ICSC 2019

8th International Clinical Skills Conference 2019

Sunday May 19th to
Wednesday 22nd 2019

Prato, Tuscany

MONASH University

ICSF INTERNATIONAL CLINICAL SKILLS FOUNDATION

PRATO 8

ABSTRACTS Papers Workshops Posters

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8th International Clinical Skills Conference

Conversations

Prato, Tuscany
19 - 22 May 2019

Abstracts

KA: Keynote Address
KWS: Keynote Workshop
O: Oral Presentation
P: Poster Presentation
WS: Workshop Presentation
RTD: Round Table Discussion

ICSF INTERNATIONAL CLINICAL SKILLS FOUNDATION

The International Clinical Skills Foundation (Inc) is an Australian Registered Charity with the mission to improve the clinical education of health professionals in low-middle income countries.

Founded in 2017, the Foundation was formed by a group of academics working in health professional education to help support and disseminate the work of the biennial International Clinical Skills Conference. The conference has been held in Prato, Italy since 2005 and attracts expertise from around the world to progress the science of learning and to improve the safety of patients in health settings.

Supporting our work

If you would like to help us provide grants, scholarships and fellowships to develop clinical educators and projects in low-middle income countries please visit our website. www.InternationalClinicalSkillsFoundation.org

Mission Statement

The purposes of the foundation are to improve clinical skills teaching and learning internationally. Not just physical clinical skills but also communication and teamwork, and to enhance learning cultures within health systems.

We aim to develop clinical education expertise in lower and middle income countries to generate self-sufficient education centres that are well connected with existing networks in the rest of the world, helping health care educators in these countries to join the global conversation.

By creating sustainability within their own educational practices and medical facilities, programs will be developed that bring them up to date with current innovations, and facilitate advances in the context of their own health systems.

Areas of clinical skills development

- Preparing junior health professionals for the work context
- Communication in inter-professional teams
- Developing healthcare education curricula in low-middle income countries
- Assessment of Clinical skills teaching and learning
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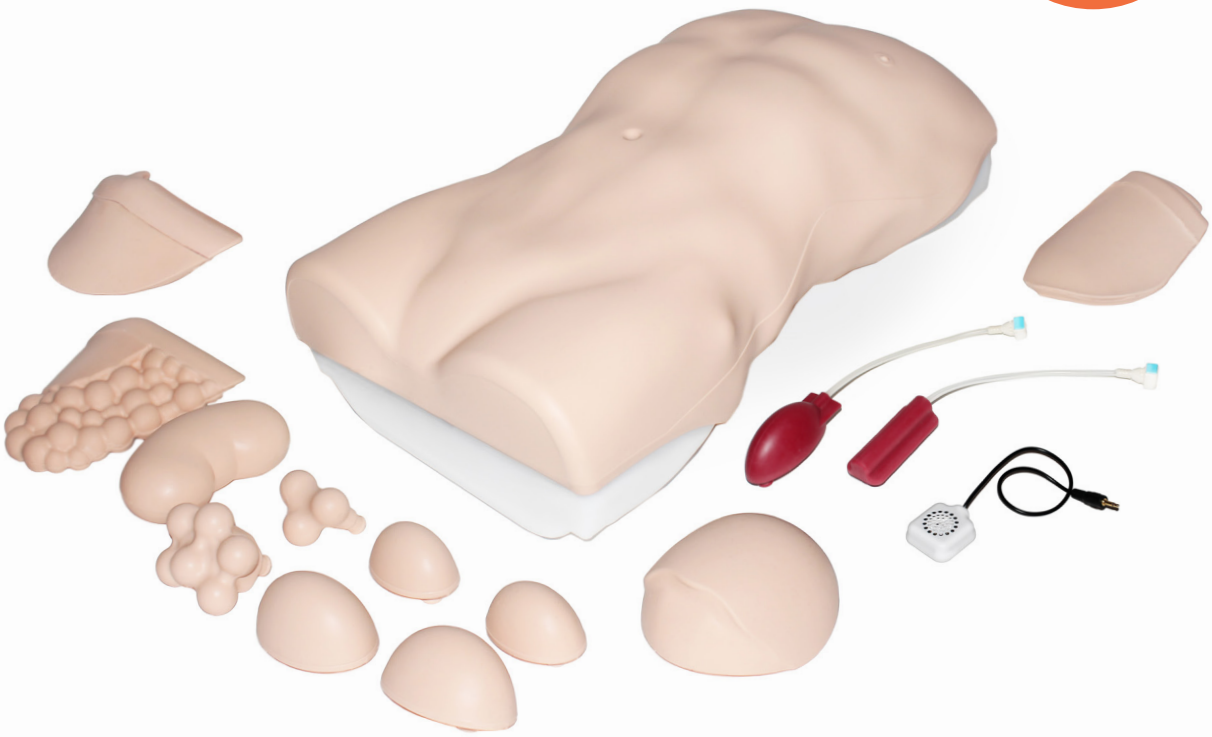

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KA01

CONFLICT VS CONFLICT: conversations that have the power to destroy and the power to reinvent

Liz Crowe

Is conflict in conversations inherently evil or good? In an age where there are suggestions that burnout, incivility and bullying in health are at pandemic rates one can assume that conflict should be avoided at all costs.

That what we need is a culture of compromise and compassion. Yet compromise can be the antithesis of understanding and growth.

In health we need to understand the interplay between psychological safety, learning, high functioning teams and innovation with that of conflict.

We do not need to avoid onflict.

We cannot avoid conflict. When conflict is left untouched it grows like a weed.

Unresolved conflict is never benign on individuals, teams or culture.

Therefore, we must get better at discerning what conflict is worth investing in and what conflict is must be held to account.

Conflict has the power to transform.

Conflict can only be constructive rather than destructive when conversations occur from a space of shared vulnerability, where language is spoken with responsibility and ownership and when people are less interested in justification and more interested in curiosity and understanding.

If someone is passionate enough to fight with us openly in health, we need to hear and understand.

If conflict is about individual power and personality than we need to be prepared to take the same principles of conflict to the open and highlight their behaviour.

The cost of incivility on humans, error, safety, retention and wellbeing is well documented and often leaders and teams alike have no sense of what to do about it.

This talk will examine all areas of conflict within health.

How robust conversations and open conflict can revolutionise thinking and outcomes in health and why destructive conflict needs more open communication.

KA02

Team talk to ensure safe patient care: Does one size fit all?

Tanja Manser

The provision of healthcare is an inherently communicative task.

Communication among healthcare professionals has been linked to the occurrence of adverse care events as well as to their prevention or amelioration.

This keynote will provide an overview of what we know about safe and effective team communication focusing on acute care teams.

Using examples from my own research covering a range of care settings and communication challenges I will describe effective communication behaviours.

I will also explore factors of the team task that impact on which communication patterns support safe and effective care.

In summary I will describe not only communication behaviours but also meta-communicative strategies that should be prioritised in education and training of healthcare teams.

KA03

The Art of Modeling the Learning Process

Jimmie Leppink

Comparisons between groups or conditions in terms of average test performance (e.g., post test performance in an experiment) or a similar learning outcome measure (e.g., exam score in a non-experimental study) are common in quantitatively oriented studies on the development of clinical skills.

However, what happens in the process towards that outcome measurement remains largely uncharted territory.

This is unfortunate, because a deeper understanding of the learning process can result in more detailed predictions of learning outcomes and a better design of education with it.

During my talk, I will discuss some objective and subjective learning process measures that have been useful in research on the development of clinical skills or skills in other contexts, and I will discuss how these measures can be incorporated in future research on the development of clinical skills.

KA04

Learning through talk: exploring synergies between simulation and workplace learning

Walter Eppich

Although the workplace learning literature has focused on 'doing', clinical practice involves 'talking' not only with patients but also about patients within team-based healthcare settings.

This realisation has led to an emphasis on 'communicative competency' as a learning outcome, which detracts attention away from other important considerations.

This presentation will take a complementary view and treat 'talk' as joint social activity between conversation partners and as a medium of learning for practice as well as learning from practice in line with sociocultural perspectives.

I will address the following overarching question: How does 'talk' contribute to learning in clinical education?

Three specific instances of healthcare talk serve as the point of departure for this exploration: (a) healthcare simulation debriefing, (b) workplace telephone talk, and (c) team reflection before, during and after patient care episodes.

I will integrate main findings from my research program to discuss how talk contributes to clinical education.

Lessons from the structured talk of feedback and debriefing in healthcare simulation demonstrate the potential in deliberately steering the talk of practice by attending to both process and content of learning conversations.

When viewed through a socio-cultural lens, talk represents social activity that drives learning.

Thus, relationships and rapport enable learning through talk.

One of my key research findings about 'productive conversational tensions' adds a more nuanced view to our understanding of workplace talk in recognising that some tensions motivate junior doctors to adapt their telephone talk in ways to minimise future tensions.

Along these lines, talk plays an integral role in conceptions of individual competence in clinical education, namely in developing competence, appearing competent, and assessing competence.

Further, talk drives the development of shared understandings within healthcare team that promotes collective competence.

Health professions educators should steer the talk of practice in two ways: (a) through formal and informal means, such as structured feedback and debriefings that attend to relevant process and content, and strategies that foster relationships and supportive learning environments, and (b) through simulations designed to sensitise clinicians to the affordances of future workplace talk.

KA05

The Sad Risk Taker: Rethinking The Role of Emotions In Learning and Clinical Skills

Vicki Le Blanc

In caring for patients, clinicians and trainees are constantly confronted with emotional events: stress in situations of uncertainty, anger at a perceived injustice or sadness at an undesired patient prognosis.

In many of these emotional situations, clinicians and trainees must obtain and interpret information, make judgments regarding treatment options, and remember previously learned information.

Evidence from the neurosciences indicates that emotions have a significant impact on how we perceive the world around us, what we pay attention to, what we remember, as well as our judgments and decision-making.

However, discussions of emotions in the health professions are predominantly relegated to the wellness realm, where educators are concerned with the impact of training and practice on mental health.

The roles of emotions on clinical thinking, reasoning and learning are rarely broached.

Given that medical practice and training often occur in emotional settings, we need to understand how clinicians' emotional states affect their ability to interpret information, make decisions, and remember critical information.

This greater understanding will, in turn, shape how we teach, provide feedback and coaching, as well as how we assess our learners.

The presentation will present an overview of the research on the relationship between emotions and cognition, as well as the implications for health professions education and clinical practice.

KWS01

Let's talk about how behavioural science can make a difference in healthcare

Tanja Manser

Behavioural science is increasingly used in healthcare to understand the impact of individual, team and organisational factors on safe and effective patient care.

However, the transfer of behavioural research methods and behavioural research findings often requires translation.

This workshop will explore the potential of behavioural science to support educational and clinical practice using examples of my own research focusing mainly on teamwork in acute care settings.

During the workshop examples of behavioural research will be presented, participants will discuss in small groups how this could be useful for their practice as educators, clinicians, simulation researchers etc. and feed back their key points to the audience.

The workshop will make use of the diversity in the audience because what we take from a piece of research is dependent on the viewpoint of the reader and on the current needs in our respective organisations.

KWS02

Emotions Under the Microscope: Capturing Emotions in Health Professions Education

Vicki Le Blanc

There is growing recognition of the role of emotions on learning and performance in health professions education.

Educators and researchers are increasingly interested in how emotions influence learning and performance, how learners approach emotional events, as well as how to best prepare learners for - and support them - in emotional clinical situations.

However, approaches to the study of emotions vary, and any particular approach will be best suited to certain circumstances rather than others.

Educators and researchers new to the domain of emotions could easily be overwhelmed by the various approaches to capturing emotions.

The focus of this workshop is to present a brief overview of what is known regarding emotions, learning, and performance, particularly in health professions education.

This overview will form the foundation for an interactive session in which participants explore their research and educational interests regarding emotions.

Various methods of capturing emotions – namely subjective, behavioural, physiological and socio-cultural - will be discussed.

KWS03

Debriefing Following any Event that Causes Global Distress in the Team

Liz Crowe

Whether it is a medical error, an unexpected death, conflict in the team or a colleague who has died unexpectedly one of the greatest resources available to us is the ability to come together and talk in a facilitated, safe and confidential environment.

Not just conversation – a structured debrief that allows real and honest communication where we examine what occurred, leadership and system success and failure, delegation, operational procedures, emotions and learnings and the psychoeducation of acute critical stress symptoms and recovery.

Debriefing of events that have caused distress in the team has benefits for teams, individuals, and patients.

Levels of social support and quality of personal relationships are positively associated with good mental health and wellbeing and having a debriefing framework in place can build on these important indicators.

This interactive workshop explores the ‘why’ and ‘how’ of debriefing.

It will debunk the myth that all debriefing is ‘dangerous’ and highlight the debriefing work that continues in the defence forces and emergency services.

The workshop aims to give participants a strong foundation to building a debriefing foundation within their own organisations.

KWS04

Healthcare debriefing: from simulation to clinical practice

Walter Eppich, *Ignacia del Morel[1], Jose Maria Maestre[2]*

[1]Hospital Virtual Valdecilla, Santander/Spain, Spain
[2]Hospital Virtual Valdecilla, Santander/Spain, Spain

Debriefing conversations are recognised as essential components of healthcare simulations to provide feedback and promote reflection, yet debriefings in clinical practice remain relatively infrequent.

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.

During this session, attendees will explore their debriefing successes and challenges and identify opportunities to strengthen their debriefing conversations using a blended approach adaptable for clinical event debriefings.

This workshop is designed for educators who want to enhance their debriefing skills.

During the workshop, attendees will gain valuable insights into healthcare debriefing through interactive didactic inputs, video review and group discussion, and structured debriefing practice with role-play.

After this session, attendees will be able to:

1. Demonstrate strategies to establish a supportive learning environment
2. Apply a structured approach to debriefing structure
3. Facilitate focused discussion around relevant topics

KWS05

Designing Research for Understanding the Learning Process

Jimmie Leppink

Much of the quantitatively oriented studies on the development of clinical skills focus on comparisons between groups or conditions in terms of average scores on learning outcome measures.

My keynote presentation covers several objective and subjective learning process measures that may help to gain a deeper understanding of learning outcomes and may inform educational practice and future research accordingly.

During this interactive workshop, we will discuss ways to include the learning process measures covered in my keynote presentation and other learning process measures of interest in future empirical studies on the development of clinical skills.

O01

Advancing skill development and transfer between SIMulation and clinical placement: Connecting assessment results, feedback messages, and strategies for students

Jennie Brentnall[1], *Felicia Bruzzese[1], Tien Ang Teddy Pun[1], Belinda Judd[1]*

[1]The University of Sydney, Sydney, Australia

Introduction

Placements are a large component of entry-level allied health training programs, and where students integrate their learning with practice and further develop essential skills.

Simulation-based educational approaches are often used to develop and demonstrate students' competence in key clinical skills for later placements.

Inherent to maximising the benefit of such simulation-based approaches is that students transfer skill development between settings.

However, much feedback to students in these settings is oral.

Frequently the quantity of information provided is lost because it is not recorded or connected to strategies for skill development.

Innovations are needed to engage the current generation of students with educators in multiple forms of conversations that will lead to skill development.

Objectives

This project brings together student and academic perspectives to guide face-to-face and virtual feedback conversations that enable students to use assessment and feedback information to identify and implement strategies for skill development.

Methods

Academics and honours students collaborating in a one-year action research project are creating, implementing, evaluating, and revising a Feedback Engagement Toolkit for occupational therapy, physiotherapy and speech pathology.

The phases involve the cyclical identification of the current situation from student and educator perspectives, generation and trial of solutions, and review from both perspectives.

Discussion points

To achieve improved practices, this project addresses themes of: (i) challenges to educators offering and students utilising assessment and feedback information that promotes skill development; (ii) connections to strategies for skill development; and (iii) innovation in approaches to engage students and educators in various forms of feedback conversations.

Conclusions

The Toolkit in this project activates both personal interactions and technologies to support students' skill development, as is consistent with active involvement as adult learners in clinical environments.

Ultimately, these innovations are to better prepare students' for subsequent placements, boosting their confidence and capacity for continued skill development.

O02

Preparing students for intentional conversations with older adults: A narrative competence initiative

Margaret Mcallister[1], *Colleen Ryan[1], Deb Friel[2], Donna Lee Brien[1]*

[1]Central Queensland University, Noosaville, Australia
[2]Central Queensland University, Rockhampton, Australia

Aged care presents challenges for clinical learning, because stigma and poorly developed psycho-social skills compound feelings of student inadequacy.

Further, residents' loneliness and social disconnection are issues that students could be empowered to address.

This presentation discusses the findings of an evaluation underway, of an educational innovation that combined the narrative arts and nursing education.

The aim was to better prepare students in making a positive difference to the aged-care community by using narrative skills to increase networks of communication with older people.

Narrative Competence (NC) is the ability to deeply listen to a person's story and then to communicate that story back so that it becomes life-enhancing

1. It involves three interrelated skills: intentional conversation; being conscious of the self-in-relation to other; and creating client ease.

Previous studies show that NC improves patient safety and quality of life, and produces work satisfaction and wellbeing in clinicians

2. We developed a one-day interactive workshop involving film discussion, biographical story-telling models, and guided NC development.

A case study examined the impact of the learning experience. Focus groups provided qualitative data and a questionnaire and self-efficacy scale were administered to understand students' perceptions of NC and the impact of the workshop on confidence in communicating with older people.

Narrative competence provides a novel solution to a difficult problem – that many nursing students are reluctant to engage in aged-care placements.

Equipped with vital psycho-social capabilities students can make a positive difference to this community.

NC develops intentional conversational skills, empathic engagement, communication, cultural competence, collaborative goal setting, and fosters sense of community.

1. Corbally, M, & Grant, A. (2015). Narrative competence: a neglected area in undergraduate curricula. Nurse Education Today, 36: 7–9
2. Ariso, J. (2018). Enhancing second-order empathy in medical practice by supplementing patients' narratives with certainties. BMC Medical Education, 18:35.

O03

Mixing reality: The integration of HoloLens technology in clinical skills education

Neil Harrison[1], *Paul Fettes[1]*

[1]University of Dundee, Dundee, United Kingdom

Background

The application of virtual reality, augmented reality and mixed reality to education is an emerging field.

Their use in medical education began with the teaching of anatomy which is of significant benefit to learners (Nicholson, Chalk, Funnell & Daniel, 2006). This technology is increasingly used in surgical skills training.

Knowledge of anatomy is one of the principles underpinning the development of physical examination and procedural skills.

The importance and application of anatomical knowledge in the acquisition of clinical skills is often poorly appreciated by learners but is regarded as essential by educators (Dangerfield, Bradley & Gibbs, 2000).

An innovative way to bridge the gap between the process of physical examination and procedural skills and an understanding of the underlying anatomy was therefore sought through the technology of mixed reality.

This involves the use of special eyewear to produce a 3-D anatomical image which can be superimposed onto the surface anatomy or in the environment of a subject or model without affecting the ability of the learner to interact with the real environment.

Methods

Sessions utilising mixed reality to teach both abdominal examination and lumbar puncture were developed. These sessions were then piloted and evaluated with undergraduate medical students and postgraduate doctors.

The sessions involved the learner carrying out the examination or procedure in simulation whilst utilising both ultrasound and mixed reality 3D modelling to improve their appreciation of the anatomy involved.

This is work in progress and further quantitative and qualitative data will be collected around knowledge and skill acquisition.

Conclusions thus far

Sessions incorporating mixed reality technology, provided learners with the following benefits:

- Increased engagement with teaching through the use of new technology.
- Improved anatomical knowledge and 3D understanding.
- Enhanced application of anatomical knowledge to clinical skills.
- Supported learning of ultrasound procedural skills.

O04

Feedback conversations: the development of evaluative judgement in Near Peer Mentoring models of clinical education

Merrolee Penman[1], *Belinda Judd[1], Jennie Brentnall[1], Gretel Evans[2], Sue McAllister[1], Joanna Tai[3], Tanya Thompson[4], Kate Thomson[1], Monica Vasquez[4], Michelle Wykes[5], Jonathan Young[2]*

[1]The University of Sydney, Sydney, Australia [2]Western Sydney Local Health District, New South Wales, Australia [3]Deakin University, Melbourne, Australia[4] South West Sydney Local Health District, New South Wales, Australia [5]Nepean Blue Mountains Local Health District, New south Wales, Australia

Introduction
Work-ready graduates are expected to be competent self-managers of their learning.

An essential aspect of self-management is evaluative judgement, the ability to evaluate the performance of self and others.

Through engaging in feedback conversations in the placement environment, medical students have gained clarity regarding expected standards, and their self and peer assessments became more accurate.

However, it is unknown if similar learning outcomes exist for allied health students in near peer mentored placements.

The aim of this exploratory study was to investigate how engaging senior students in feedback conversations with junior students in near peer mentored placements supported the development of evaluative judgement in senior students, and attendant enablers and barriers.

Methods
A prospective qualitative descriptive design was implemented with a convenience sample of supervisors and their allocated junior/senior occupational therapy and physiotherapy students.

Data collected included senior students' (n = 11) recordings of feedback sessions with junior students using 'think-aloud' methodology, and semi-structured group interviews with supervisors (n = 12), senior students (n = 16) and junior students (n = 7). Data was analysed using qualitative content analysis.

Results
Senior students developed their evaluative judgement through re-evaluating their own performance and evaluating junior students' performance.

Enablers included the preparation and role modelling of feedback conversations by supervisors, the senior/junior student relationship, and the senior students' role in providing formative feedback.

Barriers included the length and timing of junior student placements, the senior students' confidence in their emerging competence and their knowledge of the expected standards to be reached by junior students.

Conclusion
Students can develop their evaluative judgement through near peer mentoring.

However, supervisor role modelling and support as well as senior student preparation was required to assist students to develop skills in facilitating feedback conversations.

O05

Refugee in my neighbourhood

Jacqui Pich[1], Tracy Levett-Jones[1], Natalie Govind[1]

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Context
At the end of 2017, the number of people forcibly displaced worldwide reached a high of 68.5 million people, this included 25.4 million refugees and 3.1 million asylum seekers.

In addition 40 million people remain internally displaced.

In Australia the current size of the Refugee and Humanitarian Program sits at 13,750 places, with the majority of places are reserved for people fleeing the Syrian conflict.

For these reasons an understanding of, and empathy for, refugees and those seeking asylum is important to instil in our nursing students who will be part of the future nursing workforce caring for this vulnerable population.

Teaching and learning resource – what we are doing
In partnership with a local Sydney council and nursing staff from NSW Refugee Health a module is being created based on a group of former refugees and asylum seekers living in Sydney.

Digital stories will be created based on their experiences getting to Australia, and encompassing all aspects of a refugee's journey.

These digital stories will form the basis for tutorial activities and for a reflective assessment in a first year first semester nursing subject.

Learning will be consolidated through a workshop where the group will be partnered with academic staff members and deliver a face to face telling of part of their story to students, accompanied by video stimulus showing aspects of the refugee journey.

Finally students will attend a debriefing session to help them unpack and reflect on their thoughts and feelings from this experience.

What will we find?
The aim of this project is to increase the empathy, understanding and knowledge levels of first year nursing students with this vulnerable population.

This will be measured using pre and post testing.

Conclusion
The results of this project will be presented at the conference.

O06

Interprofessional Education in Immediate Life Support training improves simulated patient related outcomes

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Introduction
Resuscitation training is a core element of many undergraduate healthcare curricula. Standardised resuscitation courses, such as the Resuscitation Council UK's Immediate Life Support (ILS) course, are delivered providing healthcare learners with a structured algorithmic approach to managing the critically unwell patient. It is known from the resuscitation literature that every minute that passes whilst a patient is in cardiac arrest with a shockable cardiac rhythm the chance of survival decreases by 12-15%, with effective cardiac arrest management requiring a team-based approach

Methods
A retrospective analysis of video recorded data collected from a study observing the differences in overall team performance post intervention of either Interprofessional or Uniprofessional ILS courses for medical and nursing students. Analysis focused on the time taken to identified 'time critical' points within the resuscitation, hypothesising that those who had undertaken the interprofessional training would be more efficient in team resuscitation leading to shorter time to critical intervention, thus potentially improving patient outcome.

Results
The UPE trained teams confirmed cardiac arrest in a median time of 23.5 seconds from entering the room whilst the IPE trained groups confirming in 22 seconds (P=0.527). The IPE trained group commenced CPR a median time of 10s faster than the UPE trained group (P=0.206).

Similarly, the IPE group performed the first 'rhythm check' (a process involving connecting the mannequin to the defibrillator whilst CPR was ongoing) in a median time of 87s, compared to the UPE group median time of 116.5 seconds (P=0.006).

The time from entering the room to delivery of first shock in the IPE group was a median of 106.5 seconds compared with the UPE group 158 seconds(P=0.005). Analysis of the 'delay' between rhythm check and defibrillation showed that there was a median delay of 21 seconds in the IPE group compared to 41.5 seconds in the UPE group(P=0.005).

Conclusion
Interprofessional education as a pedagogical approach to training has been on the increase over the past number of years, as educators realise that healthcare occurs in teams and to train effective teams all members must train together. This study has shown that, while in a simulated setting, the benefits of interprofessional team training can have an effect and potentially improve patient outcome.

O07

Emergency surgical obstetrics simulation training: an ex-vivo low-cost model using bovine uterus and porcine bladder for haemostatic uterine suture techniques

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Objective

Postpartum haemorrhage remains a leading cause of maternal mortality and morbidity. While conventional obstetrics training curricula describe at length the management of postpartum haemorrhage, obstetricians rarely practice the relevant surgical techniques electively. Procedures such as the transverse or longitudinal haemostatic uterine brace sutures are recognised to be safe, simple, and allow for the preservation of the uterus. Training during emergency situations is rarely practical or ideal. We describe a simple model that simulates the atonic postnatal uterus and allows trainees to practice the safe placement of the brace sutures.

Methods

We use a bovine uterus model with attached broad ligament, bladder and ureters for the transverse haemostatic suture. For the longitudinal brace suture, we use a porcine bladder to simulate the uterus, with the ureters and bladder mesentery simulating the tubes and broad ligaments. The placement of the sutures can be practised with the uterus/bladder closed, or open akin to a caesarean section. Tissue dissection and feedback is almost similar to in-vivo conditions. The sutures are inserted and driven using the material and correct placement utilised during real surgery. The facilitator acts as an assistant, replicating real-life situation, and provides guidance/feedback to the trainee. Skills such as hand-eye coordination, fine movements, using an assistant, recognition of various degrees of tension that should be applied on tissues are developed in an 'elective' environment, and are transferrable to the acute situations.

Results/Conclusions

Our wet-lab training model allows the acquisition, maintenance, and enhancement of the required technical skills in a controlled environment, using inexpensive, reproducible and widely available specimens. The model has proved successful in both high- and low-resources healthcare settings. It is utilised in obstetrics emergencies courses and training sessions in the West of Scotland, and has been introduced by the authors in low-resources healthcare settings (Alexandria University Maternity Hospital, Egypt).

O08

Learning to prescribe: negotiating the clinical workplace

Ruth Kinston[1], *Niamh McCarville[1]*

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Introduction: Prescribing and the ability to critique prescriptions are essential skills. Doctors in training write most hospital prescriptions but feel poorly prepared.

Objectives: This study aimed to understand how and why an undergraduate supervised prescribing initiative might help medical students gain proficiency in prescribing.

Method: Consenting participants were recruited from a single medical school in the United Kingdom where a supervised hospital prescribing initiative was implemented 3-years earlier. Data was gathered utilising focus groups. Material was transcribed and two researchers independently coded and analysed the data utilising realist approach to evaluate:

1. What are the mechanisms by which supervised prescribing helps students learn to prescribe?
2. What are the important contexts, which facilitate or hinder student engagement with prescribing?
3. What outcomes does participation in prescribing achieve for students?

A programme theory and middle range theories were developed.

Results: Data was collected from 3 focus groups invovling 18 senior students. Mechanisms identified as important in influencing student's learning and behaviour included:

1. **Motivation:** Internal drivers (desire to be proficient) are stronger than external ones (curricular requirements) in seeking prescribing opportunities.
2. **Responsibility:** Students feel accountable for their prescriptions and the need to justify their prescribing decisions.
3. **Being useful:** The desire to use the prescribing skill to assist the team helped to build confidence, professional identity and a sense worth.
4. **Error:** Engaging with prescribing increases their awareness of the propensity for error and understanding why they occur.
5. **Hierarchy:** The desire to fit in with the team, manage their personal reputation and avoid conflict may require the student to choose between doing the right thing and following orders

Conclusion: Supervised workplace prescribing facilitates proficiency, development of professionalism and awareness of error. However hierarchy and the desire to avoid conflict may negatively impact on a student's prescribing behaviour.

O09

Telling it like it is: What do we really know about replacing clinical practice with simulation?

Fiona Bogossian[1], *Robyn Cant[2], Emma Ballard[3], Simon Cooper[2], Tracy Levett-Jones[4], Professor Lisa McKenna[5], Linda Ng[6], Philippa Seaton[7]*

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Background

Simulation based education has emerged as an essential element of pre-licensure education for health care students.

It provides engaging and authentic learning opportunities during realists simulated clinical experiences.

With the rapid increase in simulation scholarship, we sought to substantiate current knowledge for substitution of clinical practice hours with simulation across the health disciplines using the best available evidence.

Objectives

1. To examine the levels, quality of evidence, measures and outcomes when simulation is substituted for clinical placement;
2. To identify the optimal proportions, ratios, durations of simulation replacement and;
3. To explore how this evidence impacts on professional education standards.

Methods

A systematic review of primary studies in which simulation was used to replace clinical practice hours.

Elements of interest were carefully extracted and the quality of each study was assessed using the MERSQI1.

Results

We identified 10 primary studies (six RCTs, three quasi-experimental designs and one observation-analytic design) in nursing (n=7), physiotherapy (n=2) and medicine (n=1) and the methodological quality was moderate to high.

A total of 1972 students participated in the studies and outcomes measured students' reaction, learning and behaviour.

There were no clear findings in relation to proportion, ratio or duration of replacement and, the evidence is not clearly translated into professional program accreditation standards.

Conclusion

Best available evidence supports the substitution of clinical practice with simulation although the evidence is unclear regarding the appropriate 'dose' and studies were notable in their heterogeneity.

We provide recommendations for simulation-based research to contribute to a stronger evidence base and higher impact research translation.

References:

1. Reed, D.A., Beckman, T.J., Wright, S.M. (2009) An assessment of the methodological quality of medical education research studies published in the American Journal of Surgery. The American Journal of Surgery, 198: 442-4.

O10

A Pre-Clerkship Procedural Curriculum designed for the future of Medical Education: A Pilot and Feasibility Study

Frank Battaglia[1], *Céline Sayed[1], Maria Merlano[1], Meghan Mcconnell[1], Christopher Ramnanan[1], Nikhil Rastogi[1]*

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Context

Background
Procedural skills training varies significantly across Canadian medical schools, and there is currently no standardised assessment tool to evaluate its benefits. This project aims to develop a curriculum that teaches 2nd-year medical students to perform and evaluate procedural skills, while laying the foundation for Entrustable Professional Activities (EPAs). The goals of this program include decreasing anxiety, increasing confidence, and achieving competence for students and also allowing staff to judge the appropriate level of supervision when delegating learners to perform basic procedures in the team setting. Our curriculum incorporates, near-peer teaching as well as near peer formative assessment.

Methods
Each of the twelve 2nd year participants completed a State Trait Anxiety Inventory and self-reported confidence questionnaire related to procedural skills. Students participated in four sessions taught by expert-physicians over a five-month period. A new skill was taught at each monthly workshop and an opportunity to practice previously taught skills was provided. Skills were assessed in a skills integration simulation OSCE, and the anxiety and confidence questionnaire was repeated.

Results
Students who completed this pilot program showed a significant decrease in mean anxiety state (2.48 vs 1.74, p-value<0.001), while the control group did not (p-value=0.408). When assessing confidence, students who completed this program showed increased self-assessed knowledge and confidence in the following skills: IV Insertion (p-value<0.001, p-value<0.001), Local Anesthetic (p-value<0.001, p-value<0.001), Suturing (p-value=0.001, p-value<0.001), and Sterile Technique (p-value=0.008, p-value=0.008). Upon final evaluation, the mean competency for each skill was above the level of competency. Competency was achieved in each skill by each student, as assessed by the expert physician.

Conclusions
There is evidence to suggest that implementation of this procedural skills training model within the Canadian medical school curriculum may improve student anxiety, confidence, and competency for success in clerkship and could be the foundation for developing milestones for EPAs.

O11

Validation and cross-cultural adaptation of a questionnaire for perceived relevance of safe drug administration

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Background
Attainment of medication administration skills and competency for student nurses is challenging and, despite much attention being paid to this area of practice, medication errors remain a problem1 (Aggar and Dawson 2014). Pre-testing of student knowledge provides positive motivation for learning, however, to allow comparison across research studies, it is helpful to develop standardised instruments.

Aim
As part of a process to develop a standardised outcome measure for drug administration education, we translated and culturally validated a questionnaire to assess students understanding and attitude to drug administration.

Methods
A team of UK and Spanish academics used established processes2 (Wild et al 2005) to translate, back translate and culturally adapt an existing Spanish questionnaire (Fuster-Linares et al, 2017). We also addressed the three steps of meaning, clarity and relevance3 (Duffy 2006) for each item in the questionnaire. In this presentation we will outline the steps taken to establish translation and cultural adaptation.

Conclusions
The validation and cross-cultural adaptation of instruments for use in different contexts is important to allow meaningful evaluation across countries. In this paper we will demonstrate a worked example of processes to achieve this.

