

ABSTRACTS

Papers Workshops Posters

ICSC | 7

7th International
Clinical Skills Conference



2017

7th International Clinical Skills Conference

Prato, Tuscany
Sunday 21 May to Wednesday 24 May
2017

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7th International Clinical Skills Conference

Transitions

Prato, Tuscany
21 - 24 May 2017

Abstracts

KA: Keynote Address
FO: Full Oral Paper
O: Short Oral Paper
W: Workshop
KW: Keynote Workshop
P: Poster
RTD: Round Table Discussion



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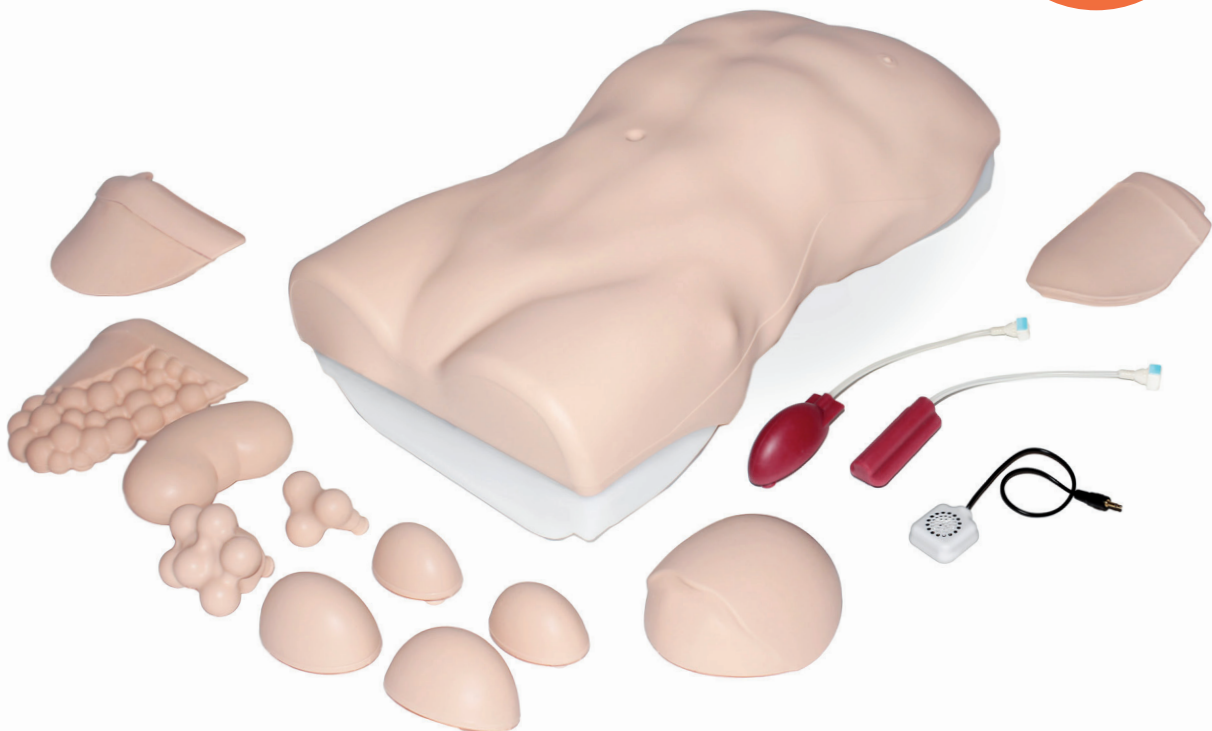


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W01

Applying Cognitive Load Theory in Simulation Based Learning

Maggie Bartlett, *Peter Yeates*
Keele School of Medicine, Stoke-on-Trent, Staffordshire, UK

Introduction

Simulation is a commonly used educational method for clinical learning. Cognitive Load Theory (CLT) is often used in designing and evaluating simulation sessions for teaching both procedural and problem solving skills.

Sweller (1988) posited that the total cognitive load on an individual is made up of three types of load; that which is related to the cognitive demands of the task (intrinsic load), that which is irrelevant to learning (extraneous load), and that which is germane to learning in that it enables the transfer of information into the long term memory and its efficient retrieval when needed (germane load). More recent work suggests that intrinsic and germane load may not be separate entities (Kalyuga, 2011).

As learning is limited by the capacity of working memory (Miller, 1956), it is beneficial to consider the total load on working memory when designing a learning activities: the intrinsic load needs to be managed; the germane load optimized; and the extraneous load reduced.

This workshop will give an opportunity to explore and experience CLT in interactive exercises and to discuss its practical application in session design.

Content and Structure

1. Introductions and workshop plan
2. Practical exercises – demonstrating and exploring working memory
3. Presentation – Cognitive Load Theory – concepts and vocabulary
4. Practical exercises – exploring Element Interactivity
5. Bringing it all together – applying the theory to practice

References

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W02

The relational context of supervision-a resource for training competent clinical educators

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Clinical educators are expected to be competent in their area of practice. However, this expertise and subject specific knowledge does not automatically translate to a clinician's ability to effectively teach professionalism, provide appropriate feedback, and assist with self-reflection and emotion regulation. In a parallel process to clinician/client interactions, clinical education occurs within a relational context. Ideally, the supervisory relationship is one in which there is enough safety for both supervisor and supervisee to discuss sensitive issues in the context of a foundation for effective teaching and learning.

We know that just as students struggle to raise issues that challenge them or are sensitive, supervisors often experience similar challenges. Providing constructive feedback can be particularly difficult within this relational context, and it is not uncommon for supervisors to avoid providing feedback, particularly when it relates to sensitive topic areas, such as professional behaviour or personal attributes. This can compromise learning and patient/client safety.

Supervisors are most effective when assisting in increasing supervisees' abilities to be self-aware. Clinicians, particularly novice practitioners, can be emotionally dysregulated when faced with intense situations. Engaging with persons who have strong emotions can be difficult for any clinician. The challenge for supervisors is to support supervisees in working through these emotionally intense situations while respecting personal boundaries.

Successful clinical education requires that the practitioner make the transition from clinician to educator. This workshop will demonstrate the use of an online resource and accompanying teaching manual that will provide methods to train clinician educators. The resource includes two components: 1) a video recording and 2) a teaching manual. The videos consist of brief presentations of relevant concepts, video-clips of experienced supervisors' reflections, and simulated vignettes of challenging interactions. The workshop will provide participants the opportunity to reflect, discuss, and engage with each other.

W03

A Hands on and Philosophical Experience with 2.5 Ways to Set Cut Scores (Passing Scores) for Psychomotor Skills Check-offs

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Passing scores for psychomotor skills check-offs are often set based on a traditionally accepted value ie. 70-75-80%. Some check-off sheets include "starred" items, those individual items that must be done correctly to pass the skill ie. "maintains sterility during the procedure". Two and a half methods of setting a cut score will be demonstrated in this hands on workshop. The Angoff method (AM), three-method Angoff (TMA) (1), and Yudkowsky patient safety approach (2) will be explained and experienced by the workshop participants. The widely used and accepted Angoff method is based on the performance expected of a marginal student. The Yudkowsky method is based upon the skill impacts of patient or clinician safety, patient comfort and procedural outcomes. We expect a lively discussion comparing, contrasting, and debating these methods of setting cut scores for psychomotor skills and, perhaps more importantly, the philosophies surrounding them.

W04

Mentoring - what matters most?

Kathleen Collins, Scott Oliver
NHS Lanarkshire, Glasgow, UK

Mentoring provides a powerful means of peer support, and is often used in undergraduate medical education in the United Kingdom. The role of the mentor can complement that of the educational supervisor, and has been reported to positively benefit students in a number of ways. A limiting factor with such initiatives is the need to provide funded, clinical time for mentors, often involving senior clinicians who have many competing demands upon their time.

We host clinical attachments for undergraduate medical students, and have integrated mentoring programmes into some of these placements. We recruit mentors from "Foundation Year 2" and above grades of training, brief them on their role, and allocate students to a named mentor. Funding constraints mean we are unable to provide dedicated clinical time for the mentor role.

We invited student 'mentees' to describe the key elements of successful mentor relationships. We were especially keen to explore mentees' perspectives on the time needed by mentors to adequately fulfil their role, and mentee preferences for their interactions with mentors. Students were asked to provide brief, anonymous, feedback about their encounters with mentors on a weekly basis, during their six-week attachment.

