraine Bouzan*

#### **Emergency Medicine Registrar Ready Course**

##### **Introduction:**

The Emergency Medicine Registrar Ready course is designed for ST3 level EM trainees to prepare them for Higher Specialty Training when they will be the senior decision maker out of hours. To ensure all ST3 level trainees benefit from the learning experience, two courses are run each year.

##### **Objectives:**

This course is designed to provide candidates with essential management and leadership skills required for leading a team on call.

##### **Methods:**

This is a simulation-based course.

Each course has 6 candidates which are supported by 12 faculty. Each candidate is given the opportunity to lead a section of the simulated emergency department. Each section lasts 40 minutes and is followed by a debrief to address the learning outcomes. A nurse in charge helps guide trainees through the day. During the simulation a trainee may consult their colleagues if there is something they are unsure of, therefore decisions may be made together to support learning. However, the final decision will lie with the person leading that given section. The course represents a busy night shift. Each real hour represents 2 hours of the simulated night shift. Trainees are required to manage all aspects of the day including staff allocation and support, reviewing challenging patients and dealing with unexpected interruptions.

##### **Intended learning outcomes:**

To prepare Emergency Medicine Trainees for Higher Specialty Training.

##### **Conclusion:**

A simulation based emergency department night shift exposes trainees to the challenging experiences that they may face. The simulation is followed in equal measure by a debrief, which ensures a rich and safe learning environment/experience. Feedback has been excellent on both courses completed in 2023.



## Abstract booklet

### Oral presentation 2

*Ms Vicky Adams, Dr Stephen Adair*

#### **Development of a Management of Medical Emergencies Course for Undergraduate Dental Students**

Medical emergencies in dental practice, such as anaphylaxis or hypoglycaemia, are uncommon but when they do arise they need to be managed quickly and effectively in order to avoid untoward consequences for the patient. High fidelity simulation would seem the ideal way to provide a safe environment for students to acquire the skills necessary to manage these events.

Management of medical emergencies has traditionally been taught in year 3 and 4 of the dental course. It comprised lectures and case base discussion sessions. In 2014 we introduced a simulation course, based in Elliot Dynes on the Royal Victoria Site. The focus at this initial phase was on recruitment of staff, development of course content, ensuring standardisation of teaching and provision of useful debrief and feedback. Course content was based on guidance from Resuscitation UK, the General Dental Council and British National Formulary.

Feedback was sought from teaching faculty and students and steps were taken to address any issues raised. We introduced further hands on teaching on the use of the drugs and equipment into 3rd year as students did not have sufficient experience of their use to be confident with them during the simulation. Multiple studies have shown video to be an effective educational tool (1) and there is also some evidence it can aid performance in clinical simulation (2). Videos of ideal management of the more common scenarios were therefore produced in an attempt to enhance performance during simulation and to aid retention.

The move to the KN Cheung SK Chin InterSim centre will allow us to develop the course further. Fidelity was somewhat of an issue in our previous venue which was more appropriate to a ward or theatre setting. This will be greatly improved at InterSim. We have also been able to extend the course so that medical emergency simulation takes place in all of the clinical years (3-5). There is extensive evidence that this type of "spaced learning" approach enhances retention (3) We will also be able to use a scaffolded learning approach with the 3rd year students being given more support to manage simple scenarios. The degree of support can be reduced and complexity increased in subsequent years allowing the progress to "safe beginner" level required by the General Dental Council.

The move to InterSim is an exciting development which we believe will benefit our students greatly.

## Abstract booklet

### Oral presentation 3

*Prof Wendy Turner, Dr Lorna Dysart, Dr Mark Lappin*

#### **Development of Case-Based Learning into Dental Practice-Based Learning in the Dentistry Curriculum**

**Objectives:** Within simulation-based education there are numerous modalities available to allow for the development of structured scenarios that encourage knowledge synthesis and skills development. A type of scenario based simulation is Case-based learning (CBL) which can be used to both broaden learners understanding of a certain clinical topic, but also to develop fundamental clinic skills such as medical history taking, diagnostic skills and improving patient management in a psychologically safe environment. Case-based learning was introduced to QUB final year BDS students in 2020 as a result of the Covid-19 pandemic where opportunities for clinical teaching were reduced. The challenge for dental educators was to allocate suitable time in the curriculum to implement these simulations once a full clinical timetable resumed. In 2022/2023, Case-Based Learning Scenarios were evolved to be delivered face to face in a dental outreach setting as Dental Practice-based Learning.

**Methods:** Originally a CBL course was delivered remotely using the MS Teams platform due to the Covid-19 restrictions. Experienced educators facilitated a series of small group teaching sessions for final year dental undergraduates over 2 academic years. Teaching was Restorative Dentistry based and covered a range of clinical and patient management simulated scenarios. Content was standardised across all teaching groups and student feedback was collected. This feedback was highly positive with the majority of students indicating the sessions improved their clinical reasoning and improved their ability to diagnosis dental disease and to treatment plan. At the end final year students are required to submit an Educational Transition Document (ETD) prior to entering the Dental Foundation Programme which was reviewed as part of the feedback for the CBL course, with the ETD highlighting areas where students felt less confident before entering Dental Practice. Informed by this, some areas of CBL teaching were developed into Dental Practice-Based Learning, incorporating specific teaching in areas of lower student confidence, as part of their Outreach Practice attachments. Feedback from students was collected through an on-line questionnaire.

**Conclusion:** Due to enforced restrictions impacting on face-to-face teaching, different forms of scenario based simulation teaching came to the fore in the undergraduate dental curriculum. Positive feedback from both students and educators identified numerous benefits to continue with scenario based small group teaching. Feedback received from both CBL and recently developed Dental Practice- Based Learning has been well received by students and staff as part of the continuing development of the undergraduate Dentistry Programme at QUB.