References
1. Aggar, Christina, and Sonja Dawson. “Evaluation of student nurses’ perception of preparedness for oral medication administration in clinical practice: A collaborative study.” Nurse education today 34.6 (2014): 899-903.
2. Wild D, Grove A, Martin M et al. Principles of good practice for the translation and cultural adaptation process for patient reported outcome (PRO) measures: report of the ISPOR task force for translation and cultural adaptation. Value Health 2005; 8: 94-104
3. Duffy ME. Translating instruments into other languages: basic considerations. Clin Nurse Spec 2006; 20:225—6.

O12

Two thousand registered nurses can't be wrong! Identifying the essential technical and non-technical skills required by graduate nurses

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Background
Graduate nurses are expected to be work-ready and clinically competent when they commence employment. However, most studies focus on what graduates 'lack' in terms of skills performance and practice readiness [1].

Aim
The aim of this study was to seek consensus on the essential technical and non-technical skills required of commencing graduate nurses by surveying a broad cross-section of practicing nurses.

Methods
A cross-sectional survey was undertaken with participants recruited via snowball sampling and through professional networks and social media. Registered nurses who had employed, worked with, supported, mentored, or taught graduate nurses during the last two years were invited to complete an anonymous web-based survey. Participants were asked to rate a list of 114 technical skills and 20 non-technical skills on a four point Likert scale ranging from 1. Undecided, 2. Unnecessary, 3. Desired, and 4. Essential.

Results
Of the 2021 registered nurses who participated, 85% were from Australia and New Zealand; and the majority had more than 20 years clinical experience. Vital signs and hand hygiene considered essential by 98% of participants. Advanced life support, venepuncture and tracheostomy care were considered the least essential skills for graduate nurses. With the exception of delegation of care and peer teaching, all of the non-technical skills were highly rated by the majority of participants.

Conclusion
This study resulted in the development of a comprehensive set of technical and non-technical skills through a process that elicited the views of a broad cross-section of key stakeholders. This skill set can be used to inform nursing curricula and will help ensure that graduate nurses are work-ready, clinically competent and able to provide safe and effective patient care.

References
1. Missen, K., et al. (2016). Registered nurses' perception of new nursing graduates' clinical competence: A systematic integrative review. Nursing and Health Sciences. 18, 143-153.

O13

An innovative level 6 module that helps prepare students for emergency respiratory physiotherapy on-call duties upon graduation

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Background
On-call physiotherapy is a duty expected of all qualified physiotherapists and it is important to ensure that physiotherapists are appropriately trained. Following the successful development of a bespoke simulation based on-call training programme with 2 local Trusts for post-graduates, we decided to design a similar programme for our level 6 (year 3) students. The aim of the module is to reduce some of the anxiety associated with this service and to facilitate a smooth transition to clinical practice with the expectation, that the local trust will supplement the training once employment commenced.

Method of Instruction
The module consists of 8 x 3 hour sessions, 6 of these sessions use simulations of real on-call case studies. Students go through a pre-briefing, followed by the scenario (either using an expert simulated patient or a computerised human mannequin) and this is followed with a debrief. Teaching can occur either before or after the simulation. The student's self-perception of their clinical reasoning and competency for on-call is measured using the 'ACPRC on-call clinical competency questionnaire'1and the effect of the simulation training is measured post-module via the 'Simulation User's Evaluation Questionnaire 2'.

Students are examined using a simulation of an on-call scenario, to assess and manage the patient. The students are marked on their performance during the simulation (80%) and a reflective essay of 1,000 words (20%). Video recordings are available to support their reflection.

Conclusion
Students have perceived this module as being highly beneficial in their learning and have rated it very highly: University evaluation scores for 2017 were 4.8/5 and for 2018 4.9/5.

Studentst have reported in a focus group that it has helped to consolidate their learning of respiratory physiotherapy; it has helped improve their self-reported competency and it has decreased their anxiety about undertaking on-call duties when they qualify.

O14

Improving student assessment and feedback for OSPE exams and practical skills sessions: can debriefing work?

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Background
Feedback following observed structured practical exams (OSPE's) and feedback in clinical skills teaching sessions have both been rated poorly by students on the physiotherapy programme in recent years. As educators, we have found this criticism confusing as following an OSPE exam, we give each student a detailed Rubric and in teaching session tutors give tailored 1:1 feedback. This led to a debate over why this was happening and why students were perceiving the situation so differently from us.

What we did
We ran a focus group, and questioned students about their perceptions. We found that the rubric was unhelpful and that in the 1:1 in teaching sessions they were often confirming techniques being taught, rather than getting feedback on how they were performing the technique itself.

What happened
The first action we undertook was to improve the transparency of the feedback marksheet following an OSPE exam. We transformed the marking sheet to include expected answers. This served two purposes, first, it helped the marker: as they could use the form during the exam and when giving feedback, they could colour code the answers using: red (not achieved), amber (partially achieved) and green (fully achieved). Secondly, this enabled the student to clearly see what they had done or not done and additional comments could be made by the examiner about what they had done well, not so well and how they could improve.

The second action (for this year with the same cohort), will be to use debriefing sessions after the skills teaching sessions, as debriefing is well evidenced in simulation based education (SBE) to enhance learning, an it will encourage active particpation and reflection by the student.

The effectiveness of the debriefing will be measured using pre and post-test educational questionnaires form the EAT1 framework and focus groups.

O15 - Late withdrawal

How to design 'learner-centred' professional development programs to grow clinical educator expertise in hospital contexts

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Background
Clinician-Educators (CEs) are crucial to support positive and effective learning experiences and ensure high professional standards of health practice for health students. The quality of clinical teaching is determined by the educational rather than the clinical expertise of CEs. This research examined physiotherapy CEs beliefs and values about effective teaching and preferences for Professional Development (PD) to support their education role.

Context
St Vincent's Hospital, Melbourne, (SVHM), is a large inner city, tertiary public hospital in Melbourne, Australia. The CEs were physiotherapy clinicians who supervised and assessed physiotherapy students in addition to their clinical practice.

Method
Data comprised forty questionnaires and two focus groups selected according to teaching experience; early career CEs (less than 5 years) and experienced CEs (5 or more years). Transcripts were thematically analysed by two researchers, independently.

Results
Early career CEs believed effective teaching was student-centred and highly scaffolded. They identified weakly as educators compared with the clinician identity and they preferred PD that involved mentoring and workshops. The experienced CEs believed effective teaching included patient-centred, outcome-focused and student-centred teaching strategies. This group held intermediate identities as educators, relative to their clinician identity and preferred scenario-based, collaborative PD about teaching. There were a few outliers, several experienced CEs, who identified strongly as educators and valued graduate qualifications of clinical teaching to improve their teaching expertise. These findings directly informed a multi-tiered PD program designed to cater to the learning needs and preferences associated with each level of identity as educator.

Conclusion
Designing PD programs to more closely align with CEs' identities as educators, by first exploring their beliefs about teaching, appears to facilitate their engagement with PD programs of teaching and enhance their development as educators.

O16

Designing an innovative clinical Interactions course (CLIC) for a new community facing medical programme

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This presentation shares our experience of designing a clinical interactions course for a unique, innovative medical programme in Scotland (ScotGEM). ScotGEM is the first course of its kind in the United Kingdom and unique as it brings together two Universities, four health boards, and is designed to create a new generation of generalist medical practitioners equipped for remote and rural settings and as agents of change. At the centre of the design is 'community facing', taking account of both the educational setting and opportunities available, enabling longitudinal student learning and contribution to the community where they are embedded.

The first stand of CLIC is the full integration of communication, physical examinations and procedural skills, delivered by a single clinician across the simulated and real clinical contexts, thus enabling learners to apply them immediately in an integrated way.

The second strand is 'Autonomy enhancing'. The CLIC course will promote self-directed (1), autonomy enhancing (2), intrinsically motivated students (3), who will be equipped to recognise and seize opportunities available to them; this presentation will explore this further.

The third strand is 'Community of practice (4)'- ensuring that students can immediately become a 'useful pair of hands' rather than passive consumers of learning/ information. Therefore the skill set, and educational climate take account of the skills considered useful. Students will also have skills as agents of change.

And finally – 'the generalist clinical mentor (GCM)' role. GCMs are rural primary care physicians who will teach clinical interactions both in the clinical skills suite, under the direction of an experienced skills lead, as well as in real clinical practice the same week. The close mentor relationship will anchor learning in real world practice and enhance transfer from simulation to clinical practice.

This presentation shares our experiences: the challenges, successes and lessons learned.

O17

Interprofessional learning in the round - professional conversations to promote learning - an organic disruptive simulation technique

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Outline
Interprofessional education and collaborative practice has never been more relevant to the modern day healthcare professional (CAIPE 2013). Interprofessional learning can happen with and without deliberate design: a coffee room, a clinical area and in academic institutions but integral to this is an open mind, mutual respect and a willingness to `speak up`. This session recognises golden teachable moments through a conversation style simulation where debriefing, learning moment capture and advocacy enquiry (Dufresne et.al. 2006) culminate in an organic disruptive simulation technique.

Background
Rehearsal for recognising the unwell patient for pharmacy students has been historically classroom based. Organic disruptive simulation is used to tease out golden learning and teachable moments where the cross fertilisation of knowledge and expertise can inform non-clinically exposed pharmacy students in the recognition of the acutely unwell, supported and informed by interprofessional colleagues.

The session takes place in an unconventional teaching space – a large open atrium at the heart of the university. It is set in the round with students all around the simulation. The pedagogical design is underpinned by the origami debriefing model (Butler, McDonald and Merriman 2017) which incorporates low fidelity simulation, high impact dynamic learning to construct new learning and confidence.

Method
Pre and post session data was gathered to determine knowledge and confidence using a pre-session questionnaire. Focus groups were conducted and themes induced from focus group transcripts. Participants are representative of three professions in the sessions.

Ethical approval was granted by both participating schools at Robert Gordon University.

Results and findings
All data is pending.
Mrs Laura Chalmers and Mrs Alyson Brown

O18

Medical student telephone consult conversations: A discourse perspective of structure and participant goals

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Telephone referrals to senior doctors form part of junior doctor daily clinical communication, yet final year medical students receive little experiential preparation for this task. Training with structured communication protocols such as ISBAR might improve transfer of information. However, they may not reflect typical communication patterns valued by clinicians, particularly when the roles are junior and senior doctor. There is limited research on junior telephone calls. The aim of this study was to examine how telephone consultations were co-constructed to achieve participant goals.

We recorded telephone consultations made during immersive simulation scenarios by final year medical students to a senior doctor prior and post clinical immersion in their trainee intern term. 31 students participated in both the pre and post immersion calls. We conceptualised the study using a practices of community framing. The calls were analysed using discourse analysis attentive to how participant goals and the context influence the unfolding of the interaction.

In pre-clinical immersion patterns were evident in that earlier stages involved the transfer of information to the receiver in largely monologic chunks whereas later stages were more interactional and included clarification and negotiation. Post immersion, there was more prioritisation of relevant clinical information and less redundancy in the earlier phases of the calls. Post clinical immersion, there is some discursive evidence that students adapted their telephone call consultations to the valued practices of the community, including the need to prioritise relevant clinical information early in the call and share their clinical reasoning. Standardised communication tools such as ISBAR used in communication training outline the role of only one speaker during the call. Clinical communication education could be strengthened by focusing on the joint participation of both junior and senior doctor.

O19 - Late withdrawal

A comparative qualitative analysis of Australian competency standards for non-technical skills

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Introduction

Medical error is acknowledged as a mix of human and system factors [1] with non-technical skills contributing to up to 80% of errors [2]. These so called non-technical skills, including situation awareness, communication, team working, decision-making, leadership, coping with stress and managing fatigue, are critical for safe patient care.

Competency standards documents identify essential knowledge, attitudes, skills and values for each profession [3] and form the criterion for health professional registration. However, little is known about how non-technical skills are addressed in standards documents for registration as a health professional in Australia.

Methods

A qualitative comparative analysis enabled identification of non-technical categories and elements developed by Flin et al [4] in standards documents. Data collection involved document analysis with data analysis using deductive coding. Standards documents for eleven health professions including Dentistry, Nursing, Medicine, Medical Radiation, Midwifery, Occupational Therapy, Pharmacy, Physiotherapy, and Podiatry were examined.

Findings

A total of 1616 statements were reviewed with 592 statements coded to a non-technical skill category, 27 statements were coded twice. All non-technical skill categories appeared in the standards documents. A total of 31 elements were included in the study. Six elements were common, 22 elements lacked commonality, and three elements were missing from the standards documents. Any statement that did not align with the categories and elements of non-technical skills was coded to an other category.

Conclusion

Non-technical skill categories addressed in the Australian standards documents were communication, leadership, decision-making and team working. Less reference made to situation awareness, and minimal reference made to managing stress and coping with fatigue. It is positive to identify categories and elements of non-technical skills in the standards documents. However, a deliberate and systematic approach may be beneficial to support health professionals to intentionally and effectively collaborate to implement quality and safer healthcare in future.

O20

Defining and comparing learning actions in two simulation modalities

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Background: Practical skill performance is a main concern in nurses' professional practice.1 Simulation-based learning is a well-established approach in acquisition of practical nursing skills. There is limited research on what students are actually doing during simulation-based learning processes.

Aims and objectives: To explore learning actions that nursing students used during skill learning in a clinical skills centre.

Design: A qualitative research design was used, involving content analysis.

Methods: Video-supported observation was conducted of nine nursing students practicing vein cannulation in a clinical skills centre.

Results: The students engaged in various learning actions, but they were primarily engaged in seeking and giving support related to the procedural guidelines. They were seldom engaged in other learning actions, such as knowledge exploration or collaboration through reflection and discussion, to find solutions to problems during skill training.2

Conclusion: Such information processing is a simple form of interaction and is concerned with a surface approach to skill learning, meaning that learning is based on memorising of factual and procedural knowledge with less attention to understanding. A simulation-based learning experience lacking cognitive reflection, prevents students from gaining greater understanding and to clarify their existing understanding.3

Relevance to simulation-based education: Reflection is recommended for students to enhance skill competence and obtain self-regulatory knowledge. Aspects relevant to support a deep approach to learning will be discussed.

1 Marshburn, D.M., Engelke, M.K. & Swanson, M.S. (2009). Relationships of new nurses' perceptions and measured performance-based clinical competence. The Journal of Continuing Education in Nursing, 40(9),426–432.

2 Ravik M, Havnes A, Bjørk IT. (2017) Defining and comparing learning actions in two simulation modalities: students training on a latex arm and on each other's arms. Journal of Clinical Nursing, Open access

3 Marton, F. & Säljo, R. (1976). "On qualitative differences in learning. I. Outcome and process." British Journal of Educational Psychology,46,4-11.

O21

Walking in someone else's shoes – a 3D cultural empathy experience

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Background
Australia's general population includes 25% of people who were born overseas, and nearly 50% of people have a parent who was born overseas (Gill & Babacan 2012; AHRC 2014). This increasing cultural diversity is reflected in the student cohort at Flinders University, Australia. However, educators often fail to consider how students' cultural backgrounds and values may impact their experience of experiential learning interventions such as simulation.

Aim/s
The aim of this study was to explore the impact of a 3D cultural simulation video (designed by Everson et al, 2015) from the perspective of a group of culturally diverse 3rd year nursing students.

Method
Participants lay on a bed and wore 3D glasses and headphones. They watched a 3D video where they adopted the role of a patient admitted to a hospital in a developing country where no-one speaks English. While watching the video the student's blood pressure was taken and aromatics were released in the room timed with similar events in the video. Following the simulation, individual debriefs were held. Ethics was granted.

Results
Seventeen students from several cultural backgrounds participated in the study. The simulation lasted 15 minutes, debriefs an average of 25 minutes. The debriefs were audio recorded and thematic analysis of the transcripts revealed concerns related to: importance of communication to patient assessment, unmet patient needs and developing trust; person-centred care, compromised patient safety and related increased stress, and religious practices and faith in religious healing.

Conclusion
Overall, participants described how participating in the simulation influenced their understanding of, and commitment to, practising in a culturally competent manner. The implications for undergraduate health professional curriculum is to include authentic cultural empathy learning opportunities. The study also provided student participants from countries other than Australia with the opportunity to validate their own experiences whilst on placement.

O22

Critical conversations with clinical teachers around meaningful professional development

Colleen Ryan[1]
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Professional Development (PD) for clinical teachers is often designed for them, rather than with them, and thus may not be relevant, engaging or effective[i].

A Critical Participatory Action Research (CPAR) project was offered to Austalian clinical teachers to design thier own PD. This methodology uses a process of exploration, discussion and critical reflection to understand learning needs, as well as to deliver and evaluate the experience collectively. CPAR aims for transformative change[ii].

Three three hour cycles of action, reflection and evaluation took place. During this process a PD experience was co-designed. Critical questions guided the conversations that took place during the sessions. Clinical teacher's tensions and impacts on their work with nursing students were explored. Questions to promote the conversation included; What is your understanding of cultural and political happenings in your working world and in your working relationships, that impact your work with students? What kind of professional development will enable this group to become critically reflective, transformative clinical teachers and leaders?

Digital recordings of the conversations took place to understand what involvement in the co-designed experience meant to participants, and what professional development the group felt they needed. A critical lens informed the discourse analysis to illuminate educational, organisational and cultural constraints impacting the work of clinical teachers. This presentation will discuss the findings. Clinical teachers are valued members of the nursing educational team. Their voice in the design of their teaching and learning needs to be heard and incorporated in their professional development so they will be individually transformed and in turn, learn to challenge and change the status quo.

[i] Andrews,C.E., & Ford, K. (2013). Clinical facilitator learning and development needs: Exploring the why, what and how. NEP,13 (5), 413-417.
[ii] Fine, M. (2009). Epilogue in J. Anyon. Theory and Educational research. New York: Routledge.

O23

Use of a Challenge Exam to Evaluate knowledge Aquisition

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Background
The premise underlying education is that participants exit the process with improved cognitive and/or behavioural skills relative to entry. However, while exit behaviours are often assessed via examinations, entry behaviours are not often assessed. The aim of this study was to determine whether particpants' knowledge changed over a 13 weeks coursework unit of study

Methods
A 25-questions mulitple-choice challenge was administered to students from 2 different programs undertaking a common unit of study for which they shared lectures and turorials for 40of 52 contact hours. The challenge was delivered in week 1 of Ssemester 1 and repeated in week 1 of semester 2 after students had completed semester 1 exams and a six-week vacation. Students were informed; "Questions relate to content that a graduate physiotherapist with a moderate to strong background in musculoskeletal/sports physiotherapy should be able to answer". Answers included distractors that students with sound content backgrounds could differentiate from true answers. There was no time limit for completion, and answers were marked electronically. Feedback was provided in the form of mark.25 after occasion 1, but students were not informed that the challenge would be administered again.

Results
The mean marks across groups on occasion 1 were 8.9/25 and 14.9 for occasion 2, which were significantly different ($p<0.05$). The unit of study coordinators agreed content for 15 of the 25 questions hd been covered during semester 1. There were no significant differences between performances for the two cohorts on either occasion

Conclusion
Students demonstrated knowledge improvement that corresponded to content that had been delivered during Semester 1. Differences in practice backrounds did not affect performance between groups. A challenge exam is a simple and effective method to evaluate learning for knowledged-based units of study in a tertiary environment.

O24

What are the perceptions of a procedural skills "sign off" versus an OSCE amongst final year medical students?

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Background
A novel low stakes skills assessment was introduced into the final year medical curriculum at Keele University, United Kingdom. As a consequence, the assessment of procedural skills was withdrawn from the end of year OSCE.

The assessment consisted of five twenty minute stations each examined by a single assessor using the Leicester Clinical Procedure Assessment Tool (LCAT) (1). The skills assessed were considered to be key and high risk tasks of junior doctors, namely Intravenous Cannulation, Urinary Catheterisation, Blood Cultures, Intravenous Antibiotics and Intravenous Insulin Infusion. Students were provided with feedback verbally at the time of the assessment and electronically via email. Students who failed were invited to resit immediately or following remediation.

Methods
Focus groups were used to explore student perceptions of this final year method of procedural skills assessment compared to their previous experience of formal procedural skills assessment within the traditional OSCE. A facilitator guide was developed with reference to the existing literature. Discussions were audiotaped and transcribed. Transcripts were analysed independently by two researchers to identify emerging themes.

Results
Two focus groups were conducted each containing eleven final year students who had completed the procedural skills assessment. Five overarching themes were identified: Assessment Properties, Self-Efficacy, Feedback, Preparation for Practice and Competence. Findings within each theme will be presented.

Discussion
A formal procedural skills assessment is acceptable to Medical Students. It may act to improve self-efficacy, confidence and competence by driving learning through practice. However, further study is needed to determine the "hidden curriculum" of introducing such an assessment.

1. McKinley RK, Strand J, Gray T, Schuwirth L, Alun-Jones T, Miller H. Development of a tool to support holistic generic assessment of clinical procedure skills. Med Educ. 2008 Jun;42(6):619–27.

O25

A low-cost gynaecological laparoscopic skills simulation programme: NHS Lanarkshire/West of Scotland experience

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Objective: Laparoscopic training has become an integral component of specialist gynaecological training. Acquisition of the necessary clinical skills within a standardised training programme can be a long and occasionally difficult process, with recognised challenges related to personnel, time, instruments, simulation and funding. We present the West of Scotland Laparoscopic Skills Simulation Programme, where the acquisition rate of technical skills is significantly accelerated with low-cost, reproducible and widely available wet-lab models.

Methods: All trainees are invited to attend for laparoscopic training in the wet-lab of the hospital education department. Skills such as hand-eye coordination, coordinated fine movements, using an assistant, recognition of various degrees of tension that should be applied on tissues are developed through task-specific simple innovative models for common laparoscopic procedures. These include: simulated ovarian cystectomy (double-intestinal wall specimens, balloons in poultry skin, porcine liver and gall bladder), precise fine pedicle/planes dissection/traction & counter-traction/exposure of the anatomy (rabbit nephrectomy), ectopic pregnancy surgery (gravid female rabbits), and laparoscopic dissection/cutting/suturing (poultry thighs). All stations run on low-cost, widely available training boxes and are facilitated by experienced gynaecologists.

Results The wet-lab training programme has been running and evolving for 12 years, with reproducible results and successful tangible outcomes in relation to developing, maintaining and enhancing intermediate/advanced laparoscopic skills. Trainees' feedback confirms increased confidence with surgical procedures which is maintained in the workplace. The programme is recognised by the Royal College of Obstetricians and Gynaecologists for the laparoscopic module of the training programme. NHS Lanarkshire has been recognised as one of the top three gynaecological training centres in the UK (2017).

Conclusion Ex-vivo training and acquisition of necessary laparoscopic skills simulating common surgical procedures and tissue feedback can be obtained using inexpensive, readily available and reproducible animal models. This has proved successful in the National Health Service limited resources setting.

O26

Debriefing the Daily Grind

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Simulation currently plays a major role in the health professions education and it is widely regarded that debriefing lies at the heart of its education benefit[1]. Participants must reflect upon the scenario; allowing them to contextualise the experience and recognise how it may relate to future situations[2]. However, it is also accepted that simulation generally remains expensive to run, both in terms of equipment required and personnel to 'run' the simulated scenarios. While simulation must now be included in all undergraduate medical curricula[3], it will be limited by resources.

In an attempt to reap the benefits of debriefing, without the expense incurred by simulation, weekly debriefs were included in the schedule of final year medical students from the University of Glasgow during their clinical attachment in Emergency Medicine within University Hospital Hairmyres. The debriefs encourage the students to share and discuss experiences they had had on their placement in the prior week and have no specified learning objectives, but at the end of each session students will be asked to share their take home messages and how/if it will impact their future practice. Each debrief will be facilitated by a clinician with experience of facilitating simulation debriefs.

This study wishes to evaluate whether the benefits of debriefing a simulated scenario could translate to debriefing the typical situations experienced by medical students during their clinical attachments. This will be done by analysing the content of the debriefs, to look for evidence of newly acquired concepts and associations, and via an end of block questionnaire which will ask the students to rate and comment upon the worth of the debriefs.

This study anticipates that debriefing even commonly encountered clinical situations will still provide medical students with some of the benefits that simulation debriefing provide.

O27

Team-based learning replaces Problem-based learning: The Sydney Medical School experience

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Background
In 1997, Problem based leaning (PBL) was introduced to Sydney Medical School (SMS), providing a long-established form of student-centred teaching with in the medical curriculum. However, increasing student numbers (from 142 Year 1 students in 1997 to 332 in 2016) and limited teaching resources, rendered this model of teaching unsustainable. With a lack of standardisation across cohorts, student satisfaction with the PBL model had decreased in recent years. In 2017, Team-based learning (TBL) replaced PBL. This evaluation study sought to explore students' perceptions of TBL in Year 1 and Year 2 of the 2017 medical program in 2017.

Methods
Year 1 students (n=275) completed three blocks of TBLs: Foundations, Musculoskeletal, Respiratory. Year 2 students (n=350) completed three blocks of TBLs: Neurology, Endocrine, Renal. Student feedback was collected by questionnaire, using closed and open ended items. Data were analysed using descripting statistics and thematic analysis.

Results
In total, 232/275 (84%) Year 1 and 258/350 (74%) Year 2 students responded. Students found positive aspects of TBL included the small group dynamics; intra-team and inter-team discussions; interactions with facilitators; provision of clinical contexts by clinicians; the readiness assurance process (online individual MCQs prior to class, team MCQs at commencement of class). Suggested improvements included: better alignment of pre-reading tasks with the TBL case; shorter class time; increased opportunity for clinical reasoning; and more feedback on the mechanistic flowchart.

Conclusion
TBL provided a valuable replacement for PBL. Interactions and discussion with experts as facilitators, the presence of clinicians; the tests with feedback and explanation; problem solving in small groups; interactions with teams in one large room were all aspects of TBL experience that the students found positive. Suggested improvements included better alignment of pre-reading tasks with TBL cases; reduced class time; increased opportunities for discussions and feedback with the tutors on team work.

O28

Interprofessional faculty development for junior health professionals: a blended learning program

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Background
The need for faculty development programs designed to help junior health professionals fulfill their multiple roles across various institutions, is widely acknowledged. However, such programs are usually logistically difficult for hospital clinicians to access, and discipline based. In collaboration with four healthcare faculties, we sought to develop a blended learning, interprofessional faculty development program that was up to date, relevant, and accessible to clinicians working in the hospital and university settings. The purpose of our study was to explore participants' perceptions of the structure, processes and outcomes of the program, utilising the conceptual framework of communities of practice.

Methods
The Clinical Teacher Training (CTT) program included eight modules, and was delivered using a blended learning format Participants were provided with education literature, on-line activities, and videos, plus in-class opportunities for active participation in small interprofessional learning groups, and large group sessions. Quantitative data were collected from participants by questionnaire, and analysed using descriptive statistics. Qualitative data were collected by focus group. Framework analysis was used to code the data set using 'communities of practice' as a conceptual framework.

Results
Participants felt able to achieve most of the CTT programme learning outcomes through active participation, formative assessment and feedback. Participants felt that their learning was enriched through the blended learning platform, and through delivery within an interprofessional context; however, participants suggested it would be beneficial if more content was delivered through face-to-face sessions, particularly regarding 'Journal Club' and 'Mentorship' modules. Although participants felt well prepared to teach students, they felt less well prepared for assessment activities.

O29

Assessing students' 'readiness for placements' using a multidisciplinary evaluation tool for foundational competencies

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Background
Novice students are frequently engaged in pre-clinical preparation activities such as simulation-based education. However, there are few standardised tools with which to evaluate these early learners' skills, and none provide explicit feedback about students' readiness to progress onto their placements/fieldwork opportunities. A standardised assessment will help identify students who require further development before progressing onto placements, therefore maximising students' clinical placement success and minimising the detrimental effect of placement failure on students and clinical educators, and the associated economic burden.

Method
The Evaluation of Foundation Placement Competencies (EFPC) tool was created, having been informed by existing multidisciplinary research on students' preparedness for placement and placement-based assessments. An online survey ascertained the perspectives of educators, academics and students, verifying the behaviours important to demonstrate a student is 'ready' to begin their placement program.
To examine the measurement properties of the tool, we first trialled it with students from undergraduate and graduate entry physiotherapy, occupational therapy and speech pathology programs at the University of Sydney. A Rasch analysis confirmed adequate construct validity of the tool before implementation in allied health programs at other Australian universities.

Results
Rasch analysis of 350 student assessments from the trial has shown the EFPC measures a unidimensional construct with satisfactory construct validity. The items address four domains of behaviours: Communication, Professional Behaviour, Learner Behaviour and Information Gathering. Survey respondents have confirmed the feasibility and importance of the items and expected levels of attainment. The EFPC has been successfully used in a range of simulation-based placement preparation programs.

Conclusion
The EFPC is a unique tool with which to assess students and provide feedback on their readiness to progress onto their placements. It can be used across disciplines to highlight students who require additional development, and to inform effective placement preparation programs.

O30

The impact of the soap (standardised observation and assessment of practice) assessment of 3rd year nursing students on nursing practice

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Context
The SOAP assessment or Standardised Observation and Assessment of practice was first piloted at the University of Newcastle in 2004 with a group of 60 students (Levett-Jones et al, 2011). Since then thousands of students have successfully been assessed as competent beginning practitioners using this tool.

What is the issue?
Competence can be problematic to assess due to issues of validity, reliability, subjectivity and bias. However, there is an ethical, legal and professional responsibility to evaluate students' clinical performance accurately to ensure that graduates are competent to practice safely and legally. Failure to fail students who display incompetent or unsafe practice has significant implications for the individuals, but more widely for nursing professionalism and patient safety. Research has found that "failure to fail" is a real issue in tertiary facilities, with many complex facets (Hughes et al, 2016). Given the costs of nurse education and the potential social and professional costs of poor quality nursing graduates, strategies like the SOAP assessment, , have an important role to play.

What was done?
The 5 hour SOAP process includes an observation period of 1.5 – 2 hours, during which the students are expected to manage a patient load typical of a beginning Registered Nurse in their clinical area and to direct the care of these patients in a safe and legal manner. The assessor then formulates a series of higher order questions to ensure that the student has the requisite knowledge underpinning their practice. This VIVA (oral exam) takes approximately 1 hour. The assessor then maps the results against the NMBA Registered Nurse Standards of Practice to make a recommendation of 'satisfactory', 'remediation required' or 'unsatisfactory'.

Conclusion
This presentation will provide a detailed overview of the SOAP assessment including quantitative and qualitative evaluation results and issues learned since its inception.

O31

The VOTIS – A Video Observation Tool for Assessment of Inter-professional Skills

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Introduction/background
Inter-professional (IP) models of care are one solution to ensuring effective client-centred practice in health care delivery. Currently, there is a focus on building meaningful opportunities for students to develop IP practice. Although assessment of IP skills is needed, little guidance is provided to assist clinical educators in gathering evidence for assessment of these skills.

Aim/objectives
Development and evaluation of a video-based tool for formative and summative assessment of observable IP behaviours.

Methods
A review of literature regarding competencies required for IP practice and IP assessment tools was undertaken. An audit of profession-specific IP assessment requirements within physiotherapy, occupational therapy, audiology, speech pathology and dentistry was completed. The Video Observation Tool for Inter-professional Skills (VOTIS) was developed, allowing students and clinical educators to generate ratings of students' skills in eight IP competency areas. The tool was piloted across a range of student IP clinics involving 60 students and 10 educators.

Results
Inter-rater reliability was established and student and educator feedback was gathered through focus groups and interviews. Use of the VOTIS for student team interactions that occurred outside of client contact resulted in disruption and repositioning of student IP behaviours. This change occurred in a range of different ways. For some students it was the result of structured reflection and formative feedback and for others behaviour change was driven by summative assessment.

Discussion
Recommendations for increasing the utility of the VOTIS and for its embedded use in curriculum and clinical placements will be discussed.

O32

Student and clinician identities: Exploring identity constructions in interprofessional workplace learning narratives

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Context
Healthcare students learn in interprofessional workplace settings, strongly influencing their professional and interprofessional identity development. Professional identities matter: They are the cornerstone of ethical practice, can foster confidence, develop collaborative practice, and cultivate well-being. This study explores student and clinician identity constructions in narratives about informal workplace interprofessional student-clinician interactions.

Methods
Twelve group and ten individual interviews using narrative interviewing were conducted (with 38 students and 23 clinicians from six professions: medicine, nursing, midwifery, occupational therapy, paramedicine and physiotherapy). Qualitative narrative analysis methods were employed to explore how students and clinicians constructed their own and others' identities during their narratives.

Results
We identified 24 different student identity constructions (most common 'learner', 'novice' and 'competent'), and 17 clinician identity constructions (most common 'wrong-doer', 'educator', 'specialist' and 'kind'). In negatively evaluated narratives, students commonly constructed student identities as 'subordinate' and 'trouble-maker', whereas clinicians constructed student identities as 'reluctant learner' and 'incompetent'.

Discussion
The findings demonstrate a wide variety of identity constructions for students and clinicians within narratives of interprofessional student-clinician interactions. Furthermore, we found similarities and differences in how identities were constructed by narratives. The influence from even single positive and negative interprofessional interactions on identity construction is described.

Conclusion
By illustrating how students and clinicians construct themselves and others during interprofessional interactions, we can better appreciate why certain interprofessional interactions are constructed as positive or negative. We encourage informal interprofessional interactions that considers professional and interprofessional identity development to facilitate the development of collaborative practice in the future workforce.

O33

Innovation in clinical skills teaching and assessment; are we meeting the objectives?

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In 2017 a new medical curriculum was launched in the Joint Medical Program at the Universities of Newcastle and New England, NSW, Australia. The new curriculum (5 year BMed Sci, MD; MD) is being rolled out as the previous 5 year BMed is taught to completion of the final cohort. This represents an opportunity for comparison of student experiences and outcomes between programs.

One key area of change is the approach to clinical skills teaching. In the BMed, early learning of clinical skills including physical examination and history-taking occurred as small groups working with a range of clinicians predominately on hospital wards, and students' first hospital-based clinical rotations occurred in year 4. In the MD early clinical skills are taught in regular classroom-based sessions using simulated patients, with very limited real patient contact, and the first hospital-based rotations occurring in year 3.