A total of 34 responses, reporting 28 encounters with mentors, were received. Feedback was overwhelmingly positive, and students appeared to value any contact with a mentor. There was no appreciable effect of mentor seniority, and short discussions seemed as valuable as longer meetings. Meetings in public areas of the hospital were highly valued, and privacy seemed less important than in meetings with educational supervisors.

This project has highlighted the value of mentors to students. Doctors of all seniorities can act as mentors, with only a modest time commitment that seems achievable within existing working arrangements. We plan to utilise mentors in additional student placements in the forthcoming academic year.

W05

The hidden professionalism curriculum at medical school

Scott Oliver, Kathleen Collins
NHS Lanarkshire, Glasgow, UK

"Good Medical Practice" (GMP) defines the professional standards by which doctors should act; these are reflected in "The Scottish Doctor", upon which all Scottish medical schools base their undergraduate curricula. Professionalism themes can be difficult to teach, and students' experiences of professionalism may mainly come from the hidden curriculum. Our hospital offers undergraduate clinical attachments to medical students from the Universities of Dundee, Edinburgh and Glasgow; we explored our students' awareness of professionalism issues, and the training they had received about them, hypothesising that differences between groups could reflect differences between medical schools' hidden curricula.

We developed a series of fictional vignettes based upon the GMP professionalism domains. We invited students to participate in semi-structured interviews where we discussed these vignettes. Interview transcripts were subjected to thematic analysis.

A total of 13 students participated. Most students had been formally taught about consent and information governance, but most other aspects of their professionalism knowledge were acquired through observation during clinical placements. There was surprisingly limited understanding of issues relating to probity, clinical documentation and patient safety; some struggled to identify these issues within the vignettes. Students who reported spending more time in clinical areas tended to recognise professionalism problems more readily, and were more confident managing them. Students felt intimidated by professional hierarchies within hospitals, and there was limited awareness of where to find additional sources of help with professionalism problems, for example published guidance or their medical defence organisation.

The majority of medical student teaching about professionalism occurs through the hidden curriculum. Students spending more time on clinical placements have greater awareness of these issues and are better equipped to manage them. Formal integration of professionalism teaching into the undergraduate curriculum is recommended.

W06

Their life in your hands: A new training tool to promote safety for diabetic patients and health care professionals

Nina Raphaela Godson
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Newly diagnosed diabetics require the appropriate training in taking their own blood glucose levels and understanding the results and action that needs to be undertaken Veenendal (2014).

Furthermore healthcare professionals require the same type of equipment to also practice the skill of blood glucose monitoring to prepare them to take blood samples in real life. It can be unsafe to train students and patients using their own hands, taking health and safety into consideration, more importantly their perception of the results. Chen & Chang Yeh (2015)

Currently there is no equipment that can be used to train this skill without using inappropriate equipment or danger to the individuals hands hands. The simulated 'Glucometer blood testing hand' provides patients, students and health care professionals with a tool that can help them visualise a human hand using the appropriate fingers to be used when taking a blood sample. The fingers are made with a flexible life like skin, with removable finger tips .In each removable fingertip there are 10 capsules of mock blood that gives varies blood glucose readings, ranging from low blood sugar (hypoglycaemic and hyperglycaemic (high blood sugar).The Innovative nature of the Glucometer hand has taken 5 years to develop, providing an opportunity for diabetic patients, health care professionals and students to practice in a safe simulated environment, without harm.

Veenendal, C, (2014) Simple Tips for Teaching Blood Glucose Testing Technique Downloaded from aip.sagepub.com at COVENTRY UNIV PERIODICALS LIB on August 4, 2016

Chen, C, & Chang Yeh, M, (2015)'the experiences of diabetics on self-monitoring of blood glucose: a qualitative metasynthesis', *Journal of Clinical Nursing*, 24, 5/6, pp.614-626

W07

"Empathy and Realism" - A Design lead approach to the Scottish Chief Medical Officer, Catherine Calderwood's annual report (REALISTIC MEDICINE)

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The Scottish Chief Medical Officer (CMO) 2014-15 annual report, entitled "Realistic Medicine" provides a refreshing new challenge to the role of professionals in clinical practice. The report has six key components that will frame a new approach to both clinical and political medical thinking in Scotland.

The six components are: 1. A change in style to more empathic, shared-decision making 2. Building a more personalised, user centered approach to care 3. The reduction in harm and waste, particularly with reference to overinvestigation and overtreatment. 4. The reduction in unnecessary variation in practice and outcomes 5. The better management of risk, with particular reference to the consenting process. 6. The need for healthcare workers to become improvers and innovators.

The CMO report drives the need to rethink empathy, risk management and creativity within healthcare. Dundee is pioneering an empathic, Design lead approach to health and social care and has formed a strong partnership between the Academic Health Science Partnership in Tayside (AHSP) and the University of Dundee Duncan of Jordanstone College of Art and Design.

We have started to introduce Art and Design, "Service Design" tools and methodologies at education, clinical improvement and citizen engagement events and will share our experience gained through interdisciplinary sharing of expertise between a healthcare service and Art and Design College.

The workshop will introduce attendees to the vocabulary of Design, Design thinking, Empathy mapping, Journey mapping, Ethnography and Touchpoints as applied to the interpretation of "Realistic Medicine". A strong theme of the workshop will be structured on "how" to realise genuine "user" engagement in settings of education, research and clinical care.

W08

Learning and teaching the skills of Evidence Based Physical Examination (EBPE)

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The physical examination is still regarded as a core component of undergraduate and post-graduate curricula¹. There is often an expectation that a traditional 'full clinical examination' is required in a teaching or assessment situation, but more experienced clinicians rarely undertake one as they usually use a focused examination to confirm or refute diagnostic hypotheses set up during their history taking². Some elements of a traditional examination are performed 'by rote' without an understanding of their predictive value for disease.

In our experience, students question the brief but focused examinations they see being undertaken by clinicians, and some appear uncertain of the actual value of the physical examination when technological aids to diagnosis such as X-rays, ultrasounds and MRI scans are so readily available.

This workshop will provide an opportunity to consider the evidence for the use of focused examinations and the practical aspects of teaching evidence based physical examination³ in any clinical teaching situation.

Educational methods/interactive learning
We will begin by encouraging participants to consider their own examination skills practice within their current clinical or teaching roles. We will present a variety of clinical scenarios, and working in small groups, participants will consider questions about examination choices, the reliability of findings as predictors of disease, and other aspects of clinical decision making. We will then consider the potential enhancement of teaching and learning about the use of physical examination in diagnosis by applying evidence based examination theory to practice.

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W09

Threshold concepts for clinical skills teachers: how can they help us to develop curricula and support students to navigate transitions?

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Threshold concepts have been widely studied in a range of disciplines. They are increasingly being researched within the health professions and, more recently, within medical education. Identified by Meyer and Land in 2003, threshold concepts are key to achieving mastery of a subject and exhibit some or all of the following characteristics; they are transformative, integrative, irreversible, troublesome, bounded and discursive. As students grapple with this learning, they pass through a liminal state of transition, a “space of knowing and not knowing” [1]. Understanding where threshold concepts feature in a curriculum can inform curriculum development decisions. The threshold concept framework can also help teachers recognise where learners are in transition, are struggling, or where they may potentially struggle and identify how to support them more effectively.

This interactive workshop will be led by health professional educators from different backgrounds who have researched threshold concepts and regularly use the ideas in their educational practices. We will briefly share our research findings as part of the discussion.

Intended outcomes

We will build on Ray Land’s keynote address by encouraging participants to draw on their experiences as teachers, learners or researchers to:

- Revisit and further explore the notion of threshold concepts and identify examples from their own personal experience
- Consider the relevance to clinical skills teaching and learning of 1) the threshold concept framework and 2) research findings in health professional education
- Explore and discuss possible threshold concepts in clinical skills education, including the concept of professional touch
- Discuss how to recognise, from students’ use of language, where learning is transformative or troublesome and the implications of this
- Identify practical ways of applying the threshold concept framework to clinical skills teaching in their own setting. This may be in relation to curriculum design, promoting learning or engaging faculty

W10

Patients as teachers: Integrating the patient voice into your clinical communication teaching

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Workshop Description

Patient-centred care is health care that is respectful of, and responsive to the needs and values of patients. Research demonstrates that patient centred care improves the patient experience and can have positive outcomes for the patient, health service providers and staff¹. A patient-centred approach is supported internationally through a number of health care reform initiatives and the establishment of a range of health care performance standards. Despite the strong impetus for a patient focus there is little written about effective models of education and the strategies that work when integrating patients into teaching and learning experiences. Using an existing education program on medical error and open disclosure for postgraduate health professionals, this workshop will introduce participants to a framework and practical strategies for setting up an education program that involves patient consumers.