## Abstract booklet

### Oral presentation 4

*Dr Maya Dyson*

#### **Evaluating the impact of a pilot “shared management planning” workshop for third year medical students: A quasi-experimental study**

**INTRODUCTION** The doctor-patient relationship has evolved into one that is more equitable and patient-centred. This has led to the emergence of concepts such as shared management planning, which represent a progression from more traditional consultation styles. Effectively explaining a diagnosis to a patient, developing a shared management plan (SMP) and motivational interviewing are key ways in which doctors can empower patients to make informed choices regarding their health, thus supporting their autonomy. SMP is not routinely incorporated into medical school curricula, despite gaining increasing prominence in postgraduate education and practice. From a social perspective, ensuring patients are informed and educated is an integral part of achieving sustainability within healthcare and a doctor's communication has a significant role within that.

**OBJECTIVES** This study aimed to evaluate the impact of a pilot “shared management planning” communication workshop on third year medical students

**METHODS** This study used quasi-experimental methodology. A SMP workshop was developed, which combined a brief review of communication theory and table top exercises with individual simulation scenarios and a group debrief. Thirty 3rd year medical students from the University of Nottingham participated in this program with a maximum of three students allocated per workshop. The simulation activity was performed by each student individually and involved the use of a standardised patient. All simulation scenarios required the explanation of a diagnosis, exploration of individual lifestyle factors and the development of a SMP. The clinical content reflected the relevant curriculum, the GMCs “Outcomes for Graduates” and their MLA content map. Electronic feedback was collected via anonymous pre and post-intervention questionnaires that included Likert-scale questions and free text responses.

**OUTCOMES** From analysing pre and post-intervention questionnaires, students reported a 70% increase in their confidence in explaining a diagnosis to a patient, a 45% increase in their confidence offering lifestyle advice and an 86% increase in confidence in developing a SMP. 100% of participants stated that they would recommend the workshop to their peers. Students gave positive feedback regarding the small group size, simulation content and receiving constructive, individualised feedback from educators.

**CONCLUSIONS** It is important to introduce the concept of shared management planning at an undergraduate level, in order to ensure that student doctors are able to navigate these conversations effectively. Low-stakes, individual communication simulation can be a highly effective learner activity for this topic. However further research is required to assess the longer-term and “real-life” impact of such interventions.

## Abstract booklet

### Oral presentation 5

*Dr Bilal Korimbocus, Ms Helen Wilson, Ms Aine McGuckin, Prof Gerry Gormley*

#### Framework for utilising moulage in OSCEs: taking authenticity to the next level

##### INTRODUCTION

Objective Structured Clinical Examinations (OSCEs) are commonly used as a method of assessment in health profession education. They espouse to facilitate the fair assessment of behavioural skills and competencies. Whilst “real patients” may act as cases in OSCE stations, more often OSCE stations draw upon simulation principles and techniques to “create” clinical scenarios. Whether working with Simulated Participants (SPs) or manikins, simulation has a lot to offer in OSCE station development. However, a range of conditions are under-represented in OSCEs given the challenge of creating the clinical features of these conditions (e.g. dermatological conditions and wound assessment). Moulage, the ability to harness special effects techniques to present a wide range of clinical signs, has the potential to create such clinical features.

**OBJECTIVES** Given the challenges of organising OSCEs (i.e. the need for consistently similar scenarios for large cohorts of students) guidance is required to optimise the effective use of moulage. In this conceptual presentation, we will present a framework, developed by a multi-professional team, which provides guidance in how best to utilise moulage in OSCEs.

**METHODS** We have developed a framework that provides practical guidance on the effective use of moulage in OSCEs. We have provided a pathway for incorporating moulage into OSCEs from the development and co-production stage through to the piloting and contingency planning stage, and finally the post-OSCE evaluation and quality improvement stage.

**OUTCOMES** Key elements include: the alignment of moulage to the assessment objective(s) of the OSCE station, and early feasibility checks for appropriateness of moulage in OSCEs. We noted the importance of considering diversity issues and how moulage can act as a potential trauma trigger for SPs. Practically, this framework highlights steps to ensure: the durability of moulage with multiple examinations, the ease of application, financial costs, and the training required (both for the SPs and the moulage artists) to ensure the effects are standardised and realistic. Other practical considerations included: the time required for application and removal for the moulage as well as the provision of equipment for the same.

**CONCLUSIONS** This presentation will capture the important elements of this framework and use three case studies to illustrate these principles in action (melanoma, Lyme disease and self-inflicted wrists wounds). Such framework will be of benefit to those involved in OSCEs, or keen to get involved, in enhancing authenticity in a wide range of potential OSCE stations

## Abstract booklet

### Oral presentation 6

*Dr Andrew Spence, Prof Gerry Gormley, Dr Davina Carr*

#### **The impact on learning in healthcare simulation education using Transformative Agency through Double Stimulation (TADS)**

**Introduction** Simulation is being increasingly used in health profession education to develop clinical and behavioural skills. However, there is a tension between simulation being merely a *\_performative\_* act against optimising the *\_transformation\_* of students' skills. Transformative Agency through Double Stimulation (TADS) [Sannino, 2015] is an approach shown to enhance skillsets in other walks of life, by repeating scenarios, such as in business. However, its' use has rarely been explored within healthcare education.

**Objectives** To investigate the effects of double simulation as a model of teaching in medical education informed by TADS, from an ethnographic perspective. Specifically, to establish the thoughts, feelings and attitudes of students undergoing repeat simulation

**Methods** The TADS study was performed in InterSim Education Centre, Queen's University Belfast, where, in groups of three, simulation naïve second year medical students undertook a scenario managing an acutely unwell patient. During debrief, students evaluated their performance and experiences, where they, aided by facilitators, collectively identified areas of improvement. Post-simulation the students underwent a second scenario followed by a further group debrief. Individual semi-structured interviews were then conducted. All debriefings and interviews were audio recorded and transcribed to facilitate thematic analysis, providing a rich ethnographic description of the TADS approach.

**Outcomes** All participants greatly valued the experience, reporting significant benefit to their learning. During the first debriefing they described being "nervous but excited at the prospect of simulation training" before the first scenario. Reflecting, they identified areas to improve including "initial assessment of the unwell patient" and the "need for more organisation within the team", as well as "improved communication and division of roles during the scenario". Students' performances improved during the second simulation, in tandem with being more relaxed and confident. The embodied experience of implementing their perceived improvements were positive takeaways. In individual interviews they commented that before the second simulation they "had less nerves which led to a calmer atmosphere". They also functioned more efficiently by "reflecting on the first simulation, we understood increased organisation and communication would result in a better performance". Participants valued the opportunity to undertake a second scenario, feeling it allowed them to immediately apply their knowledge gained during debriefing.