While the curricular change has standardised the approach to clinical skills teaching and learning, ensuring consistency of approach, opportunities for practice, feedback and assessment, it is not clear how well it prepares students for hospital-based clinical rotations. In January 2019 we will run formative Objective Structured Clinical Examinations with students entering year 3 of the MD and year 4 of the BMed; both cohorts about to begin their first hospital-based rotations. Students will take part in assessments of clinical skills covered previously by both cohorts and will complete a brief survey exploring their preparedness for clinical rotations. The survey will be repeated at the end of the academic year and the OSCEs will be repeated with the MD students entering year 4 in 2020.

It is expected that the MD students will display competence in performing structured examinations, but may be less competent than BMed students at identifying pathologies. Preliminary results of the comparative analysis will be presented.

O34

A different kind of conversation: supporting students to become shared decision makers through guided reflection on experience

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Shared decision making (SDM) can enhance patient safety and quality of care and improve medicines adherence and patient satisfaction [Crawford et al, 2010]. Newly qualified doctors often struggle with SDM [Brennan, 2010], yet SDM is not routinely taught within medical education and there is little evidence about the most effective educational approach.

Following an initial pilot, we introduced a new learning topic "shared decision making" into our Year 3 Small Group curriculum. Students review SDM literature and explore its underpinning concepts and benefits. They then reflect on examples of SDM observed in clinical settings using a template which references the SHARE tool (AHRQ).

We Aimed to

- Explore how guided reflection on clinical consultations influence students' understanding and perceptions of SDM
- Identify lessons for future teaching and learning

Methods

Students posted their reflective templates on their group e-discussion board. A coding framework was developed from a purposeful sample and the data coded accordingly. Students and tutors also completed a short questionnaire.

Results

45 student volunteers submitted reflective templates describing SDM in a range of clinical settings. Significant shifts in students' understandings of SDM were seen. The reflective template and SHARE tool seemed to facilitate these shifts. In addition, reflection appeared to help students notice and deconstruct clinician behaviour and language. Some students found SDM troublesome and we will share examples of this. 25 students and 5 facilitators completed questionnaires. All students felt the SDM topic was relevant to their future roles. They found getting feedback on their reflections particularly helpful. Several respondents suggested ways of improving the session.

Discussion

Guided reflection on placement experiences can lead to shifts in how students perceive the doctor patient relationship and the decision making process. We will describe how we are using the pilot and study findings to improve this intervention.

O35

Designing case scenarios for simulation-based assessment of competency to practice: development of a valid and sustainable process

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Background

The Australian Physiotherapy Council has trialled the use of simulation-based assessment for overseas-qualified physiotherapists in which candidates complete 3 clinical assessments. A key element of the trial has been the development and implementation of a valid, peer-reviewed, sustainable process for creating new patient scenarios for assessments, standardised across sites in two Australian states.

Method

A 5-stage process was used. 1) Planning – sets of scenarios were designed as a suite of 3 cases and mapped to the Australian physiotherapy practice threshold competencies; 2) Writing – expert physiotherapy clinicians with experience writing simulation scenarios developed actor scripts and accompanying medical resources; 3) Peer-review – all scenarios went through a comprehensive 3-stage peer review process with at least 3 different clinical and simulation experts across 3 Australian states to confirm content appropriateness, practicality and accuracy; 4) Actor training; 5) Post-implementation review – following initial implementation, further review by actors, assessors and trainers was completed to fine tune each scenario for future use.

Results/Reflections

Increased standardisation and high authenticity were key to facilitating candidates' performance, in contrast to scenarios written for educational purposes where facilitation and flexibility can be integrated. Further, actor training resources needed to be comprehensive to ensure reliable and authentic portrayal. Local health system-based variances in equipment, medications or clinical approaches needed to be resolved during the peer-review stage, extending the timeframe for scenario development. These issues identified the need for a more complex approach to writing scenarios for assessment purposes. Once these issues were resolved, the benefits of simulation-based assessment were apparent. In contrast to the inevitable variability of assessments in hospitals using real patients, a suite of 3 blue-printed, peer-reviewed simulated patient scenarios per candidate offers a controlled, standardised and efficient environment. This provides the opportunity for more accurate assessment of entry-level competence.

O36

Conversations that develop clinical skills in undergraduate nurses through the use of actor-patients

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Context
While simulation is widely used in nursing education, there is little evidence about the perspective of actor-patients in developing clinical skills.
A simulation activity in an acute care ward environment involving senior nursing students and actor-patients was developed to accelerate learning of the students' clinical skills. This study explores the perspective of the actor-patient and their conversations with students to support learning.

What we did
A qualitative methodology was used with actor-patients (n=4) who participated in a total of 10 scenarios over two days. As part of the debriefing process, actor-patients provided feedback to the nursing students (n=82) regarding their perception of the care they had received. Following the simulations, the actor-patients were invited to participate in a focus group to explore their perspective of the nurse-patient interaction during the simulation. The interviews were transcribed verbatim and the transcripts were read by two researchers before independently populating a coding frame which was developed from a simple communication model: input-message-output. Thematic analysis identified themes and sub-themes.

What we found
Nine themes and three subthemes from student and actor-patients interactions were identified. The themes identified were: Student interaction, creating drama, constructing the situation, communication, forcing decision-making, provoking feelings, realism stimulates learning, feedback to students, and benefits. For example, actor-patients reported that interacting with students and creating drama was important for developing the scenario. Communication was key. They also noted the student actions that imparted confidence, kept them informed and comfortable. Furthermore, the realism of the simulation provoked emotions and forced decision-making.

Conclusion
The benefit of simulations using actor-patients included supporting verbal and non-verbal communication and the provision of direct feedback to students. Conversations between actor-patients and students regarding the interactions that took place aided learning about the impact of clinical skills on the effectiveness of nursing care.

O37

Impact of a novel airway planning tool on non-technical skills in the management of the anticipated difficult paediatric airway

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Introduction
The difficult paediatric airway is most often anticipated. Decision-support tools and cognitive aids suitable for paediatric airway management should support clinicians to plan and optimise their first choice and avoid complications from multiple intervention attempts(1).

The ADAPT (Airway Decision and Planning Tool) resource was designed by our institution to encourage team communication and planning prior to an anticipated difficult airway. Qualitative analysis of key human factors enablers in airway management has emphasised the importance of team work, communication, prior planning and equipment preparation. ADAPT facilitates a shared understanding of the clinical situation and supports these key human factors elements (2).

Our study aims to pilot and evaluate the use of ADAPT in the management of an anticipated difficult paediatric airway when compared with standard algorithms.

Method
Five multi-disciplinary groups comprising an experienced anaesthetist, trainee and an anaesthetic nurse will be presented with two difficult airway scenarios in a simulation environment and given 10 minutes to devise an airway strategy and then complete the scenario. In the first scenario they will be given access to a difficult airway algorithm of their choice if requested. In the second scenario they will be asked to use the ADAPT resource.

Each simulation will be evaluated using the Anaesthetic Non-Technical skills system to compare positive and negative behaviours in the two scenarios (3). The simulation session will be followed by a group discussion to reflect on the two scenarios and their management in a recorded debrief. These sessions will be transcribed and analysed to identify key emergent themes using a content analysis approach.

Results
Findings from the ANTS assessment and qualitative analysis will be presented in a descriptive format.

Conclusions
This report will assess the success of the ADAPT resource in achieving the goals of supporting team planning and communication in paediatric airway management.

O38

Evaluating clinical reasoning in health professional education: What are the tools actually measuring? A Systematic Review

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Introduction
Clinical reasoning is an imperative skill for thriving as a health clinician in a dynamic and complex clinical environment. However, it is a complex phenomenon that is difficult to define and measure. This review systematically identifies the tools used to measure clinical reasoning and its related constructs in training programs across the health professions. This study aims to bring some clarity to the complex phenomenon so that educators can better understand how to teach, develop and assess clinical reasoning in health professional education.

Method
CINAHL, EMBASE, ERIC, Medline and pre-Medline, Proquest Nursing and Allied Health, and PsychInfo databases were searched using terms related to allied health professions AND clinical reasoning (including related terms) AND student AND tool development and testing. Studies were included in the review if they were peer reviewed, published since the year 2000, and described the development or validation of tools measuring clinical reasoning or related constructs, for use with allied health students in clinical or simulation settings.

Results
The initial search located 7,882 titles and abstracts. These are being screened and from papers meeting inclusion criteria data are extracted pertaining to the study participants, student learning and tool – including theoretical model, construct, measurement properties. Each tool is critically appraised with respect to the construct measured, the robustness of the tool, and the utility of the measure of clinical reasoning in allied health education.

Conclusion
This comprehensive systematic review identifies a range of constructs related to clinical reasoning, and approaches to measuring those constructs, developed for use with allied health professional students. Via a critical appraisal, this examination clarifies how the phenomenon of clinical reasoning is conceptualised and measured so that educators may identify or develop the means to measure relevant indicators in education across the health professions in clinical and simulation settings.

O39

Early Detection of Deterioration In Elderly (EDDIE): Evaluation the implementation of a hospital avoidance program

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Background
Existing models of care in residential aged care facilities (RACF) are not equipped to identify and manage the clinical deterioration of residents. The EDDIE study used the iPARIHS framework evaluate and identify essential elements contributing to successful implementation of a hospital avoidance (HA) program that was designed and driven by the Aged Care industry. The program provided diagnostic equipment, clinical skills training and decision support tools to expedite recognition of clinical deterioration and allow for episodes of care to be provided in the nursing home.

Methods Results
This prospective pre-post cohort study found that of the 112 episodes of care initiated following the implementation of the HA program, 75 were treated in the RACF. Pre-post implementation (12 months) comparisons showed a 19% reduction in hospital admissions (45 vs 37) and 31% reduction in the mean length of stay (7.7 vs 4.8 days). Economic modelling estimates for every 1,000 residents the program contributes to 1,606 fewer hospital bed days per annum, with cost savings of $2.6 million and 0.62 incremental QALYs gained per 1,000 residents.

Key learnings were that the timing and content of the training core components of the HA program cannot be compromised and that a clear understanding of how the HA program is different to usual care is essential. Close monitoring during the implementation phase is essential as staff are likely to modify components of a program because they do not want to duplicate or add documentation.

Conclusion
Whilst our study supports growing evidence that HA programs reduce hospital presentations and admissions from RACF. The difference with our study is that this is the first Age Care industry HA initiative that supports RACF staff to provide sub-acute care within the RACF setting, which reports reductions in hospital transfers, length of hospital stays and demonstrated health economical savings.

O40

Impact of disseminating a standardised trust wide clinical skills teaching programme for undergraduate medical students

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Introduction
Medical students in our institution are expected to gain competency in a defined set of clinical skills during their third/fourth year hospital rotations. To support this, a standardised clinical skills teaching programme was developed and disseminated across the NHS trust's three hospital teaching sites. The study had two aims; determine if programme delivery improved perceived student confidence and establish if programme effect was independent of teaching site.

Methods
The programme consists of four sessions; venepuncture/cannulation, catheterisation, ECG acquisition/interpretation, ABG sampling/analysis.

Sessions
comprise a presentation followed by demonstration and practice on clinical models. Anonymised pre and post session questionnaires were completed using a Likert scale to rate confidence. Wilcoxon rank-sum testing was used for comparison of non-parametric paired means and Kruskal-Wallis analysis used for multiple comparison of non-parametric data. Qualitative evaluation of the course was compiled via free-text questionnaire.

Results/Discussion
Statistical analysis of pooled results across three sites showed statistically significant improvement in confidence following all interventions (Wilcoxon rank sum test, $p<0.0001$). Multiple analysis of confidence before and after each intervention across all three sites showed statistically similar results (Kruskal-Wallis, $p=>0.999$). Qualitative feedback was uniformly positive and highlights included; step-by-step technique, systematic approach to ABG/ECG interpretation and university examination practice. Developments suggested primarily focussed on requesting higher fidelity models and additional disposable equipment.

Conclusion
The implementation of a standardised clinical skills teaching programme gives significant improvement in perceived confidence amongst undergraduate students and appears to be independent of teaching site. Notable logistical challenges included setting up non-clinical areas safely for practicing clinical skills and movement of shared clinical models between sites. We have identified an appropriate teaching space at each site and sourced funding for the purchase of additional clinical models to address this. This programme will now form a core part of teaching provided to undergraduates in our NHS trust.

O41

Blocking the trajectory of error: The importance of nurses' communication skills for safe patient care in general surgical wards

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Context
Nurses are the only health professionals at the patients' bedside 24-hours a day and as such are the last line of protection against threats to patient safety. Previous research has suggested poor non-technical skills rather than deficiencies in technical competence are the leading cause of error at the sharp end of healthcare. However, the non-technical skills required of nurses for safe care in surgical wards have not been identified.
In this presentation, the results of recent doctoral research are reported. The aim of this descriptive exploratory study was to identify the non-technical skills required of nurses in general surgical wards for safe and effective care.

What I did
Non-participant observations were used to understand the interactions and other elements of what was required of nurses in their everyday clinical practice. Field notes were used to record the observations. Data saturation occurred after 15 observations. A four-level analysis of the data was performed. Using an inductive process observations were independently coded by two teams of coders, one national and one international.

What I found
Communication was the predominant non-technical skill identified. The study revealed factors that influenced the quality of the exchange of information between nurses and other health professionals and patients and their families and the environment in which they worked. Poor communication was exposed as a vulnerability in the work system and a threat to patient safety. In order to compensate for this difficulty, the evidence shows that nurses made performance adjustments to make care succeed.

Conclusion
Greater emphasis on communication skills training is needed in the nursing curriculum to empower nurses to be proactive and speak up in an unpredictable work system thus creating another level of safety for patients in their care.

O42

Frameworks and quality measures used for debriefing in team-based simulation: a systematic review

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Objectives
The skill of the debriefer is known to be the strongest independent predictor of the quality of simulation encounters[1] yet educators feel under-prepared for this role[2]. Debriefing inter-professional groups brings its own unique challenges due to learner differences in background, experience and professional identity[3]. The aim of this review was to identify frameworks used for debriefing team based simulations and measures used to assess debriefing quality.

Methods
We systematically searched PubMed, CINAHL, MedLine and Embase databases for simulation studies which evaluated a debriefing framework. Two reviewers evaluated study quality and retrieved information regarding study methods, debriefing framework, outcome measures and debriefing quality.

Results
A total of 676 papers published between January 2003 and December 2017 were identified using the search protocol. Following screening of abstracts, 37 full-text articles were assessed for eligibility, 26 studies met inclusion criteria for quality appraisal and 18 achieved a sufficiently high quality score for inclusion in the evidence synthesis. A debriefing framework was used in all studies, mostly tailored to the study. Impact of the debrief was measured using satisfaction surveys (n=11) and/or participant performance (n=18). Three themes emerged from the data synthesis: selection and training of facilitators, debrief model and debrief assessment. There was little commonality across studies in terms of participants, experience of faculty, and measures used.

Conclusions
A range of debriefing frameworks were used in these studies. Some key aspects of debrief for team-based simulation, such as facilitator training, the inclusion of a reaction phase and the impact of learner characteristics on debrief outcomes, have no or limited evidence and provide opportunities for future research particularly with inter-professional groups.

O43

Team Leadership in Emergencies: should the "lighthouse" be demolished?

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Team training programs frequently teach the concept of a single leader commanding the team from the end of the bed. This concept of "lighthouse leadership" became embedded in emergency response teams since Cooper and Wakeham's[1] paper demonstrated superior outcomes in cardiac arrest teams when the medical officer present led in this way. There has been limited further evaluation of this leadership structure in health care action teams, and despite an increase in leadership training programs, there are continued reports of poor leadership in teams with negative effects on performance. Shared leadership is associated with improved team performance in multiple other domains,[2] but little is known about how leadership is shared in healthcare action teams, or whether it is of benefit to performance.

Methods
A systematic literature review was performed to assess sharing of leadership functions in healthcare action teams. Types of shared leadership were mapped to a conceptual model[3] and outcomes of shared leadership reviewed.

Results
Only thirty-three papers met the inclusion criteria.[4] A variety of shared leadership models were described across three categories. Spontaneous collaboration attempted to augment leadership as team members assisted an ineffective leader. Intuitive working relations consisted of examples of temporary delegation of leadership functions to a junior team member for training. Institutionalised practices shared leadership functions across two or three clinicians with the purpose of distributing team leader workload.

Conclusions
There is limited literature describing shared leadership in healthcare action teams. Given strong evidence for a positive relationship between shared leadership and team performance in other domains, healthcare action teams need to consider how various models of shared leadership affect individual and team performance. This may assist teams to evaluate how leadership is (or might be) shared in their context for the improvement of teamwork and patient care.

O44

Review of healthcare simulation in the Nordic countries

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Background
Based on common healthcare services, the Nordic countries could benefit from increased collaboration and uniformity in the development of simulation-based learning. However, only a limited overview exists on healthcare simulation research and its progress in the Nordic countries. Therefore, the aim of the current literature review is to provide a general overview of the Nordic research on simulation in healthcare education, and to suggest directions for future research.

Methods
The design employed was an integrative review. We conducted a search for relevant research published during the period spanning from 1966 to June 2016. Thirty-seven studies were included and appraised for quality. A thematic analysis was used.

Results
The results revealed that Finland has published the greatest number of qualitative studies, and only Sweden and Norway have published randomised control trials. The studies included interprofessional or uniprofessional teams of healthcare professionals and students. Most studies used a qualitative or a descriptive design. Five themes that explicate the Nordic research subjects emerged from the thematic analysis; technical skills, non-technical skills, user experience, educational aspects, and patient safety.

Conclusion
This review identified the research relating to status and progress of simulation in the Nordic countries. Shortcomings in simulation research include a lack of well-designed randomised control trials or robust evidence that supports simulation as an effective educational method. Furthermore, there is a shortage of studies focusing on patient safety, the primary care setting, or a combination of specialised and primary care settings. Suggested directions for future research include strengthening the design and methodology of simulation studies, incorporating a cross-country comparison of studies using simulation in the Nordic countries, and studies combining specialised and primary care settings.

O45

Virtual patient interactions, undergraduate nursing students and non-technical skills: A case study

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Introduction
Non-technical skills are “cognitive, social and interpersonal skills associated with technical skills that contribute to safe and efficient clinical performance” [1]. Historically, these so called non-technical skills have evolved through experience and exposure in clinical practice, however current clinical practice requires health professional graduates to be equipped with these fundamental skills on graduation.

An innovative technology enhanced simulation using virtual patients was recently implemented in undergraduate nursing curricula to develop non-technical skills. The purpose of this research was to identify what undergraduate nursing students learnt about specific non-technical skills following interactions with virtual patients.

Methods
To describe, explore and understand the case in a real-life context, case study methodology was used [2]. The virtual patient comprised the case, with the year level of the nursing student the units of analysis. Themes from an integrative review [3] and categories and elements from Flin et al [1] comprised the theoretical framework underpinning the study. Data collection focused on qualitative data from focus groups and interviews followed by framework analysis. Ethical approval for the study was obtained.

Findings
Ten focus groups and one individual interview was conducted with first-year students, comprising a total of 45 students, and six focus groups with third year students comprising a total of 31 students. Seven non-technical skill categories were recognised, with 27 sub-categories identified in the data. Students identified interaction with the virtual patient developed communication, situation awareness, teamwork and decision-making skills. Leadership skills to a lesser extent and managing stress and coping with fatigue were minimally reported. Variance in the complexity of learning related to non-technical skills was identified across the year levels. Additionally, humanistic traits of duty, advocacy and empathy were described.

Conclusion
These findings point to the future value of virtual patients in developing safe and competent practice and, ultimately, enhancing patient safety.

O46

Development of a national program of Clinical Skills teaching for Pharmacist Independent Prescribers, lessons learned and planning for the future

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Background: In 2015 we successfully bid to develop a program of education for Independent Pharmacist Prescribers (PIP's) throughout Scotland. This was a collaboration with NHS Education Scotland to to support the Scottish Government's strategy 'Achieving Excellence in Pharmaceutical Care'.

Innovation: Our team have developed a portfolio of courses to train post graduate pharmacists, who have achieved their independent prescribing qualification, to clinically assess patients. The educational content of these courses was developed by our team and delivery has been supported by collaboration with, Strathclyde University, Robert Gordon University, Edinburgh University and Glasgow Caledonia University. Courses are delivered by medical and nursing staff with access to simulated patients and simulated clinical experiences provided. Throughout the last 3 years online content has been developed to support these courses. The portfolio of courses has evolved and we currently offer places on courses entitled Consultation Skills, Core Assessment Skills, Common Clinical Conditions, Diabetes Assessment, Cardiovascular & Respiratory Assessment and Musculoskeletal Assessment.

Results: Since 2015 the Core Clinical Assesment course has had 485 participants. Over all courses we have had 875 particpants from throughout Scotland. The remote nature of Northern Scotland has led to requests for more training in these areas. Following such request, we have delivered courses in remote and rural areas including Shetland and Caithness and we are currently looking at ways to facilitate more courses in Highland Scotland. As we re-tender to continue developing and delivering this program, we are reviewing feedback from these courses and collating information from all centres where modules are delivered to see how best to move forwards with this training program as the role of PIP's continues to develop. The evaluation of this feedback and plans for future development will be shared in this presentation

References
Scottish Government, Achieving Excellence in Pharmaceutical Care, https://www.gov.scot/Publications/2017/08/4589/0

O47

Undergraduate midwifery and medical students' interprofessional management of simulated post-partum haemorrhage: impact on self-efficacy and satisfaction with simulation

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Background: Post-partum haemorrhage (PPH) remains the leading cause of maternal death globally, with between 5 and 15% incidence in Australia. Simulation training for qualified interprofessional teams has been shown to improve the outcomes of PPH, leading to improved patient safety. This research explores the benefits of interprofessional simulation for undergraduate midwifery and medical students focussing on the development of clinical knowledge, communication, problem solving and self-efficacy when caring for a woman with a PPH.

Methods: Ethical approval received from Monash University Human Ethics Research Committee. We developed a scenario of a woman having a primary postpartum haemorrhage requiring midwifery and medical students working collaboratively to manage the deteriorating woman immediately after birth. Participants were recruited from two courses, Bachelor of Nursing Bachelor of Midwifery and Bachelor of Medicine Bachelor of Surgery. Using mixed-methods study design data was collected using video, audio-tape and self-reporting questionnaires over three repeated measures. Pre and post simulation questionnaires comprised two previously validated tools, Self-Efficacy Beliefs in Interprofessional Learning (SEBIL) and Satisfaction with Simulation Experience Survey (SSES). Purpose developed multiple-choice questions measured students' clinical knowledge. Using IBM SPSS V25, data analysis included descriptive statistics, repeated Wilcox Signed Rank Test and chi-square. Statistical significance was set at _ =.05.

Results: 44 students with a median age of 21.5 years participated in eight simulations. Significant differences were found between SEBIL sub-scales ('Interprofessional Interaction' and 'Interprofessional Team Evaluation and Feedback') and the SSES subscale 'Debrief and Reflection' pre and post simulation $p<0.0001$. No significant difference was found in clinical knowledge.

Conclusion: The students' perceived self-efficacy for interprofessional teamwork was improved and reflection was not improved. No improvement in students' clinical knowledge as measured by the MCQs was demonstrated. Further research into the effectiveness of simulation in improving clinical knowledge is required.

O48

Building more than houses with Lego - a great conversation starter

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Background
As children, we learn by playing and talking. We learn to share, negotiate and collaborate. The concept of Lego® Serious Play® was started in 1996 when two Swiss Professors (Lego, 2018; LEGO Group 2010) explored using Lego® as an alternative strategic planning tool. We have adapted this concept as an ice breaker activity in our undergraduate midwifery-medicine interprofessional education workshop.

Aim/s
Our aim was to evaluate using Lego® as a fun way for students to get to know each other, initiate conversations and bond as a team, prior to working in in their usual roles in simulated situations ranging from normal vaginal birth to complications such as post-partum haemorrhage and shoulder dystocia.

Method
Students are divided into mixed discipline groups within the first hour and asked to design a birthing room using Lego®. After 20 minutes, a spokesperson for the group shares their creative process and then provides a tour of the newly built birthing room. These explanations have been recorded, analysed and photos captured of the models. A pre- and post- workshop survey asks about using Lego® as a learning tool for team communication and collaboration.

Results
Pre-workshop responses were positive or intrigued as to how Lego® could be used, with no negative comments. Post workshop feedback was overwhelmingly positive from both midwifery and medical students. This activity enabled creative conversations, debate on required equipment and acknowledgement of prior experience to be shared. Discussions included where to place equipment as well as what helped to create a friendly birthing environment.

Conclusion
The Lego® activity enabled open discussion plus laughter, which aided in the team building process. However, the oration of the creative process illustrated the differing priorities within the disciplines around desired equipment placement and design which becomes useful for interprofessional learning.

O49

Translational education: an interprofessional model for advancing clinical skills education in the workplace

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Context: All professional bodies require healthcare practitioners to provide annual evidence competence and development in their clinical skills. Many educational strategies have been used to deliver this (face-face lectures, webinars, workshops). Content is driven by curricular needs but few aligning with local population needs or report robust evidence of change in practice. Given the challenges with resources in healthcare worldwide the design and implementation of healthcare professional education must be effective: improving value of healthcare experience for patients, clinicians and the service within which this is delivered.

What was done?: A short contact, blended learning educational programme was designed for interprofessional community practitioners (doctors, nurses, pharmacists) to improve their patient assessment and clinical decision-making skills with dermatological conditions. The clinical subject was identified as an exemplar for cancer and chronic disease care. Applying action research methodology an iterative approach to subject content and teaching methodology was implemented. Content was informed by mixed method analysis of referral letters to specialists (demand for services), consultation with learners and national healthcare policy on service provision. Outcomes from this determined the most appropriate pedagogic models: clinical decision-making and communication for behavioural impact. Each learner (n=43) submitted patient encounters from clinical practice and participated in an interview 3 months post attendance.

Outcomes: Qualitative thematic analysis of 112 patient encounters and 36 interviews demonstrated improvement in clinical practice through increased accuracy in decision making, patient safety, holistic care and improved use of service pathways. The action research approach offered a means to develop a model for interprofessional healthcare education that directly improved clinical skills in the workplace.

Conclusions: This study describes a translational education model by which interprofessional healthcare educational interventions can directly improve clinical practice. Key to this is the integration of pedagogy, healthcare policy and local population needs.

O50

Transition to Clinical Practice (TCP): Preparing students for learning in the clinical environment

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Medical students report feeling anxious and poorly prepared for entering clinical clerkship (Surmon, Bialocerkowski, & Hu, 2016). Transition to clinical practice programs play an important role in improving students perceived levels of preparedness for the clinical environment and can help reduce the associated stress and anxiety that is evoked, yet there is limited evidence in the literature describing stand-alone programs aimed at transitioning students into clinical clerkship (O'Brien & Poncelet, 2010; Poncelet & O'Brien, 2008)

We deliver an 8 week Transition to Clinical Practice (TCP) program in the final term of the preclinical phase, that aims to provide a foundation for a successful transition into clinical clerkship. It includes a variety of learning experiences from interactive lectures, to tutorials with simulated patients. Each week is based on a different specialty.

Methods
A qualitative descriptive approach using focus groups and semi-structured interviews were utilized in this study. Focus groups with students early in their clinical phase were conducted in April-May 2018. The semi structured interviews with directors of each clinical site were also conducted at this time. A follow up questionnaire using likert scales, ratings and short answers to compliment the qualitative data was also implemented.

Results
Preliminary analysis of focus group data suggests students find TCP is undervalued. Their first high stakes OSCE occurs at the end of TCP and attention is focused on revision, rather than preparation for clinical learning. Students also identified that an increase in clinical exposure could improve their awareness of the different work requirements in year 3.

Discussion
This study will analyse the delivery methods of the TCP program and identify strengths and future innovations in preparation for clerkship. We posit that a well structured and appropriately timed TCP program will enhance the student experience as they transition from the foundational years into clinical clerkship.

O51

Talking the talk and walking the walk: Are patient safety priorities addressed by simulation-based education?

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Background: Over the last decade healthcare simulation has received strong government support in Australia and New Zealand e.g. in 2013 the Australian Government invested $46 million in capital and $48 million in recurrent funding in the establishment of over 200 simulation centres. The key driver for simulation-based education is to improve the quality and safety of healthcare and both countries have evidence-based, national measures of patient safety1,2. While simulation-based education has had a significant impact on knowledge and skills, there is limited evidence of the transfer of learning to practice and improved patient outcomes.

Objective: To explore the extent to which simulation-based education addresses the contemporary patient safety priorities in Australia[1]and New Zealand[2].

Methods: A scoping review of literature published between 2007-2016. Primary studies were included if they related to the NSQHS Standards1/HQS Indicators2and evaluated the impact on clinician behaviour or patient safety. Studies were tabulated and synthesised.

Results: We identified 15 studies for inclusion in the review. Nine studies were undertaken in the USA, two in the UK and one each from Canada, France, Israel and Australia. Most studies were of medical and nursing staff, and five were interdisciplinary. In 11 of the studies the sample size was <40. Only four of the ten NSQHS standards (Preventing and controlling health care associated infections, medication safety, Patient handover and Recognising and responding to clinical deterioration in acute care) were addressed.

Conclusion: Critical synthesis of the literature identified that simulation-based education research addressed a limited number of quality and safety standards, with an emerging body of international research demonstrating significant impact on clinician behaviours and patient outcomes. The dearth of evidence from Australia and New Zealand suggests that outcomes of simulation in this region are not yet commensurate with significant investments that have been made.

O52

Being creative with patients' conversations

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Background
The focus of person-centred care in every-day practice is an essential element that needs to be at the forefront of care delivery. This is important if we are to embrace a workplace culture that is supportive of new graduates and students, where 'doing the little things' are not considered unimportant but are an essential component of care.

Study objective
This project aimed to explore nurses' experience of being a patient or a consumer of healthcare through the care of a loved one.

Method
A qualitative phenomenological approach (van Manen, 2014) involved interviews with 14 registered nurses who had been a hospitalised patient or had identified as the primary carer for a hospitalised patient. Participants were interviewed on two occasions, with an average six-month gap between the two interviews. At the follow-up interview, the participants were encouraged to reflect on their story and the meanings attributed to their experience. Initial analysis was undertaken using van Manen's (2014) four fundamental existentials: lived space, lived body, lived time and lived other. Grappling with the themes that emerged I began to rethink how could these 'patient/consumer conversations' be captured to portray the richness and depth that they deserved. Drawing upon Higgs and Titchen's (2007) work I sought to make meaning that would resonate.

Outcomes
Five poems that encapsulate the stories of compassion or lack of, and the importance of 'being in the moment' are shared in this presentation. Hearing the voice of health care consumers will only be effective if such lived experiences are translated into education, practice and management. This is the challenge for health professional educators. How can we prepare students to create workplace environments to be person-centred focus, incorporating caring and compassion to improve the consumer experience, irrespective of the consumer's background?

O53

Overcoming barriers to a national simulation-based mastery learning programme

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Simulation based teaching of practical procedures is recommended by several national organisations.[1,2]This is because of reduced working hours, increased litigation costs, and recognition that there is a better way to teach procedures than 'see one, do one, teach one' on patients – an approach that can perpetuate inaccurate or dangerous practice. The efficacy of Simulation Based Mastery Learning (SBML) has an excellent evidence base, with reduced complications, reduced cost and collateral benefits.[3]

A regional SBML programme has been created for skills including central venous catheter and lumbar puncture. Benefits have been increased confidence in knowledge and performance, earlier adoption of skills within training without increase in complication rates, freeing up more senior trainees to teach according to the guidelines. Documentation has improved, and unsafe equipment has been identified and removed.

Other similar regional programmes exist although they are not uniform or ubiquitous. Now the plan is to set up a national programme. This makes sense because the procedures are the same, so the process and the teaching should be the same. It is feasible within a small country with a national health service. Existing material can be used. It would potentially have huge benefits with a standardised approach and proliferation of best practice. A 'passport' indicating completion of recognised structured teaching will aid trainees when moving around during training.

There have been 5 national conferences explaining rationale and methodology. The idea has been approved in principle by the national Directors of Medical Education committee. A teaching structure has been agreed. Agreement on where to host the material online has been reached. A Mastery Learning Group has been formed with regional representation, and is working to develop national pre-course reading material and checklists for various skills. Progress has been disappointingly slow, but there have been developments.

O54

"How things work around here" – using near-peer teaching to hand over institutional knowledge

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Context
We hosted a series of near-peer tutorials for undergraduate medical students undertaking an apprenticeship attachment in the trust in which they would work following graduation. Incumbent Foundation doctors provided the tutorials, supported by a medical educationalist. Our evaluation considered the value of institutional knowledge transfer through these sessions.

Methods
Six sessions, comprising multiple 20-minute tutorials, were provided over 6 weeks. The predefined topics all related to FY1 working. We asked tutors to orient sessions around "what I wish I had known before I started, to impart local, institutional knowledge and practical tips. Anonymous, voluntary feedback was gathered using a paper form.

Results
Sixteen students provided feedback about 19 short tutorials. 97% stated that sessions were pitched "just right". 100% of learners could identify something important and new they had learned about each topic, to take into practice. Only 7% suggested additions to the sessions, and these were often personally motivated. Free text comments indicated students had gained understanding of their impending professional roles, 'tips of the trade' and organisational insights.

Discussion and Conclusions
Foundation training brings unique requirements, different to any other junior doctor role. Most senior clinicians involved in preparing students for practise had their junior experiences many years ago working in another organisation, or indeed have never worked in Foundation roles as they are currently configured. The learners benefited and engaged with sessions run by current Foundation doctors, attaining insights and institutional knowledge that could otherwise have been lost. We continue to host these sessions and encourage others to recognise the value of involving junior staff in new staff inductions.