¹ Australian Commission on Safety and Quality in health Care. (2010). Patient centred care: Improving Quality and Safety by Focusing Care on Patients and Consumers – Discussion paper. Available at www.safetyandquality.gov.au

W11

Teaching Clinical Reasoning

John Frain, Nicola Cooper
University of Nottingham, Nottingham, UK

Objectives

At the end of this session participants will be able to:

- Understand the vocabulary used in teaching clinical reasoning (CR)
- Understand how a CR theme could be incorporated in to a curriculum
- Identify appropriate settings for teaching CR
- Identify teaching methods that are most effective in facilitating learning CR

How doctors and healthcare professionals think, reason and make decisions is arguably their most critical skill. This is important since the literature suggests diagnostic error is common and results in significant harm to patients. Errors in reasoning account for the majority of the root causes of diagnostic error – most commonly the available data was not synthesised correctly.

Medical schools and postgraduate training programmes assess knowledge and skills, but few offer comprehensive training in clinical decision making. Yet teaching and acquisition of clinical reasoning skills can be integrated into the curriculum from the earliest stages. A number of teaching and learning techniques can be used to emphasise clinical reasoning skills while at the same time delivering existing content (knowledge and skills).

This workshop will be an opportunity for small group work and discussion for participants.

Topics will include:

- Defining the language of clinical reasoning and its different elements
- 'Exploring' symptoms
- A spiral curriculum for clinical reasoning
- Effective teaching and learning techniques
- Assisting students in the transition from learners to decision-makers

Discussion will be facilitated with a presentation of the evidence of how cognitive psychology, educational theory and studies of expertise can facilitate teaching and learning CR. Consideration will also be given to feedback and mapping curriculum content to assessment outcomes.

W12

Critical Concepts in Instructional Design for Complex Skills

Jennifer Stojan¹, Todd Cassese², Deepthiman Gowda³, Michelle Daniel¹

¹*University of Michigan Medical School, Ann Arbor, MI, USA,* ²*Frank H. Netter MD School of Medicine at Quinnipiac University, Hamden, CT, USA,* ³*Columbia University College of Physicians and Surgeons, New York, NY, USA*

Clinical skills courses (CSCs) teach a variety of complex skills, including communication skills, physical examination, oral presentations, written documentation, and clinical reasoning. A significant body of research within cognitive psychology and educational science suggests that whole task approaches to curriculum design may optimize learning of such complex skills. Repeated, varied practice of whole tasks encourages learners to integrate the knowledge, attitudes, skills and behaviors necessary for success, while avoiding common problems with fragmentation, compartmentalization, and transfer that can occur with more atomistic designs. The challenge with whole task learning, however, is that high element interactivity can quickly lead to cognitive overload. When designing curricula, educators must develop whole learning tasks that are carefully sequenced from simple to complex, with the appropriate level of support (scaffolding) provided to keep learners in their zone of proximal development. Course directors trying to construct whole task curricula for the first time can encounter significant challenges. This workshop will engage participants in developing a model curriculum for a complex skill relevant to their own setting. The workshop will begin with a think-pair-share exercise. Participants will discuss a piece of a clinical skills curriculum they would like to design (15m). The presenters will provide a brief presentation of concepts, including how to develop whole tasks, sequence them from simple to complex, and scaffold the experience, all while avoiding cognitive overload (15m). Participants will select 3-4 curricula out of the ideas generated to work on at tables. They will identify what learners should be able to do upon completion of the curriculum, then work on their curriculum design, including brainstorming learning tasks, sequencing them, and identifying appropriate scaffolding (40m). The session will close with a large group report out, and clarification of concepts (20m.)

W13

Human Factors and staff development – Training the (untrained) trainers

Lucy Ambrose, Simon Gay

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Human factors are integral to all aspects of clinical care but are often implicit rather than explicit. The widely accepted definition from the Health and Safety Executive (UK industrial safety regulator) is:

‘Human factors refer to environmental, organisational and job factors, and human and individual characteristics which influence behaviour at work in a way which can affect health and safety.’ (Health and Safety Executive 1999).

Human Factors and Ergonomics training introduces the non-technical skills of communication, leadership, decision-making, team working and situation awareness and understanding of working environment, stress and fatigue and build an understanding of how systems can be developed to facilitate these constructs to improve safety and quality.

Human Factors have been recognised within the aviation industry for over 20 years and have attracted increasing interest within health care over this period. It is only in the last few years that they have been recognised formally as key aspects of health education training (Health Education England. Learning to be Safer, 2015).

As a relatively new phenomenon, many experienced educators were not trained in Human Factors at either undergraduate or postgraduate level. The individual components are increasingly included in curricula but how they interlink is developed implicitly. Some specialist areas such as critical care and emergency medicine are more Human Factors aware. However, clinical staff working in general specialties, have often not received specific training. The majority of clinical experience often takes place in these settings so staff development in this area is vital to sustain an increased understanding in learners and improved patient safety in the long term.

W14

Developing authentic interprofessional clinical simulation scenarios to promote the development of clinical skills

Jacqueline Bloomfield, Astrid Frotjold

The University of Sydney, Sydney, NSW, Australia

Interprofessional collaboration is fundamental in health education due to the complex health care environment and the need for safe, quality patient care (Turrentine et al, 2016). Simulated scenarios in interprofessional healthcare education can promote teamwork, communication and develop interprofessional understanding and positive attitudes while also facilitating clinical skills education (Liaw et al. 2014).

Authentic scenarios, when aligned with learning outcomes, can engage students, promote deep learning and facilitate reflection on strengths and areas for development (Wiseman and Horton 2011). To develop authentic and realistic clinical scenarios, consideration of key issues is imperative. These include: intended aims, students’ level of learning and clinical experience, links between theory, practice and assessment, & scenario complexity. Practical issues including student numbers, the physical learning environment, time & resource availability must also be considered. The scenario must also provide the opportunity for students to collaborate and explore the task from different perspectives.

This workshop, will draw on the principles of best practice for use of simulation in interprofessional education, and aims to promote an understanding of the context in which simulated scenarios can be used for clinical skills education. In providing participants with an opportunity to develop scenarios for use in the simulated clinical environment it will also offer a forum for discussion of how to address associated challenges.

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W15

The transition from competence to capability: implications for a clinical skills programme

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Undergraduate health profession education emphasises the development of student competencies, often detailed in national guidance and presented as learning outcomes. Separate domains, such as biomedical knowledge, professionalism and clinical skills, tend to be taught and assessed independently and usually employs familiar tools in predictable settings.

This workshop will question whether competency-based curricula adequately train our students to practice in today's complex, ever changing healthcare environments. We will briefly draw on research into students' preparedness for practice to demonstrate how just 'ticking the competency box' can leave newly trained health professionals unprepared for tackling problems in the real world. But what does this mean in practice?

Objectives

During this interactive workshop participants will draw on their own experiences of teaching, learning and assessment to:

- Explore the relationship between 'capability' and competence.
- Consider the skills and qualities that contribute to being capable, such as the ability to problem solve in complex situations, to adapt, innovate and deal with conflicting information.
- Discuss ways of providing students, within a curriculum, opportunities to develop the qualities they need to be capable
- Become familiar with a 'capability framework' and identify practical approaches for using this in teaching and assessment practice.

Participants will also work with a case study - an innovative inter-professional simulation programme, developed by two of the workshop leads to address some of these issues in a clinical skills context. In small groups, participants will apply the capability framework and share their own experiences in order to consider:

- In what ways does this programme enhance students' capability?
- What additional elements could be included?

Finally we will discuss whether and how capability should become more explicit as a curriculum goal, encouraging participants to identify ways their own curricula can facilitate students to develop capability and preparedness for professional practice

W16

Authenticity in simulation based medical education: does high fidelity mean high technology?

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Introduction

Simulation based learning in clinical education is often associated with sophisticated and expensive technology. Technology seems to trump instructional design when engaging learners and teachers. However, the effectiveness of any simulation based learning exercise depends on: its underpinning educational principles; alignment to the curriculum; learner engagement; and crucially, on a functional debriefing session. Psychological fidelity and the fiction contract [1] may be more powerful than complex engineering in engaging learners and facilitating learning.

Authenticity is another aspect of simulation which needs to be considered; novices may need less authenticity in simulation than more experienced learners in order to learn [2] and, for them, too much authenticity may impede learning.