**Conclusion** Our study showed the value of immediate repeated simulation to reinforce areas of improvement resulting in not only superior performance but also an enhanced experience. Our pedagogical model using TADS can be applied to other healthcare disciplines with use in interprofessional education.

## Abstract booklet

### Oral presentation 7

*Paul Baylis, Sandy Nelson, Ursula Heaney, Alison Warke, Sinead Doherty,*

### **Teaching faculty development. Teacher training to support the delivery of competent peer assisted learning: THE DERRY MEDUCATION COURSE (DMC)**

**Introduction** Peer Assisted Learning (PAL) is an evidence based model of delivering medical education at both undergraduate and postgraduate levels whereby medical students and junior doctors lead in the teaching and learning of their peers. At MedEdWest, the medical education department of the WHSCT, we have been delivering PAL since 2014. Key to our PAL programs are that fledgling educators are equipped with effective teaching skills. Accordingly we established the Derry Meducation Course (DMC), a concise “Teach-the-Teacher” programme to upskill our prospective student and junior doctor educators. The aims of the DMC are to ensure high standards of educational experience, especially in simulation, and to provide a consistent approach to teaching. The purpose of this paper is to “show and tell” our work in developing peer delivered medical education across the WHSCT.

**Description** Our original DMC was delivered via face to face teaching sessions. The Covid-19 pandemic forced us to modify how we delivered our course. We implemented a blended learning approach which included online learning, small group work and practical teaching sessions. We cover the following topics.

- Good Clinical Teaching
- Leadership Skills
- Supervision and Mentoring
- Developing The Clinical Examiner
- How To Run A Simulation And Debrief

All of the sessions are delivered in the month of August. In years 2021/22 and 2022/23 we ran evaluation projects. Both Pre and Post course evaluation questionnaires were completed. They captured both quantitative and qualitative feedback about the course, including Likert scales and free text responses. Questions explore participant’s satisfaction with the course and their confidence to embark on their roles as PAL clinical tutors. The Results demonstrated that educators rated the DMC highly. They reported a significant improvement in their confidence in delivering PAL in terms of clinical supervision, Simulation based medical education and in their lecturing skills.

**Discussion** There are many advantages of PAL, both for teachers and learners. PAL improves the volume of teaching that can be sustainably delivered in our DHG plus it enthuses and enables the next generation of medical educators at an early stage of their career journeys.

**Conclusion** MedEdWest’s PAL teacher training course is well received by participants and improves their confidence to commence their duties as peer educators.

## Abstract booklet

### Oral presentation 6

*Dr Janine Stockdale, Dr Lorna Lawther, Dr Mary Gillespie, Mrs Debbie Cordner, Dr Billiejoan Rice*

### Summative Simulation: learning to flip assessments

#### Introduction

The suggestion that simulation optimises healthcare professionals' effectiveness in managing obstetric emergencies, continues to be evidenced (Yucel et al., 2020). Learning about human factors through team simulation, is therefore, a central component of midwifery and nursing education (Stockdale et al., 2021). Yet this creates an instructional design challenge in that learning outcomes must be summatively assessed, even though experts in simulation caution otherwise (Rosenorn-Lanng (2015). As more direction about summative simulation becomes available (El-Awaisi et al., 2022), this paper describes the implementation off a flipped summative simulation with undergraduate students and discusses the associated outcomes.

#### Method

**Design:** in collaboration with expert clinicians, a 7-minute simulation that depicted clinicians managing maternal sepsis, was recorded. Prior to filming, a pre-defined list of subtle system and clinical errors were agreed by the clinical team.

**Implementation:** during a two-hour session, 63 final year midwifery students were asked to individually observe the 360o simulation video accessible via the Canvas platform. With headphones in situ, they were able to gain a panoramic view of the team's response to maternal sepsis, while completing a structured, reflective report. The report asked them to reflect on the quality of the team dynamics, task allocation and completion, team interaction, communication and situational awareness. The reflection was not gamified, in that the students were not challenged to find a particular number of team errors. A technician was available for troubleshooting any access problems.

**Outcomes:** a summary of the student outcomes and recommendations for further implementation of a flipped summative simulation will be provided.

#### Conclusion

Summative simulation is cautioned against, however, there is a requirement that new midwives and nurses are proficient in the identification, escalation and effective care of obstetric and medical emergencies. Flipping a simulation, where the students assess a team of clinicians, offers a novel way of summatively assessing these proficiencies in order to meet the requirements of the Nursing and Midwifery Council. More research into summative simulation is required.

## Abstract booklet

### TRANSITIONS USING SIMULATION

#### Oral presentation 1

*Dr Katherine Aiken, Dr Anna Sturgeon, Dr Hannah Gillespie*

#### **"Pass the Bleep": Students can do more during clinical assistantships**

**INTRODUCTION** Graduation marks a crucial transition for medical students: from observers with limited responsibility, to doctors who are expected to care for patients safely and efficiently. Given this abrupt transition, it is unsurprising that new graduates consistently report feeling unprepared (1). Students learn when they are supported to participate in the authentic tasks of clinical care, and clinicians can provide these opportunities. In practice, there is a reluctance to do so, for fears this might make clinical care less safe.

**OBJECTIVES** Our objective was to use the best available educational theory to design, implement and evaluate a stepwise programme to develop capable FY1s. We aimed to demonstrate that students can be supported to participate in real patient care without compromising patient safety. Our near-peer-programme, "Pass the Bleep", was developed with guidance from senior academic, medical and nursing colleagues.

**METHODS** To guide final year medical students from the classroom to the clinical environment, we used the Experience Based Learning model (2) to develop this programme. The climax was a "supervised on-call shift", where students were given the hospital on-call bleep. To prepare them for this, we:

- 1) Shared near-peer experiences of working as junior doctors and allowed students to discuss their concerns;
- 2) Developed a "bleep-prioritisation workshop", where students rehearsed clinical prioritisation, categorising jobs as red: go immediately, amber: go soon, and green: can wait. An open discussion followed to discuss the reasoning underpinning these decisions.
- 3) Organised a "simulated on-call shift" where students responded to common or emergency scenarios faced as an FY1s in the form of high fidelity simulations. Each student actively participated in a simulated scenario, where they responded to a call from a concerned member of staff, attended, assessed, escalated if necessary, and documented their encounter.