O55

Get It Right Next Time: Using Simulation as a Means of Learning from Significant Clinical Incidents

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Background
Significant Clinical Incidents (SCIs) often occur due to a complex interaction of human, technical and organisational factors. Learning from adverse events enables us to improve patient care but there are challenges regarding how we disseminate this learning to frontline staff across different healthcare organisations. It is recognised that simulation can be used to promote learning from safety incidents (1).

Our aim was to utilise simulation as a means of promoting organisational learning from adverse events amongst Foundation Year 1 doctors.

Methods
5 simulation scenarios were developed based on SCIs which had occurred within a large health board over a one year period. The scenarios incorporated both technical and non-technical learning outcomes. The scenarios were integrated into half day simulation sessions at three different hospitals. 252 Foundation Year 1 doctors participated in these sessions led by 30 faculty across the three sites.

Results
The 'Take Forward Messages' from each session were recorded and thematic analysis was performed to categorise outcomes into technical and non-technical skills. On each site, there was a greater focus on non-technical aspects with communication and situational awareness associated outcomes being most frequently highlighted. Some variation existed between sites with regards to certain learning outcomes (duty of candour) which may reflect different faculty approaches to specific scenarios.

Conclusion
Simulation is an effective means of promoting learning from adverse clinical events. Both technical and non-technical learning outcomes can be promoted, with greater emphasis on non-technical skills within our cohort. Our findings were similar across all three sites highlighting how simulation can be used to disseminate learning across organisations.

References
1. Macrae, C. (2018) Imitating Incidents: How Simulation Can Improve Safety Investigation and Learning from Adverse Events. Simulation in Healthcare, 13(4), 227-232.

O56

The development of the Australian Patient Safety Competency Framework for nursing students: A Delphi Study

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Background
The knowledge and skills nursing students develop during their undergraduate studies have a direct impact on patient safety [1]. However, in Australia, the absence of a clear set of patient safety competencies presented a challenge to curriculum development and student assessment.

Aim
The aim of this project was to develop and seek consensus on the Patient Safety Competency Framework (PSCF) [2] for nursing students using a collaborative and inclusive process.

Methods
A Delphi study was conducted with 32 nursing academics representing nursing schools from across Australia and 9 content experts participating.

In Round 1 consensus was sought on the key patient safety competency domains most relevant to undergraduate nursing programs.

Round 2 sought consensus on the knowledge and skill sets that illustrate each of the competency domains.

In Round 3 expert panel members provided final comments on the PSCF as a whole.

Results
Overall, a very high degree of consensus was achieved in regards to the competency statements, with the majority of the panel members' feedback related to clarity of terminology and repetition within some of the statements. The final PSCF includes competency statements related to:

1. Person-centred care
2. Therapeutic communication
3. Cultural competence
4. Teamwork and collaborative practice
5. Clinical reasoning
6. Evidenced-based practice
7. Preventing, minimising and responding to adverse events
8. Infection prevention and control
9. Medication safety

Conclusion
This presentation will profile the PSCF, a clearly articulated and evidence-based set on competency statements, knowledge and skills sets that can be used for curricula development and nursing student assessment.

References
1. The Bristol Royal Infirmary Inquiry. (2001) Learning from Bristol: the report of the public inquiry into children's heart surgery at the Bristol Royal Infirmary 1984-1995. Bristol Royal Infirmary Inquiry, July 2001. www.bristol-inquiry.org.uk/

2. Levett-Jones, T. et al. (2017). Patient Safety Competency Framework (PSCF) for Nursing Students. http://psframework.wpengine.com/wp-content/uploads/2018/01/PSCF_Brochure_UTS-version_FA2-Screen.pdf

O57

Exploring the relationship between competence and confidence in occupational therapy students and graduates

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Understanding the development of competence and confidence in health students is important to produce competent graduates who are ready to work in complex environments. The development of professional confidence is considered a key factor for health students because it supports clinical decision making and quality of care. Mismatches in confidence and competence are potentially problematic as they may lead to either under or over-estimation of knowledge and skills, limiting the ability to practice effectively and to identify lifelong learning needs. The few studies that have been undertaken in this area suggest that mismatches are prevalent. The aim of this study was to compare the confidence of occupational therapy students and graduates that they had acquired the concepts and capabilities of the discipline with their demonstrated level of competence.

In this mixed-methods study, 73 surveys were completed by first (n=13) and final year (n=20) occupational therapy students, recent graduates (n=20) and experienced clinicians (n=20). In-depth interviews were completed with first (n=7) and final year occupational therapy students (n=10), recent graduates (n=10) and experienced clinicians (n=10). Likert scales were used to rate participants' confidence in acquiring concepts and capabilities of their discipline. They also answered open-response questions (via survey or interview) asking them to demonstrate their competence in relation to the previously identified concepts and capabilities. Descriptive statistics and the Structure of Observed Learning Outcome (SOLO) taxonomy were used for analysis.

Results showed moderate or good correlations between competence and confidence for 24 of 30 competencies assessed across all participants. Poor correlations were identified for concepts of evidence based practice, client centred practice and occupation. First year students demonstrated less mismatches between competence and confidence than all other groups. Mismatches in competence and confidence were evident for final year students, recent graduates and experienced clinicians which has implications for practice

O58

Ways of learning clinical skills by nursing students – a ethnographic approach

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It is of importance that the nurse has adequate skills in order to promote a safe care. International studies describe that nursing students are not prepared for work, and newly-graduated nurses express doubts about their ability as well as a fear that patients will be injured. There is a lack of knowledge and understanding of how nursing students learn clinical skills during their clinical practice. The aim of the study was to explore and describe how learning and development of clinical skills occurs. An ethnographic approach was used. Data were collected by participant observations, informal conversations and interviews during nursing students' clinical practice in an emergency department at a university hospital in Sweden. The preceptor has a central position in order to enhance learning and socialisation into clinical skills. Learning styles by the student and the interaction between the preceptor and the student formed the learning situation. How reflection was used by the preceptor varied. Preceptors and students showed different approaches in potential learning situations regarding practical skills. The way in which they interacted influenced how the student acted in the performance of practical skills. A tension was described between the learning of clinical skills at the clinical skills center and during the clinical practice. In some cases, the students expressed that they understood that different performance was possible without the patient being injured but data also showed a difference from guidelines that could jeopardise patient safety. In summary, there is a need for building continuity between the ways that students' experiences are organised across the settings of learning (university-based and clinically based learning) to enhance nursing students' learning and socialisation into practical skills. Reflecting on actions is essential for developing and learning practical skills, and thus to develop a professional identity as a nurse.

O59

Pre-registration clinical skills assessment in Australia: does simulation-based assessment match reality?

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Background

To achieve registration in Australia, overseas-qualified physiotherapists must demonstrate competence in clinical practice. However, sourcing appropriate patient assessments has become increasingly difficult, resulting in excessive wait times. Simulation-based assessment may offer a more standardised and efficient approach to clinical assessment. However, simulation as a valid method for evaluating the clinical competence of overseas-qualified physiotherapists has not been confirmed.

Method

Following ethical approval, simulation-based clinical assessments were conducted in Melbourne and Sydney. Candidates were invited to voluntarily participate in wait-list order. Study 1 (n=25) involved participants completing three simulation-based and three domain-matched real-life assessments, order randomised. Study 2 (n=150) involved candidates completing three simulation-based and one real-life assessment, domain and order randomly allocated. Simulation-based assessments were conducted in a simulated physiotherapy specific clinical setting with purpose-written, competency-mapped scenarios portrayed by actors. Candidates were assessed using standard Council procedures for all assessments, and competency to practice measured.

Results

Interim results (n=113 matched datasets) showed that there was good equivalence. A similar number of passes and fails were observed: 48.7% and 45.2% pass for real-life and simulation-based respectively. 64.5% of candidates' pass/fail assessments results matched ($X^2(3)=9.57$, $p=0.002$). Participants who failed the real-clinical assessment scored significantly lower in simulation (Kruskal-Wallis: $p<0.001$). Pass/fail status in the simulation-based assessment was the best predictor of matched real exam outcome (OR 3.776, $p<0.001$). Location of assessment (Melbourne or Sydney) was also a significant predictor (OR 0.418, $p=0.035$).

Conclusions

Simulation-based assessment has good equivalence to 'real' clinical assessments when evaluating overseas-qualified physiotherapists' competence to practice in Australia.

O60

An Australian first: The use of Entrustable Professional Activities embedded in an e-portolio to support clinical dietetic education and assessment

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Background: Health professions use competency-based frameworks in educational assessment, however their ability to evaluate student competency in training placements can be challenging where assessment decisions may be made by non-academics. Electronic (e)-portfolios are commonly used to document skill development and provide evidence of competency. Entrustable Professional Activities (EPAs) are being increasingly adopted by professions to support the implementation of competency-based frameworks. Here, we present the findings of the development and trial of an e-portfolio with embedded student self-assessment using EPAs in the La Trobe University Dietetic program between 2015 and 2017.

Methods: Qualitative and quantitative surveys (students n=38, supervisors n=20), with follow-up structured interviews were conducted to appraise the e-portfolio and assessment methods used in clinical placements. EPAs were then developed and embedded into an e-portfolio for use student clinical skill assessment. Post-implementation surveys (students n=42, supervisors n=39) were conducted and analysed to determine the efficacy and acceptability of this novel approach.

Findings: In pre-pilot surveys and interviews, supervisors and students felt EPAs and student self-assessment supported learning and assessment of clinical skills on placement. Students were comfortable with both EPAs and competency based assessment, whereas supervisors preferred EPAs. Both groups expressed support for an assessment scale describing the level of supervisor support required for safe practice and favoured continued use of an e-portfolio. Post -implementation, EPAs were better accepted by supervisors, as indicated by increased satisfaction scores from 1.88/5 to 3.98/5 compared to previous competency-based assessment approaches. Supervisor assessment confidence increased from 2.63/5 to 4.12/5 when using EPAs.

Conclusion: Our assessment innovation of embedded EPAs in structured e-portfolios and associated student self-assessment supported dietetic student learning and skill development on clinical placements. As EPAs describe clinical practice, they are easily interpreted and applied by practising clinicians, enable student self-reflection and promote meaningful student-supervisor conversations regarding skill and competency development.

O61

A standardised international airway course, the Beyond BASIC course and implementation in Low-Middle income countries

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Objectives
To assess the feasibility of conducting advanced airway management course (Beyond BASIC: Airway Management) to critical care physicians in both high and low/middle income countries.

Methods
A two-day airway course was implemented and evaluated on 40 occasions in 18 cities across 13 different countries from 2013 until 2018. Each course director was supported by at least one of the course developers for the initial course. The curriculum included pre-course e-learning, lectures, group case discussions, video analysis, skill stations and simulation. Skill stations include video, fibre-optic and double lumen tube intubation, front of neck access and tracheostomy). Non technical skills were also taught. Participant feedback was used to evaluate each course.

Results
Participant registration occurred locally, all courses had good acceptability and easy implementation. Implementation relied heavily on a local course director able to attract instructors and Industry support for equipment. Choices were offered between different skills stations and simulations based on local needs. Low fidelity simulation, (SimMon) was adequate. Local integration relies on ongoing communication with local hospitals and training organisations. In low/middle income countries, it also requires support (equipment) from industry, as well as a "local champion". There were no significant differences with participant feedback on course design, content, satisfaction or course practicality between high and low/middle income countries.

Conclusion
A two day advanced airway management course is feasible in both high and low income countries. In low income countries it requires significant local enthusiasm, an appropriate course director and ongoing support from industry and the course developers.

O62

Transforming clinical communication with the Accelerate Communication Excellence (ACE) Program

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Introduction
Health students working with clients require high level communication competence. Students working with patients from social, cultural and linguistic backgrounds different from their own require even higher levels of communication competence. Poor communication competence is a barrier to clinic success and may result in patient mismanagement, satisfaction and student failure. To address this risk, the Faculty of Health Science, University of Sydney, Australia developed the Accelerate Communication Excellence (ACE) Program.

Objectives
The ACE program has two objectives. Firstly, to embed communication as a graduate quality, and accelerate the professional communication competence of all first year students. Secondly, to identify and provide additional support for first year students with poor professional communication competence that may act as a barrier to clinical placement success.

Instruction and assessment method
ACE is an innovative two part program to teach clinical communication skills. ACE-Diagnostic is an automated web based program that develops, assesses, and provides feedback on professional communication. The areas of professional communication are reading, writing, listening, speaking and reasoning. ACE-Immersive is a 4 day intensive program for students needing additional support following ACE-Diagnostic.

Evaluation
ACE was piloted and validated in 2016 with 360 students completing ACE-Diagnostic and 30 attending ACE-Immersive. Since then 2,000 first year health students completing ACE-Diagnostic and 222 students attending ACE: Immersive. The 10% of students needing ACE: Immersive scored poorly on listening comprehension, writing, reasoning, and speaking.

Discussion ACE is an innovative and cost-effective program for developing vital professional communication skills (listening, reading, writing, reasoning and speaking) in novice students. In addition, student performance on the ACE-Diagnostic assessment tasks accurately identifies first year students with poor professional communication competence that may act as a barrier for clinical success. The ACE-Immersive improves professional communication; as yet, zero fails on first clinical placement after attending ACE-Immersive.

O63

Dialysis patients' views about longitudinal engagement with medical students: an exploratory study

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Context
Patients with end-stage kidney disease attend ambulatory haemodialysis settings over extended periods.

This may provide opportunities for longitudinal student engagement with individual patients. The aim of this study was to explore dialysis patients' views about engaging with the same medical student over twelve months.

Method
Haemodialysis patients were interviewed about their views of engaging with medical students for educational purposes.

Questions in individual structured interviews explored patients' attitudes to engaging with medical students, permitted activities/discussion topics, provision of feedback and specific patient requirements and concerns. Scaled responses were also obtained for patient comfort discussing a range of topics. Patient interview comments were transcribed verbatim. These comments were independently coded (JM, NK) to identify relevant themes.

Findings
Twenty-five of 27 patients consenting to interview were willing to interact with students and were further questioned.

All patients would permit all activities/discussion topics relevant to their clinical circumstances.

All patients were prepared to give students verbal feedback, however only 12 patients were prepared to provide students with written feedback.

With respect to length and frequency of sessions, patients offered varying responses, catagorised as: >60mins or <60mins; >once/wk or <once/2wks; duration >6months or <6months. Six themes emerged to inform patient degree of engagement: 'meeting student needs'; 'passing the time'; 'enough time'; 'shared patient journey'; 'specific reasons limiting interaction'; 'patient agency'.

Patients wanting to 'meet student needs' were more likely to prefer sustained engagement than those qualifying their preference as 'enough time'.

Conclusions
We identified three levels of patient engagement with students: not wanted; infrequently over short time; frequently over extended time.

Underlying patient motivations/conditions influence preferences suggesting co-creation of learning opportunities with dialysis patients would be optimal. Our findings may be transferable to other ambulatory patient-care settings within medicine and to similar settings within other disciplines.

O64

Summative assessment of professionalism in an authentic, integrated clinical skills assessment

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Context
The ISCE (Integrated Structured Clinical Examination) was designed to provide evidence for judgements of student performance, and to foster learning, based upon rich feedback given to students following the exam. We value the fully integrated nature of the assessment of professionalism within the ISCE, therefore five equally weighted 'domains of competence' give credit to students who demonstrate global competence & fluency of the task:

- Clinical examination-PROCESS
- Clinical examination-CONTENT
- Diagnostics and clinical reasoning
- Clinical care and patient safety
- Professionalism

Personalised and constructive student feedback links individual's results to overall assessment criteria and intended learning outcomes.

What we did
In order to improve the quality of feedback relating to student's demonstrated professionalism, we introduced:

1. Examiner feedback: in addition to existing (what was done well and what could be improved), examiners were asked to provide free text feedback regarding students' demonstrated professionalism.
2. Simulated patient (SP) feedback: a formative domain mark was added, assessing student's demonstrated professionalism, from the patient's perspective.

What we found
- Including SP rating at station level did not show any significant negative impact on students' performance.
- The overall difference in SP vs examiner marking is not statistically significant.
- Examiners' rating and formative SP rating of professionalism showed a significant and positive correlation.
- Reliability of the station marking remained consistent with both examiner and SP marking for most of the stations.
- Including SP professionalism rating in examiner checklist score and calculating new borderline regression pass mark did not show a marked difference in station level and overall results for SP stations.
- No significant differences were found in SP vs examiner rating according to students' gender, ethnicity and language groups.

Conclusion
Focusing upon professionalism as an integrated component of clinical competence within a summative assessment of clinical skills resulted in improved quality of student feedback, embracing the patient voice.

O65

The purple list: a gay dementia venture Conversations with undergraduate medical students;developing empathy and positive professional attitudes

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'Medical Education must aim to transform students into 'the sort of person' who does the kind of work that doctors do in the real world' (Langendyk et al 2016).

Moving from largely university-based education to immersion in clinical environments is a critical transition for medical students in their development of constructive professional behaviours and empathic approaches. There are difficulties inherent in 'teaching' in this area, navigating the generation gap to facilitate learning of important, sensitive information. Professionalism often fails the student 'legitimacy test', lacking the objective scientific parameters that define much of the core curriculum.

This abstract describes the delivery and evaluation of a short play for third-year students at the Hull York Medical School.

Presentation
We adopted a transformative approach to learning (Mezirow 1990) to challenge established views, whilst engaging and 'entertaining' without patronising. Two of our talented Simulated Patients had written 'The Purple List'- a one-act drama, delivered as a monologue by 'Sam' detailing his own, and husband Derek's experiences as Derek's dementia progresses over two years. We developed a workshop in consultation with the author/actor based on this intense, emotive drama which raises important issues around professionalism, diversity and humanistic care. The 40- minute play was followed by facilitator-led reflective workshops.

Conclusions
The students` response to the play was overwhelmingly positive. They were engaged, moved, empathic and immersed in the narrative. Their animated and insightful discussions demonstrated a level of engagement with the core issues which students acknowledged would not be likely with a more traditional educational approach. Structured reflective feedback from all 140 students indicated that they found the play challenging and emotive and confirmed the transformative impact of the experience. Feedback suggested changes in perspective and professional attitudes, and sensitive consideration of the core issues, with identified achievable aims for personal change in the future.

O66

Authentic Assessment of Professional Competence in the Academic Setting – Two Suggestions

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Authentic assessment (where students apply knowledge to demonstrate competence in performing real-world tasks) is becoming increasingly important in health professions education. However this type of assessment is challenging in the academic environment, particularly when dealing with specific professionalism competencies. Open Book Exams and OSCE stations can provide authentic assessment for some areas of the professional curriculum.

Open book exams are not traditionally used in health professional education, but are well suited to competencies where consulting a resource is a "real world" response. The format of an exam used to assess knowledge and application of professional standards in first year entry level PT students was changed to an "open book" format. Comparison of exam results between the use of open and closed book exams was completed along with thematic analysis of student feedback and observational data. Exam results were comparable to the previous cohort of students. Student feedback was generally positive but indicated that the tight time allowed was problematic and increased clarification was required as to what resources could be accessed.

While adherence to and application of professional standards is often an element of OSCE stations, it is usually not the key focus of the encounter. We developed OSCE stations focusing on key professional standards. Wherever possible the stations focused on more than one professional standard, for example demonstration of assignment of task to others, coupled with appropriate documentation of the assignment. Students were scored on the "professionalism" aspects of the station, and not the clinical content. Key elements of relevant professional standards formed the basis for the score sheet. The stations were challenging to design and required several modifications, but were successful in assessing student competence. Student preparation for the stations was key in order to focus students on the professional standards rather than details of the clinical task.

O67

Driving educational change through an ultrasound teaching fellowship

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Ultrasound (US) is now used widely across a spectrum of disciplines1 due to:

- An improved safety profile of US-guided procedures
- A more challenging patient population
- Advances in sonographic technology

At our institution a single decommissioned US machine was dedicated for teaching, which was limited and inconsistent. This fellowship was established to align personal educational objectives with a vision to urgently meet this need.

Methods

- Establishment of a year-long fellowship with dedicated teaching time.
- Collaboration with stakeholders (industry/ university/clinical staff) to source US equipment.
- Undergraduate curriculum developed to include US teaching.
- Development of small group tutorials:

o Basic US principles taught in a large group setting.

o Practical sonography small group tutorials (max 10), using peer models with direct observation and feedback.

- Development of US educational materials for anatomy demonstrators.
- Development of mastery learning post graduate courses using US (PICC line insertion and airway US).

Results

- 260 students/doctors received sonography teaching, over 23 sessions.
- Thematic analysis of formal feedback demonstrated that candidates were receptive to this teaching. Students valued the practical, hands-on nature of US tutorials and felt the subject matter was interesting and helpful. Negative factors included the student:tutor ratio and time available for individual practice.
- Retention of knowledge was confirmed at four months.
- Based on feedback, smaller groups will be trialled (November 2018) allowing more “time on probe”.
- Ongoing capability to deliver high quality US teaching has been assured by successful procurement of six new US machines, dedicated for teaching.

Conclusion

Establishment of an US teaching fellowship has been successful in championing the importance of US education and expanding local undergraduate and postgraduate US teaching capability and delivery.

O68

A grounded theory approach to medical students learning clinical reasoning in the workplace

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Clinical reasoning is a core competency in the practice of medicine as it entails setting the right diagnosis and selecting an appropriate treatment plan.

Much research on reasoning comes from cognitive psychology where participants are researched under strictly controlled settings in environments often isolated from the workplace.

Medical students spend a great amount of their training in hospital clinical clerkships.

Nevertheless, little is known on how do students actually learn to reason in the workplace.

This study aims to explore how learners develop their understanding around a patient's possible diagnosis and its management in the early stages of the curriculum.

The study also attempts to uncover how the contextual factors impact on their reasoning ability.

Studying reasoning in such authentic environments provides the researcher access to rich contextual data but poses also certain difficulties due to the inherent complexity of such settings.

To account for these factors and capture the complexity of a clerkship environment a qualitative approach was chosen as more suitable and more specifically, grounded theory methodology.

A total of 24 participants are currently under inclusion.

Data is gathered by semi-structured interviews as well as direct participant observations with follow-up field interviews.

Coding, memo-writing, theoretical sampling, saturation and theory construction are performed according to the standards of grounded theory.

At the previous Prato conference in 2017 the initial results from the analysis of the first nine interviews were presented and discussed.

As now the data collection is completed the researchers aim to present the final results.

O69

Development of expertise in physical examination as viewed through Gibson's theory of perceptual learning

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Background
The purpose of clinical history taking is to obtain information through careful questioning and listening while physical examination (PE) uses a series of manoeuvres to collect information through perception using the senses: tactile, auditory and visual.

In developing expertise in PE, students therefore need to develop abilities in the physical actions as well as the perception. Many medical schools use checklists to teach and assess PE to medical students which seem to focus students' learning on physical actions but not perception.

Gibson's theory (1969) on the development of perceptual learning, provides a different perspective on the learning of PE which can be used to analyse the impact of current teaching methods on the learning of perception in PE.

Method
As part of a larger study, medical students in years 2-4 of a four-year postgraduate medical program were interviewed individually or in focus groups about their experience of learning PE. The interviews were audio-recorded, transcribed and analysed using Gibson's theory of perceptual learning.

Results
Two major themes emerged: Absence of perception in early PE learning and assessment; Enablers of the development of perception, particularly meaningful clinical encounters with real patients.

Discussion
For students learning PE in isolation of real patients, there is little encouragement to develop their perceptual abilities which is reinforced by the knowledge that students can pass assessments which use standardised patients by replicating the physical tasks without perceiving any findings. The development of their perceptual abilities makes significant progress when they encounter real patients for whom their perceptual findings in the PE contribute to the diagnosis.

Conclusion
As educators, we need to ensure that our methods of teaching and assessment provide students with the opportunities to develop their perceptual skills in order to be able to use PE for its intended purpose: to help make a diagnosis.

O70

Learning Surgical Skills in a rural setting: The role of context in student participation

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Background

In their third year, medical students at Deakin University (DU) attend one of five clinical schools: four hospital-based clinical schools and the Rural Community Clinical School (RCCS), a comprehensive Longitudinal Integrated Clerkship (LIC) Program. The equivalence of students' participation in clinical tasks across these programs is unknown.

Aim: To compare LIC students' level of participation in surgical condition encounters with hospital-based peers.

Methods: Students completed an online record of clinical tasks performed during encounters with ten common surgical conditions selected from the curriculum. Tasks included history taking and physical examination, formulating a differential diagnosis, ordering and interpreting investigations and preparing management plans. Students selected their level of participation in these tasks (from observation to independent performance).

Results: The most commonly logged tasks were history taking and physical examination (39%), followed by preparing management plans (17%). A significant difference was observed in the degree of student participation in clinical tasks with LIC students recording more active participation (88% LIC vs 33% hospital, $p<0.001$). Significantly more 'observation' was recorded in hospital-based clinical schools (67% hospital vs 12% LIC; $p<0.05$) and greater supported participation in surgical tasks was evident in LIC (72% LIC vs 26% hospital, $p<0.001$).

Discussion/recommendations: Focus has been on potentially limited clinical exposure in the LIC context. This study adds to this debate demonstrating that students are more participatory in this context compared to hospital-based peers. Supported participation is likely to be an important process contributing to the described benefits of LIC programs(1). Further investigation is recommended on the views of clinical supervisors across sites on the appropriate level of student participation at each stage of learning. This may inform the implementation of strategies to increase supported participation in all clinical schools. The impact of students' level of involvement in surgical encounters on mastery of clinical skills requires investigation.

1.Dornan T, Boshuizen H, King N, Scherpbier A. Experience-based learning: a model linking the processes and outcomes of medical students' workplace learning. Medical education. 2007;41(1):84-91.

O71

Program Assessment: Taking stock of the current state of Canadian Undergraduate Medical Education in Procedural Skills Curricula

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Purpose

The objectives of the study were: (i) to characterize procedural skills education currently employed in pre-clerkship and clerkship curricula; (ii) to determine what skills physician-educators think medical students should know upon graduation; and (iii) to identify physician-educator perceptions regarding the development of pre-clerkship procedural curriculum.

Method

A web-based survey was distributed to 201 clinician-educators across Canada's 17 medical schools. Respondents were directed to an individualised survey based on their self-identified, roles at their institution. Respondents were asked demographic questions, what procedural skills are being taught and in what setting at their institution, and their opinions on the value of a pre-clerkship procedural curriculum.

Results

From the 17 school's surveyed, 8 schools responded "yes" that they had a clerkship procedural curriculum. For a pre-clerkship procedural curriculum, only 4 schools responded "yes". The top 5 procedurals skills identified that medical students should know upon graduation, in order, are: IV Access, Airway Management/ Ventilator Management, Local anesthesia/field block, Casting, Spontaneous Vaginal Delivery. Clinician-educators strongly supported a pre-clerkship procedural curriculum (median=4.00/5.00, mode=5.00/5.00), and they believed it would decrease anxiety (median=4.00/5.00), increase confidence (median=4.00/5.00), and increase technical ability (median=3.00/5.00) in incoming clerks.

Conclusions

Across Canada, the state of UGME procedural skills education is inconsistent. With the identification of the Top 10 procedural skills medical students should know upon graduation, the learning objectives of a formal curriculum can be developed. With overwhelming support from both medical students and physician-educators alike, a formal pre-clerkship procedural curriculum is poised to redefine the landscape of procedural care for a whole new generation of physicians.

O72

What the e-delphi expert panel said about . . . simulation best practice statements for pre-registration nurse education in Scotland

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Simulation-based learning is used extensively in nurse education (Ricketts 2011) and can often be a mandatory part of the curriculum. I am a nurse lecturer involved in simulation and it is also the topic for my doctoral studies. The result of my integrative review that explored the evidence that learning transfers from simulation to clinical practice highlighted the difficulties in reporting simulation as an intervention and the need for transparency. Simulation best practice statements were used by only one of the twelve studies reviewed. It was concluded that multi-site studies are required to gather evidence from larger samples. To fulfil this each institution would be required to facilitate homogenous simulation activities.

An e-delphi study was conducted April to May 2018 to establish if consensus could be reached by an expert panel of pre-registration nurse academics around which simulation best practice statements would be appropriate for their practice (Linstone and Turoff 1975). The objectives were:
To explore the current use of simulation and nature of practice across Scottish nursing schools; to ascertain if nursing schools in Scotland currently use best practice statements for simulation; to gain consensus on simulation best practice statements for use in nursing curricula.

This presentation will focus on the results of their responses and highlight key messages from their free text narrative about simulation, simulation best practice statements and the importance of staff training to design and deliver simulation.

LINSTONE, H. and TUROFF, M. (eds) 1975. The Delphi method: Techniques and applications. Massachusetts: Addison-Wesley Publishing Company Inc.

RICKETTS, B. 2011. The role of simulation for learning within pre-registration nursing education – A literature review. Nurse Education Today. 31 pp. 650-654.

O73

Standardised patient and video learning for novice speech pathology students: does it make a difference?

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Novice students report feeling anxious about meeting their client and building therapeutic relationships. They feel unsure about how to prepare for clinic and make the transition to 'clinician'. Anecdotally, clinical educators report that novice students require a high degree of direction and support when preparing for their first clinical encounters. One method of supporting students in developing clinical skills is using standardised patients, however this approach is resource and time intensive. An alternative approach is video observation.

This study aimed to compare the effectiveness of a standardised patient (SP) and video observation (VID) for reducing student anxiety and increasing self-reported preparedness. Novice speech pathology students participated in two learning activities (i) VID and (ii) SP. In the VID task, students observed two initial interactions between a speech pathology student and a carer, one each with pre-novice and intermediate level skills. In the other task, students interacted with a clinical educator portraying a SP in the clinic. Sixty Graduate Entry Masters students were randomly allocated to VID then SP, or to SP then VID. Participants completed a 31 item questionnaire about their preparedness and anxiety at three time points: prior to, and after each of the activities. The results indicate a reduction in student anxiety and an increase in perceived preparedness following both VID and SP. Successive decreases in anxiety and increases in preparedness were shown from the first activity to the next regardless of which activity was first. Participants rated the SP activity as more useful than VID, however 85% felt both activities should be used with future students. These results indicate the utility and feasibility of two low-tech simulation activities for clinical learning in novice speech pathology students.

O74

Sleep quality and OSCE performance in medical students

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Background
The quality of medical students' sleep is important to understand as good sleep is fundamental to wellbeing. Good sleep helps to optimise memory and learning (1) and also has an important role in the maintenance of psychological health (2). Several studies from North America suggest the majority of medical students may have insufficient sleep (3). A number of international studies have also demonstrated sleep problems in medical students from China, Hong Kong, Malaysia, India, and Iran. A New Zealand study (4) showed almost 40% of university students surveyed had significant sleep issues lasting for more than a month, although this was not exclusively sampling medical students.

Aim
To explore the impact of medical student's sleep duration and quality on their performance in high stakes assessments

Objectives
To compare mean sleep quality and daytime sleepiness at baseline with mean sleep quality and daytime sleepiness in the week and night prior to a high stakes clinical assessment (OSCE).

To compare the sleep quality and daytime sleepiness of those performing well in assessments with those performing poorly to investigate if there is an association between sleep quality and/or daytime sleepiness and performance.

Study Design
Setting & Participants – Year 3 medical students at the University of Auckland.

Design – Paper questionnaire comprising demographic information, Pittsburgh Sleep Quality Index (PSQI), Epworth Sleepiness Scale (ESS), caffeine intake, breakfast consumption, exercise frequency administered after Year 3 OSCE.

Data matched with results from the assessments.

Statistical analysis looking at the association between sleep quality (poor vs normal) and performance (poor performance vs normal/high performance) as the primary outcome.

Current status
This study is funded, has ethical approval and data collection is being carried out in October/November 2018.

O75

A comparison of checklist and global style ratings in clinical assessments

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Objective Structured Clinical Examinations (OSCEs) are widely used in the assessment of students' developing clinical skills and competencies across all stages of health programs. Rigid checklist-style marking criteria promote consistency across markers but tend to limit the detection of differences in students' skill level and the capacity to account for scenario-specific variation which is inherent in clinical practice. Global rating scales enable expert assessors to use their judgement regarding the students' competency and how appropriate their approach is for the scenario presented. Each of these approaches to assessment design has strengths and weaknesses.

Reaching an effective balance between these approaches is expected to enable OSCEs to effectively assess students' competency and consider the expert judgment of clinical assessors, while also identifying specific areas for improvement, provided in student feedback. We have developed OSCE marking rubrics which require assessors to mark, on a 5 point likert scale, 'clusters' which represent components of a physical examination or clinical consultation. Each cluster is comprised of multiple 'micro-skills' which are marked for the purpose of providing formative feedback to students.

In 2018 we have implemented these renewed rubrics with students in years 1 and 2 of our medical program. Here, we explore the data from 280 students performing five OSCE stations each. Scores obtained from the cluster scoring are compared with that obtained from the micro-skill marking which is representative of the checklist approach. The scores and student outcomes from these approaches are compared with each other using simple comparisons of means, and compared with the overall global assessment using correlation. The correlation between micro-skill and cluster scoring is also examined.

Here, we discuss the strengths and weaknesses of each approach to OSCE assessment and propose an approach to finding a balance for implementation across all stages of a program.

O76

Creating a maintenance of competency culture - there's more to it than the procedure

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During the early years of their medical studies, students are expected to develop many 'core' clinical skills. Research has shown that clinical skills 'degrade' over time if not practiced, and thus increasingly it is being recognised that in the interests of patient safety there may be a need for medical professionals to demonstrate maintenance of competency.