Simulation offers opportunities for the deliberate practice of skills with the support of 'perfectly accurate feedback' from teachers [3], in a safe environment for both learners and patients. This may not always require highly technical equipment but does require high fidelity, high authenticity and the possibility of establishing an effective fiction contract.

The session

The session will start with a presentation introducing the topic and proposing a common vocabulary for subsequent discussions. These discussions will be prompted by the following questions:

- Does hi-tech equal hi-fi and can low-tech be hi-fi?
- Does authenticity require hi-tech and hi-fi?
- How can we calibrate the "authenticity dose" and how do we balance effective learning and fidelity?
- How can we overcome hi-tech barriers to integrating simulation in a curriculum?

References

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W17

Feedback workshop

Karen McKelvie, *Gayl Wall*

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Feedback in medical education is a central component of effective teaching and learning. Through a process of effective feedback learners develop the ability to monitor, evaluate and self-regulate their own learning. This feedback process plays a significant role in the enhancement of learners' knowledge, skills and professional practice.

Despite an increasing awareness of the importance of feedback as a factor in engaging learners and maximising their learning, research has shown that tutors often feel uncomfortable giving direct feedback on performance to medical students. Furthermore, the National Student Survey (amongst others) suggests that feedback is often an area of student dissatisfaction in UK higher education.

Using an interactive format, this workshop is designed to help participants explore how best to deliver effective feedback within a clinical setting and thereby enhance the likelihood of learner engagement and achievement. Starting with a discussion of the key principles of effective feedback and a toolkit for action, participants will then consider scenarios, sharing their own experiences and insights into what constitutes good practice. Through teaching a simple clinical skill, participants will be afforded opportunities to both receive and deliver feedback. In this way, participants will be able to hone their professional skills and develop specific strategies for giving feedback in various situations.

Workshop objectives

- Discuss the importance of feedback as part of the learning process
- Explore how feedback and feed forward are linked to effective learning
- Consider the key principles of providing effective feedback
- Consider a toolkit for facilitating student reflection and providing effective feedback
- Review several models by which feedback can be delivered effectively and efficiently
- Practice of feedback techniques through the clinical teaching skills scenarios

W18

Implementing Simulations for Clinical Judgment Development

Paula Gubrud, *Stephanie Sideras*

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Demands to increase enrolment coupled with decreasing access to traditional clinical sites create the need to find effective alternatives for clinical education. The 2014 National Council of State Boards of Nursing in the United States, study found that simulation could be used to replace traditional clinical practica with the caveat that standards of best practice in simulation education are maintained. Current healthcare practice requires use of clinical judgment to manage complex and ill-structured problems that necessitate the application of sophisticated technology, evidence-based standards, and patient-centered care all within an inter-professional environment. Simulation is an effective and efficient site for the development of clinical judgment because it allows for active practice of authentic clinical problems that prepare pre-licensure students for beginning practice. The reflective aspect of simulation-based education facilitates integration cognitive, psychomotor and affective competencies required for practice.

This workshop will provide guidance for implementing simulation experiences that aim to develop clinical judgment. Tanner's Clinical Judgment model will be used as a framework to guide the development of simulation-based learning activities. The session will begin with an overview of Tanner's model and will focus on foundational aspects of scenario structure and implementation. Content will address developing behavioral objectives for clinical judgment; creating/adapting a storyboard to enhance the cognitive skills used in clinical judgment; and creating reflective learning activities. Strategies for designing dialogue cues that support clinical judgment practice will be discussed and the use of graduated prompting as a debriefing method will be presented. The workshop will include video triggers to provide participants with active practice in identifying components of clinical judgment visible during a simulation. The overall goal is to develop simulation based learning activities focused on developing clinical judgment competency in a variety of healthcare settings.

W19

An interactive workshop on the use of inter-tribal education and simulation in a healthcare setting

Ian Summers^{1,2}, Stuart Marshall^{3,4}, Victoria Brazil^{5,6}

¹*Emergency Department St Vincent's, Melbourne, Australia,* ²*St Vincent's Education and Simulation Centre, Melbourne, Australia,* ³*Melbourne University, Melbourne, Australia,* ⁴*Monash University, Melbourne, Australia,* ⁵*Bond University, Gold Coast, Australia,* ⁶*Emergency Department Gold Coast Hospital, Gold Coast, Australia,* ⁷*Anaesthetic Department Monash Medical Centre, Melbourne, Australia*

This workshop will focus on the use of education including simulation to break down barriers and increase the effectiveness of collaboration between specialist teams within hospitals. Where critical care and other specialised hospital teams often work and train effectively within clans or tribes (eg ED medical, nursing and allied health) misunderstandings can occur where one clan meets another (eg ED and anaesthetics) with important implications for patient safety.

This interactive workshop explores collaborative solutions to inter-clan clinical care by the use of combined education sessions, simulation and joint training. It will include diagnostic and needs assessment, planning, and scenario preparation with the aims of participants planning their own cross-clan training.

KA01

Translational simulation – training, tribes and making a difference

Victoria Brazil

Bond University, Gold Coast, Australia

In 2017, healthcare simulation is at a cross roads. The technology is brilliant. Applications are diverse – procedural skills, teamwork and more. Issues like human factors have become important in health professional education. But few have managed to demonstrate real improvement in patient outcomes or integrate healthcare simulation with quality improvement initiatives.

Healthcare is complex and ‘tribal’. Increasing complexity and specialisation has resulted in the development of strong professional identities, and the sociocultural aspects of care are critical for patient outcomes. Too often, tribalism is toxic, and patients suffer.

Health professional educators have skills and responsibilities to connect their work with quality outcomes for patients – safety, effectiveness, efficiency, equity and patient centredness

This session will use a case study approach to illustrate how healthcare simulation can be used to improve patient journeys, clinical outcomes and ‘tribal interfaces’ in health.

Key messages

To make a difference:

- Simulation (or any other health professional education) should be ‘goal directed’ and connected with health service priorities
- Simulation should have diagnostic and therapeutic roles
- Simulation delivery should balance creativity and discipline

KA02

Why is quality improvement so hard?

Mary Dixon-Woods

*Cambridge Centre for Health Services Research,
Cambridge, UK*

Although quality improvement (QI) is frequently advocated as a way of addressing the problems with healthcare, evidence of its effectiveness has remained very mixed. This talk will identify some of the major challenges and offer suggestions on what needs to be done to get better at getting better. It will stress the need for strengthening of the scientific foundations of QI, for more rigorous evaluation, and for improved fidelity in the application of QI methods. It will also point to structural problems in the way QI is organised at present. QI work is often pursued through time-limited, small-scale projects, led by professionals who may lack the expertise, power or resources to instigate the changes required. There is insufficient attention to rigorous evaluation of improvement and to sharing the lessons of successes and failures. Too many QI interventions are seen as 'magic bullets' that will produce improvement in any situation, regardless of context. Too much improvement work is undertaken in isolation at a local level, failing to pool resources and develop collective solutions, and introducing new hazards in the process. Progress will depend on addressing these challenges.

KA03

The hidden value of written assessment comments

Shiphra Ginsburg

*Wilson Centre for Research in Education, Toronto,
Canada*

Subjectivity in assessment is gaining increasing respect in the medical education community. In this presentation we will view subjectivity through the lens of language: what we say and how we say it can provide a window through which we can see how clinical supervisors construct opinions and judgments about their learners. Analyzing the language assessors use can deepen our understanding of how they conceptualize competence and performance. Learning how others interpret that language can provide evidence to support the validity of using narrative comments in a way that is credible and defensible. This is important for decision making around transitions in training.

KA04

Transition as an opportunity for workplace learning

Pim Teunissen

Maastricht University, Amsterdam, The Netherlands

Transitions are common in the medical education continuum. They range from small ones, such as a medical student moving from one rotation to the next, to larger ones, such as a senior resident finishing training and starting a first position as a junior consultant. Next to residents transitioning to consultant, there are three other major transitions. The first is that of high school students starting medical school, the second transition is students going from non-clinical to clinical training and the third transition is that of graduated students to residents. We tend to treat these four major transitions as problems. They can lead to personal turmoil, increase the risk of burnout, are accompanied by a drop of competence and may even lead to unacceptable risk for patients.

There is, however, another side to transitions that I will highlight in this talk. Transitions are examples of change that is part and parcel of our working lives and healthcare in general. How healthcare professionals deal with change, small and large, is key to how well they function, adapt and cope with challenges. When we see change in the working life of healthcare professionals as normal and even desirable, a new set of questions need to be answered. How do medical students and doctors deal with change, how does medical education prepare them for change and how can workplaces capitalize on change as a learning opportunity?