**OUTCOMES** In its first iteration, twenty-one students participated. All reported it aided their preparation for work. Students were particularly positive about the supported, graded learning environment which prepared them for the challenge of holding the on-call "bleep". No related adverse incidents were reported.

**CONCLUSIONS** This intervention targets the preparedness "gap". Research has emphasised the need for medical students to gain experience, not just competence (3). The Experience Based Learning Model gave a framework for the development of this intervention, creating supportive conditions that enabled students to prepare and participate in authentic clinical practice. The programme scaffolded medical students' learning, harnessing simulation and clinical experience to support progressive independence in practice.



## Abstract booklet

### Oral presentation 2

*Dr Carol Wilson, Dr Neil Kinnear*

#### **A novel inter-varsity simulation pilot study.**

##### **Introduction**

Upon graduation, junior doctors are expected to have the knowledge and skills required to manage common medical emergencies. Medical students often report anxiety and under preparedness for such situations, struggling to integrate taught clinical skills into clinical practice. Simulation has been shown to provide a unique educational opportunity superior to traditional didactic methods. Currently the first cohort of students from a new medical school are on placement alongside students from an established medical school.

**Objectives** This pilot study aims to evaluate the impact of an intervarsity simulation curriculum in this unique group.

**Methods** Simulated sessions were offered weekly for 10 weeks and focused on the management of one curriculum based medical emergency. Each session involved a pre-teaching simulation, followed by a teaching session, with a final post-teaching simulation. Specific skills training was embedded throughout (e.g. fluid and medication prescribing). All students on placement at Causeway Hospital were invited which included students from Queens University Belfast and the first cohort of students from Ulster University. Sessions were evaluated in a voluntary, anonymised, online post course questionnaire.

**Outcomes** After the simulated sessions, students reported increased confidence in the assessment, recognition and management of an unwell patient. The embedded clinical skills groupwork was rated highly with particular benefit gained from real-time tutor feedback. Students identified this as a potential gap in their clinical skills which was addressed by these sessions. Participants had positive opinions of the sandwiched teaching to consolidate knowledge and clinical skills. They enjoyed the “real life” scenarios indicating that they would be helpful in progression to their role as junior doctors. The opportunity to work with students from a different university was highly valued. Students noted that it was a safe environment to learn from and with each other, and served as a good “ice-breaker”. Junior year groups, in particular, reported benefiting from watching more experienced students.

**Conclusion** This novel pilot intervarsity simulated teaching program provided a safe, highly valued educational experience for students from two universities to work together for the first time in the management of common medical emergencies.

## Abstract booklet

### Oral presentation 3

*Dr Lorna Lawther, Ms Amanda Morrow, Ms Lily Maxwell, Ms Hannah Garrity*

#### **Undergraduate experiences of simulation-based education and transition to registration: experiences of the Newly Qualified Midwife**

**Introduction** Simulation-based education (SBE) in midwifery undergraduate education is recognised as a valuable tool for developing confidence, embedding theoretical learning and supporting students to develop competence in clinical and behavioural skills in preparation for registration (Lendahls & Oscarsson, 2017). Transition to registration is stressful as new registrants seek to assimilate their knowledge, maintain confidence and embed skills in the dynamic reality of the clinical environment (Hunter et al, 2019). Newly qualified midwives (NQM) are recognised as particularly vulnerable to burnout and leaving the profession therefore approaches to support transition to registration and the associated behavioural skills is especially important to consider. The student experience of simulation pre- and post-registration may have potential to mitigate against the challenges of transition to registration and is an area which could be explored further within midwifery education and practice.

**Objectives** To present the experience of NQMs who have experienced undergraduate SBE in QUB and the extent to which SBE has enabled the transition to registration.

**Methods** 2-3 NQMs will relate their personal reflections on the journey from a 3rd year undergraduate midwifery student to newly qualified midwife with reference to their experiences of SBE and the impact on transition to registration.

**Outcomes** Undergraduate midwifery students are supported to develop behavioural and clinical skills however, supporting the continued development of these skills as a NQM may be constrained by lack of opportunity to engage in theoretically informed high-fidelity SBE in post-registration clinical practice. Opportunities for continued involvement in undergraduate midwifery education may aid transition and role acquisition through supporting the learning of others thereby challenging personal knowledge and increasing recognition of the journey of learning. It is proposed that self-reflection and self-regulation are important skills that are gained via SBE but the extent to which they aid role transition to NQM have not been explored. There is scope to explore and develop our understanding in this area.

**Conclusions** Clinical and behavioural skills acquired via the undergraduate SBE experience extend beyond registration and may have the potential to aid transition to registration. In order to develop these skills, NQM need to have continued experience of high-fidelity SBE with an emphasis on inter-professional learning, personal professional development and the development of a network of inter-professional collegiality and support. Further research is required to enable a comprehensive understanding of the value of SBE education in pre- and post-registration practice including impact on the retention of NQM

## Abstract booklet

### Oral presentation 4

*Dr Eimear McCorry, Dr Victoria Mayers, Dr Anna McGovern, Dr Stephanie Redpath*

### Using Simulated Scenario to Achieve Consensus on Risk Assessment in Child and Adolescent Mental Health

#### Introduction:

Risk assessment is a core component of Child and Adolescent Mental Health (CAMHS) Care. However risk is often viewed as something subjective and undoubtedly in practice we see different interpretations of risk. The FACE risk assessment is a method to standardise risk assessment but anecdotally it too appears to be open to subjectivity.

#### Objective:

Through team observation of a simulated clinical scenario we aim to create discussion regarding risk assessment and ascertain consensus amongst the team as to how to stratify risk.

#### Method:

A simulated patient interaction, similar to those commonly encountered in CAMHS, was created. This scenario was observed by audience comprised of clinical staff working throughout CAMHS in the Trust. After the observed scenario the audience were invited to score each domain of risk assessment via anonymous online poll. A panel, comprised of 4 senior members of the clinical team, were then invited to give their assessment of risk with accompanying rationale. Discussion was opened to the audience for debate, clarification and further opinion.