A pilot study was undertaken at an Australian university with a 4.8-year undergraduate medical program. Late in Year 3, two procedural skill simulations (intramuscular injection (Year 2 competency); cannulation (beginning of Year 3 competency) were run to establish competency (knowledge, skills, approach to patient, safety, etc.), assessed by a tutor using a validated scoring instrument. Prior to the session, tutors agreed on the competency standards in all domains (i.e. criterion-referenced). Based on the outcome, students were then scheduled for additional practice. As learning is more effective if skill acquisition takes place in context, we used 'situated learning', i.e. utilising the theory of experiential learning where participants learn concepts, reflect on them and then hopefully translate this into improved future practice/action.

The findings of this pilot study suggest that procedural skills maintenance with use of a clinical competency assessment is effective in maintaining acuity, with 91% of students achieving competency on their first attempt. The generalisability of results is, however, limited by the study of a single cohort at one institution.

Clinical opportunities early in the medical curriculum are limited in an undergraduate medical programme. Any clinical skills training, often in the skills laboratory, should ideally be re-assessed at regular intervals prior to graduation with contextualised content prioritised to promote discussion and reflection. Skills require continued and deliberate practice to be maintained. This pilot study suggests that simulation-based training and practice in clinical skills is associated with statistically significant improvements in overall performance.

O77

Development of an outcome measure to assess performance of physiotherapy cardiorespiratory skills: A Delphi Study

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Background: Current evidence regarding high fidelity simulation (HFS) in physiotherapy education focuses on student perceptions producing very positive responses from students. HFS has the potential to improve skill performance and consequently better prepare students for gaining the best learning from clinical placement but is an expensive teaching method. Before the impact of HFS can be investigated a valid and reliable tool to assess skill performance is required.

Purpose
To develop a valid and reliable tool to assess student competency in core cardiorespiratory skills.

Method
A Delphi method, a method of gaining convergence of opinion was implemented. Using pre-defined criteria cardiorespiratory experts were identified and invited to participate. The first round questionnaire, using open questions to identify participants' expectations of students in relation to core respiratory physiotherapy assessment and treatment techniques were sent to the panel. Data from round 1 was analysed and generated round 2 where participant's level of agreement with statements was established (using Likert scales). This aimed to clarify explanations about techniques to patients, instructions prior to and during techniques, hand positions to be used, patient positioning and safety considerations. Round 3 will further clarify outstanding aspects prior to development of a draft outcome measure which will be circulated for comment in round 4. Levels of agreement with statements in round 4 will be calculated using content validity index

Results
The response rate for round one was 31% (6/13) representing Australia, Canada and UK. Sixteen further panel members for round 2 were identified from a search of university staff lists and biographies across the 3 countries. Round 2 response rate was 52% (15/29). Round 3 is currently underway

Conclusions
Conclusions will be available for inclusion by the time of conference along with the outcome measure ready for testing to establish reliability and validity.

O78

Using Educational Measurement strategies to drive quality improvement in haemodialysis care

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Context
Arteriovenous fistula cannulation for haemodialysis treatment is a technically challenging clinical skill. An educational initiative - Managing Access by Generating Improvements in Cannulation (MAGIC) – seeks to enhance haemodialysis nurses' skills and familiarity with this technique. MAGIC comprises an online educational package supported by locally delivered electronic education materials and a data collection strategy intended to drive local quality improvement. This paper describes the use of an educational measurement strategy (based upon Kirkpatrick's model) to drive engagement with MAGIC, while facilitating and measuring associated quality improvement activity.

Methods
A four-stage strategy was developed in consultation with medical and nursing colleagues working in renal and haemodialysis units across the UK.

Level 1 and 2 measures are 'user level' measures. Level 1 reflects engagement with MAGIC; the data allow optimisation of educational materials and 'marketing' to clinicians. Level 2 measures explore users' learning from the package; the data ensures educational materials meet their stated aims. Level 3 and 4 are 'service level' measures. They record pre-specified changes in clinical practice (level 3) and overall clinical outcomes (level 4), including patient-reported measures (e.g. pain associated with fistula cannulation), use of evidence-based cannulation technique, and fistula failure rates.

Discussion
This modified Kirkpatrick's model provides insights for local educators, project managers and policy makers alike. The model resonates with clinical practice, brings clarity to the MAGIC programme, and is easily understood by academics and clinicians. The enthusiastic, nationwide clinical engagement MAGIC has achieved is at least partly attributable to this model. We suggest it could serve as a template for similarly complex educational interventions in other aspects of healthcare.

O79

Deliberate socio-culture engineering as a key element of interprofessional simulation design

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Many elements contribute to the success of interprofessional learning. One being the creation of appropriate groups of learners, both in terms of the mix of participants and, also, in terms them sharing ownership of the learning task – labelling them as a team. Creating an environment where the team "succeeds" ensures it is well placed to deal with the subsequent simulated challenging situation, encompassing a high risk of failure with extreme consequences. Another element, is ensuring sufficient contact between learners for appropriate interprofessional interaction to occur. This contact can be overt and obvious to learners, such as occurring during structured learning tasks, or can be covert such as occurring during breaks where continued interactions are facilitated by timetabling and the physical environment. Optimising conversations between participants is also an important element for successful interprofessional learning. Requiring participants to fulfil well-defined, tightly structured roles promotes effective communication, as there is no choice but to interact, and conversations may thus occur, where otherwise would be unlikely. Further, creating diverse health care teams for simulation purposes that ultimately reflect real clinical practice – is a key element of interprofessional simulation design.

In this presentation, we will describe the socio-cultural engineering strategies deliberately employed to optimise interactions and learning in our innovative interprofessional simulation. The design of the socio-cultural engineering is based on our knowledge of the science of education and practical experiences gained delivering this program to over 10,000 final year medical and nursing students during the past 10 years at Monash University.

This interprofessional learning program is currently being evaluated using realist theory. Qualitative data from a realist evaluation, including expert opinion will be provided. Insights gained from student focus groups in relation to students' experiences of working in interprofessional health care teams for the full day of simulation will be shared.

O80

Object-based learning to promote professionalism in Health Sciences – Engaging with material culture in a cross-disciplinary peer-assisted learning environment

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Introduction/background
Scholarship on teaching health ethics is limited in Optometry. There are no existing research focussing on the key conceptual content for an optometric curriculum.

This project aims to explore student personal and professional learning and reflection in ethics via engagement with artefacts in Grainger Museum, University of Melbourne. We seek to explore students' understanding of ethical concepts and skills in health professional contexts, including teamwork, communication and collaboration.

Methods
Optometry students experienced activities in the museum that focused on ethical dilemmas, including dealing with present or future 'moral distress' in health professional contexts.

Results/Findings
Together, 90-99% of the students (n=81, 100% response rate) reported that this task increased their understanding and awareness in digital literacy, professionalism and heath ethics. They reported it has helped in identifying strengths and weaknesses in communication and inter-personal skills. 85% of the students recommended incorporating activities involving digital literacy and museums into the program in future. Overall, students appreciated incorporating Humanities in a clinical discipline as it encouraged lateral thinking and allowed more personal growth.

Discussion
This research focuses on strategies for optometric teaching and learning in health ethics. It investigates object-based learning through pedagogical encounters with cultural artefacts. We have successfully implemented activities that are sustainable and embedded within the curriculum.

Engaging with material culture in a museum context has delivered a deeply interactive and engaging learning experience, promoting the development of professional identity, awareness, and professional wellbeing.

O81

Evaluation of an interprofessional tag team simulation based on an aboriginal case scenario

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Aim
To investigate the development of cultural capability among health professions students who complete the simulated cultural learning activity.

Method
The interprofessional Indigenous cultural simulation was undertaken using the Tag Team Patient Safety Simulation (TTPSS), which has been successfully implemented in multiple nursing programs across Australia (Levett-Jones, Andersen, Reid-Searl, Guinea, McAllister, Lapkin, & Niddrie, 2015).

Participants included students from the Bachelor of Nursing, Master of Occupational Therapy, Master of Dietetics, Master of Physiotherapy, Master of Counselling, and Master of Psychology (Clinical).

A mixed method approach was used to evaluation this learning activity.

Discussion and Conclusion
Health Professions students need to be prepared for the varying cultural contexts and practices they will be involved with in clinical practice. There is considerable evidence that Aboriginal people's experiences of racism directly corelates to poorer mental health outcomes. Lowitja's Experiences of Racism survey (2012) found that 30% of respondents had experienced racism within the health care system. Such experiences may lead to reduced access to health care services, including preventative services, and poorer treatment and care from health professionals. Therefore there was an imperative to develop these capabilities in preparation for clinical practice.

Academics across the Health Professions and Psychology developed and delivered a simulated learning activity to prepare students to provide and interprofessional approach to culturally safe practice of Aboriginal peoples. The scenario, co-developed with Aboriginal health experts, was based on the Commonwealth Government's 2014 Aboriginal and Torres Strait Islander health curriculum framework for higher education providers. This Framework supports the provision of curriculum that develops students' cultural capabilities.

This presentation will convey the findings from the evaluation of our innovative curriculum and insights into the development of cultural capabilities of our students.

O82

Two for the price of one: are multiple interviewers better than one for qualitative research interviews?

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Context
Traditional qualitative interviewing is performed by a solo interviewer with one interviewee. Recent authors have described "dyadic interviews" with two interviewees, noting the added benefits of the dynamic generated between the interviewees. Very little has been written however about "panel interviews", where two interviewers speak with a solo interviewee. We describe our experiences with the aim of introducing others to the benefits of this uncommon research technique.

Methods
We conducted panel interviews during our study investigating the hidden professionalism curriculum at medical school. Two interviewers conducted a series of audio recorded interviews with medical students. The students were presented with pre-written professionalism scenarios and invited to comment on their perceptions of the scenarios, their experiences of similar situations, and their knowledge of tackling such events.

Results and discussion
The dynamic between two interviewers enabled a rich dataset to be obtained. One interviewer led the questioning while the other made detailed field notes, played a "devil's advocate" role, and ensured interviews kept to a sensible time window. Dual interviewers provided a degree of standardisation between interviews, and limited "interviewer fatigue" when multiple students were available to participate on the same day. Limitations are acknowledged, including the added interviewer time commitment. Care must also be taken to achieve the correct interview tone without intimidating interviewees.

Conclusion
We recommend this technique for qualitative research, and suggest it has potential to yield more rich data than traditional one-to-one interviews.

O83

Using practical assessment to meet the future needs of health students

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Context
Undergraduate students value assessments that are meaningful, authentic, practical, and that increase their knowledge and expand their skills set.

What we did
Two assessment items were developed for use in 2nd and 3rd year undergraduate nursing students and piloted at two Australian universities. The first assessment involved students choosing and completing continuing professional development (CPD) activities and compiling evidence of this. CPD is mandatory for registration as a registered nurse in Australia.

The second involved a written assessment applying for a new graduate nursing position in NSW Health. Students were required to address the selection criteria and to research a local health district they were interested in applying to.

What we found
The results from student feedback were positive and indicated that students found the assessments relevant and useful in familiarising them with the CPD requirements of registration: "This is the most relevant assessment in the entire degree".

They reported that the written assessment helped with their new graduate applications as they received targeted feedback to help improve their submissions and they were grateful for this. Researching specific aspects of nursing as it related to local health districts helped in their preparation for interviews.

Conclusion
Written assessments are an important component of health degrees however many students do not see the relevance of these to clinical practice. Assessments that reflects life skills, such as CPD and new graduate applications, are relatable and useful and represent an effective and interactive means of learning.

O84

Interprofessional Learning in Immediate Life Support training does effect TEAM performance during simulated resuscitation

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Aim of the study
To assess performance in a simulated resuscitation after participating in either an interprofessional-learning (IPL) or uniprofessional-learning (UPL) Immediate Life Support training course (ILS).

Introduction
The Team Emergency Assessment Measure (TEAM) is routinely used in Resuscitation Council (UK) Advanced Life Support courses. This study used the psychometrically validated tool to assess if the delivery of an IPL ILS to final year medical and nursing students could improve overall behavioural performance and global TEAM score.

Methods
A randomised study of medical (n=48) and nursing (n=48) students, assessing performance in a simulated resuscitation following the IPL or UPL ILS courses. Post-course completion participants were invited back to undertake a video-recorded simulated-resuscitation scenario. Each of these were reviewed using the TEAM tool, at the time by an experienced ALS instructor and subsequently by a clinician, independent to the study and blinded as to which cohort they were reviewing.

Results
Inter-rater reliability was tested using a Bland-Altman plot indicating non-proportional bias between raters. Parametric testing and analysis showed statistically significant higher global overall mean TEAM scores for those who had attended the IPL ILS courses (independent reviewer p=0.03, ALS-instructor p=0.005).

Conclusion
Our results demonstrate that an IPL approach in ILS produced an increased effect on TEAM scores with raters recording a significantly more collaborative team performance. A post-scenario questionnaire for students also found a significantly improved experience within the team following the IPL course compared to those completing UPL training. Though this study shows that team behaviour and performance can change and improve in the short-term, we acknowledge further studies are required to assess the longer-term effects of IPL interventions. Additionally, through this type of study methodology other outcomes in regards resuscitation team performance may be measured in regards to potential benefit to patients at level four of Kirkpatrick's hierarchy.

O85

Teaching verbal – only communication skills to medical students

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Background
Clinicians in emergencies often find themselves communicating with inexperienced practitioners or laypersons regarding clinical equipment and care. The complexity of this situation is compounded when the clinician needs to provide direct clinical care, (e.g. intubating, holding a cervical spine, providing CPR), preventing them from using their hands to communicate. This leads to frustration and delays in provision of care. A different set of communication skills is required to effectively and timely communicate the clinician's needs.

These skills are not taught within the medical curriculum resulting in use of traditional communications methods. The Doctor for a Day (Dr4aDay) Program is specifically designed to raise awareness, increase student confidence and compliment current skill sets by allowing medical students to practice these skills in a safe environment.

Methodology
Each undergraduate student buddies with a secondary school student, in emergency clinical simulations, in which the undergraduate students instruct the students to perform the care. Undergraduate students are required to hold their hands behind their back and communicate by describing the instruments or procedure in regards to shape, colour, texture, and composition without the use of medical terminology or jargon.

Results
Undergraduate students (n= 60) undertook an anonymous quantitative and qualitative survey on completion of the program. Qualitative feedback from undergraduate students have identified: improvement in verbal communication skills, recognition of the importance of verbal only communication,

Undergraduate student quantitative evaluation utilising a Likert scale of 1-5 indicated :

- Material taught during Dr4aDay compliments my clinical practice - 4.18.
- The program increased my confidence - 4.15.
- Material learnt today will help me as a Junior Doctor- 4.23.

Conclusion
The Dr4aDay program provides medical students with a valuable opportunity to identify the need for and develop verbal only communication skills whilst increasing confidence and skill as a junior doctor.

O86

Learning to perform intimate pelvic examinations: experiences of graduate physiotherapy students

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Background
Learning to perform intimate pelvic examinations (IPE) is integral to pelvic floor physiotherapists training. Unlike medical or nursing training programs, physiotherapists are taught to perform IPE using peers. To date there is no published data of the experience of graduate physiotherapists learning these important skills.

Method
Participants enrolled in postgraduate pelvic floor physiotherapy programs at two Australian universities were invited to complete two anonymous questionnaires about their experiences in learning to perform IPE on their peers and being the 'patient' for their peers to learn. The first questionnaire was completed prior to the first IPE practical session and the second questionnaire approximately ten days after the first IPE session. Survey data was analysed using descriptive statistics and a general inductive approach was used to analyse free text responses.

Results
Seventy-one female students were recruited (response rate 82.5%) from eight countries. The mean years from graduation was 7. 51% had previous training in IPE (short courses, workplace training) and had experienced a diverse range of teaching methods (on patients, a peer, a teaching associate or mannequin). Four main themes emerged from the free text responses: preparation, emotions, educational value, and professionalism.

Conclusion
This study provides a better understanding of the student perspective of the teaching and learning of intimate examinations. Results can be used to inform the methods of teaching IPE in physiotherapy programs globally.

References
Dabson, A. M., Magin, P. J., Heading, G., & Pond, D. (2014). Medical students' experiences learning intimate physical examination skills: a qualitative study. BMC Medical Education, 14.

Wearn, A. M., Bhoopatkar, H., Mathew, T. K., & Stewart, L. (2012). Exploration of the attitudes of nursing students to peer physical examination and physical examination of patients. Nurse Education Today. doi:http://dx.doi.org/10.1016/j.nedt.2012.08.012

O87

Improving Nursing and Midwifery curriculum on Indigenous health and clinical care

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Internationally a crucial capability for healthcare professionals is ability to work well with diverse cultural peoples. In Australia, a core capability for registered nurses and midwives is ability to provide culturally safe clinical care with Indigenous Australians. This is imperative as unacceptable health inequities exist for Indigenous Australians with poor provision of culturally safe health care a contributing factor. It is therefore essential that nursing and midwifery learners are well prepared to provide responsive clinical care in the context of diversity. Surprisingly there is little known about effectiveness of educational approaches in preparing health professional learners to work with Indigenous peoples.

In 2018 a unit in Indigenous Health in Nursing and Midwifery at Monash University was delivered via a partnership between the Gukwonderuk Indigenous Unit and Nursing and Midwifery. This was delivered via blended learning and was informed by the Aboriginal and Torres Strait Islander Health Curriculum Framework comprised of five cultural capabilities – respect, reflection, safety and quality, advocacy and reflection. This study aimed to answer the following questions regarding the unit: what learning patterns and trends occurred; what reflections did the project team have on this information and; what teaching practices altered as a result and why.

Mixed methods data was collected from learners included course pre and post validated attitudinal questionnaire, pre and post multi-choice assessment questions on the five cultural capabilities and learner reflections on application of the five cultural capabilities. Changes to attitudes varied for the five cultural capabilities as did pre and post multiple choice questions with learning stronger in some capabilities. This pattern was also present in learner reflections on application. This information informed changes to curriculum to address areas of strength and limitations and provides valuable insight into educational approaches to improve health professionals' ability to work with diversity.

O88

Assessing Reflectivity in Student Videos

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Background
Reflection and reflective practice are essential components of nursing practice. The need for nurses to engage in reflection and reflective practice forms a core part of the nursing registration standards worldwide. In Australia it falls within the first listed practice standard for registered nurses. Nurses are expected to "develop practice through reflection on experience, knowledge, action, feelings and beliefs" (NMBA, 2016, p. 3). Most reflective activities in healthcare provider education take the form of reflective journaling or reflective portfolios. However, with increasing techno-savvy students it is important appropriate pedagogical strategies are used by educators to promote incorporation of twenty-first century skills into students' reflective activities (Baporikar, 2016).

Aim
This project sought to utilise students' video reflections to facilitate student post-practicum learning of a community placement experience, through a web-based interface.

Method
Adopting a three-phased case study approach, pre-registration nursing students were invited to participate in this funded project. Four students participated and created videos. Analysis of the videos was undertaken using the Reflective Writing Framework (Freeman and Bett, 2012; Hatton and Smith, 1995) which is premised on four types of reflection, is Descriptive Writing (unreflective), Descriptive Reflection, Dialogue Reflection and Critical Reflection. In viewing the videos, we sought to ascertain whether the student's narrative in their video reflected any of these four elements.

Findings
All students' narrative demonstrated Descriptive writing, Descriptive Reflection and Dialogue Reflection. However, the ability to articulate Critical Reflection appears to be influenced by the student's prior life journey.

Conclusion
Reflection is often just incorporated into a written assignment or as a journal task, with minimal regard to student engagement with the activity nor whether scaffolding of reflectivity is occurring across a program of study. As technology advances exponentially pedagogical strategies, such as student reflective videos needs to become mainstream.

O89

A Human Factors Redesign of the Paediatric Difficult Airway Trolley

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Background
Paediatric airway management depends both on mastery of techniques in a different care setting and a wider range of equipment to suit a range of patient sizes. Storage of equipment is particularly critical in facilitating care during airway emergencies(1). Equipment problems have been identified as a common problem with paediatric difficult airway trolleys(2). A human factors redesign of the paediatric difficult airway trolley must both support available techniques and allow rapid identification of the right equipment.

Methods
Anaesthetists and anaesthesia nurses undertook a collaborative redesign process. This resulted in a decision to group equipment in a manner that supports utilisation of specific airway techniques, with additional grouping into weight ranges. Custom-designed iconography has been incorporated to allow rapid identification of weight-range packs, with external labelling of drawers on the trolley to indicate the supported technique of face-mask ventilation, supraglottic airway (SGA) techniques, intubation and emergency front of neck access (eFONA) packs.

Results
Introduction of the trolley was accompanied by scenario testing with anaesthetics nurses gathering equipment to facilitate neonatal intubation, conversion of SGA to endotracheal tube and eFONA. The average reduction in time to achieve these goals was 22.1 s (58.8% time reduction), 72.1 s (89.1% time reduction) and 48.6 s (72.3% time reduction).

Conclusions
A comprehensive approach to redesigning the paediatric difficult airway trolley has led to our department revisiting what is essential in these clinical situations. Early usability testing suggests it achieves the design goals of optimising equipment identification and supporting clinician teams by allowing them to focus on completion of tasks and communication, rather than sourcing equipment.

O90

The experience of medical students working as healthcare assistants during their undergraduate training

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Background
Healthcare assistants (HCAs) play a vital role in today's NHS. They work in hospitals or community settings, and spend much of their time undertaking hands-on, practical care tasks, such as making beds, washing and dressing patients, serving meals, and helping patients with toileting. As HCAs do not need to have obtained a formal qualification prior to starting the role, they typically work under the guidance of a nurse. In Australia, assistants in nursing (AINs) have a similar role to HCAs.

Method
Some medical students choose to do HCA work during their time at university, but there is very little published literature describing their experience, or the perceived benefits and challenges of the role. As a result, a qualitative study exploring the experience of medical students working as HCAs was undertaken at a Scottish university. Data was collected from eleven medical students by audio-recorded, semi-structured, one-on-one interviews, before the audio recordings were transcribed, and thematic analysis performed.

Results
Four main themes emerged from the data, including three perceived benefits of HCA work, and one challenge. Participants reported that HCA work had given them a better understanding of the multidisciplinary team, an ability to help staff with tasks when they were on medical school placements, and improved communication skills with patients. However, students also had to deal with the frustration of not being allowed to use some clinical skills that they had learned at medical school because they are not part of the formal HCA job remit.

Conclusions
HCA work helps medical students develop a range of care skills, and it can legitimise their participation in the clinical environment. In addition to this, students can experience benefits in areas that can be difficult to formally teach, such as interprofessional socialisation and awareness.

O91

Using digital simulation to teach and assess mandatory work place health and safety practices in nursing laboratories

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For tertiary sector providers on-line interfaces provide an efficient means of curriculum delivery. Historically mandatory nursing laboratory induction programs providing education about work place health and safety have been delivered either as a demonstration in class or via on-line learning module and evaluated using a quiz. Evaluative research found this to be ineffective with limited translation of theoretical concepts in practice. To address this a digital simulation utilising a serious game approach was developed to replace traditional preparation approaches. While students continue to access theoretical content on line the mandatory quiz has been replaced with a 3D virtual representation of the nursing laboratory environment. Imbedded within this are a series of clinical skills that players complete to evidence safe practice and demonstrate competence. Players are required to achieve 100% in order to achieve a pass. Individual feedback is provided. This presentation provides information about the digital simulation design, its introduction and evaluation. This will be of interest to academics and laboratory staff involved in the application of WH&S policy and within laboratory spaces, and those interested in teaching clinical skills using VR and game based technology.

O92

Development of objective measures to assess performance from training to clinical practice

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Context

Competency training and objective assessment to facilitate decision making, perceptual skills and hand-eye coordination has potential to improve clinical outcomes. However, the provision of technology in the learning experience lacks a seamless integration into clinical practice. Development of objective assessment metrics will help to discriminate between specific aspects and levels of performance. Eye-tracking has been shown to be a valid method for measuring the learning curve in ultrasound guided regional anaesthesia training. The aim of the current study was to develop and validate reliable metrics that could be applied in simulation and clinical contexts.

Method

We employed Delphi methodology to gain consensus on task success and errors from 16 UK experts in regional anaesthesia. Tasks (n = 15) and errors (n = 15) were selected based on inter-rater agreement > 0.80. Six experts and six novice trainees participated in individual instructional phantom and cadaveric training sessions. Participants were then videoed as they were tested on an interscalene block on a cadaver and their eye movements were measured.

Results

A series of Mann-Whitney tests indicated that experienced Anaesthetists compared to trainees had significantly higher global rating score performance ($p<.01$) and self-assessment ($p<.001$); reduced time on task ($p = .04$) and glances away from the monitor and longer fixation duration ($p = 0.03$). Preliminary results also indicated fewer errors. There were no significant differences in mood, sleepiness, visuo-spatial skills, dexterity, sustained attention or visual scanning skills ($p>.05$).

Conclusion

Our findings indicate that eye tracking combined with task analysis can reliably distinguish experienced learners from novices. Differences in performance were not found to be due to inherent characterises but are indicative of learning. We plan to introduce additional objective methods to integrate with our current tools to offer a comprehensive battery of robust training, assessment and monitoring metrics across multiple disciplines.

O93

Enriching the inter-professional curriculum in a rural setting

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Background
Traditional approaches to curriculum delivery are primarily devoted to producing graduates who are proficient in their professional domain, leaving little time for interaction between disciplines. Rural doctors need to work closely with other health workers in the context of life in smaller communities.

Context
The Broken Hill University Department of Rural Health (BHUDRH) was established to improve health care in far-western New South Wales (NSW). It runs a programme of extended clinical placements for 11 medical students from three universities. It also takes many medical students on short-term placements, as well as nursing and allied health workers.

Innovation
The BHUDRH has established a programme of weekly workshops that focus on rural and cultural issues in an inter-professional learning context. This programme is designed to deepen the medical students' experience, and to further the goal of developing the rural and remote health workforce. This presentation describes the Enhanced Rural Inter-Professional Cultural Health (ENRICH) programme and offers an example of a recently developed session on Stroke.

ENRICH uses community resources – professional, cultural and artistic – to provide stimulating educational opportunities. Students cover topics ranging from hands-on resuscitation skills to experiential learning around ageing with colleagues from several health disciplines. The regular, programmed nature of this scheme gives rural, inter-professional and cultural aspects of learning a high profile in the students' experience.

Implications
The ENRICH programme puts issues of life and practice in a rural community firmly on the agenda of BHUDRH students. It gives them an experience of the depth of a rural community that they might otherwise not be aware of, and promotes teamwork through inter-professional education. It is another strategy for encouraging students to return to rural work.

O94

Exploring the use of Holographic technology in Nurse education

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Background
Simulation is recognised internationally as a safe and effective way to teach health students. However, there exist limitations to this learning experience due to the static nature of mannequins and the complexity of the learning required. The evolution of holographic technology has the potential to change nurse education, and enhance the understanding of both anatomy and physiology, to advance physical assessment skills. The integration of immersive technologies have been explored for their application in medical training, however, there is sparse research exploring how these technologies can be used to advance nurse education.

Objective
The aim of the study was to explore students' perspectives of learning through holographic technology and the application of this emerging technology can enhance nurse education.

Methods
A cross-sectional survey of second year nursing students was recruited to explore the educational application of augmented reality based on the instructional theory of whole-task training. Participants were required to undertake a nursing assessment and documentation of a projected holographic patients based on a developed case study.

Results
Four themes emerged from the data relating to how learning was enhanced: assessment, clinical judgement, visualising and reflecting. All participants reported that the use of Hologrpahic technology assisted learning.

Conclusion
Holographic technology has the potential not only to increase engagement and motivation with learning but to enhance patient assessment and clinical judgement skills

O95

Learners and Educators Perspectives in Simulation-based Educational needs in Qatar

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Context
Weill Cornell Medicine - Qatar (WCM-Q) has been leading in providing educational support and networking opportunities to simulationists in Qatar. WCM-Q has partnered with educators across health professions institutions and schools within the country to provide a platform to identify and address the needs of a diverse interprofessional group of simulationists. We report on the progress of the community as well as the latest challenges and opportunities and contrast these with our learners' reflections, who engage with Simulation-based educational activities in different health professions schools and health care setting in the State of Qatar.

Description
Since 2017, WCM-Q has initiated a phased multi-year community engagement strategy aligned with the needs of the SBE community. The main vehicle for addressing the needs of the community is an annual symposium hosted by WCM-Q in collaboration with our interprofessional network of health professions educators in Qatar. The annual symposium brings together the SBE community to offer opportunities for professional development, ensuring the community is kept up to date with standards of best practice and strategies for effectively engaging learners through SBE. In addition to the informed educational offerings based on the needs of the community, the symposiums continue to provide a quality improvement opportunity for attendees through asking attendees to identify professional development plans (PDP) at the conclusion of the symposium.

Conclusion
WCMQ has been following up on the progress of the de-identified PDPs from attendees, since 2017, as a mechanism to capture the evolving needs of the community. Utilising the PDP's of the community as the main mechanism to monitor the evolving needs of the community has given us greater insight into how we can better align our education offerings to enable our community to identify and overcome barriers.

O96

Making connections: Digital stories to enhance students learning about clinical reasoning and patient safety in nursing

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Context
Nurses with effective clinical reasoning skills have a positive impact on patient outcomes; conversely, those with poor clinical reasoning skills often fail to detect impending patient deterioration (Levett-Jones et al, 2011). Teaching these abstract concepts to nursing students can be challenging. A teaching strategy designed to engage learners in complex concepts is the art of storytelling. Stories help nursing students better understand their role in the health and care of patients and clarify the contribution of nursing to healthcare. Digital stories are the modern form of storytelling and combines narrative pedagogy with videos, audio, voice, text, still images and music. Unfolding digital stories promote a strong emotional connection, beyond clinical and technical skills to convey inferred and sometimes unappreciated elements of practice (Haigh and Hardy, 2011; Swap et al., 2001).

What we did
A mixed-method study was undertaken with second year undergraduate nursing students from one Australian university. As part of their usual coursework, students were exposed to digital patient stories based on Levett-Jones' (2013) clinical reasoning model. Students also completed an oral clinical reasoning assessment based on the patient stories. To evaluate the impact of using digital stories to enhance the student learning experience about clinical reasoning, focusing on recognition and management of the deteriorating patient, students were invited to complete a pre and post survey and attend focus groups.

What we found
This presentation will explore the main themes identified from the focus groups and the pre and post survey results in relation to the students learning experience about clinical reasoning.

Conclusion
It is hoped that the students will make connections with the patient stories and enhance their learning experience about the relationship between clinical reasoning and patient safety.

P01

A Virtual Empathy Museum: A unique approach for improving healthcare graduates' empathy skills

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In healthcare, empathy is considered a basic component of therapeutic relationships and a critical factor in patients' definitions of quality care. More than 200 studies have demonstrated the positive impact of empathic healthcare interactions on patient outcomes [1]. There is also compelling research demonstrating that healthcare devoid of empathy results in a wide range of negative psychological and physiological outcomes for patients [2]. Further, healthcare professionals who practice without empathy are at heightened risk of depression, burnout and attrition.

While it is reasonable to assume that most healthcare students have an empathic disposition, evidence suggests that empathy levels often decline during the period of enrolment in an undergraduate health degree. Despite the need for more attention to the development of empathy as an employability skill, many healthcare programs only pay lip service to this concept.

Against this backdrop we developed a Virtual Empathy Museum (VEM), an innovative digital resource funded by an Australian Technology Network of Universities grant. The VEM includes evidenced-based teaching materials such as simulations, digital stories and a range of other educational materials, designed to enhance healthcare students' and practitioners' empathy skills and enable them to make a positive impact on patient care.

This presentation will introduce the VEM with the aim of starting a conversation (or perhaps even a 'movement') that leads to empathy being included as an integral component of every healthcare curriculum. The relationship between empathy and patient outcomes will be explored; and the results of a systemic review that examined the effectiveness of empathy education will be presented.

References

1. Trzeciak, S., Roberts, B.W., and A. J. Mazzarelli (2017). Compassionomics: Hypothesis and experimental approach. Medical Hypotheses 107: 92-97.

2. Reynolds, W. & Scott, B. (1999). Empathy a crucial component of the helping relationship. Journal of Psychiatric Mental Health Nursing, 6, 363-370

P02

Identifying Needs and Delivering a Paediatric Airway Education Course

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Background

Paediatric airway management poses distinctly different challenges to adult airway management as the nature of airway presentations is different(1,2). Focus group research conducted at our institution indicates that learners at all levels and from a variety of backgrounds identified strong development of basic airway skills and specific use of simulation to support team-based care as priorities in airway education. Unable to identify a paediatric airway management course that met these needs and provided an overview of paediatric airway care we undertook to develop a program to meet learner requirements.

Methods

A course faculty was gathered to develop a curriculum. This includes sessions on the particular considerations in paediatric airway management, basic skills of airway assessment, consolidation of basic airway techniques including face-mask ventilation, and techniques to avoid peri-operative airway complications. Skills stations for supraglottic airway techniques and conversion of these devices to an endotracheal tube, laryngoscopy and intubation techniques and management of "Can't Intubate, Can't Oxygenate" situations have been included. Human factors and communication skills are incorporated throughout and reinforced in simulation sessions to complete the course. All stations are being tested and refined prior to delivery of the course.

Results

At the time of commencement of these courses in December 2018, course feedback will be obtained from faculty members and attendees. Faculty members will provide feedback on whether course objectives are met by delivery of the course. Attendees will provide feedback to assess if learner objectives and expectations are met and to assess the ongoing need for a paediatric airway course

Conclusions

Airway education in the specific area of paediatric airway management does not presently meet identified learner needs in our area. This report will describe the development of a specific course to meet these needs and assessing the success of the course in meeting educational objectives.