From this perspective, I will highlight the challenges and opportunity transitions offer in the context of workplace learning. The particular transition I will focus on is that from resident to junior consultant. Research indicates junior consultants do not feel competent in several non-clinical aspects of their work, such as teaching, managerial and financial skills. How do they learn to adapt to change, what can workplaces do to support them and what lessons are there for medical education based on this final transition to independent practice? I discuss answers to these questions based on empirical research and relevant conceptual orientations, most notably workplace learning and ecological systems theories.

KA05

Threshold concepts and troublesome knowledge: a transformational approach to learning

Ray Land

Durham University, Durham, UK

This presentation will outline the Threshold Concepts Framework (TCF), a discipline-based and transformative model of learning which can be used as a conceptual tool and analytical framework to inform programme design, and spur educational research initiatives. Threshold Concepts can be considered akin to a portal, opening up a new and previously inaccessible way of thinking about something and leading the learner to new conceptual and affective terrain.

Threshold Concepts represent a transformed way of understanding, without which the learner cannot progress, and invariably involve a shift in the learner's subjectivity. Threshold Concepts, it is argued, lead to a qualitatively different view of subject matter and, as the 'jewels in the curriculum', are central to the ways of thinking and practising within a discipline.

As a consequence of comprehending a threshold concept there is a transformed internal view of subject landscape, or even world view. This transformation may be sudden or protracted, with the transition to understanding often involving 'troublesome knowledge'. Depending on discipline and context, knowledge might be troublesome because it is ritualised, inert, conceptually difficult, alien or tacit, because it requires adopting an unfamiliar discourse, or perhaps because the learner remains 'defended', resisting the inevitable ontological shift that threshold concepts entail. Difficulty in understanding threshold concepts may leave the learner in a state of 'liminality', a suspended state or 'stuck place' in which understanding approximates to a kind of 'mimicry' or lack of authenticity. This session will explore how the framework might offer medical and health educators new perspectives in terms of how they design curricula, approach teaching and support learners. A searchable archive of thresholds research evidence across many disciplines is maintained at: <https://www.ee.ucl.ac.uk/~mflanaga/thresholds.html>

KW01

How to write about quality and safety and get published

Mary Dixon-Woods

Cambridge Centre for Health Services Research, Cambridge, UK

This workshop will offer tips on how to write up projects on quality and safety in healthcare. It will distinguish between research, evaluation, and quality improvement, and show how different norms and guidelines apply to each. It will discuss how to select the right journal for the outputs, and how to optimise structuring and writing of papers. It will offer tips on how to negotiate the publication process, including practical advice on how to avoid common pitfalls.

KW02

Let's talk about talk

Pim Teunissen, Walter Eppich

Maastricht University, Amsterdam, The Netherlands

Much of clinical practice involves 'talking' not only with patients but about patients with other health professionals. 'Talk' encompasses spoken words, their verbal and nonverbal content and accompanying social implications, and represents a main component of work in modern societies. Particularly in healthcare, 'talk' drives patient care and learning from patient care.

Students in all healthcare professions will develop skills for work-related talk. They speak with other healthcare professionals to coordinate patient care among interprofessional and multidisciplinary distributed teams, to seek and give advice about patient management, and to transition care from one team to another. Thus, these conversations make up a substantive portion of the workplace curriculum. However, talk is seldom the focus of teaching or assessment in healthcare training.

This workshop will take the concrete example of work-related telephone conversations to discuss its potential for learning, teaching, and assessment. We will use a combination of brief, interactive didactics and small group activities to help participants talk and think about talk. The first part of the workshop explores the significance of talk in a myriad of clinical situations. The second part of the workshop will help participants analyse what happens in a telephone conversation. In the third part of the workshop, groups of participants discuss the potential of telephone conversations for learning, teaching, and assessment informing a plenary wrap-up.

After this workshop, participants will be able to:

1. outline the myriad ways in which talk reflects learners' thinking as developing healthcare professionals,
2. describe how workplace telephone conversations provide a snapshot of learners' developmental trajectory,
3. identify how they can use telephone conversations for learning, teaching, and assessment.

KW03

Performance art for educators

Victoria Brazil

Bond University, Gold Coast, Australia

Impressions about speakers are made in seconds. 'Stage presence' is critical for educators. This session will encourage audience connection and engagement, and practice skills for 'starting your session like a Bond movie', together with looking and sounding great. We'll channel Cate Blanchett to enter and exit our 'stages' with style.

Our 'audiences' include learner groups, conference audiences and even our colleagues and patients. This emphasis on style is to magnify the impact of your substance, not to replace it or lessen the importance of content.

Finally, we'll reflect on how we'll know if we are doing a great talk, and how to get that elusive effective feedback

Key messages

Educational Presenters will

- Connect with the audience
- Sound good
- Look great

KW04

The 'jewels in the curriculum': using threshold concepts and troublesome knowledge to inform curriculum design

Ray Land

Durham University, Durham, UK

This interactive workshop session will build upon ideas presented in Ray Land's keynote address and provide an opportunity for participants to explore further how the Threshold Concepts Framework (TCF) might be employed to inform and enhance curriculum and assessment design in medical and health programmes.

The session will suggest methods for identifying candidate threshold concepts within a discipline and explore participants' own experience and expertise to characterise the ways of thinking and practising (WTP) – the disciplinary modes of reasoning and explanation – that medical and health educators consider to be fundamental to a grasp of their subject. It will examine what students tend to experience as 'conceptual bottlenecks' and which curriculum design interventions, or changes of mode, might aid mastery of these difficulties.

It will explore, further, the relationship between candidate threshold concepts in medical curricula and how these elements of the curriculum are typically taught, sequenced and assessed. What kinds of understandings, or misunderstandings, do student assignments or performances characteristically exhibit? Do students offer mimicked understandings rather than real mastery? In a time of risk and uncertainty what personal transitions and shifts in subjectivity must students of medicine and health face in the formation of professional identity? How may they be best supported through 'liminal' or stuck places?

One potential issue to be addressed is the role that TCs, as curriculum 'jewels', might play in streamlining content and modes of assessment. What areas of knowledge and conceptual issues currently appear to receive the most attention. Is the balance between content knowledge and conceptual mastery optimal, or might the curriculum be overstuffed?

KW05

Understanding and assessing professionalism in medical education

Shiphra Ginsburg

Wilson Centre for Research in Education, Toronto, Canada

The goal of this workshop is to deepen participants' understanding of professionalism in medical education. We will review the importance of context and the hidden curriculum and will discuss the challenges involved when assessing others' professionalism. Together we will work through some common challenges using an educational framework. Participants are encouraged to bring their own challenges for discussion.

O01

Learning clinical reasoning as a process of participation in authentic learning environments; medical students' learning of reasoning during clinical clerkships

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Clinical reasoning is central to the practice of medicine (1). The dominant theoretical paradigm is *Dual processing theory* (slow and fast thinking), originating from the cognitive sciences. Clinical reasoning has traditionally been researched in cognitive experiments under controlled settings, in experimental labs or classrooms often isolated from real-life environments. By failing to examine learning in its authentic clinical settings, one misses the multitude of complex and unpredictable interactions between the individual and its environment that drive learning. (2) (3). This study aims to produce a better understanding of how medical students construct their understanding around a patients' problem (diagnosis) and its solution (treatment plan) during their clinical clerkships. A secondary aim is to understand how different contextual factors impact on the students understanding. Participants are medical students at Uppsala University Medical School. Data will be collected by direct participant observation during clinical clerkships, semi-structured field-interviews, as well as student-reported diaries.

Data and results will be presented at the conference. This study can contribute with knowledge on how to plan educational initiatives that facilitate and support learning of clinical reasoning.

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O02

Utility of low fidelity simulation in bridging the gap between theory and practice in undergraduate management of acute surgical emergencies

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Simulation is widely used in surgical undergraduate and postgraduate education with regards to practical and technical skills¹. However, there is little evidence in the literature to suggest it is utilised as frequently when it comes to managing acutely unwell surgical patients prior to surgical intervention. Simulation in medical education has been incorporated into many university curricula, particularly as acute care skills are difficult to teach in a classroom setting and students find it challenging to bridge the gap between theory and practice. The UK undergraduate surgical curriculum indicates that students should be able to assess and manage acutely unwell surgical patients, recognise emergency surgical conditions, and be able to make decisions in the face of an acutely unwell surgical patient². A five week low fidelity simulation programme was developed for students attending Hairmyres Hospital for surgical attachments to bridge the gap between theory and practice in management of acute surgical emergencies. This work in progress wishes to determine whether participation in such a programme affects students' confidence and competence in managing acute surgical emergencies, collecting data through Likert scales and the Ottawa CRM Global Rating Scale³.