#### Outcomes:

94 members of the CAMHS clinical team participated in the exercise.

87% of participants agreed/strongly agreed that the session was useful.

84% of participants agreed/strongly agreed that the session made them consider how they approach risk assessment.

There has been a wealth of qualitative feedback obtained with positive feedback for the exercise.

#### Conclusions:

This appears to be the first time that a simulated scenario has been used regionally in relation to risk assessment within CAMHS. The feedback has been overwhelmingly positive and we have demonstrated the usefulness of an exercise such as this in informing future practice.

Going forward we can expand these scenarios allowing additional educational and training opportunities not only in risk assessment, but in other key areas of Child and Adolescent Mental Health

## Abstract booklet

### Oral presentation 5

*Dr Peter McAlister, Dr Sarah Berry*

#### **Incorporating Regular Simulation into Paediatric Regional Teaching**

**Introduction** - Simulation based learning post covid-19 occurs infrequently within paediatrics and is often restricted to courses. There are many barriers to attending simulation on a regular basis in both the tertiary centre and district general hospitals. Alongside the Neosim team in RJMH, the RBHSC SimEd team introduced monthly simulations through NIMDTA to encourage protected attendance at simulations.

**Objectives** - To improve attendance at regular simulation based learning and improve trainee experience using simulation, bridging the gap caused by barriers to simulation. To Develop interprofessional teamworking between neonatal and paediatric teams providing a collaborative approach to simulation. To allow well constructed debriefing sessions with consultant presence at each simulation session.

**Methods** - Baseline survey was conducted initially to assess issues with simulation attendance and suggestions for improvement. Work pressures and carrying the bleep were the main barriers to attendance at simulation. Bleep free, protected time, portfolio sign-offs and consultant presence were the main attractions to simulation based learning. Sessions were pre-booked online through regional teaching platform and were advertised by email and social media. Pilot simulation sessions for ST1-3 and ST4+ with consultant presence followed by monthly simulations. 8 participants working in pairs for each session with 4 simulations; 2 neonatal scenarios, 2 paediatric scenarios. Pre- and post-session feedback collected regarding the simulations giving qualitative feedback using likert scales. Protected time created by booking study leave for sessions in advance. Work based assessments can be filled in for participation.

**Outcomes** - Results not fully completed at present. Results collected using likert scales and qualitative analysis with comments. ST1-3 showing improved confidence from pre-course questionnaires in both paediatric and neonatal simulations. ST4+ sessions demonstrated similar results. Positive feedback received including mixture of paediatric and neonatal simulations, relaxed environment and consultant presence.

**Conclusions** - Regular, protected time for simulation based learning as part of regional teaching has been a success for trainee experience. Trainee confidence has improved in managing neonatal and paediatric emergencies. The interprofessional approach has helped to engage trainees in a variety of scenarios. Expert debriefing provided by consultants has improve the trainee experience and positively impacted on the trainee experience of simulation. The pattern set by regular simulation based learning is replicable and should continue long-term, engrained into the regional teaching programme.

## Abstract booklet

### Afternoon session CHAIR – Dr M Williams

#### Oral presentation 1

*Dr Sarah O'Hare, Dr Richard Conn, Prof Gerard Gormley*

#### **Theory guided interprofessional simulation: Designing an in-situ simulation programme to enhance transformative agency and enable organisational change.**

**INTRODUCTION** The critical nature of emergencies requires General Practice (GP) practices to provide a prompt patient-centred collaborative approach. In-situ simulation (ISS) is documented as an acceptable and feasible way to train for high acuity, low opportunity scenarios such as emergencies. Existing GP ISS research is individually focused and often atheoretical. Cultural historical activity theory (CHAT) is useful as a methodological framework for the vital task of studying practice-based learning in complex learning environments(1). Transformative agency by Double Stimulation (TADS), a concept associated with CHAT, provides new opportunities for education to structure, analyse and interpret collective change.

**OBJECTIVES** Guided by CHAT principles an interprofessional team participated in a longitudinal programme of ISS “SimLab” relating to GP paediatric emergencies. We sought to understand how the SimLab mediated transformative agency in responding to paediatric emergencies.

**METHODS** Workshop (I) involved a “mocked-up” paediatric ISS. Afterwards, participants were provided with a summary of recognised best practice, researchers facilitated participants in identifying workplace activity to CHAT framework and identified contradictions. In Workshop (II), through collaborative activity participants identified accumulated historical tensions and devised a future model to resolve contradictions(2). Workshop (III) involved a different ISS followed by a discussion to explore if the changes had enhanced their emergency response. The study applied qualitative data collection methods including focus group recordings, video footage and participant reflection diaries to gain detailed accounts of participants’ experiences. Analysis used TADS as a theoretical framework to identify, quantify, trace and understand manifestations of transformative agency.

**OUTCOMES** CHAT enabled a deeper exploration of the complex relationship of ISS and real-world clinical practice(3). Two months later a follow up interview demonstrated that many elements of their newly modelled systems had become stable in their organisational structures and were considered an enhancement on previous practice. Participants exhibited six types of expressions of transformative agency; resisting, criticising, explicating, envisioning and committing to actions which evolved through collective activity over the course of the SimLab(4). Agentive actions centred around: re-envisioning the role of non-clinical staff; acknowledging the limitations of individualised approaches; formalising emergency care responses; and recognising the need to reforming delivery of emergency training.

**CONCLUSIONS** This study presents a CHAT-informed ISS programme which scaffolded the process of TADS, enabling participants to exhibit transformative agency and develop systemic solutions. We propose further research applying this approach in other contexts, further evaluating the pedagogic potential of ISS as a mediator of organisational change.