P03

Implementation of a pedagogical tool for an effective learning process regarding practical skills

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Newly educated nurses reports to feel unprepared and to have weakness in performance of practical skills. Our aim was to implement the "Model of Practical Skills Performance" in nursing school in a county council in northern Sweden to provide opportunities of reflection for nursing students, strengthen clinical teachers skills to use the pedagogical tool, and to develop a common language for parties involved. The implementation activities were; web-based education with theoretical guide of the model, workshops including experimental learning, operationalisation phase where the model is used as a reflection tool and a follow-up seminar. To evaluate experiences of using the pedagogical tool we used a questionnaire among students and focus group interviews among teachers. Preliminary results showed that the model helped students to facilitate an early understanding when the model was used with a clear purpose. Students described they become aware that learning is a process. The teachers experienced the students to be more creative to seek own solutions and that feed-back was in the focus of both technology and care. Implementation activities and more results from questionnaires and citations will be presented in the poster. We conclude that students and teachers understanding are facilitated through a common language based on the different categories of the model.

P04

Does an intervention focusing on situation awareness and teamwork improve performance in interprofessional intensive care teams? A randomised controlled study

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Background, context and aim
In complex highly technological environments loss of situation awareness will increase errors and impact patient safety (1). Situation awareness (2) as a concept are being used more frequently in healthcare and is becoming a key factor when preventing unnecessary complications in emergency care (3).

To increase patient safety, interprofessional simulated training sessions were performed in situ at intensive care units at two different hospitals in the northern part of Sweden.

The aim of this project was to evaluate the impact of a learning intervention for interprofessional intensive care teams on situation awareness, team and task performance.

Methods and intervention
Twenty intensive care teams (76 participants; physicians, nurses and enrolled nurses) were randomized into intervention or control. The intervention consisted of a targeted education focusing on team performance and situational awareness. Reflection-on-action were used to enhance learning. Situation awareness was measured twice during each scenario. The effect of the intervention on situation awareness (SAGAT instrument), team (TEAM instrument) and task (A-E scale) performance will be analyzed.

Conclusions and discussions so far
The analyses are in progress and the results will be presented and discussed in the final poster.

1) Schulz, C. M., Krautheim, V., Hackemann, A., Kreuzer, M., Kochs, E. F., & Wagner, K. J. (2016). Situation awareness errors in anesthesia and critical care in 200 cases of a critical incident reporting system. BMC Anesthesiol, 16(1), 4.doi:10.1186/s12871-016-0172-7

2) Endsley, M. R. (1995). Toward a Theory of Situation Awareness in Dynamic-Systems. Hum Factors, 37(1), 32-64. doi:Doi 10.1518/001872095779049543

3) Jones, C. P. L., Fawker-Corbett, J., Groom, P., Morton, B., Lister, C., & Mercer, S. J. (2018). Human factors in preventing complications in anaesthesia: a systematic review. Anaesthesia, 73 Suppl 1, 12-24. doi:10.1111/anae.14136

P05

Comparison of OSCE Global Rating Scale and Entrustable Scale in OSCE Assessments

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Background: Objective Structured Clinical Examinations (OSCEs) are high reliable and valid tools for assessing clinical skills. Entrustable Professional Activities (EPAs) are now used in supervisor-student relationships to evaluate how trustable a clinical event is for the particular student-to-practice transition. This study aims to evaluate OSCE global-rating and EPAs correlations.

Method: Twenty-one PGY students undertook the OSCE from 2017 to 2018. Each PGY participated in 8 stations of the test. One week after the end of the OSCE exam, a video evaluation was carried out. The same station test was evaluated by two examiners at the same time. Test was conducted on five themes: medical history, physical examination, condition interpretation, medical communication, and skills operation. The questions were evaluated using the Entrustable scale, checklist, and global rating. The results were analysed by the SPSS software.

Results: The following correlations were found: (1) there is a high correlation between checklist and global rating (r=0.711); (2) there is a high correlation between checklist and Entrustable scale (r=0.7); and (3) there is a moderate correlation between global rating and Entrustable scale (r=0.68). It indicated that the effect of the EPAs assessment is similar to the OSCE. The intra-rater reliability of on-site assessment and video assessment were highly correlated with the five stations, moderately correlated with the three stations by checklist, and moderately correlated with all stations by Entrustable scale. Kendall's W test was used to explore the consistency of the inter-rater reliability. The Kendall's coefficient of concordance was found: (1) with the OSCE (on-site assessment=0.71; video assessment=0.67); (2) with the EPAs (on-site assessment=0.47; video assessment=0.72)

Discussion: Overall, the EPAs assessment is applicable to almost the current OSCE. However, in the reliability analysis, the intra-rater reliability of the OSCE was higher than that of the EPAs assessment; the inter-rater reliability of the OSCE was more stable than that of the EPAs. It is speculated that the examiner may be familiar with the OSCE assessment, as the OSCE has long been used in national examinations, while the EPA assessment form has not yet been systematically evaluated and consensus.

Conclusion: In this study, it was found that the EPAs assessment can be smoothly integrated into the OSCE. If we can improve the EPAs assessment and plan systematic courses for teaching and promotion in the future, EPAs would be as stable as the OSCE, and it would be more comprehensive for the assessment of student's ability and trustworthiness.

P06

Evaluating the usability and acceptability of the discharge summary feedback (DSF) tool with junior doctors and final year medical students

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Background and purpose

Accurate and timely transfer of information about patient care and treatment across the healthcare interface is vital to ensure patient safety. In the UK, this information is frequently inadequate. Junior doctors produce the majority of discharge summaries but most receive no undergraduate training. Work based observation and feedback has shown to enhance learning. Our aim is to develop and evaluate a discharge summary feedback (DSF) tool that could be used to enhance the acquisition of this skill amongst senior medical students.

Methodology

- Development of the DSF tool

National recommendation of the core content of a discharge letter was reviewed. Utilising focused discussion the DSF tool prototype was created. Faculty members at Keele University (all practising clinicians) and a range of junior doctors were involved in this process. We used an iterative approach of review and refinement to develop the DSF tool until consensus was reached.

- Field testing of the DSF tool

The DSF tool was initially tested in 2 stages. In stage 1 the tool was field tested on junior doctors. In stage 2 the tool was tested on senior medical students. Once the feedback had been given utilising the DSF tool, participants will be invited to complete a questionnaire to evaluate the usability and acceptability of the feedback given.

Results

10 junior doctors and 21 medical students received feedback using DSF and then completed the questionnaire. All the junior doctors and 80% of the students had previously written discharge summaries. 90% of participants agreed the tool encouraged constructive feedback and would develop performance and confidence.

Conclusions

Writing hospital discharge summaries is vital for handover of information and co-ordinating patient care. Errors in communication are a frequent source of patient safety incidents. Work based observation and feedback using the DSF tool encourages development of this communication skill.

P07

"Live feedback" recursive methods of teaching evaluation

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Background
North East London Medical Education department has been running simulation training for trainee doctors for well over 10 years. Since 2014 simulation training has been expanded to other healthcare professionals, now amounting to 12 different simulation programmes.

We have been collecting online feedback for our work since 2014 which has been helpful in improving our programme. Sometimes there has been a delay between collecting data and processing - which meant data was not used as efficiently as it could be.

Method
This year we introduced a "Live Feedback" system that we developed using free, open source software tools allowing us to collate on-line feedback in seconds after the answers have been submitted. It also allows us to engage with audiences differently - we spend 10 minutes for feedback asking participants to fill a short form on their own mobile phones. We then display a graphical summary of their responses and suggestions and raise relevant points with the audience. It allows us to have 5 minutes of meta-feedback, summarising this back to the group and allowing for real time discussion and interactive reflection creating constant, updated improvements to our work.

We would like to summarise our work in a poster.

P08

Adopting a mastery approach to venepuncture training for undergraduate medical students

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Background
Competence in venepuncture and cannulation is essential to the provision of good clinical practice. Historically we have taught these skills via demonstration and practice on part task trainers in addition to the use of videos and checklist. This leaves a simulation – workplace gap.

Innovation
We have developed a mastery approach including peer practice of venepuncture to address this problem. This approach has included several stages. Firstly we designed pre-teaching material. This was followed by face to face teaching in simulation with the inclusion of written feedback. Then, with satisfactory achievement in simulation, students were offered the opportunity of peer practice supported by a tutor and with written feedback. Following this teaching within the clinical skills centre students are offered the opportunity for support in practicing venepuncture in clinical areas on a one-to-one basis. This approach focusses on both technical and non-technical elements essential to safe practice of venepuncture.

Results
A large number of the year group consented to participate in the full mastery approach, including practice of venepuncture on peers, with very positive feedback. Further, in depth, feedback is currently being sought via questionnaires and will be provided in the final poster.

This poster presents both the development of this innovative approach and formal evaluation.

References
Billing, D., 2007. Teaching for transfer of core/key skills in higher education: Cognitive skills. Higher education, 53(4), pp.483-516
Dehmer, J.J. et al., 2013. Competence and confidence with basic procedural skills: the experience and opinions of fourth-year medical students at a single institution. Academic Medicine, 88(5), pp.682-687.

P09

Virtual Reality within medical education: a review of the pedagogies underpinning Virtual Reality Learning Environment design, what can we learn?

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Introduction
Virtual reality enables the creation of unique three-dimensional learning environments. With recent technological advancements and the improved affordability of virtual reality devices, it is rapidly becoming a more widely accessible educational tool. However, consideration of how learners learn within virtual environments and clear guidance for medical educators on how to maximise virtual learning opportunities remains limited. This literature-based research project explores the role of virtual reality within medical education through systematic review of the current literature and consideration of the pedagogies underpinning virtual reality learning environment design.

Methods
Data was systematically reviewed for pedagogical themes to provide insight into how virtual reality mediates learning, the pedagogical models underpinning virtual reality learning environment design and how virtual reality teaching practices in other professional fields inform medical educational practice.

Results
Virtual reality learning environment design is complex, involving multiple processes. However, there is evidence supporting its positive impact on medical education, particularly in regard to spatial learning processes, if a holistic design approach is used. Medical educational practices may be further strengthened if virtual learning environment design is informed by other professional fields. However, medical educators should not lose sight of their teaching needs and the suitability of virtual reality materials for their requirements.

Conclusion
Virtual reality technologies are rapidly developing and becoming more accessible to medical educators. They have the potential to provide unique learning opportunities, however, limited guidance is available to assist informed decision making about using virtual reality within medical educational practices or how to maximise effective virtual learning. Whilst this project provides insight into the use of virtual reality within medical education, literature remains limited. With the predicted growth of virtual reality technology, this highlights the benefit of ongoing research into this rich subject area, to ultimately inform its long-term efficacy and impact on patient outcomes.

P10

Critical comparison of face-to-face and e-learning pedagogies in acquisition and application of theoretical knowledge for clinical skills at undergraduate level

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Background
Clinical skills are essential to practice effectively as healthcare professionals and new graduates identify procedural deficiencies as a major cause of concern. Proficiency relies on undergraduates acquiring background knowledge on methodology to complete tasks. This can be achieved by employing teacher-centred activities (face-to-face lectures), or self-regulated, independent activities supported through digital resources (e-learning). However, despite equivocal educational performance between face-to-face and e-learning methodologies, concerns have been raised multimedia is driven more by novelty than pedagogical evidence. After literature review, a relatively absent area was the theory informing e-learning in clinical skills teaching. This project aims to explore why and how contrasting pedagogies remain beneficial for clinical skills acquisition and identify components that support blended learning strategies.

Methods
This is a literature-based investigation with an inductive approach to research. A systematic review strategy was adopted with PubMed and Web of Science interrogated for relevant references. Data was coded, observing for trends in pedagogical concepts.

Results
71 studies included. A predominance exists in use of digital video training and interactive e-modules/programs for multimedia teaching. Face-to-face pedagogical concepts isolated in the data illustrate merging of didactic and constructivist learning theories with group discussions and open feedback complementing lectures. Pedagogical differences were noted for learners and teachers. E-learning improves completed pre-work rates, whereas difficulties with scheduling conflicts act as barriers to successful face-to-face teaching. Direct tutor responses to student problems, allowing for real-time feedback were highly valued. A blended curriculum appears to inspire undergraduates to champion autonomous learning and engage with different e-learning mediums supported by tutor involvement.

Conclusions
Instructional design of teaching programs can be augmented by learning theory, and research advocates a constructivist approach to integrating e-learning into clinical skills curricula. E-learning and face-to-face pedagogies appear to demonstrate educational benefit as separate teaching entities and combined in a blended learning environment.

P11

Communication Skills, Sexuality & Gender Diversity, and Perception in medical education

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Communication skills are now regarded as integral to medical education for training future doctors. Effective communication between clinicians and patients, including understanding patient perspectives so that shared decision-making can happen, is seen as important in empowering patients, as well as improving health outcomes (Evans et. al., 1991).

Communication skills are often taught as relating to process issues: about the way questions are asked, to listening skills, professional behaviour, and the use of para-verbal or non-verbal cues. At the same time, it is recognised that some content issues need to be more readily utelised, for example, by asking patients about their ideas, concerns and expectations. A third aspect to communication skills is that of perception skills. How other people are perceived can significantly influence how information from or about those other people is perceived, interpreted and understood (Silverman et. al., 2013).

This research seeks to align diversity awareness training with communication skills in medical education and integrate this teaching into broader medical education curricula, with particular focus on sexuality and gender diverse communities (LGBTQI+). By integrating broader diversity awareness with communication skills teaching, perception or attitude towards others can be developed in medical students to facilitate a more effective approach to all patients in general.

Evans, B. J., Stanley, R. O., Mestrovic, R., & Rose, L. (n.d.). Effects of communication skills training on students' diagnostic efficiency. Medical Education, 25(6), 517–526.

Silverman, J., Dr., Kurtz, S. M., & Draper, J. (2013). Skills for communicating with patients. London ; New York: Radcliffe Publishing, c2013

P12

Determining Efficacy of the Surgical Exploration And Discovery (SEAD) Program in Reducing Anxiety and Increasing Confidence in Performing Procedural Skills

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Background & Objectives

Clerkship students feel increased anxiety and lack of confidence when it comes to surgery, possibly due to a lack of exposure during pre-clerkship. This study assessed whether participation in Surgical Exploration and Discovery (SEAD), a two-week intensive surgical program that includes career information, simulation workshops and operating room observerships, would help decrease anxiety, increase confidence, and foster interest in a surgical career.

Methods

In all, 30 first year medical students were randomly selected for the SEAD program and 32 were only given the program's instruction manual during the duration of the program serving as the control. At baseline and after the completion of SEAD, both groups were given a survey containing the State Trait Anxiety Inventory that measures self-reported anxiety levels with an adjunct that gauges confidence and interest in a surgical career.

Results

Students who participated in the program showed significant improvements in self-perceived knowledge and confidence for each surgical skill: scrubbing (p-value<0.001, p-value<0.001), maintaining sterility (p-value<0.001, p-value<0.001), and surgical assisting (p-value<0.001, p-value<0.001). However, there was no difference in the average state anxiety with procedural skills (p-value$=0.190$) between students who participated in SEAD and those who did not. Students who completed SEAD had a notable increase in their interest in pursuing a career in surgery compared to their pre-test (p-value$=0.020$) and compared to the control group (p-value$=0.600$).

Conclusions

The SEAD program may increase medical students' confidence and interest in pursuing a surgical career. These results encourage offering medical students with similar opportunities that provide exposure to surgery in pre-clerkship.

P13

A Novel Method for improving Procedural Skills among Medical students and improving procedural skill teaching capability of JMOs – RISSK

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Introduction

Formal teaching opportunities delivered by Junior Medical officers (JMOs) are becoming an increasingly important but rare resource necessary for career progression. Opportunities for formal teaching opportunities which can be verified are often difficult to obtain.

The near peer teaching by JMO to senior medical students is important as it has been demonstrated to be highly effective in the teaching of procedural skills. Experienced JMOs have developed clinical perspective and are aware of their own level of work readiness when they started as interns.

Objectives

Improve and consolidate surgical competencies among medical students and junior doctors.

Provide JMOS with educational experience in curriculum design, practical workshop teaching, assessment, feedback and audit of teaching efficacy.

Method

A series of 8 workshops were developed and delivered as part of the RISSK Program.

Essential clinical skills were taught to medical students by JMOs. The topics covered included basic plastering, suturing, knot tying, basic laparoscopic skills, urinary catheterisation, NG tube insertion and wound management.

Each tutorial was delivered by a JMO team, comprising an intern/resident with a senior surgical SRMO. The initial component was a theoretical session covering the basic principles of the skill using resources which were developed by JMOs and reviewed by senior clinicians. The second component was a practical session with JMOs as facilitators, allowing them to consolidate their skills. Students were then assessed on their competency.

A pre-workshop survey was completed by the students assessing their confidence with the clinical procedural skills. The students' competency was assessed at the end of each session. Feedback forms following each tutorial were collected from both the students and the facilitators. Following the completion of the program a final survey was conducted to determine the efficacy of this program in meeting its objectives by both the students and facilitators.

P14

Effectiveness of Trauma First Aid Training Program for Police Officers to Provide Initial Post-Crash Care in Urban Tanzania

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Background

Road traffic injuries (RTI) is a major public health concern worldwide, estimated to cause 1.2 million deaths and about 50 million injuries each year. Tanzania, a low income country has experienced an increase in RTI in the past decade whereby trauma resulting from RTI is a major cause of hospitalization in the country. The capacity of prehospital care responding to the growing burden of road RTI in the country is low due to a number of factors including lack or inadequate trained workforce on initial post-crash care.

Aim

The overall aim of this research is to evaluate the effectiveness and challenges of an intervention; trauma first aid training program for police officers in order to improve their knowledge, attitude and practice on provision of initial post-crash care. This will allow for identification of major challenges regarding further implementation and viability of the program.

Methods

The overall project isconducted in Dar es Salaam, Tanzania which is a leading region in injuries and deaths due to road crashes. Study I involved a survey of 340 police officers with the aim of assessing their current knowledge, attitude and practice regarding trauma first aid. An intervention program on trauma first aid education has been conducted, where 135 police officers in Dar es Salaam have been trained in June 2018 with a 2days course on trauma first aid education. Short term outcome of the program have been investigated through self-administered pre and post-test questionnaire on knowledge and skills before and after the trauma first aid course. Preliminary analyses has started and will be presented at the conference in May. Further studies will be performed throughout the project with exploring perceived post training effects and challenges by interviewing both police officers and different kinds of stakeholders.

P15

Does personality, learning styles or attitudes towards interprofessional learning affect medical students' professional development during clinical courses

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Student activating methods in clinical teaching is known to support professional development but less well known if personality, learnings style and attitudes towards interprofessional learning have any impact on the development of professional roles. The aim of this study was to investigate how personality traits, learning styles and attitudes towards interprofessional learning (IPL) are related to the progress of professional development as defined by CanMEDS roles.

We included 79 students on their 6th term (63.3% females, mean 28.8 years) of whom 77.2 % had some previous IPE experience. We followed them up at their 9th term when they had passed courses in internal medicine, scientific project work, surgery (incl. 2 weeks IPL), neurology, psychiatry and ENT. We asked them to rate their professional development (CanMEDS roles) at 6th (retrospectively) and at the 9th term. They were also asked to rate their attitudes about IPL (IEPS questionnaire), and to fill in Kolb´s learning style and Big Five Inventory questionnaires. Personality dimensions, learnings styles and attitudes to IPL in relation to progress of professional competences according to CanMEDs will be reported. We conclude that these factors might be of interest in better understanding of professional role development during clinical medical education.

P16

Peer Assessment and Feedback of Written Reflections in Physiotherapy Education

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Context
Structured reflection writing is used in health professional education to facilitate the development of clinical reasoning skills. Learners commonly under-appreciate the value of reflection writing in the development of core clinical and professional skill acquisition. Published work demonstrates that "peer review" can improve learners' written and critical thinking skills.

What We Did
A peer review process was developed to facilitate engagement in written reflections: learners were taught the key elements of reflection writing, completed a reflection on their clinical practice experience, reviewed a peer's reflection, provided constructive feedback to their peer, and received feedback (on their own reflection) from a peer. This process was followed across six clinical placement experiences over the length of the program (two-years). Focus group feedback, pre / post comparisons and comparisons with a control group were conducted to evaluate the impact on the quality of, and appreciation for, reflection writing.

What We Found
Qualitative data from focus groups indicate that the peer review process increased engagement in reflection writing and enhanced appreciation for the role of reflection in clinical practice. A blinded pre / post comparison and comparison with a control student cohort demonstrated improvements in the quality of the reflections in learners who participated in the peer review process. Learners were more aware of the elements of quality reflection writing and the repetition of the process over six clinical placements refined the learners' skills in reflection writing.

Conclusion
The peer review process of clinical placement reflections increased learners' appreciation for the value of reflection writing in clinical decision making, and its role in clinical skill development.

P17

Challenging the hierarchy: using interprofessional simulation as a means of improving communication and promoting teamwork

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Background
The traditional uni-professional approach to medical and nursing education does not replicate the inter-professional workplace. Perhaps as a result, the majority of serious clinical incidents arise from mis-communication within the inter-professional team and a lack of understanding of roles.

Methods
We have designed a simulation course focusing on the importance of non-technical skills in the clinical inter-professional environment. To emphasise realism, participants enter the scenario in sequential order – nurse, FY2, core medical trainee then consultant. Included in the scenarios are challenges of hierarchical gradient and potential effects on patient safety.

All participants have completed questionnaires as a method of evaluation.

Results
The majority of participants stated inter-professional learning was extremely beneficial in highlighting areas of good practice and challenging areas in all aspects of non-technical skills. All participants documented the utility of nurse involvement and their issues when communicating with members of the multidisciplinary team. Awareness of authority gradients and learning techniques to break these barriers have proven essential in improving communication within the team.

Conclusion
This focus on inter-professional learning has been highly successful. It is crucial to developing and improving collaborative practice which in turn makes everyone more likely to work effectively as a team.

P18

Physician Associates: The future of mental healthcare? Evaluation of a novel clinical placement in a new profession

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Background
Physician Associates (PAs) are a new health professional in Europe who assist doctors in the diagnosis and management of patients. There are currently 350 PAs estimated working in the UK. Our healthcare trust developed a 5 week clinical placement for 24 PA students in psychiatry, following from a pilot in 2017. Our objectives were; high quality training experience, evaluating feedback from students and supervisors, and to use feedback to improve future placements.

Methods
The students began the placement with a week of classroom teaching, including lectures covering psychiatric subspecialties; then 1 day of OSCE Simulation training with reflection and feedback. After, they were attached to a clinical team and allocated a supervisor. Placement activities included, taking histories, performing mental state examinations and observing ward rounds. Feedback was collected from students and supervisors. This feedback was analysed to highlight areas for improvement for future placements.

Results
The students gave positive feedback on simulation based training compared to lectures. They wanted more, shorter lectures and increased use of simulated patients. 100% said they found Simulation training ‘very or extremely useful’.

Conclusions
Feedback from students has guided future improvements for placements, including increased use of simulation training and more focussed lecture delivery.

P19

Using a Tag Team Simulation Approach to Improve Communication in Healthcare, the Business World, and Ethics Education

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Misunderstandings, miscommunication and culturally unsafe care by healthcare professionals are frequently reported. To assist emerging professionals with crucial conversations one methodology employed was that of Tag Team Patient Safety Simulation (TTPSS). The concept of Tag Team Simulation, first developed in 2014 by an Australian team is a very versatile framework that allows for reaching of large numbers. We will share our experiences and results from a pilot study conducted at a large public university in western Pennsylvania that assessed the effect of this cultural sensitive conversation, which employed a simulation-based pedagogical strategy on student learning in a classroom setting. This quasi-experimental approach, using a pre-test post-test design with a non-equivalent simulation (n=43) and non-simulation (n=73) group was a replication of a study, which originated in Australia, and mimicked the Tag Team Patient Safety Simulation (TTPSS). Challenging conversations were navigated not only by the participants, but with help from observers through the engagement of antagonist and cue cards. Results revealed the simulation-based strategy improved student understanding of working with culturally sensitive populations, however, this improvement had no greater learning effect than with the traditional based pedagogical strategy. The implications of our findings, limitations and future directions will be shared.

P20

3D technology a new pedagogical approach in midwifery education

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Background
Difficulties are often experienced by students to achieve a conceptual understanding of 3D anatomy, and misconceptions about physiological phenomena are often hard to understand from reading a textbook alone. Key skills such as physiological involution of the uterus are impossible to recreate. The needs of students in the 21st century are changing, this has resulted in university departments developing innovative blended learning strategies to address their needs and deliver education that is pedagogically relevant. The evolution of technology with 3D applications have the potential to change how education is delivered (Frost et al., 2017).

Research
A 3D artefact was developed by the Visualisation Development Team at the University of the Sunshine Coast under the guidance of midwifery experts. This artefact introduces midwifery students to birth of a placenta and the physiological processes that simultaneously occur. An additional element was included by the introduction of a manikin which further enhanced their learning and skills in midwifery practice.

Evaluation
The artefact was piloted by students enrolled in the Bachelor of Midwifery program/course. Students responses and attitudes towards the use of this new technology were evaluated using an evaluation questionnaire, to establish their initial perspectives on the use of 3D within teaching. The evaluation asked open and closed questions and the responses were collated.

Results
Were overwhelmingly positive with 100% of students requesting more education using 3D technology as a pedagogy for teaching and learning in midwifery education.

Conclusion
This presentation will share the results of listening to the student's voice and observed outcomes, when introducing new 3D technology into midwifery programs and provide academics with valuable insights about student learning needs when new technology is used.

References
Frost, J, Delaney, L & Fitzgerald, R. (2017). University of Canberra Implementing Augmented Reality into Nursing Education. Australian Nursing and Midwifery Journal. 25(5), 30.

P21

Using collage to understand "what it means to be a doctor": insights for professional training

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Introduction
Understanding individuals' motivations to practice medicine has the potential to inform a diverse range of issues including medical recruitment and professionalism training. We used an innovative collage method to explore "what it means to be a doctor" from the perspectives of clinicians at different career stages.

Methods
Small groups of newly appointed consultants, foundation doctors, medical students and school pupils were invited to create collages using supplied general newspapers and magazines. They were created during events hosted by medical educators, concerning pre-medical training (school pupils); preparing for professional practice (medical students); career planning (foundation trainees); organisational induction (newly appointed consultants). Participants were asked to use approximately 50% text and 50% images in creating their collage. Discourse analysis techniques were used to interpret the data.

Results / Discussion
All groups engaged with the activity, and 63 collages were produced over 9 sessions. Analysis demonstrated the evolution of emotions and thought processes across the medical career pathway. School pupils and new consultants demonstrated optimistic, strategic views about 'practising as a doctor'; with the more idealistic school pupil approach maturing by the time of consultant appointment. Medical students and junior doctors took more operational views of 'working as a doctor' and their outlook was significantly more pessimistic.

Conclusions

The data suggests that perspectives on clinical practice develop and mature throughout training. School pupils are attracted by positive, aspirational elements of becoming a doctor; this morphs into darker and more functional aspects of the workplace among senior students and junior doctors, while newly appointed consultants have better awareness of "bigger picture" issues, perhaps reflecting their broader experience.

Collage is a brilliantly simple and effective technique, with clear potential to assist in exploration of difficult problems in healthcare. Further work should delineate the full potential of collage, and design motivating interventions for doctors-in-training.

P22

Prescribing Skills Assessment – A diagnostic and therapeutic tool to build skills in medication safety in an Australian medical school

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Context
Medication safety is a national and international priority. Worldwide, new medical graduates feel under-prepared to prescribe safely and make medication errors, some of which lead to patient harm. With a trend towards shorter, more integrated medical courses and large cohorts, medical programs face challenges when delivering and assessing the effectiveness of teaching in clinical pharmacology, in addition to the level of student -competence prior to graduation.

Intervention
The Prescribing Skills Assessment (PSA) is an international, online teaching and assessment tool in clinical pharmacology (1). In 2016, the inaugural Australian pilot was conducted at Monash University (2) Students were invited to prepare for and participate in the PSA. Feedback indicated that it was an acceptable and relevant intervention (2). Its use has been extended to 2017-2018 and now includes multiple Australian medical schools (3). .

Results
Student participation has been enthusiastic with increasing numbers year-on-year. Deficits in cohort performance have been identified. These have been fed back to help the students to improve their skill-set and to inform the development of additional educational interventions in the teaching program. They have been fed forward to inform the provision of support and ongoing education of the candidates, upon entry into the workplace as junior doctors.

Conclusion
The PSA is an invaluable tool to diagnose the effectiveness of teaching and preparedness in clinical pharmacology at the point of graduation. Deficits identified can therapeutically improve the teaching program both at under- and postgraduate level. Objective measurements of impact on performance are under analysis, through review of the PSA results across the three years and feedback from the postgraduate workplace.

References
Upon request

P23

Medical students perspective on the flipped classroom for teaching A to E assessment

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Medical school curriculums can be difficult to condense to an appropriate timetable for students. Flipping the classroom by getting students to complete pre-reading prior to attending a practical session can ease congestion in timetables. At the University of Exeter Medical School, we incorporated a flipped classroom to teach A to E assessment to 30 third year medical students.

Originally the A to E assessment of an unwell patient was delivered over two sessions. The first was a seminar based discussion from a senior doctor going through the steps of an A to E assessment. The second was a practical session where the students practised the assessment on a manikin supervised by the senior doctor. We decided to change the first session to an online blended learning tool combining a brief instructive video, relevant reading, external links and an interactive quiz. We surveyed the students after their practical session to gain feedback on their perspective of the flipped classroom.

The students agreed or strongly agreed that the flipped classroom was easy to access (28 out of 30), they understood the objectives (25 out of 30) and felt prepared for the practical session (28 out of 30). 15 of our students said they would prefer to see more sessions flipped, with 5 disagreeing and 10 being neutral on the question.

Flipping the classroom offers engagement of different learning styles and allows students to pre-load learning to reduce the cognitive working load during a practical clinical skills session. It also helps to make better use of limited face-to-face teaching time. Our results suggest that students feel well prepared to engage in a practical clinical session after engaging in an online inverted classroom. Generally students would like to see more sessions flipped although had not experienced the original traditional classroom format for comparison.

P24

Pretty Fly For A Low-Fi: Effective Low-Fidelity Simulation In An Age Of High Expectations

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Introduction
High-fidelity simulation is a powerful and popular paradigm, but technology alone does not equate to effective learning(1). We developed and assessed the suitability of low-fidelity simulation to enhance an undergraduate cardiology placement curriculum.

Methods
We applied Kolb's experiential learning model(2) to improve an existing cardiac emergency simulation session using low-fidelity resources. Students enhanced their knowledge of A to E assessment in an instructor led interactive primer before embarking on paired cardiac emergency scenarios, whilst observing students provided feedback on pre-selected components, complementing an instructor led tutorial and debrief.

Results
Feedback was drawn from 32 students. Despite low fidelity equipment, most found the facilities appropriate (84%) and realistic (72%). Students unanimously stated content was appropriately matched to their level of training and allowed application of their clinical knowledge. 91% felt more confident managing cardiac emergencies. Praise reflected interactivity, experiential learning, discussion & feedback. Criticism referenced outdated equipment, absent video recording, and large student numbers.

Conclusion
Basic education theory provided a structure for designing an effective experiential learning session. Higher fidelity equipment, although demonstrably desirable, shouldn't distract from the need for well designed, theory informed, teaching sessions. Curriculum-linked, effective, and enjoyable simulation can be delivered with low fidelity equipment.

References
1. Beaubien, J., & Baker, D. (2004). The use of simulation for training teamwork skills in health care: how low can you go? Quality and Safety in Health Care, 13(Suppl 1):i51-i6. http://doi.org/10.1136/qshc.2004.009845

2. Kolb, D.A (1984). Experiential Learning: Experience As The Source Of Learning And Development. Englewood Cliffs, NJ: Prentice Hall.

P25

To ensure future doctors can advise patients on physical activity for the prevention and treatment of chronic disease

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Physical inactivity has been called' the greatest public threat of the 21st century'.

The health costs of inactivity are massive. The United Kingdom is three times as inactive as Holland and twice as inactive as France. Exercise can be used to both prevent and treat chronic disease as well as improving surgical outcomes. Relatively small amounts of exercise have been shown to have dramatic affects [150 minutes of moderate exercise weekly] so if we could get more people to reach the minimum requirements we could save the NHS an estimated £18 billion a year. The knowledge of the physical activity guidelines recommended by the chief medical officer in most medical schools is poor.

Since 2012 fourth year medical students have attended a two hour lecture/workshop as part of the musculoskeletal module where they look at statistics relating to inactivity and the physiology of how exercise both prevents and treats chronic disease as well as improving surgical outcomes. Working in small groups using real clinical case scenarios they learn how to write a structured prescription with brief interventions tailored to the individual using behaviour change counselling and motivational interviewing which they can use in their consultations. Later simulated patients with chronic disease are used to practice consultation skills under the supervision of general practice tutors.

The following week they are attached to general practice where they can utilise their knowledge and skills in the primary care setting.

Evaluation is performed using online feedback at the end of the musculoskeletal module. A final year medical student also evaluated the teaching as part of a SSC using a pre and post teaching questionnaire. Physical activity prescribing is also part of the 4th year end of year OSCE assessment.

P26

Online conversations: e_Professionalism in the medical curriculum

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One identified issue in health professionalism is the ubiquitousness of social media and other online interactions, and the lack of dynamic teaching resources on how to navigate virtual spaces as a health professional (Barlow et al. 2015). This deficit was noted repeatedly in the 2018 Deakin Medicine Curriculum Conference, indicating a need to address this both from a learning and teaching perspective. In response, staff across various health disciplines at Deakin are collaboratively developing a suite of targeted online modules that introduce students to the principles of e-Professionalism, integrating AHPRA's Social Media Policy and other relevant guidance documents. The effectiveness of this intervention will be evaluated through a before and after quiz looking at how well students achieved the core learning objectives, including:

- Identifying what is appropriate online behaviour for a professional
- Demonstrating awareness of the demands of privacy when engaging in social media as a health professional
- Describing the impact of personal branding on career advancement, including online history

Results for this evaluation will be available in March 2019 and written up for the conference poster.

Reference: Christopher J. Barlow, et al. "Unprofessional behaviour on social media by medical students," MJA 203, no. 11 (2015): e1.