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O03

Experiential learning through others: A novel facilitated peer learning programme

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Whilst peer learning is often used in an undergraduate classroom setting¹, less is known about its use in clinical settings². A novel small-group undergraduate peer learning programme was developed for fourth year medical students, which sought to allow medical students to learn from each others' clinical experience³ during their clinical attachment. This programme was evaluated to establish whether facilitated peer learning in this setting promotes experiential learning.

The programme ran for three 4-week blocks, with each week based on a different system. One session was held per week and consisted of peer case presentations, facilitated group discussion and linked bedside teaching.

Feedback was universally positive with students concluding that the programme was enjoyable and useful. Thematic analysis indicates that students were motivated to seek out interactions with patients as a result of taking part in peer learning in order to find cases to present, therefore widening their clinical experience, and that discussing other students' cases exposed students to cases they had not seen themselves, thus promoting experiential learning.

Facilitated peer learning increases clinical knowledge by exposing students to experiential learning, both directly and indirectly. Similar programmes to the one described could be adopted within clinical placements elsewhere.

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O04

Efficacy of Teaching Brief Motivational Interviewing to 3rd Year Medical Students

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Background:

There is growing evidence for teaching behaviour change counselling skills in the pre-clinical years of the medical curricula. Few studies, however, have rigorously tested the effectiveness of teaching brief motivational interviewing to medical students. Some studies have omitted appropriate comparison conditions, and others have lacked direct observation of skills.

Method:

Forty-six students volunteered in a quasi-experiment to examine the efficacy of teaching brief motivational interviewing to 3rd Year medical students. The pre-post design was improved with the inclusion of a waitlist comparison group. Teaching involved a 2-hour workshop followed by 3 x 2-hour practical skills blocks using simulated patients. Confidence and knowledge of brief motivational interviewing was measured at pre-, post-, and 3-month post-teaching using the Motivational Interviewing Confidence Scale (Poirier et al, 2004) and the Motivational Interviewing Knowledge and Attitudes Test (Leffingwell, 2006), respectively. Skills were assessed three times during the simulated patient practical sessions using the Behavior Change Counselling Index (Lane et al., 2005). Data were analysed using repeated measures t-tests and ANOVA or ANCOVA, where appropriate.

Results:

After controlling for age and years of prior education, we found confidence in health behaviour change conversations significantly improved from pre- to post- ($p = .025$) and improvements were sustained at 3-month post-teaching ($p < .001$). Knowledge of brief motivational interviewing also improved from pre- to post-teaching and remained unchanged at 3-month follow-up (both $p < .001$). Skills assessed during the practical sessions indicated a significant improvement across the three practical skills blocks ($p < .001$).

Conclusion:

Findings suggest that 3rd year medical students can achieve brief motivational interviewing skills and knowledge within a relatively short training period and confidence in behaviour change conversations improves and is sustained.

O05

The impact of undergraduate nursing students' anxiety on educational outcomes in simulated clinical sittings

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Background:

The adoption of simulation as a teaching strategy in undergraduate nursing education is gaining credibility. In simulation scenarios, students' are exposed to multiple stressors that limit their ability to learn (Nielsen and Harder, 2013) and significantly moderate their performance (Beischel, 2013).

Objectives:

The purpose of this study was to determine how undergraduate nursing students appraise simulation activities and to identify how anxiety affects clinical performance.

Design:

Explanatory sequential mixed methods.

Methods:

A total of 33 undergraduate nursing students (31 females and two males) participated in two emergency scenarios with a professional actor. OSCE checklists were used to evaluate clinical performance, and the Stressors Appraisal Scale (SAS) was used to measure students' anxiety before and after the emergency scenarios. Students' insights into the relationship between anxiety and educational outcomes were obtained through 12 focus group interviews.

Results:

Prior to the simulation scenarios, the pre SAS was a mean of 1.4. The majority of the students were psychologically threatened ($n=26$) and only seven students were challenged. The performance scores did not differ significantly between the two groups ($p = .54$), but there was an indication that challenged students scored higher than those who were threatened. After simulation, the SAS had a mean of 1.55, an increase from the pre SAS, which indicate they were more threatened after simulation. There is no significant different in anxiety pre and post simulation ($p < .715$); however, the more students were anxious before the simulation, the more likely they were to feel anxious after the simulation ($p < .001$). Additional themes related to 'not being prepared' and 'staying still' emerged from the qualitative data.

Conclusion:

Participants' appraisals of simulated scenarios have an influence on their clinical performance in simulated settings. Our findings suggest that insufficient preparation for emergency situations appears to increase students' anxiety.

O06

Advancing clinical skills education through the human factor; good communication makes sense!

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Patient-centred communication is a fundamental component of nursing and enables the growth of a positive nurse-patient relationship¹. Student nurses use verbal communication skills whilst undertaking patient health assessment. However, are their explanations understandable to the patient?

This pilot project was underpinned by the 'human factor' using Mask-Ed. Mask-Ed is a simulation teaching method which allows students to interact with an academic who is disguised as a patient. The Mask-Ed character portrays humanistic behaviours that encourages patient centred care and enhanced communication skills².

A qualitative methodology was undertaken with a sample of 50 student nurses. Students were provided with the opportunity to reflect upon their knowledge base and confidence before the session, using a pre-questionnaire. On arrival of the character, the students carried out a health assessment and reflected upon the patient's lifestyle. The patient asked the students questions in a way that facilitated learning. Following the session the academic de-masked and gave feedback on the interpersonal interactions associated with the correct explanation and terminology. A post-questionnaire evaluated evidence of learning and student confidence; further thematic analysis was used to compare the results from the pre and post questionnaire.

The students' confidence in giving accurate explanations to the patient had improved, owing to the effectiveness of the masked educator's facilitation. The human factor associates with present-day thinking around simulation and contextualisation of health care assessment³.

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O07

'Bored to Board': Engaging students in learning about medicines management

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Medicines management is a fundamental aspect of healthcare and is a source of risk to patients. Medicines related safety incidents are common, with over 150,000 incidents reported in England between 2013-2014 (National Institute for Excellence in Health and Care, 2015).

Senior nursing students consistently express high levels of anxiety in relation to this aspect of their role. They are concerned about their transition to becoming registered nurses and the expectation that they will be competent in medicines administration. They report a lack of time to have supervised practice in placement and lack confidence in their knowledge and skills.

As educators we constantly explore new ways to engage learners in clinical skills education that captures their attention, inspires confidence and enhances knowledge and skills. Games are used to stimulate active learning in a way that is both challenging and enjoyable. At the same time they encourage deep learning through discussion, debate and reflection on practice (Baid and Lambert, 2010).

We therefore devised a board game relating to medicines management as an engaging and fun way for students to enhance their learning in a subject that they perceive to be important but unexciting.

A formal evaluation has now been undertaken and the findings will be discussed in light of the use of a board game as a meaningful educational strategy.

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O08

Finding One's Professional Identity: The Influence of Clinical Handover

Georgina Willetts

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The functioning and interactions of nurses with themselves and others is important as it affects care delivery, clinical competence and workplace culture. Nurses' social identity is central to this functioning.

In this presentation the results of recent doctoral research are reported. Nurses' social interactions with themselves and others during clinical handover were studied. The project utilized ethnographic principles to understand the performance of professional identity in the professional interplay of nurses within this work context. Social Identity Theory was the theoretical basis of the study.

Research Aim:

The overall aim of this project was to investigate elements that constitute the performance of nurses' professional identity within a specific work environment.

Research Methods:

- Video recordings of both clinical nursing handover and unit team meetings (multidisciplinary) (n=4)
- Focus group interviews with the nurses who participated in the handover (n= 10) where the group was asked to describe the clinical handover meetings in which they had been involved
- Individual interviews with nurses (n=4) to describe the clinical handover and the multidisciplinary meetings in which they had been involved.

Results:

Interactions between nurses with themselves were different to the interactions of nurses with others. Significantly, this project found that group clinical handover provided a site for both the performance and the on-going social construction of the nurse's professional identity. In contrast the multidisciplinary team meeting only provided a site for the performance of nursing professional identity.

Discussion and Conclusion:

The findings revealed that there is an importance in professional activities where nurse-to-nurse communication, connection, and social expression are central for the development and construction of professional identity. This has produced new insights, which can inform practice development.