## Abstract booklet

### Oral presentation 2

*Dr Paula Houton, Ms Lisa Morrison, Dr May McCann, Prof Gerry Gormley, Prof Gavin Davidson, Dr Helen Reid, Dr Paul Murphy*

### **Mental health crisis assessments: feasibility study using an interdisciplinary, forum theatre-based, simulation framework**

**Introduction** Mental health crisis assessments are complex, involving a range of professionals including general practitioners, approved social workers, police officers, paramedics and psychiatrists. These assessments necessitate high-level communication skills, interdisciplinary team-working and confidence in making complex decisions. However there are disparities between expected competencies and education, with a call for interdisciplinary, experiential learning. In response, we developed a learning approach; an interdisciplinary, simulation framework based on the principles of forum theatre.

**Objectives** To assess the feasibility of using a novel, interdisciplinary, forum theatre-based simulation approach to prepare for mental health crisis assessments. This study assessed participants acceptance of the teaching approach and evaluation design.

**Methods** Two half-day simulation training workshops were designed and delivered as part of a feasibility study in line with the Medical Research Council's framework for developing and evaluating complex interventions. Each workshop commenced with a pre-scripted anti-model play depicting a mental health crisis in the community. Participants (n=68) included approved social worker trainees (n=27), general practitioner trainees (n=22) and police officers (n=19) who each attended a single workshop. Data was collected using pre and post-event questionnaires and eight focus groups. There was personal and public involvement in all aspects of this research. Afterwards, the research team reflected on the feasibility of delivering this educational approach.

**Outcomes** Quantitative and qualitative data confirm this training was feasible and popular. All participants would recommend this training approach to a colleague. The overall acceptability rating was high (average rating of 4.73/5). All participants ranked this learning experience as "good" or above, with the majority (58%) giving an "excellent" rating. Template analysis generated eight themes which support this training approach and evaluation design; 1) More of the same: there is a need for training like this, 2) Being present in the moment: embodied learning, 3) Better than role play: authentic learning, 4) Collective perspectives: the benefit of interdisciplinary learning, 5) Safe space to learn, 6) The importance of ground rules, 7) Group size: getting the sweet spot and 8) Evaluation methods: practical and multi-functional.

**Conclusion** Feedback was universally positive, supporting the feasibility and acceptability of this novel, interdisciplinary learning approach. This simulation framework has great potential for more effectively preparing people for a wide range of complex, high-risk, high-stress assessment and planning processes across health and social care.

## Abstract booklet

### Oral presentation 3

*Dr Linda Ni Chianain, Dr Jenny Johnston, Prof Gerry Gormley*

#### Exploring the Embodied Experience of Simulated Participants in Representing Illness

**Introduction** Simulated participants are highly valued in healthcare simulation as they play a vital role in training healthcare professionals in patient care. However, their experiences are often overlooked and are treated as instruments exploring the perspective of the learner. Consequently, SPs are frequently objectified, and their voices are inhibited. It is time to acknowledge this and give voice to SPs lived experiences, allowing them to share their insights on embodying the illness in simulation, which is frequently developed by HCPs in the absence of the individual experiencing the illness.

**Objectives** To explore SPs lived experiences of embodying the illness in simulation-based education.

**Methods** The theoretical frameworks of Merleau-Ponty and Stanislavski provided a useful lens through which to explore the embodied nature of SPs experiences. This is particularly relevant to the experiences of SPs, as their existence is inherently embodied within the simulated environment. While Stanislavski's system of acting is based on the idea that actors should embody their characters to fully immerse themselves in the role. Hermeneutic phenomenology was used as this approach is particularly relevant to understanding the experiences of individuals, as it allows for an exploration of how they make sense of their existence within the simulated environments. Twelve SPs were interviewed from two Universities on the Island of Ireland. Template analysis was used to identify themes, while drawings were used to elicit information and provided a visual representation of the SPs' experience. Personal and public involvement (PPI) has been central to this research as the person with the illness experience is central to healthcare education, although their involvement is frequently absent or tokenistic.

**Outcomes** The findings suggest that SPs experience a range of emotions, including satisfaction, frustration, and a sense of detachment from their simulated environment to emotionally invested. Six themes were identified, where SPs undergo various phases of transitioning from being themselves to embodying the person they portray, to leaving that portrayal. The participants must not only communicate the symptoms of the illness but also physically embody the experience of being unwell.

**Conclusion** The study provides valuable insights into the challenges of embodying the illness. Embodying the illness is a complex process, as simulation advocates for realism, authenticity, and patient-centric approaches. Further research is needed to develop strategies for enhancing the experiences of SPs where they feel valued, involved, and supported through sufficient training to reflect a person's illness experience and to de-role without residue.

**Abstract booklet**

# Workshops



## Abstract booklet

### WORKSHOP 1

*Dr Paul Murphy, Mrs Patricia Holden, Ms Aoife Rafferty*

#### **A workshop on enhancing traditional healthcare communications training with behavioural skills**

**Introduction & aims** Effective communication is essential to the clinical practice of a healthcare professional, and sub-optimal communication can adversely affect patient care and lead to complaints. When correlated with the move towards patient-centred care this requires healthcare professionals to engage more deeply with patients to ensure they achieve safe and successful clinical objectives [1]. This workshop aims to address shortcomings in extant communications training [2], where the role of the healthcare professional is central, and suggest a more thorough method connecting the patient's role and lived experience. Techniques from the dramatic arts will be incorporated to enhance traditional communications methods. Participants will enhance their communications skills with "behavioural" skills [3] in order to achieve better empathetic interaction.

**Learning objectives** The workshop will offer participants the necessary skills to improve their performance both as a healthcare professional (HCP) and as a patient. The immersive simulation will allow participants to more deeply understand the patient's perspective, as well as their own emotional responses to challenging conversations.

#### **Session description (planned activities)**

Introduction: 10 mins

Simulation scenario familiarisation: 10 mins

Simulation exercise: 30 mins

De-rolling exercise: 10 mins

Debrief and discussion leading to close: 20 mins

**Educational methods** Participants will engage in a type of simulation concentrating on behavioural skills built on a hybrid paradigm of practices from the disciplines of simulation-based healthcare education, actor training and the sociology of emotion.

**Expected impact** Participants will understand how to enhance the manner in which they make impressions on others through verbal and gestural behaviours, and how to deal with the impressions they receive from others.