P27

Clinical reasoning of speech-language pathology students reflected in problem-based learning and clinical skills performance

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It is generally believed that the Problem-based learning (PBL) approach can bridge theory to practice and enhance clinical reasoning (McAllister & Rose, 2004). Although PBL was found to be correlated to clinical reasoning and general clinical skills in students from healthcare professions (Brady, 2009; Ho, Whitehill & Ciocca, 2014), and that speech-language pathology students displayed similar clinical reasoning as students in other clinical domain (Hoben, Varley & Cox, 2007), little is known on how exactly clinical reasoning is defined, measured, reflected, and taught in the clinical curriculum of speech-language pathology.

The present study investigates the clinical reasoning of final-year speech-language pathology students reflected in (1) a stringent PBL curriculum (which stresses on the critical thinking process, an important component in clinical reasoning) and (2) clinical skills classified according to the type and degree of clinical reasoning involved. It is predicted that all components of PBL will be correlated to clinical skills with varying degrees and types of reasoning. Students' profiles in terms of knowledge and competencies in different types of clinical reasoning skills will help clinical educators identify different learning styles and specific learning needs in at-risk students. Ways to teach clinical reasoning in the curriculum and implication on the application of clinical reasoning models in speech-language pathology will be discussed.

References

Brady, K. L. (2009). "Problem-Based Learning and Clinical Reasoning: An Action Research Study with Occupational Therapy Students," Adult Education Research Conference. http://newprairiepress.org/aerc/2009/papers/9

Hoben, K., Varley, R. & Cox, R. (2007). Clinical Reasoning skills of speech and language therapy students, International Journal If Language & Communication Disorders, 42, S1, 123-135.

Ho, D. W. L., Whitehill, T. L. & Ciocca, V. (2014). Performance of speech-language pathology students in problem-based learning tutorials and in clinical practice, Clinical Linguistics & Phonetics, 28:1-2, 102-116.

McAllister, L. & Rose, M. (2008). Speech-language pathology students: learning clinical reasoning. In J. Higgs, M. Jones, S. Loftus & N. Christensen (Eds.), Clinical Reasoning in the Health Professions (3rd ed., pp.397-404). Oxford: Butterworth-Heinemann.

P28

Ambulatory medicine performance as a part of predictive tools for successful board examination among Thai internal medicine residents

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Context: In-training evaluation is worthy tool to predict the final outcome of internal medicine residency training. Various types of written and clinical examinations were previously used and positive correlation with Thai Board of Internal Medicine Certifying Examination (TBIM-CE) are evidenced. Correlation between ambulatory medicine performance, one of the competency required to pass the degree, and successful internal medicine training is still uncertain.

Summary of Work: We retrospectively assessed the correlation between ambulatory medicine performance, other in-training evaluation and TBIM-CE among residents at Siriraj Hospital, Mahidol University. Workplace-based assessment at continuity of care clinic (CCC); which knowledge, skills, and professionalism were evaluated, and also open book assignment scores in common out-patient topics were evaluated as ambulatory medicine performance.

Summary of Results: A total of 224 internal medicine residents during 2010-2015. Significant positive correlation was found between CCC performance towards both written and clinical part of TBIM-CE ($r = 0.23$, $p = 0.01$ and $r = 0.2$, p 0.002). Significant positive correlation was found between assignment scores and clinical part of TBIM-CE ($r = 0.2$, $p = 0.02$). CCC performance scores positively correlated with other in-training assessments as in-patient chart audit and modified essay question test ($r = 0.96$ and $r = 0.35$, $p < 0.001$). The strongest correlation was found between written and final clinical part of TBIM-CE ($r = 0.39$, $p < 0.001$).

Discussion and Conclusion: Ambulatory medicine performance correlated well with successful TBIMCE.

While CCC performance correlated with both written and clinical parts of examinations, assignment scores limited correlated with the clinical part. Some essential aspects excluded from paper work such as professionalism and skills may be required. Assessment of multiple clinical aspects throughout training were needed to predict successful training including workplace-based assessment of ambulatory medicine performance, one of the essential competency required for internal medicine practices.

P29

Health industries: An applied health workforce, research and education partnership

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Context
In 2016, a unique partnership was established between a prominent Australian private health care organisation and a large vocational and higher education provider offering nursing and allied health programs. Our vision was to be a leading edge education and health precinct fostering opportunities for collaboration and innovation. Our goals centred on promoting and raising the profile of both organisations; improving education, organisation and patient-centred outcomes; and building current and future workforce capability.

What did we do?
To achieve our goals, we established an education agreement and a joint governance structure. An Australian first Clinical Chair role was established to drive applied research and innovation across both organisations and a new 150 bed private hospital was built on site within the education providers health precinct. The new 150-bed hospital opened in January 2017 with nursing students of the education provider taking up clinical placements mid-2017.

What have we achieved?
A number of state and national education and research grants have been awarded including a National Health & Medical Research Council Partnership Grant on falls prevention. Our research projects to date have focused on challenging conversations in health care and a collaborative project on intra-professional learning. A partnership program commenced in 2018 with selected students undertaking their placement experiences for the majority of their course at the hospital with a view of these students becoming future employees. Publication of research outputs have been presented in academic journals and at national and international conferences. In 2018, we were the recipient of the Victorian Government's Industry Collaboration Award.

Conclusion
This partnership is showing promising signs of fulfilling its vision in providing an innovative leading edge and truly collaborative health care precinct contributing to quality learning experiences for students and ensuring research is applied, shared and targeted at solving real world health care problems.

P30

Advanced-novice peer mentoring in community-based speech pathology placements: a trial of preschool sites

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Novice students report feeling anxious when starting placements. Supervisors and peers may lend guidance and emotional support in these early placements. The clinical program for novice speech pathology students at an urban university in Australia consists of two placements, one based in the on-campus speech pathology clinic (clinic) and the other in the community at a local preschool (community). Novice students attending the clinic placements receive mentoring from advanced (final year) student mentors, in addition to teaching and supervision from experienced speech pathology clinical educators. On the community placements, novice students are paired with peers from their cohort to conduct a language and literacy program with children at preschool. Both groups engage in peer learning which is a well-documented clinical education strategy. However, there are differences in the peer mentoring and supervision of the students between the two placements that may contribute to higher levels of anxiety for the community group.

It is not currently known whether the higher anxiety of students attending the community placement is due to the absence of an advanced mentor. The community student pairs are at the same level and are less able to be a knowledgeable guide for each other. To investigate the influence of an advanced speech pathology peer on the experience of novice students attending a community placement, we report on a current trial where six advanced students are providing mentoring for a subset of novice students on their community placements. The aims of this trial are to ascertain the benefits and disadvantages of including a mentor to the novice pair and its impact on student learning. Perspectives from the preschool staff and students will be gained via surveys prior to and after their placements. Conclusions about the impact and feasibility of advanced-novice peer mentoring in preschools will be considered.

P31

From conception to delivery: Evaluation of an undergraduate Obstetrics and Gynaecology teaching program

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Background
Clinical experience during Obstetrics and Gynaecology (O&G) undergraduate training is limited. Wide exposure to acute scenarios is often unachievable. Encountering O&G presentations is commonplace post-graduation.

Simulation is commonly used for post-graduate training, and is shown to improve both knowledge and team working[1]. Simulation used in undergraduate curriculum has been shown to better prepare students for foundation years[2].

We aimed to determine whether participation in this O&G program improved medical students' perceived confidence and competence in performing clinical skills, managing acute presentations and use of non-technical skills.

Methods
A one-day course incorporating simulation was developed for students. This ran eight times over an academic year, designed to develop clinical and non-technical skills and facilitate a safe approach to the unwell O&G patient.

Pre and post-course questionnaires were completed by students. Likert scales were used to rate confidence in clinical and non-technical skills. Data was analysed for comparison of means. Qualitative evaluation of the course was compiled via a free-text portion.

Results
Data was normally distributed using D'Agostino and Pearson omnibus normality test. ANOVA testing showed improvement in the mean Likert scores from pre to post-course confidence of 2.0 to 4.2 ($p=<0.0001$) across all domains. Comparisons were made of individual domains using Bonferronie Adjustment for multiple comparisons showing significance for all areas save communication, teamwork and coping with pressure. These areas were mentioned as key learning points in the free-text section.

Conclusions
Participation significantly improved medical students' perceived confidence and competence in clinical skills, managing O&G presentations and their non-technical skills. Simulation provides the students with an opportunity to manage O&G specific scenarios to which they were previously unexposed. Students felt better prepared to manage acute scenarios following graduation.

P32

Delivering 'Ready Meals' to the Emergency Department

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One of the challenges of undergraduate education is finding the time for bedside teaching, due to lack of time, departmental pressures and lack of resources to facilitate easy delivery of teaching. Final year University of Glasgow students who attended University Hospital Hairmyres, a busy district general hospital, for Emergency Medicine placements were asked to complete a questionnaire detailing their experiences of clinical skills teaching. This revealed that clinical skills teaching could be improved.

In order to address the problem, individual 'Ready Meal' skills boxes were designed and produced. The boxes comprise of visual aids and worksheets to support impromptu conversations and teaching on the 'shop floor'. Skills covered include recording and interpreting an electrocardiogram, performing an arterial blood gas and interpreting the results, and interpreting a chest x-ray.

This study wishes to evaluate the use of skills-based pre-made teaching boxes (Ready Meals) and whether their use facilitates teaching of medical students in a busy emergency department (ED). This will be done through a pre-questionnaire detailing previous teaching of the aforementioned skills and self-rating their ability. The ED clinicians will complete a pre-questionnaire detailing how frequently they provide unscheduled clinical skills teaching, how this skills teaching is delivered and how long this usually takes.

At the end of the placement, both groups will complete a post-questionnaire evaluating the uptake of Ready Meals during their block, how long sessions took to deliver & whether it was an effective teaching tool. The students will be asked to self-rate their ability once again.

This study anticipates that having pre-prepared materials readily available in time-pressured clinical areas will enhance the teaching of key clinical skills to medical students on their clinical placements and become a useful teaching tool available to educators.

P33

Creation of an emergency front of neck access (eFONA) education video: improving airway management and patient safety using clinical cadavers

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Oxygenation can be achieved by one of four ways: bag-mask ventilation, extraglottic device, endotracheal tube, or front of neck surgical airway. Reflecting on previous studies, the 4th National Audit Project confirmed that anesthesiologists are very poor at performing emergency front-of-neck access (eFONA), with a success rate of 30%. (1)

An open, eFONA technique is being recommended by major airway societies, however, most anesthesia providers will have never actually performed this life-saving skill. (2,3) Our group used best practice evidence and guidelines in our clinical cadaver lab to create teaching videos and capture photographs that outline in detail the necessary steps and procedures for performing this technique to educate airway providers.

In our current competency-based anesthesiology education, airway educators have the responsibility to ensure that this high-acuity, low opportunity procedure is performed well and safe. As access and cost may limit the use of cadavers for simulation, this innovative education program will allow participants to review the video before practicing this skill on a task-trainer model. (4) This allows for distributed learning of an essential competency. Psychomotor skill learning theory and participant adherence to a validated eFONA checklist will be incorporated in the education program.

Providing oxygenation through a front of neck surgical airway is a thankfully rare event, but one that holds significant patient morbidity and mortality if completed with the currently quoted 30% success rate. We feel that repetitive exposure in a simulated, but life-like model, will allow anesthesia and airway providers to improve confidence and eFONA success rates in this life-saving skill. The creation of an eFONA skill maintenance program at our institution could potentially be expanded to all Canadian anesthesia and airway providers.

1. Br J Anaesth. 2011;106(5):617-31.
2. Can J Anesth. 2017;64(10):1079–1081.
3. Br J Anaesth. 2015;115(6):827-48.
4. Can J Anaesth. 2013;60(11):1089-118.

P34

Learning to take a sexual history in the Pediatric and adult population: A Canadian medical school clinical skills curriculum

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Background/Purpose
Taking a sexual history during clinical interviewing is a challenging topic to teach in medical school and to assess in practice. There is a need for collaboration and sharing of innovative curriculum ideas across institutions.

Summary of the Innovation
We describe one Canadian medical school's curriculum for sexual history taking in the Pediatric and adult population, including the use of standardised patients. And a validated patient feedback tool. We also demonstrate the potential for continued use of this tool in postgraduate medical education and with practicing physicians.

The Structured Communication Adolescent Guide (SCAG) is a programmatic validated assessment tool developed for HEADSS interviewing skills. Assessment is provided by the patient, not faculty, and is given using a structured guide. It allows for multiple types of feedback (numeric and written) over multiple time points, evaluating for learning rather than of learning. Medical students, residents and faculty use this tool to assess and improve their performance Transgender content has also been added to the case based and SP curriculum framework.

Conclusion
We hope that this presentation will inform attendees of new medical education tools and ideas that can be implemented at their institutions for the teaching of sexual history taking in their patient population.

P35

Overcoming barriers to a national simulation-based mastery learning programme

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Simulation based teaching of practical procedures is recommended by several national organisations.1,2 This is because of reduced working hours, increased litigation costs, and recognition that there is a better way to teach than 'see one, do one, teach one' on patients – an approach that can perpetuate inaccurate or dangerous practice. The efficacy of Simulation Based Mastery Learning (SBML) has an excellent evidence base, with reduced complications, reduced cost and collateral benefits.3

A regional SBML programme has been created for skills including central venous catheter and lumbar puncture. Other similar regional programmes exist although they are not uniform or ubiquitous. We are now setting up a national programme. This makes sense because the procedures are the same, so the process and the teaching should be the same. Existing material can be used. A standardised approach and proliferation of best practice is potentially hugely beneficial. A 'passport' indicating completion of recognised structured teaching will aid trainees when moving around during training..

There have been 5 national conferences explaining rationale and methodology. A teaching structure has been agreed. Agreement on where to host the material online has been reached. Work is underway to develop national pre-course reading material and checklists for various skills.

P36

The impact of an intimate care e-simulation on nursing students' empathy levels

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Background

Empathy is fundamental to quality patient care. Attention must be given to the development of empathy skills for undergraduate nursing students. Preparation should begin in nursing curricula from a first year level when communication skills are introduced. Effective communication by the nurse is central to enable empathy to be portrayed. To establish effective communication nurses need to understand the patient life story so as to gain insights into the patient's feelings, perspectives and needs. For an older person who is dependent on a nurse to provide intimate personal care such as showering and toileting, the level of empathy displayed by the nurse may leave a lasting impact. Simulation can be an effective modality to introduce a patient story and ultimately give students an understanding of empathy.

Aim

The aim of this study was to evaluate the impact of an intimate care e-simulations on nursing students' empathy levels.

Research Design

The qualitative study involved beginning nursing students from two Australian universities. Participants viewed a 10 minute e-simulation followed by a 30 minute group debrief. The e-simulation involved the use of Mask-Ed simulation which portrayed a vulnerable patient in need of care for his incontinence. This modality was selected based on its previous success with intimate care scenarios for first year undergraduate nursing students. A pre-post design using the Comprehensive State Empathy Scale (CSES) was used to collect data and analysis was conducted using SPSS.

Results

Intimate care e-simulations can enhance empathy for beginning nursing students. E-simulations require realistic narratives that incorporate vulnerability where the student can feel a connection with the person portrayed.

Conclusion

E-simulations that enhance human connection in a classroom have potential value for nursing programs in preparing students for real world experiences where person- centred care and effective communication is central.

P37

Integration of structured patient handover as a clinical skill in undergraduate teaching

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Inadequate handover of patient care leads to adverse patient outcomes[1], and this is particularly important with the increasing complexity of medical trainee shift patterns in the United Kingdom[2]. The General Medical Council (GMC) have emphasised effective handover as a professional obligation[3].

The teaching of effective handover is well established in post-graduate training, however the explicit teaching of the skill in UK undergraduate curriculums appears variable[4]. The authors noted a concerning lack of awareness of the importance of a formal structured handover amongst newly qualified doctors. This manifested as attitudes which undermined a patient safety medical culture.

We aim to integrate structured handover into the University of Glasgow Year 3 curriculum in order to assimilate this skill early in the students' clinical development. This will be achieved by introducing a workshop in the students' teaching prior to clinical attachments. This will focus on the Situation-Background-Assessment-Recommendation tool1 and will include video demonstration of good practice, and an opportunity to engage in role play scenarios with critical peer review. The ability to perform the handover skill will be assessed in a non-intervention group of Year 4 medical students as well as the Year 3 students to assess the impact of this workshop.

1. Müller M, Jürgens J, Redaèlli M, Klingberg K, Hautz W, Stock S. Impact of the communication and patient hand-off tool SBAR on patient safety: a systematic review. BMJ Open. 2018;8(8):e022202.
2. The Lancet. Doctors' training and the European Working Time Directive. The Lancet. 2010;375(9732):2121.
3. [Internet]. Gmc-uk.org. 2018 [cited 14 September 2018]. Available from: https://www.gmc-uk.org/-/media/documents/Good_medical_practice___English_1215.pdf_51527435.pdf
4. Gordon M. Training on handover of patient care within UK medical schools. Medical Education Online. 2013;18(1):20169.

P38

Evaluation of vSim ® for Nursing from a nursing students perspective in Norway

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Background
Simulation-based education using virtual reality is an emerging technology that has been suggested as an effective pedagogical approach to teach various skills in the nursing education. However, few studies have described students' perceptions of using virtual reality tools. VSim® for Nursing, a virtual reality tool developed in the United States, was implemented in the nursing curriculum at the University of Stavanger in 2017. The purpose of this study was to explore Norwegian nursing students' perceptions with the virtual reality simulation tool vSim® for Nursing.

Methods
This study used a descriptive and a convergent mixed method design. The method included a seven items questionnaire and five open- ended questions. Sixty-five 2nd year Norwegian nursing students participated in the study.

Results
Most of the nursing students evaluated the virtual clinical scenario in surgical nursing from vSim ® for Nursing useful, realistic and educational in preparing for clinical placement in surgical care. However, a small portion of the nursing students had trouble understanding and navigating the vSim ® for Nursing program.

Conclusions
Introducing a virtual reality simulation tool made in the United States into a Norwegian nursing education encompasses faculty and student preparation. Moreover, guidance from faculty members during the simulation session is essential for students who are facing difficulties with the English language and the simulation program.

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At home training for laparoscopic skills: not as easy as it sounds

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Background
Gynaecology trainees are experiencing reduced access to live training opportunities. Laparoscopic simulation provides the opportunity for skill development outside of the operating room however access to simulation equipment is an identified barrier to training. A take home box trainer project was implemented at the Mater Mothers' Hospital in Brisbane, Australia, to improve trainee access to, and participation in, simulation training for laparoscopic skills.

Methods
Commencing in 2015, trainees were offered a portable laparoscopic box trainer with instruments and equipment for skills training (EoSim ProTrac) for use at home. A structured curriculum of laparoscopic training tasks including demonstration videos, stratified performance targets, a log book and asynchronous online feedback was provided. Over the 2015 and 2016 periods, improvements in trainees' laparoscopic skills were assessed by performance of a tubal ligation and bilateral oophorectomy on a virtual reality laparoscopic simulator. Qualitative assessments of barriers to and enablers of participation were assessed via surveys and interviews with participants.

Results
55 trainees have participated in the program over four years including 16 current trainees. Despite sub-optimal engagement with training, improvements in laparoscopic skills were seen in the laparoscopic tubal ligation task (2015: 124 s vs 91 s, $p = 0.041$, 2016: 251s vs 71s $p = 0.021$, pre and post training respectively). Several barriers to implementation of the project have been encountered, and trainees report using the box trainer much less than expected. The curriculum has evolved in response to trainee evaluation and strategies from implementation science have been introduced to improve engagement.

Conclusions
A take home box trainer project demonstrated improvements in laparoscopic skills, however trainee engagement was less than expected. Strategies to enhance engagement require further evaluation.

NOTE - outcomes from the 2015-2016 program have been published: https://obgyn.onlinelibrary.wiley.com/doi/pdf/10.1111/ajo.12802

RTD01

Clinical communication; does the patient have a right to know?

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In the UK, The Department of Health, the British Medical Association and many of the Royal Colleges provide guidance for clinicians on copying clinical correspondence to patients and the NHS Plan made a commitment that patients should be able to receive copies of clinicians' letters. This guidance, some of which has been available since the early millenium, is comprehensive, yet in todays modern clinical practice, where patient directed and patient centred care is paramount, implementation of the practice remains sporadic, at best. The topic has generated much debate in medical literature and social media and although there is consensus that there are situations when it is clearly inappropriate there is no agreement on when it should be implemented. It is apparent that there are differences in practice between specialties; paediatrics are more likely to adhere to the guidance than adult specialties, and again it is not evident the reasons for the discrepancy. We wish to reflect on and facilitate discussion around this controversial topic, using questions to challenge opinions on best practice and seek experiences from international practice whilst discussing the reasons why it is not common practice in the healthcare environment in the UK, despite the ever growing trend of patient directed and patient guided healthcare. We would also wish to explore any training implications and other associated barriers.

Facilitators
Lead facilitators are practising clinicians across multiple medical specialties and who vary in their opinions and experiences of sharing clinical information with patients. Lead facilitators are actively involved in medical education within their institution at senior level with multiple years experience of debriefing and facilitation skills. Prior experience, outwith their day to day roles include presentations at national and international conferences, including international workshops and oral presentations at ICSC7 and numerous regional, national and invited international workshops and presentations.

RTD02

Future Proofing Students

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"Half of what we are going to teach you is wrong, and half of it is right. Our problem is that we don't know which half is which." Charles Sydney Burwell, Dean of Harvard Medical School (1935-1949).

How do Schools of Healthcare help to "future-proof" students who may well practise clinically for 40 to 50 years, or perhaps even longer? Issues that we face are; rapidly developing technologies, an apparent acceleration of the pace of life, globalisation and climate change, changes in longevity, and the likelihood that we are all going to have to work longer.

This Round Table discussion will explore the concept, mechanisms and possible consequences of future-proofing the clinical skills of healthcare students for the uncertainties to come. We will consider what we can do as educators to help students in the pursuit of professional longevity.

RTD03

Is there a downside to using Simulated Patients to teach and assess Communication Skills?

Anna Hammond[1], *Janine Henderson[2]*

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Background

Simulated Patients (SPs) are widely used to facilitate the learning of communication skills enabling students to receive detailed feedback on experiential practice in a safe environment. They are also used in the assessment of students' communication skills in Objective Structured Clinical Examinations (OSCEs).

We have observed that our most experienced SPs are highly conversant with medical jargon and consultation skills and have almost become 'medical faculty'. Consultations can therefore lack the true patient perspective, with SPs focussing their feedback on process rather than giving a true patient perspective.

Roundtable objectives

To consider the challenges in ensuring that highly experienced SPs continue to respond from a true patient perspective

To critique whether the use of SPs in OSCE stations is a valid way to assess students' communication skills with real patients

To consider whether using consultations with Simulated Patients is useful for students in the later years of an Undergraduate medical course who are learning to integrate the different components of a consultation and reasoning clinically in a real-life clinical context

To share best practice with colleagues

Roundtable

A brief interactive presentation including the authors' experiences of working with experienced Simulated Patients which will draw on current literature regarding the evidence for using Simulated Patients in the teaching and assessing of communication skills

Delegates will have the opportunity to take part in three roundtable discussions –

- OSCE Stations using SPs assess how good students are at communicating with SPs but not with real patients
- Experienced SPs are in danger of responding with a faculty not a patient perspective
- By using SPs in teaching we over focus on process and forget the global picture.

The sessions will conclude with feedback to the wider group facilitated by the roundtable authors Questions/Answers and sharing best practice with other delegates.

RTD04

Conversations about attendance in the clinical environment

Mary Lawson[1], *Dominique Martin[1], Lara Fuller[1], Sharon Lee[1], Nur Faraheen Abdul Rahman[2]*

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Background

Attendance patterns in health professional education have been studied extensively. The research focus has been on attendance at formal teaching (e.g. lectures) rather than clinical activities[1]. Recently, there has been a shift in focus to examine the impact of providing online learning materials on attendance[2] with emerging evidence of differences between face-to-face, contemporaneous viewing and viewing later on student performance.

Such findings may have a direct impact on clinical learning in terms of students' reparedness for clinical placements. But patterns of attendance in the clinical context have broader implications including on professional socialisation and team function[3]. Poor attendance may be more evident in the clinical environment where group sizes are smaller but can be complex to understand and respond to effectively. Accreditation requirements for attendance may help to set the agenda for thresholds and monitoring of attendance but again, these only provide a partial picture and do little to provide guidance on supporting the student who is attending poorly and possibly struggling.

Focus

This roundtable discussion will focus on the contentious issue of attendance in the clinical environment. In particular, what happens when our personal experiences do not align with our own organisations approach? Participants will be encouraged to analyse key issues surrounding practices in relation to:

- attendance thresholds, accreditation and monitoring
- the relationship between attendance and performance
- initiating a conversation around poor attendance that considers both the teacher's personal values and their institutional requirements.

1. Mattick, K, Crocker, G & Bligh, J 2007, 'Medical student attendance at non-compulsory lectures', Advances in Health Sciences Education, 12, (2): 201-10.
2. Anmol Gupta & Norma Susswein Saks (2013) Exploring medical student decisions regarding attending live lectures and using recorded lectures, Medical Teacher, 35:9, 767-771
3. Smith, L. B. (2012), Medical school and on_line learning: Does optional attendance create absentee doctors? Medical Education, 46: 137-138.

RTD05

Understanding the cognitive journey to safe prescribing

Lucy Ambrose[1], *Simon Gay[1], Tom Gale[2]*

[1]University of Nottingham, Nottingham, United Kingdom [2]University of Plymouth Medical and Dental School, Plymouth, United Kingdom

This roundtable discussion will consider the different epistemological perspectives to prescribing and how they can influence prescribing practice. Researchers have looked at prescribing from many different angles; encompassing positivist approaches to quantifying errors alongside constructivist analyses of influences on prescribing practices. The picture that evolves is of a complex skill that incorporates a vast range of learning outcomes to achieve safe practice.

Analyses of curricula suggest that a developmental journey is followed in terms of progression in knowledge, then skills, alongside professional behaviours and attitudes. In addition prescribing skills have been explored with regards to the different components of safe prescribing expected after professional registration with the concomitant introduction of the role of human factors within the workplace.

Understanding the complexity of prescribing at different stages is an important step, but there is still a significant issue with prescribing errors across healthcare worldwide. With an increase in expectations for other health care professions to take on a role in prescribing, there is an even greater imperative to understand the phenomenon of prescribing and the cognitive journey associated with it.

Roundtable Discussion Group objectives

During this Roundtable discussion delegates will explore:

- The established literature about prescribing skills and strategies that have been developed to promote safe prescribing practice.
- The steps on the 'cognitive journey' to competent prescribing.
- The challenges posed to healthcare students and their educators in developing safe prescribing skills.

Intended audience (experience level and pre-requisites)

All levels of experience would be welcome but some experience of current healthcare student education and an interest in safe prescribing would be an advantage.

RTD06

Community clinical skills teaching: Great idea! How on earth do we find the placements? International and Inter-professional conversations and solutions

Anna Frain[1], *Magdy Abdalla[1, 2], John Frain[1]*

[1]University of Nottingham, Nottingham, United Kingdom [2]Keele University School of Medicine, Keele, United Kingdom

Objectives
At the end of the session the participants will have:

- An understanding of the value of teaching Clinical Skills in the Community
- An understanding of some current causes for the pressures on placements
- An appreciation of international and inter-professional perspectives.
- Had conversations and debate around abolishing community Clinical Skills teaching, teaching all Clinical Skills in the community, teaching one to one or in groups, increasing payments, decreasing payments, academic rigor
- Shared best practice
- Prepared a protocol for recruitment of placements following the conversation and shared experience outlining ideas to use and share with fellow professionals

Teaching clinical skills in a community setting is well established and evidence based. Students of all clinical disciplines give positive feedback about the quality of their experience. In the UK, medical school places are currently expanding, inevitably resulting a requirement for more placements in the future. Medical professionals have mixed attitudes to teaching (Sturman N, 2011).

There is a concern we could sideline academic standards and rigor in our desperation to obtain more placements, (Wass 2016). Are we listening sufficiently to feedback from students and allowing it inform our choice of placements? There are well-documented pressures on community placements (Pearce 2007). These will not simply vanish as expansion takes place and must be anticipated and addressed.

Previous roundtable discussions at Prato, have highlighted we all experience similar issues in our everyday work. One such discussion has resulted in an inter-professional and international publication (Cooper et al, 2018, Chapter 2), which brought together these reflections in a constructive way.

Through this discussion we hope to share common experiences, pressures and solutions to this very important area of clinical training. A summary of points raised during the roundtable conversation will be drawn into a summary sheet of advice for those trying to develop future placements.

RTD07

Lifting the lid on professional touch: incorporating insights from research into practice

Andy Wearn[1], *Hilary Neve[2]*

[1]Auckland University, Auckland, New Zealand [2]Plymouth University Peninsula Medical School, Plymouth, United Kingdom

Touching and being touched are integral to human life – and for most health care professionals, touch is an essential part of health care practice. It can be diagnostic, therapeutic and expressive. It is an important element of holistic care, yet its role is changing as our use of technology increases. Most health profession curricula teach manual touch, but many do not include or discuss the concept of professional touch. Although there is a significant literature discussing touch in health professional practice; 1) we lack a framework with which to consider the different elements and nuances of touch 2) we do not know how to best support students to understand and navigate the complexities of developing professional touch.

This roundtable discussion will be facilitated by clinical educators from New Zealand and UK, with particular experience of clinical skills and professionalism teaching and learning. As members of a wider team they have recently undertaken a qualitative research synthesis exploring touch within the health professions literature, using a Threshold Concept Framework. This interactive session aims to integrate the themes and framework emerging from this study with participants' own experiences and ideas and through discussion, to identify opportunities for promoting learning about touch within curricula. It will include a short plenary, small group, pairwork and individual reflection.

RTD08

Learning from feedback: Can reflection be built into clinical skills training or does the requirement to reflect kill its usefulness?

Janet Lefroy[1], *Sarah Smithson[1], Matt Webb[1]*

[1]Keele University School of Medicine, Keele, United Kingdom

According to Schon ([1]), the expert is a reflective practitioner who learns in two ways. Firstly, by thinking about what they have done, how it turned out and what they might have done (reflection-on-action). As they become more expert, they can use similar thought processes during an event and therefore adjust what they are doing so that it turns out better (this is reflection-in-action).

A feedback conversation about clinical skills should prompt a trainee to reflect on what they have done and make a plan for improvement. Some individuals are less reflective than others, and repeatedly make the same errors ([2]). Schon and others in his wake have encouraged such individuals that they can learn to be reflective practitioners and thus learn to improve themselves ([1,3]).

Training and appraisal systems now accordingly include an element of mandatory reflection for learning. One frustration for those running these systems is that reflective writing often seems to have been done to satisfy the requirement and although benefit to learning is claimed, the habit does not continue when it is not mandatory ([4]).

The scene for the round table will be set using the example of Keele's workplace feedback system which has an add-on designed to promote learning and ongoing feedback discussions. This feature has not been used by students as much as we expected. We would like to understand how to make it more useful. We think that a similar dilemma faces other training programmes where written reflection is built in.

Attendees will rotate among tables where questions are posed about the controversial area. Facilitators will help the discussion and debate each side of the argument. At the end of the session the facilitators will sum up the arguments and controversial points.

RTD09

To discuss the complexity of clinical reasoning (CR) and a paradigm shift in simulation based education

Debbie Thackray[1], *Jennie Brentnall[2], Belinda Judd[3]*

[1]School of Health Sciences, University Southampton, Southampton, United Kingdom [2]Faculty of Health Sciences, University Sydney, Sydney, Australia [3]Faculty of Helath Sciences, University Sydney, Sydney, Australia

Clinical reasoning is an intricate skill that health professionals agree is vital for autonomous practice in a dynamic and complex clinical environment. Educators appear to agree that CR development is multifactoral and experiential, yet we are all using slightly different terminology, and seem to have slightly different perspectives on whether this skill is predominantly affective, cognitive or behavioural and therefore it is challenging to know how best to educate our students and also how to assess it.

We would like to propose that simulation based education (SBE) can help prepare our students, not only with their technical and communication skills but also the development of their CR skills. SBE is an ideal medium for CR development as it enables the conversations to take place between the students and patient and other members of the health care team in a safe environment. We would like to suggest that through appropriate scaffolding of activities and by carefully designing the simulation, we can gradually extend the complexity of the situation, so as to expose the learner to new situations and differentials, whilst providing the social context of the learning and the relationships that inform the decision-making process.

Roundtable Discussion
Participants in the round table will learn and share perspectives on the known aspects of CR and debate the differences between CR, Critical thinking and Clinical judgement. We will discuss the educational methods currently employed to facilitate CR and discuss and debate the features of simulation based education that may facilitate students to develop clinical reasoning. We will share our own success stories and challenges from our program of practice and research.

Conclusion
Insights gained from conversations about the pedagogies underpinning the facilitation and assessment of students' clinical reasoning, will inform participants' development of best practice approaches in their own settings.

RTD10

Barriers to teaching an evidence-based history and physical examination at the bedside: Are they insurmountable?

John Frain[1]

[1]University of Nottingham, Nottingham, United Kingdom

Even in a technological age, the history and examination remain the mainstays of clinical method and are still responsible for 80-90% of patient's diagnoses. While interventions and treatments require an evidence-base prior to their introduction, less emphasis is placed on the evidence base for the history and examination. Traditionally taught at the bedside, competence in the history and examination is essential for developing cognitive function and reasoning skills as a clinician. Opportunities for, and the culture of, bedside teaching are in decline. Reasons include lack of time and resources as well as diminishing confidence among clinicians in their own abilities as bedside teachers. In addition, an over-emphasis on the progress as technology as well as competition from other priorities in the curriculum may 'edge out' the bedside tradition.