O09

Paediatric Nursing Content in Undergraduate Curricula

Beverley Copnell, Lisa McKenna

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Healthcare professionals caring for children require specific clinical skills to meet their unique physical, psychosocial and developmental needs, but there is little consensus internationally on how and when these skills should be acquired. In Australia, stakeholder groups contend that undergraduate programs should prepare students to practise at a specified minimum standard. Whether and how they do so is unknown.

The aim of this descriptive exploratory study is to examine how, and to what extent, curricula of Australian undergraduate nursing programs prepare students to care for children.

All undergraduate degree programs leading to initial registration as a nurse were eligible for inclusion (n=34). Double degrees and graduate entry programs were excluded. Program coordinators were invited to take part in individual, semi-structured interviews.

Initial analysis found that 12 programs (35.3%) included discrete child-focused courses as core content, while 8 (23.5%) included discrete content as electives only, and 14 (41.2%) had no discrete content. Two offered both core and elective courses.

This study will identify facilitators and barriers to the teaching of paediatric nursing content, the first to address this using a qualitative approach. The findings will have the potential to inform paediatric curriculum content in nursing as well as other health disciplines.

O10

Training Actors for Interprofessional Role Play

Sue Murphy

University of British Columbia, Vancouver, BC, Canada

Context:

In preparation for clinical placement, interprofessional students participate in an encounter with actors, to practice communication and conflict resolution. Actors must authentically portray a patient, a preceptor and a health care team member, but rarely have a health care background or understanding of the roles of different health care professions, interprofessional teamwork, or clinical settings.

What we did:

Actors were given preliminary information about their roles, the scenarios, and purpose of the activity. This was followed by a workshop including lecture, demonstration, and role play with feedback. A final rehearsal was held immediately prior to the encounter.

What we found:

Understanding the role of each health profession, the context of practice and the concept of Interprofessional care was needed to facilitate authenticity in role play. Actors who had participated previously were able to peer-mentor newer actors which was beneficial. Actors added valuable suggestions for playing the roles. Portraying 3 different roles in a short space of time proved challenging.

Implications:

Training actors for role play must ensure the clinical context and the roles of different professions as well as the purpose of the exercise itself are understood. Time for discussion and practice and mentorship from experienced actors is helpful.

O11

Teaching Professionalism in the Clinical Context: Key Themes

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Context:

Clinical educators play a key role in the development of professionalism competencies which are challenging to learn in an academic setting, such as communication, collaboration, respect, teamwork, maintenance of professional boundaries and development of an effective therapeutic relationship. Discomfort with the process of teaching and evaluating professionalism and lack of awareness of unintended "messaging" in a clinical setting can lead to a situation where professionalism may remain largely ignored or ineffectively remediated.

What we did:

A literature search was done to identify key themes in the development of professionalism and professional competence which were relevant to the clinical setting.

What we found:

Six key themes were identified for the development of professionalism competence and for moving professionalism into a central role in the clinical rotation:

1. making development of professional competence explicit in learning objectives and the learning plan;
- 2) role modelling;
3. explicit discussion of the hidden curriculum;
4. provision of feedback related to professional behavior;
5. professional identity formation and
6. documentation and evaluation.

Conclusion:

This work is still in progress. The aim of this presentation will be to generate discussion and feedback on these key themes and their practical application and implementation in the clinical setting.

O12

Designing Evidence Based Reasonable Adjustments in the Assessment of Clinical Skills for a Student with a C5/6 Spinal Injury

Liz Fitzmaurice, Dinesh Palipana
Griffith University, Gold Coast, Australia

Introduction:

In 2015 Griffith University School of Medicine re-admitted a student with a C5/6 Spinal injury in Year 3, of a four-year MD programme. Review of the literature found few details relating to the designs of assessments, within Medical Schools for students with significant disabilities. Therefore, the School has been innovative in its design and delivery of evidence based, equitable clinical skills assessments for the student.

Methods:

“Reasonable adjustments” were designed for all clinical skills assessments, in collaboration with the student, disability services and an external expert from another University.

Results:

Reasonable adjustments relating to examination of clinical skills were undertaken using a student, patient and task specific approach. Mixed methodology was used to evaluate the process, gathering both quantitative and qualitative data. Evaluation of the data, shows a high degree of student and examiner satisfaction with the OSCE process as well as quantitative proof of student success.

Conclusion:

Designing evidence based assessments of clinical skills incorporating “reasonable adjustments” for students with significant physical disabilities is possible, using an authentic approach. The success of the assessment process, is reassuring for Medical Schools transitioning to selection processes reflective of the diversity of the population served.

Authors:

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O13

Transitioning from introductory to graduate practice in a Bachelor of Nursing Science Program

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Graduates of a Bachelor of Nursing Science(BNSc) Program need to be confident, ethical and accountable practitioners, who can work individually and collaboratively in order to deliver quality health care. To achieve this, the BNSc was redesigned in 2016 around 3 scaffolded phases of the curriculum—introductory, developing and transitioning/graduate.

A *Clinical Practice Learning Framework* (CPLF)

was developed to support these three phases in the curriculum. It was informed by the work of Fenton & Royal (2015), Australian regulatory standards and the National Standards set by the Australian Commission on Safety and Quality in Health Care. The framework includes seven major elements: professional values; effectiveness; communication and partnership; assessment; care planning and management; safeguarding and quality; and leadership. These are incorporated into the learning process across clinical learning spaces including laboratories, simulation suites and clinical practicum. The framework departs from a skills based approach to an approach to learning that appreciates the complexities of practice.

The CPLF is currently supporting the ‘introductory’ phase of the redesigned BNSc program. We will report on the preliminary findings of the CPLF’s implementation and its potential for implementation throughout all three phases of the curriculum.

O14

Workplace expectations of medical students

Scott Oliver, Kathleen Collins
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Recruitment and retention of doctors poses a significant challenge: many junior doctors express dissatisfaction with working arrangements; and almost half of those completing the Foundation Programme do not continue immediately into further training, with many leaving the UK and/or clinical practice altogether. While undergraduate medical education in the United Kingdom includes training in clinical, non-technical and professional aspects of clinical practice, students' knowledge and understanding of the workplace sits mainly within the hidden curriculum, and they rarely receive formal schooling in the practicalities of working as "clinical employees" within large organisations.

We hypothesised that some of the difficulty in recruiting and retaining junior doctors could relate to a misalignment between students' workplace expectations with their subsequent postgraduate experiences. We explored the workplace expectations among University of Dundee, Edinburgh and Glasgow medical students, who had recently completed clinical attachments in our hospital, using a structured questionnaire.

We received 21 responses. While most students intended training in secondary care specialties, all provided descriptions of ideal workplaces akin to a stereotype of primary care. Notably, many aspects of the idealised workplace seemed easily achievable for British hospitals, for example the provision of tea and coffee for staff out of hours. Students appeared unaware of the corporate aspects of becoming employees, and considered that their (student) experience while attached to a ward would be identical to that of junior doctors who worked there. Students appeared uncertain that they could successfully align their hopes for a family life and work/life balance with their career aspirations.

Students' expectations of the workplace are misaligned with reality of secondary care clinical practice in the United Kingdom. Many elements of students' idealised workplaces are realistically achievable, and could begin to address the current recruitment and retention crisis in the medical workforce.

O15

Cardiac Arrest Familiarisation: A novel undergraduate programme to aid student knowledge of, and inclusion during, in-hospital cardiac arrests

Gemma McGrory
NHS Lanarkshire, Lanarkshire, UK

Within NHS Lanarkshire, University of Glasgow undergraduate students attend three acute hospital sites for medical attachments. Each attachment offers acute medical receiving experience, ward experience, and out-patient activities. There is limited formal exposure to resuscitation training and cardiac arrest experience beyond what is experienced during the undergraduate core curriculum in the pre-clinical phase, where Basic Life Support (BLS) is introduced. Students do not receive further training in resuscitation skills until shortly before graduation. Evidence suggests that retention of BLS skills is poor after a short period of time¹ and that repeated exposure to training is both beneficial and desired by students².

This cardiac arrest familiarisation programme has been designed to familiarise 4th year undergraduate students with BLS, the cardiac arrest team/trolley at the beginning of their clinical attachments with the aim of increasing student inclusion in the cardiac arrest process, thereby promoting experiential learning. The programme includes practical revision of BLS, a video of the cardiac arrest team/process, as well as emergency trolley familiarisation. Questionnaires distributed to the students before the session indicate that retention of BLS, knowledge of the team/process/trolleys is poor, and confidence is low in terms of participating in BLS. Questionnaires distributed at the end of the attachment demonstrate an improvement in knowledge and confidence across all areas. This study has demonstrated that taking part in a cardiac arrest familiarisation programme increases student confidence in taking part in a cardiac arrest, and increases knowledge of the cardiac arrest team/process/trolley, promoting experiential learning.