**Target audience** Healthcare students and professionals

**Level** All levels

**Maximum number of participants** 12

#### **Equipment required and specific room set-up**

The workshop will require a room with sufficient space for 12 participants and the 3 convenors to move around freely and engage in interactive, person-centred training. At least 15 chairs will be required. Technical equipment to facilitate the projection of PowerPoint slides will be required.

## Abstract booklet

### WORKSHOP 2

*Mrs Doris Corkin, Dr Pamela Slevin, Miss Lynne Robinson, Miss Pauline Cardwell, Dr Kathryn Ferris*

#### **The skills of the facilitator in creating an effective pre-brief within the inter-professional simbaby experience.**

**Background to workshop** Simulated practice is a key pedagogical approach, widely recognised in enhancing competence within our healthcare education. Additionally, inter-professional education (IPE) is a central tenet of developing fundamental skills such as communication and teamwork, which help to develop competencies in the future, health workforce (NMC, 2018; GMC, 2009). An effective pre-brief within inter-professional simulation is a critical component of creating an educational experience that enriches the students learning. Planned pre-briefing activities along with the utilisation of pre-planned scenarios aims to ensure both facilitators and students feel engaged and connected.

**Learning objectives of workshop** Continuous, critical review of IPE opportunities is required to enhance nursing and medical practices (McNaughten et al, 2020).

Overall aims: 1) to explore the opportunities and challenges of pre-briefing an inter-professional group of learners prior to a simulation session 2) discuss potential strategies to overcome these challenges during pre-briefing. Although, there is a dearth of research literature in relation to pre-briefing, practice is emerging, highlighting the significant impact on student learning opportunities that pre-briefing offers. Subsequently, the need to consider the components of the pre-brief on the IPE experience in maximising new learning environments and meeting student needs. Credible clinical facilitators within the higher education environment, aim to create a welcoming space, encouraging student engagement and connections with one another.

**Overview of workshop** Simulated-based learning is globally an effective teaching method to help practitioners learn. The following three elements, namely confidence, collaboration and competence are closely interrelated and create a strong sense of community within the learning environment between facilitators and students. This interactive workshop will explore skillful, conversational techniques and pre-briefing strategies that are central to creating unique, authentic, clinical experiences for everyone involved, within the inter-professional experience. Overall, session will focus on two of the most important skills a facilitator will need to succeed -knowing how to, positively role model and influence others learning, whilst creating an effective and memorable pre-briefing activity.

**Expected Impact** The workshop will offer opportunities to share practice developments around sim-based education. Exploring the pre-briefing phase of simulation is central to the learning experience of all participants and having a well-designed pre-briefing process in place to ensure a quality inter-professional simulation experience. Modification of the clinical setting helps stimulate student involvement and highlight facilitator's skill. Creating an authentic pre-briefing activity will help facilitate student engagement, connectivity and adaptability in responding to clinical based scenarios whilst augmenting existing knowledge and professional development.

**Target audience** Healthcare students and professionals

**Level** All levels

## Abstract booklet

**Maximum number of participants** 20

### **WORKSHOP 3**

*Prof Gerard Gormley, Dr Andrew Spence*

#### **“I’ve an idea!”: Developing a credible research question in simulation-based education and practice**

**INTRODUCTION and AIMS** Have you ever had an idea that you want to research...? Of course you have! In this workshop we will guide you in the incubation of your idea(s). It will help you in framing and reframing these ideas into research questions (Just a heads up that it can take weeks (and sometimes longer) to settle on that credible research question so what we'll offer are approaches to getting to that point). Best practice in simulation based education is dynamic. As modern healthcare develops, so should our educational methods also develop to best prepare our healthcare professionals for clinical practice. As an educational community, there is an imperative for us to conduct research that generates new knowledge that best guides our simulation practice. As with all forms of research, developing a well-defined research question is of critical importance to the foundation of any study. In this workshop, we will support participants in developing a credible research question and signpost on the next steps in performing a study. Ideally, participants should come to the session with ideas for research.

**LEARNING OBJECTIVES** Participants will be able to:

1. Describe important steps of developing a research aim and question - including
2. Respond to the following questions about their research idea
  - a. What is important about this topic? Why is it of interest?
  - b. What exactly is the problem that needs to be addressed? What is problematic about it?
  - c. What is and is not known about your topic under investigation?
  - d. What questions you would like to answer? What objectives would you like to achieve?
  - e. Who would you like to benefit from your research?
3. Signpost the next stage of carrying out a qualitative research project

#### **SESSION DESCRIPTION**

General introductions, “ground rules” and overview of session

Introduction to qualitative research including ontological and epistemological positions

Buzz group activity regarding participants “research ideas”

Interactive work on: Problematization, Gap analysis, Research question development and refinement

“Dragons’ Dens” presentation and “pitch” of research idea

Conclusion. Participants will complete “postcard reminders” where they will write down their “research questions” and dates they would like to initiate their plans.

**EDUCATIONAL METHODS** A range of educational techniques will be used in this session including:

Buzz groups “Sandpit” activities

#### **TARGET AUDIENCE**

Health profession researchers and educators who are keen to develop a qualitative research project.

**MAXIMUM NUMBER OF PARTICIPANTS** 20

## Abstract booklet

### WORKSHOP 4

Dr Andrew Spence, Prof Gerry Gormley, Dr Davina Carr

#### **“Let’s do it again”: How to transform learning through double simulation**

##### **Background to Workshop**

Transformative Agency through Double Stimulation (TADS) is a theoretically informed model that aims to enhance individuals’ skill and behaviours [Sannino, 2015], which has potential use in healthcare education. Informed by the TADS approach, we developed an educational model where participants undergo a simulation, then detailed debrief, followed by a second scenario and debrief. In our practice, we showed the effectiveness of debrief and \_immediate repeat simulation\_ in improving participants performances and experiences. This highly interactive and immersive workshop will enable participants to design TADS scenarios and gain tactile experiences by undertaking double simulation, which they can introduce in their institutions.

##### **Learning Objectives of Workshop**

1. Understand TADS application in healthcare education.
2. Acquire knowledge to design and implement a TADS programme.
3. Become proficient in creating a TADS framework to gain skills in developing and improving a programme.
4. Gain first-hand experience of performing repeated simulation with effective debriefing.
5. Explore the potential for TADS in an interprofessional approach to enhance multidisciplinary integration.