The literature of the history and examination has increased markedly in the last two decades. Yet its translation to the bedside has been at a slower pace. Without an evidence base, arbitrary variation in clinical method may increase the rate of diagnostic error and undermine patient safety. Variation in the teaching and demonstration of the history to trainees may undermine confidence in its efficacy as a diagnostic technology.

This roundtable will include consideration of:

- The strength of the evidence for the history and examination – is it sufficient?
- Facilitating acquisition of the skills of evidence-based medicine by students and teachers
- Promoting and protecting bedside teaching within the curriculum
- Can we actually apply evidence including statistics to the history and the examination at the bedside?
- Should the curriculum be centred on facilitating an evidence-based history and examination?
- A spiral curriculum for the history and examination – help or hindrance?

Discussions will be facilitated with evidence of the impact of educational interventions impact upon teaching at the bedside.

RTD11

International Clinical Placements in Healthcare Programs: Creating Global Citizens or Volun-Tourists?

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As the recruitment of healthcare professionals adept at responding to a diverse patient population increases, healthcare programs have been striving to create graduates who are effective global citizens and who exhibit cross cultural competence. Simultaneously, the requirement to prepare graduates for an international and intercultural job market has seen the proliferation of international clinical placements within undergraduate healthcare programs.

International clinical placements represent a key experiential learning opportunity for undergraduates, with participants reporting significant positive changes in personal development, perspective on practice and critical appraisal of healthcare systems. As international clinical placements often involve low and middle income countries (LMICs) as hosts, undergraduates are also given considerable exposure to the influence of international aid programs, the variability in healthcare standards throughout the world and the provision of healthcare within particular global regions. International clinical placements, particularly in LMICs and resource constrained settings, also facilitate the critical comparison between cultures, practice and healthcare delivery – a key attribute of cross culturally competent healthcare professionals.

Despite these important potential outcomes for graduates, there is limited research guiding healthcare programs in the provision of culturally appropriate, sustainable and consistently monitored and evaluated international clinical placements. Discordance between host country needs, clinical placement outcomes, assessment criteria and funding availability contribute to the uncertainty of long term continuity and true necessity of services and programs offered by participating students and institutions. This in turn can result in tokenistic participation and placements that more closely resemble tours and observational visits, rather than meaningful contributions to the host country's population. Innovative approaches are required to assess the needs of host countries, and clear guidance documents for the preparation and introduction of international clinical placements are vital to ensure sustainable and responsible interactions for all stakeholders.

RTD12

Controlling the explosion

Neil McGowan[1, 2], *Catie Paton*[3]

[1]NHS Greater Glasgow and Clyde, Glasgow, United Kingdom [2]Universitty of Glasgow, Glasgow, United Kingdom [3]Ken Corsar Medical Education Centre, Bothwell, United Kingdom

Over the last ten years, the expansion of simulation within medical and nursing training at both undergraduate and postgraduate level could be likened to a snowball[PC1] becoming a fully-fledged avalanche. The question is whether this grass roots organic growth can be left unchecked or whether a degree of control should be exhibited?

The drivers behind simulation based education (SBE) are multifactorial and well known to those involved. Growth is occurring at an exponential rate, partly driven by changes in curricula. Within the UK, core surgical training is changing from August 20181, with core medical training to follow suit from August 20192. Both curricula are extending, with a new emphasis on inclusion of simulation education, from mastery based skills training to non-technical skills training delivered via immersive simulation. This is being echoed in many aspects of postgraduate training. Courses and trained faculty required to deliver them are therefore increasing substantially.

The key question to be answered is how should this be best managed, if at all? Should “organic” growth simply continue, with those interested in simulation given free reign to develop and deliver, matching courses to appropriate curricula? Should there be a central control, with those responsible for new curricula specifying exactly what should be delivered via simulation? An example of this is the implementation of the national Foundation Year 2 simulation programme in Scotland.3

Not only does the question exist in terms of courses but perhaps more important is the development and cultivation of new trained faculty to deliver SBE. What level of quality assurance is necessary, if any? Are international standards needed to determine educator status? Even within the UK, “national” agreement doesn’t exist, with the Scottish clinical skills education network educator assessment framework4 differing from the ASPiH standards.5

Should this explosion be controlled?

WS01

Faculty Development for Organisational Change in Clinical Skills and Simulation (Workshop)

Brian Jolly[1]

[1]University of Newcastle, Newcastle, Australia

Objectives
At the end of the workshop participants will have a range of strategies at their disposal to commence change in their organisations around the teaching of clinical skills and the utilisation of simulation

Audience
All academics, skills teachers and simulation personnel experiencing resistance to change

Workshop Authors

Yvonne Steinert, Centre for Medical Education, Faculty of Medicine, McGill University, Canada

Miriam Boillat, (as above)

Brian Jolly (presenter), Medical Education Unit, University of Newcastle, NSW, Australia

This workshop has been developed by the authors who have over 200 publications and many years’ experience of faculty development between them.

Capacity 350 (divided into groups of 4-6 people)

Faculty development programs and activities in the health professions have traditionally focused on individual growth and renewal. However, although individual change may result in organisational change, faculty development can also play a greater direct role in promoting organisational growth and development, especially around the teaching of clinical skills and the use of simulation. This workshop will review and discuss how faculty development can function as an instrument of organisational change by exploring a variety of strategies and approaches that can help to achieve this goal. Working in small groups and through plenary discussion participants will tackle a simulated organisational challenge and also be encouraged to think about the contexts in which they work, and how they can focus directly on their organisations as the “client” in the faculty development process.

WS02

Conversations with learners: Using the arts in undergraduate medical education to challenge thinking about diversity and professionalism

Janine Henderson[1], *Anna Hammond[1], Libby Pearson[1], Ian Baxter[1]*

[1]Hull York Medical School, York, United Kingdom

Working with students in developing humanistic approaches to care and constructive professional behaviours can be difficult. 'Professionalism' as a curriculum area may be met with suspicion by students as it does not fit the clearer scientific paradigm with which students are more naturally comfortable. Learning activities are easily dismissed as unnecessary and there are difficulties inherent in 'teaching' in this area. Facilitating learning of important, sensitive information is not well served by more traditional didactic approaches, but more creative approaches to learning are easily rejected.

We adopted a transformative approach to learning (Mezirow 1990) to challenge established views, without patronising. Two of our SPs have written and performed 'The Purple List'- a one-act drama. This is a moving, emotional and involving performance delivered by 'Sam' enacting the impact of his partner Derek's dementia as it progresses over a two year period. We developed a workshop to supplement the play, in consultation with the author/actor, to further highlight important aspects of professionalism, diversity and humanistic care for Year 3 HYMS students.

The actor and author of the play will deliver a full performance of the play to the workshop delegates (35 minutes)

The workshop authors will facilitate an open Q&A session with the actor, author and delegates, to explore the development of this teaching event.

The author and actor will provide feedback to the delegates regarding their extensive experience in using this performance as a training tool with a wide variety of delegates (including health professionals, carer associations, medical students and LGBT groups, UK and Australia)

The workshop facilitators will present a thematic analysis of the critical reflections and feedback from medical students as an example of the learning experienced from this activity.

In small groups, delegates will share areas of their own curricula which may benefit from similar educational approaches

WS03

Conversations with your physiology: The science behind self-regulation to improve resilience, clinical reasoning and communication

Carla Stanton[1]

[1]Siobhan Mary Lynch PhD, FHEA, Senior Teaching Fellow and Personal Professional Development lead for Bachelor of Medicine Programs, University of Southampton, United Kingdom

Literature suggests that clinical students and professionals are experiencing an all-time high in stress levels, affecting their ability to consistently make safe and effective clinical decisions. In the face of advancing medical complexity and heightening pressures, resilience is perhaps their most vital and challenged skill to date. Under sustained states of stress, autonomic, cortical and hormonal function is compromised. This can manifest in a number of ways, from declining energy levels and focus, to impaired clinical reasoning and communication skills, all of which ultimately compromises patient safety and clinician health. Whilst knowledge and skills are vigorously assessed throughout medical schools, few offer comprehensive training in resilience, meaning many enter clinical practice without a basic toolkit to care for themselves, colleagues and patients undergoing stress. Combining HeartMath biofeedback technology with scientifically validated self-regulation techniques empowers a clinical student or professional over time to:

a) Learn how to recognise stress more quickly,
b) Apply a quick self-regulation technique in the moment,
c) Rapidly reduce the detrimental physiological impact of stress

thus improving the (student) clinician's physiological flexibility, and ability to reason and communicate effectively under pressure.

This workshop will be an opportunity for small group work and open discussion.

Topics will include:

- Identifying the four domains of resilience.
- 'Exploring' heart rate variability as a biomarker for stress and resilience.
- Defining the 'emotional landscape' of individuals, and how it relates to autonomic and hormonal health.
- Three simple HeartMath self-regulation techniques; how they reduce stress, improve cognitive function and enhance communication.
- How HeartMath tools can be integrated into a curriculum to facilitate learning, communication and improve resilience.

The presentation will facilitate discussion on these topics. Hand-held biofeedback devices will be available for participants to practice and demonstrate the self-regulation techniques. Quantifying the impact of these tools in a curriculum will also be discussed.

WS04 - Late Withdrawal

Live feedback - recursive methods of teaching evaluation

Roberts Klotins[1], *Chloe Pickup[1], Peter Carter[1]*

[1]North East London NHS Foundation Trust, London, United Kingdom

Background
North East London Medical Education department has been running simulation training for trainee doctors for well over 10 years. Since 2014 simulation training has been expanded to other healthcare professionals, now amounting to 12 different simulation programmes.

We have been collecting online feedback to our work since 2014 which has been helpful in improving our programme. Sometimes there has been a delay between collecting data and processing - which means date were not used as efficiently as they could.

Methods
This year we introduced "Live Feedback" system that we developed using free, open source software tools allowing us to collate on-line feedback in seconds after the answers have been submitted. It also allows us to engage with audiences differently - we spend 10 minutes for feedback asking participants to fill a short form on their own mobile phones. We then display a graphical summary of their responses and suggestions and raise relevant points with the audience. It allows us to have 5 minutes of meta-feedback, summarising this summarising this back to the group and allowing for real time discussion and interactive reflection creating constant, updated improvements to our work.

We initially prepared our submission for poster presentation, but then we thought that it might be interesting and useful for people to see how such a system could be implemented anywhere in their own services.

Objective
We would like to demonstrate this system to a small audience (perhaps 20 to 40 people) on screen and allow people to participate with their laptops and mobile devices so that they could see exactly how this can be set up.

Authors
We are psychiatrists, fellows in medical education. One of the authors has a keen interest in data science and has acquired qualifications in data science projects.

WS05

Using VR and AR to teach chest anatomy, cardio-respiratory assessment and key diagnostic skills for chest radiograph interpretation

Bradley Chesham[1]

[1]University of Sunshine Coast - USC, Sippy Downs, Australia

Context
Learners in healthcare professions report difficulty translating concept-based scientific knowledge into practice. Virtual Reality (VR) and Augmented Reality (AR) technology has been shown to improve user performance in tasks such as spatial understanding, memorisation and training by allowing users to experience applications from a first-person perspective and to interact using natural techniques. Digital manipulation allows a user to concentrate and practice key tasks or investigate complex concepts. The advancement of technology and use of VR and AR will influence the way health education is conducted.

What we did
Bundle of Rays is an Australian-grown healthcare education company is transforming health education by incorporating VR and AR technology based approaches to teach the gross anatomy of the chest, cardio-respiratory assessment and key diagnostics for chest radiograph interpretation.

Workshop aim
The aim of this presentation / workshop is to share how VR and AR technology is being used to teach clinical skills, and lessons learnt. Participants will have an opportunity to experience how content is delivered using VR andAR, and be engaged in discussion regarding factors that can support the use of AR and VR technology in clinical skills training for the health professions.

Conclusion
VR and AR will have a place in the future of clinical skills training within healthcare. This workshop will appeal to delegates who have experience in teaching anatomy and physiology, including skills related to physical assessment and clinical diagnostics and or an interest the use of technology in teaching and learning

WS06

Augmented reality in teaching and learning

Jane Frost[1], *Natasha Halliday[1]*

[1]University of Canberra, Canberra , Australia

Workshop
Augmented reality in teaching and learning

Aim
To demystify augmented reality and explore its potential to enhance deep learning, and

To allow participants to experience the new technology and its use in health curricula

Augmented reality is an emerging technology in the area of health student education. Studies suggest that AR has tangible benefits that include student engagement (Frost, Delaney & Ftitgerald, 2018). Based on the four stages of Kolbs learning cycle(1984), this workshop will allow participants to experience learning and the use of the technology, and then reflect and debrief on that learning. In small groups participants will then move to an active experimentation phase where they will be able to explore the applications and finally plan an activity using AR. The workshop will culminate with the presentation of each activity plan to the wider group.

Presenter
This is a new workshop and has not been delivered before however, the presenter Dr Jane Frost is an established academic with extensive teaching and learning experience. She has facilitated many workshops of a similar nature. Her co-presenter is also an experienced teacher and both facilitators have extensive experience with AR.

Participants
This workshop would be more suited to a smaller number of participants in order that each participant has more time with the headsets, 20-30 participants would be preferable.

References:
Frost, J., Delaney L,J., Fitzgerald R (2018) Exploring the application of augmented reality in Nurse education, Nurse Education in practice (under review)
Kolb, D. A. (1984). Experiential learning: Experience as the source of learning and development (Vol. 1). Englewood Cliffs, NJ: Prentice-Hall.

WS07

Training skills to behavioural fluency- how to produce learning that lasts over time and persists during distraction

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Behavioural Fluency refers to responding that is both accurate and well-paced. Research shows that behaviour or knowledge that is learned to fluency is retained for longer periods of time, persists in the presence of distraction, and can be adapted into new, more complex responses. A focus on behavioural fluency is common in other educational contexts but is newly emerged within medical education. The purpose of this workshop is to introduce the audience to the concept of behavioural fluency, to describe two types of interventions that have been used to produce behavioural fluency in core clinical and procedural skills, and to facilitate attendee reflection, and provide feedback and guidance, on implementing fluency training interventions in their own context.

In order to elucidate the fluency training process and its benefits, a portion of this workshop will detail a series of successful implementation examples and attendees will have the opportunity to review and trial the associated materials, learn about the process and any challenges encountered, and to engage with the outcome data. Examples to be discussed include:

- The use of fluency training within a simulation-based intervention to teach venepuncture to final year medical students.
- The use of fluency training within a simulation-based intervention to teach paediatric lumbar puncture to hospital doctors.
- The use of a SAFMEDS procedure (Say All Fast Minute Every Day Shuffled; A flashcard-type technique) to target behavioural fluency in the interpretation of electrocardiograms.
- The use of a SAFMEDS procedure to teach dermatology diagnostic skills to fluency.

In other educational domains, fluency training has resulted in higher achievement as compared to traditional instruction. Our own work has demonstrated that fluency training can be readily incorporated within medical education and that only a short duration of training, and minimal staff input, is required to produce behavioural fluency in core clinical skills.

WS08

Developing an OSCE station for the assessment of professionalism in preclinical medical students

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Objectives
At the end of this session participants will be able to:

- Map a professionalism curriculum to regulatory guidance
- Understand how professionalism can be assessed across the curriculum
- Appreciate students' perspective on development and assessment of professional values
- Develop the structure of an OSCE professionalism station
- Undertake piloting and standard-setting of an OSCE station assessing student professionalism
- Place assessment of professionalism within the context of the OSCE overall

Professionalism underpins safe clinical practice. Professional attitudes facilitate clinical competence. Regulatory bodies provide guidance on development of professionalism values by medical students. They require also the assessment of professionalism at all stages of the curriculum. Assessment methods include portfolio-based learning, validated measures such as the Durham Conscientiousness Index and the Situational Judgement Test (SJT). Professional values are reflected in OSCE themes such as dress code, infection control and communication skills. Inclusion of OSCE stations exclusively focussed on professionalism dilemmas from their own experience (e.g. plagiarism) may help students more place more importance on understanding this essential aspect of practice.

This will be a hands-on practical session in which participants will utilise commonplace student experiences (e.g. use of social media) to formulate ideas to develop and pilot OSCE stations relevant to the students' stage of learning. Session resources will include reflections by our students on their own experience of professionalism dilemmas, workshops and assessment of their own professionalism. Participants will have the opportunity to standard-set and assess simulated professionalism OSCE stations.

This workshop will be an opportunity for small group work and discussion for participants.

Topics will include:

- An overview of assessment of professionalism
- Blueprinting the OSCE to include professionalism themes
- Mapping professionalism domains for assessment
- Developing professionalism scenarios for an OSCE station
- Standard-setting
- Marking and examiner variability

Consideration will also be given to student feedback and mapping curriculum content to assessment outcomes.

WS09

Simulation Based Mastery Learning for teaching of procedural skills to medical students - the Why and the How

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Background
Simulation is generally accepted as a safe and appropriate way to develop procedural skills at both undergraduate and postgraduate level. However, with increasingly complex procedures being adopted there has been an increased focus on ensuring that learners are prepared for real practice which means reducing the risk of a simulation - real world gap. Teaching of practical procedures by mastery learning is a highly effective way of improving confidence, and competence in skill performance, and has been shown to reduce complications, and improve patient safety.

Workshop Objectives
- Discussion of Simulation-Based Mastery Learning methodology
- Presentation and discussion around current and potential uses for this methodology
- Demonstration and practice of developing and using Mastery checklists
- Application of mastery methodology to a practical procedure including provision of assessment and feedback between participants

Workshop Plan
A presentation of the overall concept of what mastery learning is and what it is not will be given.

Discussion of current understanding and use amongst participants will be encouraged and facilitated.

The presenters will provide examples of their experience of using a Mastery approach in training both undergraduate and postgraduate learners.

Participants will be encouraged and supported to consider potential use of mastery learning in their own areas and how appropriate checklists could be developed to support this. This will involve small group work to identify a skill and develop a checklist/assessment tool specific to this skill.

Pre-recorded videos of the undertaking of a procedural skill will be used to facilitate discussion and practice of assessment and feedback.

Reference
W. C. McGaghie et al. A critical review of simulation-based mastery learning with translational outcomes. Medical Education 2014: 48: 375-385

WS10

Developing the confidence to address underperformance in clinical skills and professionalism: reframing our conversations

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An important attribute of any educator is the ability to identify and report underperformance and offer appropriate feedback. Educators also need to feel confident, where appropriate, to raise concerns, including "low level concerns" ([1]). Yet evidence shows that poor performance is often under-reported and that there are multiple reasons for this ([2]).

This interactive workshop will be delivered by two experienced medical educators who have led national level workshops and undertaken educational and research projects around these issues. It is designed for anyone involved in the assessment of learners or who needs to raise concerns in undergraduate or postgraduate settings.

We will explore relevant literature, briefly share our own findings and encourage participants to consider the relevance to their own situations. We will introduce a framework, consider strategies for addressing underperformance and provide opportunities to rehearse skills and apply learning to case studies.

We will encourage you to draw on your own experiences as teachers, learners or researchers to:

1. Reflect on your response to underperformance and the practical, cultural and personal barriers and enablers to addressing these issues.
2. Consider and analyse these in relation to published literature and study findings in two different UK settings.
3. Explore the language you currently use in conversations around underperformance – with yourself, with learners and with colleagues – and identify ways of reframing these to facilitate change and tackle underperformance.
4. Consider how you might apply this learning more widely with colleagues and when training clinical and professionalism teams in your own faculty

(1) General Medical Council (2016). Professional behaviour and fitness to practise: guidance for medical schools and their students. London: GMC.
(2) Yepes-Rios, M., Dudek, N., Duboyce, R., Curtis, J.,Allard, R., & Varpio, L. (2016). The failure to fail underperforming trainees in health professions education: A BEME systematic review. Med Teach 38, 1092-1099

WS11

Designing a high quality simulation scenario and simulated participant script

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With the rising complexity of health care delivery, concerns with patient-clinician communication have grown exponentially. Shared communication between patients and clinicians has now become a critical tenet of patient-centred care. What has emerged is a push to enhance the experiential dimensions of communication education through simulation and role-play, particularly the integration of the simulated participant (SP) in pre-registration education. A feature of SP-based communication is the opportunity for students to practice diverse interpersonal skills but this requires careful planning and expert scenario and script development on the part of the course developer. This workshop will outline the key features of a quality scenario design and provide you with an opportunity to create your own scenario and simulated participant script using an established simulation scenario-writing framework. The workshop will use interactive small group methods such as discussions, brainstorm activities, paired exercises, and small group practical hands on activities to explore the learning objectives.

WS12

Developing the non-technical skills of medical students: Using a behavioural marker system to guide a learning conversation

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Background
Good non-technical skills are critical to the delivery of high quality, safe patient care. It is increasingly recognised that teaching of such skills should be incorporated into primary medical training. However, the concepts involved can often seem daunting to educators and nebulous to learners. This interactive workshop will detail the evidence-based development, piloting and validation of a behavioural marker system designed to facilitate the assessment of medical students' non-technical skills. The workshop is aimed at anyone involved in primary medical training who has an interest in the development of non-technical skills; the only pre-requisite is a basic working knowledge of immersive simulation. Participants will have the opportunity to gain experience of using the behavioural marker system, compare their ratings with those given by others, and further their skills in the provision of meaningful, individualised feedback.

Learning outcomes:

By the end of this session participants will:

- Be familiar with the concepts of non-technical skills (NTS) and behavioural marker systems (BMS);
- Understand how BMS have been developed within medicine and other health professional groups;
- Have considered the benefits and limitations of a BMS to assist the development of medical students' NTS and their ability to escalate care;
- Have experience of using the BMS to formatively assess medical students in the context of acute care simulation;
- Have had the opportunity to compare their ratings to those of other participants;
- Understand how the BMS can facilitate the provision of individualised, specific and meaningful feedback to assist in the development of NTS.

Educational methods
Brief didactic introduction followed by small group discussion based on video observations. The session will be facilitated by two experienced educators, both of whom have been involved in educational research for over a decade, published extensively and delivered various national level conference workshops with up to 80 participants.

WS13

Realist evaluation of an interprofessional simulation education intervention; developing a programme theory

Bronwyn Maddock[1], *Fiona Kent[1]*

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Interprofessional education (IPE) interventions are often multifaceted, comprising a number of considerations that can work independently and interdependently. Interprofessional simulation can challenge students from different professions to work in teams within a range of clinical and social circumstances. Useful evaluation of these complex interventions is required to justify the time required for educational design and delivery. Realist evaluation methods have been proposed as an appropriate framework for evaluating IPE, moving evaluation away from self-reported outcomes to explore deeper understandings of effectiveness (Reeves & Barr, 2016). Additionally, using a theoretical evaluation framework has the potential to add new knowledge to advance the interprofessional field in a scholarly manner. Realist evaluation is a theory-driven process that argues that for evaluations of social situations to be useful, evaluators need to uncover 'what works, for whom, in what circumstances?' (Pawson, 1997) In order to undertake a realist evaluation, an independent panel of experts may be utilised to propose the programme theory for testing. To test these theories in an IPE context, there is a need to identify the learners' responses or reactions (mechanisms) to the intervention in different contexts, exploring variables such as the learning environment, timing of the intervention, students from different professions and skills of the facilitators, to explain the outcomes. Realist theory is expressed as a context-mechanism-outcomes (CMO) configuration, understanding how varying contexts impact the mechanisms that influences outcomes.

A one day interprofessional simulation intervention for final year medical and nursing students will be briefly presented as a basis for analysis. The process of realist evaluation will be explored. Through both theoretical and 'hands on' activities delegates will discuss, develop and propose programme theory aligned to the final year medical and nursing student interprofessional intervention. Discussion will focus on specific considerations when developing programme theory for realist evaluations of interprofessional interventions.

WS14

Integrated clinical assessment design: in search of authenticity & maintaining standardisation

Elizabeth Metcalf[1], *Rhian Goodfellow[1]*

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Context
There are strong internal and external drivers for a rigorous and transparent process of undergraduate medical assessment. Assessment both drives student learning and is a powerful influence on their experience of a curriculum. The underlying educational principle of clinical teaching and assessment at Cardiff University is to offer students opportunity to learn, practice and be assessed upon authentic tasks to their future role as junior doctors linked via case based learning. Students develop and demonstrate in increasing levels of complexity and integration their competencies of communication, procedural and cognitive skills.

What we did
In order that students may be assessed in terms of their ability to 'show how' and 'do'1, a new assessment tool was developed. In contrast to more traditional OSCEs (Objective Structured Clinical Assessment), ISCEs (integrated Structured Clinical Assessment) assesses students' knowledge and ability to communicate and perform a range of clinical skills in an integrated fashion.

What happened
In designing the ISCE, a number of criteria were established, to ensure a valid, reliable, reproducible and feasible assessment that was acceptable to stakeholders 2, 3. A consultation with simulated patients ensured the 'patient's voice' is a key aspect of the design. Close consideration for the safety of real patients participating- providing good information at each stage of recruitment, dedicated member of administrative team to work with nursing staff to support patients on the day of the exams are all essential components of the exam, enabling real patient involvement and ensuring the authenticity of this assessment tool.

Conclusion
The ISCE complements Supervised Learning Encounters (SLEs) in the workplace and their 'in vivo' sampling, to provide an authentic, yet reliable and valid assessment of the competencies and higher order thinking required of junior doctors.

WS15

"Can you believe what just happened?" Supporting the development of professionalism for surgical practice

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Professionalism is a core competence of surgical practice. However, the nature of competency-based education (CBE) can obfuscate this critical and complex notion. In parallel with movements to enhance professionalism development within CBE curricula, professional bodies worldwide are seeking to promote surgical professionalism and redress longstanding difficulties within surgical culture around bullying, harassment and inequality. From the Royal Australasian College of Surgeons, mandatory Operating with Respect program for clinical supervisors to trainee-led initiatives and international social media campaigns such as #cutitout, #HammeritoutUK, #LookLikeASurgeon, motivation to cultivate professionalism in individuals is moving beyond the classroom in an attempt to improve the wider professional culture. Brought together with educational approaches for cultivating professionalism, greater impact might be had overall on individuals and the collective. In this workshop, we share approaches to teaching and learning about professionalism for surgical practice drawing on our experiences of two graduate programmes designed to support surgeons becoming educators. After offering descriptive examples of activities from both programmes, participants will experience the activities for themselves. Using reflective writing, we start with the 'individual' and consider significant moments in shaping their professional identity. We then move to observations of lapses in professionalism – again, at the level of the individual. We seek commonalities in these lapses and then share approaches educators can use to 'manage' these lapses. These include a simple strategy of 'conversation' as well as strategies to getting conversations started around assessment instruments to more sophisticated supervisor-trainee reflective conversations around professional dilemmas. Woven through the workshop, is the powerful impact of workplace culture on professionalism. We consider how a greater understanding of professional identity formation (PIF), can help us understand how our own experiences and values influence our educational stance as well as how we might use PIF to shape our future educational thinking and strategies.

WS16

Generic Model of Practical Skill Performance

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The network Research in Nursing Skills (RiNS) has developed, tested and implemented a generic model for practical skill performance (www.rins.dk)

The Model of practical skill performance consists of six mutually dependent categories; substance, sequence, accuracy, fluency, integration and caring comportment. These categories are not seen as elements in a hierarchy. The model is normative in the sense that all the categories within the circle must be realised in well performed practical skill in nursing.

The model can be used

- in supervision before, during and after the practical skill performance
- as a tool for feedback to students regarding their permormance of practical skills
- in reflection and self-assessment during practical skills learning
- in analysis of practical nursing situations
- as a tool for analysis in research

What can the model add in supervision?

- Common language about practical skills
- Highlight quality and complexity in skills performance
- Focus on professionalism in actions, not the person
- Informs specific practice of single categories in skill learning
- Support progression in the learning process
- Stimulates the transfer of structure in learning between different practical skills
- Transparency in skills assessment
- Increases professional awareness of practical skills

Content in the workshop

- Presentation of the Model of Practical Skill Performance and a pedagogical model including

criteria's of good performance

- Presentation of the actual use of the model as a learning tool in simulations laboratories and as a tool in supervision in clinical practice
- Demonstration of the model in supervision and as a tool in formative evaluation - video
- Participants identifie skills in their professions and develop a case where the model can come in use
- Participant discuss the potential for the use of the model in their practice, educations and countries
- Presentation of implementation of the model in nursing education – example from a Scandinavian context and reflections of knowledge translation

WS17

Who CARES? Fostering Emotionally Intelligent Clinical Leaders through Peer Social Support Groups

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Leadership education is an essential component of university healthcare programs, and emotional intelligence is increasingly recognised as a key characteristic of successful clinical leaders. However, leadership learning and teaching activities have historically relied on traditional pedagogical methods centred on theoretical models, with little opportunity for exploration of emotional intelligence. Additionally, students tend to see clinical leadership as commensurate with clinical knowledge only, however effective leaders also require knowledge of self and the ability to identify and cope with emotions – their own, and others'.

Peer Social Support Groups (PSSG) provide a safe and inclusive environment for students to explore personal leadership qualities such as emotional intelligence, and to understand the interplay between individual characteristics and group dynamics. The CARES framework (Check-in, Attention training, Reflective listening, Empathy, Safety) is an innovative and interactive approach to individual-within-organisation learning, whereby the student is identified and empowered as the expert of self. CARES enables students to build emotional intelligence through specifically designed group activities. Scaffolding of theoretical content enables application of leadership principles, and identification of personal characteristics encourages self-awareness; essential traits for emotionally intelligent clinical leaders of the future.

Working in PSSG, students are presented with fit for purpose, challenging organisational and social issues. Guided by the CARES principles, members of the PSSG are encouraged to work collaboratively, drawing on individual strengths and supporting others through self-identified limitations. Careful design of the PSSG work enables a relative contextualisation of students' experiences from the clinical environment, and provides students with an opportunity to experience working in, and leading, small teams. This approach, whereby students explore both leadership and followership encourages ongoing personal reflection and facilitates collaborative learning – central tenets of emotionally intelligent clinical leadership.

WS18

TAG TEAM PATIENT SAFETY SIMULATION: Maximising student engagement in an easily deliverable simulation approach

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Patient safety is a national and international priority. The challenge for faculty is to identify how best to prepare large cohorts of undergraduate nursing students to be workplace ready and have the ability to apply patient safety concepts to their practice. In 2016, faculty from four Australian universities successfully designed, implemented and evaluated a series of patient safety simulations using the Tag Team simulation concept (1). The Tag Team Patient Safety Simulation (TTPSS) modality, designed to engage large cohorts of learners, is informed by the Patient Safety Competency Framework (PSCF) and addresses recognised patient safety issues. Tag Team is based on the tenets of forum theatre with the facilitator playing the role of director and the learners playing the roles of either audience or players. Players can be tagged in and out at any time. The audience have cue cards with specific directions to follow. The simulations can increase in complexity or move in directions where patient safety challenges emerge for those assuming the roles of players. This occurs through the use of antagonist cards. TTPSS is delivered in the form of a tool kit which is easily used by educators and includes a facilitator guide, four simulations at basic and complex levels, cue cards and antagonist cards. All simulations are designed to be flexible and easily portable without the need for complex equipment. TTPSS is an innovative approach to simulation that caters for large student cohorts, is easily delivered with minimal resources and prepares learners in the context of patient safety.

1 Levett-Jones, T., Andersen, P., Reid-Searl, K., Guinea, S., McAllister, M., Lapkin, S., ... & Niddrie, M. (2015). Tag team simulation: An innovative approach for promoting active engagement of participants and observers during group simulations. Nurse education in practice, 15(5), 345-352.

WS19

From pedagogy to practice: implementing transformative learning in clinical reasoning

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Background

Healthcare professionals must provide high quality care that is both efficient and safe. Underpinning this requirement is a presumption that individuals are able to make accurate clinical decisions. Knowledge is not sufficient: judgment and reasoning are required to translate clinical information into accurate decisions to produce effective care. Clinical reasoning skills need to be developed in healthcare professionals in a way that produces change in behaviour. This is aplies to the spectrum of healthcare education: from undergraduate to postgraduate to lifelong practice. Though much is understood about clinical decision-making theory, direction for systematic implementation of teaching in both undergraduate and postgraduate medical education programmes is lacking. In particular, evidence describing transformative teaching methods is limited.This workshop will explore how to design effective spiral curricula in clinical reasoning, compare and contrast experiences from three medical schools in the UK, discuss challenges in implementation, share a variety of teaching methods, provide hands on demonstration of technological resources that have produced changes in learner behaviour and support attendees to adapt methodology to their programmes.

Structure of workshop

We will briefly review current knowledge on clinical decision-making learning before sharing experiences from three UK medical schools. Attendees will participate in discussions supported by interactive exercises to explore each subtopic. These exercises will include role play, video and trial of electronic teaching tools used in our current practice. The session will conclude with a reflection on principles and ideas shared during the event.

WS20

Still ticking boxes? How and why to switch from simple checklists to domain-based marking of OSCEs

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Checklist OSCEs can encourage mechanistic performance that does not mirror clinical practice well. Knowing that they will be assessed with a checklist, students develop an approach to the OSCE that is fundamentally di!erent from that which they utilise in the real clinical environment. This can have consequences for both the validity and authenticity of the assessment and students' development as clinicians. Additionally, examiners using purely checklist-based assessment can be artificially constrained with respect to how they view students' performance. Dundee ASSESS was created to address these issues. ASSESS is a domain-based system for marking OSCEs that was developed and evaluated in Dundee Medical School and has been used continuously since 2011. In this workshop, we present the rationale and fundamentals of this innovation, and help participants understand how it can be applied in their own clinical assessment context.

Learning objectives:

- understand the fundamental di!erences between checklist-type and domain-based marking
- become familiar with the Dundee ASSESS system of marking
- create an ASSESS marking tool that you can pilot at your own institution
- recognise the educational impact marking schemes can have on students, examiners and the curriculum

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