##### **Overview of Workshop**

1. Introduction and overview of the session format with outline of learning objectives.
2. Discussion of the benefits of double simulation and an approach to designing and implementing a TADS programme.
3. Small group work to explore development of bespoke frameworks, with feedback from facilitators.
4. An interactive component where groups undertake a TADS sequence where participants:
  - a. Design their own scenarios
  - b. Undertake a first scenario followed by debrief
  - c. Undertake a second scenario then a second debriefing
  - d. Explore participants experiences of TADS
5. Identify novel ideas and suggestions after delegates design and participate in their TADS model.
6. Concluding remarks to summarise and consolidate learning.

**Expected Impact** Participants will learn how to create and design a TADS simulation education session to develop in their own centres. Having the opportunity to get hands on experience of the impact of double simulation at this workshop will provide experience being both the facilitator and the learner putting theory into practice. Overall, through acquisition of knowledge and practical experience gained in TADS, participants will be able to design and implement a bespoke double simulation programme in their institutions.

##### **Maximum Number of Participants 24**

**Equipment Requests** Resusci-Anne manikin; Automated External Defibrillator; Oxygen mask; Bag-valve-mask; iGel airway; Laptop

## Abstract booklet

### WORKSHOP 5

#### Debriefing basics

Walter Eppich , RCSI SIM

Debriefing conversations are recognized as essential components of healthcare simulations to provide feedback and promote reflection. Even experienced educators can find it challenging to offer honest feedback for fear of being perceived as harsh. Various elements impact debriefing conversations, including: (a) the learning culture; (b) participants' perceived psychological safety; and (c) the educators' ability to facilitate honest discussions about performance. After this workshop, attendees will identify opportunities to strengthen their debriefing conversations by establishing challenging yet supportive learning environments, structuring their debriefings, and embodying an honest yet non-threatening approach.

**Max 30 participants**

## Abstract booklet

### WORKSHOP 6

#### **Participatory Methodology for Simulated Participant case writing**

Claire M. Condrón and Claire Mulhall RCSI SIM

Training healthcare professionals (HCPs) to work in today's health service requires authentic learning opportunities to encourage engagement in empathic, sensitive, and appropriate context-dependent skills practice. As we know, simulated participants (SPs) support the acquisition of vital skills through repetitive practice with feedback. Evidence-based practice assumes a narrative-interpretive paradigm, where a patient's experience of illness is singular and context-specific. Utilising narrative in the education of health professionals can benefit clinical practice, learner engagement, and the overall patient experience by increasing the clinician's awareness and appreciation for the impact of healthcare systems on patients' experiences and perceptions. What we learn from stories is very different from other forms of knowledge transfer - it is not simply cognition, but something deeply empathic. However, medical training often forces learners to condense patients' stories and ignore their narrative subtleties in the interest of brevity and efficiency. Using participatory methodology to create educational cases facilitates patient involvement in HCPs training and can give voice, a nuanced insight to lived experiences, and a context rich in authentic patient-specific dialogue. The inclusion of the authentic voices of service users has potential to impact and shape the attitudes of HCPs, drive social accountability, and improve alignment between the health professional workforce and societal needs. Unfortunately, the simulation case scripts for SPs typically neglect authentic patient voices in their design. Our field needs strategies to integrate the complete and diverse range of patient voices and perspectives in order to truly reflect patient-centered learning. We can leverage patient and public involvement (PPI) in the education of HCPs by employing participatory methodology to generate authentic patient-centered learning resources. This approach would expand diversity and inclusion in the curriculum, so that we might better represent our patient population and promote humanism in clinical practice.

This workshop aims to provide an innovative approach to patient involvement in experiential learning case development and the shaping of personal stories into sustainable, deliverable, and generalizable learning opportunities.

## Abstract booklet

### Learning Objectives

Recognize the importance of PPI for health professional's education.  
Demonstrate participatory methodologies to design simulation scenarios  
Discuss Narrative Capture Methodology to write authentic cases.

### Session Description and timings

#### The Pre-brief – 15 mins

Welcome / Introduce faculty with a brief biography  
Orientate to the session learning objectives  
Ground rules and expectations for a psychologically safe learning environment will be agreed.  
Extended participant introductions and expectations. Icebreaker activity

#### Think Pair Share (Small group exercise) - 15 mins

Participants will be asked to reflect and share their experiences of scenario creation in small groups to understand the current state of the art  
Who and how we write patient scenarios  
How does the patient profile emerge?

#### Group discussion - 15 mins (moderated by roving faculty).

The group discussions aim to form consensus on **key values for scenario design** where everyone's opinions are heard and understood, and knowledge is created. The groups will be asked to elect a spokesperson to share key ideas with the larger group.

#### Instruction and Practice - 15 mins

A slide presentation covering key concepts including: narrative in HP education, public-patient involvement, participatory design, co-creation

#### Case studies presentation - 15 mins

Experience from case studies at RCSI using participatory methodology for scenario design

#### If/then implementation intentions - a design task small group exercise - 15 mins

Identify opportunities to integrate PPI into your SP program

#### Facilitated group discussion - 10 mins

Groups will be guided to reflect on a shared experience in a way that builds understanding and spurs coordinated action sifting for insights and shaping new directions. Feedback, from both faculty and peers in the group, will help embed learning and aid transfer to real situations.

#### The wrap up - 5 Mins

## Abstract booklet

To highlight key take home messages. Learning through investigation guides the learner to explore, compare, and analyze resources which reflect the concepts under consideration. Suggestions for further reading to invite participants to investigate further on their own will be provided in the wrap up.

### **Educational Methods**

- Ice breaker activity
- Think pair share small group activity
- Case study presentation
- Facilitated large group discussion to provide opportunities for elaboration and interactivity facilitated by faculty.
- Small groups design task

### **Expected Impact**

Create, collaboration, and networking opportunities for educators to augment the co-design of simulated participant methodology to give voice to patient/service users and provide authentic learning experiences.

### **Target Audience**

Educators interested in using patient and public narratives to create simulated cases

### **Key words**

*Patient voice, public patient involvement, simulation patient/participant case writing, narrative capture methodology, participatory methodology*

### **Max 20 participants**