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O16

Self-regulation strategies and behaviours used by Near-Peer Nurse Teachers: A qualitative study

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Teaching is widely accepted as a role of undergraduate nurses in Australia with nursing faculties providing opportunities for students to gain teaching experiences, with near-peer teaching (NPT) as an example. There are many reported benefits of NPT, including improved confidence and performance¹. However, little if any research has explored the behaviours and strategies used by NPT to regulate their performance as they transition from learner to teacher.

At Monash University, a teaching and learning unit is embedded into the curriculum for undergraduate nurse in their final year. The program provides the students with the opportunities to develop teaching skills preparing them for their future role as teachers once they graduate. The unit covers theoretical aspects of teaching and learning, developing a session plan and conducting a teaching session on vital signs for first year undergraduate nurses.

This presentation reports on a qualitative study, using semi-structured interviews, to determine the reported self-regulatory behaviours and beliefs students employ as they transition from learner to teacher. Findings will report on how students describe their transition from learner to teacher, motivational, metacognitive and affective behaviours used to enhance performance and reported behaviours and beliefs that impact on this transition. Findings will directly inform health professional curricula, particularly around teaching students to self-regulate their learning and will provide further opportunities for students to develop greater understandings of how self-regulation can improve both near-peer teacher and near-peer learner performance.

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O17

Interprofessional communication and medication safety: Nursing, pharmacy and medical graduates' experiences and perspectives

Tracy Levett-Jones, Amanda Wilson,
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Medication errors are the second most prevalent cause of adverse patient incidents in Australian hospital settings. Although numerous strategies to address this patient safety issue have been implemented, the critical relationship between interprofessional communication (IPC) and medication safety has received limited attention. The aim of this presentation is to report the perspectives and experiences of recently graduated, currently practicing Australian nurses, pharmacists and doctors in relation to IPC and medication safety. Sixty-eight graduates from three Australian states participated in focus groups. Thematic analysis of transcripts was conducted using an iterative process.

The findings from this study illustrated how knowing about and valuing the skills and responsibilities of other team members, and respecting each person's unique contribution to the work of the team can lead to more effect communication and collaboration in the context of medication safety.

Both IPC and collaboration are critical to safe medication prescribing, dispensing and administration. However, recurring and pervasive challenges to achieving true collaboration exist in practice. This study demonstrated the need for improved preparation of graduates for their roles as members of an interprofessional team through deliberate, structured and meaningful interprofessional clinical education initiatives.

O18

Investigating nursing students' transition from novice learners to motivated undergraduate nursing students using CASS as a reflective tool

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Undergraduate nursing student's choice of education is influenced by several factors. The CASS-methodology, has shown to promote students' reflection and an opportunity to investigate different aspects that can influence students' during ongoing learning activities.

To gain a deeper understanding of the process involved in the transition from novice learner to a motivated undergraduate nursing student by using CASS.

Thirty-five ungraduated students; in first and second of six semesters were included. Data were collected using techniques generating both quantitative and qualitative data. They were asked to complete the Big Five Inventory questionnaire to assess e.g., personality. CASS-questionnaires were distributed via mobile phones every third week. Students were also asked to participate in semi-structured interviews aimed to capture aspects and perspective on studying.

Students gradually seemed to understand which aspects of their education that motivated them to engage in studying to become a professional registered nurse. They also appeared to have gained insight into the potential value of reflecting on their own knowledge building capacities in relation to using CASS as a tool.

This study provides a better understanding of how students' understanding and motivation to study to become a professional nurse may be enhanced using CASS as a tool for reflection.

O19

Emergency Nurses' rationale for non-adherence to clinical practice guidelines: compensating

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Non-adherence to clinical practice guidelines has the potential to negatively impact patient outcomes. For example, the Australian Commission on Safety and Quality in Health Care reports a contributor to undetected patient deterioration is inconsistent monitoring of vital sign observations.

A grounded theory analysis of qualitative data from 79 emergency department registered nurses, generated the theory "Rationalising Transgression". This new theory explains how ED RNs account for their noncompliance. It was found that this cohort employs three main strategies to rationalise noncompliance; Compensating, Minimalizing, and Trivialising.

Compensating, comprising two tactics, occurs when nurses believe they are compensating for errant behaviour by adding value to the patient's outcome. The first tactic conceptually labelled the 'Value of Time', was when the cohort examined indicated that time was better spent doing more important tasks for the patient than by accurately completing vital sign observations. The second strategy, 'Experience Counts', was identified when the value of professionally gained qualifications was purported to be of more use when it is applied to other more 'seemingly important' tasks than vital sign requirements.

Findings from this research provide insight to the barriers educators must overcome if they are to optimise the translation of best evidence to best practice.

O20

'I was yelled at and intimidated and treated unfairly'. Nursing students' experiences of being bullied in clinical and academic contexts

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Aim

This presentation will profile findings from a study that explored nursing students' experiences of bullying in clinical and academic contexts.

Background

Nursing students are identified as a group who are at particular risk of bullying. Numerous studies have examined students' experiences of bullying in clinical contexts by qualified nurses, however, there has been far less attention to the bullying that occurs in academic settings where the perpetrators are university staff and other students.

Design

The qualitative findings presented in this paper form one component of a mixed methods, multi-site study that examined the extent and nature of bullying in one cohort of nursing students. A convenience sample of 35 first, second and third year undergraduate nursing students from one semi-metropolitan Australian university participated in semi-structured interviews.

Findings

Participants described multiple examples of bullying occurring in both clinical and academic settings. Perpetrators included clinicians, facilitators, academics and fellow students. Bullying ranged from incivility to physical attacks. The impact of the bullying was profound; it caused many of the participants to feel anxious and distressed; it undermined their confidence and perception of competence, and often lead them to question their career choice.

Strategies described by participants to cope with or manage the bullying included avoidance, trying to 'just survive', and seeking support from trusted academic staff, family and friends. No episodes were formally reported.

Conclusion

Bullying remains a pervasive phenomenon occurring in both clinical and academic contexts. Students are, in many respects, a vulnerable and disempowered population who often fear the consequences of making a formal complaint. Thus, reporting structures and support strategies need to be re-examined, and resilience training is imperative.

O21

I Know How You Feel - Aging Simulation for Promoting Empathy in Medical Students

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Introduction

Medical students must develop the optimal attitudes for providing excellent care to older people. The simulation described here is a developing project which aims to promote empathy for challenges experienced by older patients.

Intervention

During the Geriatric Medicine rotation in Fife, University of Edinburgh medical students undertake low-fidelity simulation using simple physical props to simulate physical limitations:

- Impairments of the Special Senses e.g. reading instructions while wearing spectacles altered to simulate homonymous hemianopia, cataracts or diabetic retinopathy;
- Mobility Impairments using a commercially available ageing simulation suit to limit joint flexion and modify gait;

During a final structured debrief, the students reflect on their experiences and are encouraged to consider how their clinical practice will now alter.

Evaluation and Discussion

The simulation is now integrated into the students' monthly teaching programme following positive feedback. It is a simple, low-cost session which students find enjoyable and insightful, with responses suggesting greater empathy for older patients following the simulation. The next step is to formally assess students' non-technical skills following participation in the simulation tutorials using qualitative methodology (e.g. ward observations). The simulation will continue to be refined in order to strive for more effective means to promote empathy for older patients.

O22

How does undergraduate near-peer teaching impact graduate practice?

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Near-peer teaching (NPT) is increasingly being used in health professional education. Various benefits have been attributed to its inclusion in undergraduate curricula, partly through social and cognitive congruence afforded and playing a key part in assisting students develop teaching and facilitation skills through deeper learning experiences. While there is potential benefit of these skills for later careers, little research has evaluated impact of NPT on graduate teaching practice.

At Monash University, a unit focused on teaching and learning for final year undergraduate nursing students was introduced in 2009, and two years later in 2011 for paramedics, who developed an informal semester-long NPT program for senior students. Both programs aim to ensure that students have opportunities to develop teaching and mentoring skills enabling them to effectively fulfil future educational roles. The paramedic program uses NPT in all clinical units. Knowledge and skills include: BP, ECG interpretation, anatomy, and defibrillation. The nursing unit covers practical teaching aspects such as writing learning outcomes and lesson plans, and culminates with direct peer teaching, where first-year students are taught vital signs measurement in clinical nursing laboratories by the senior students.

This presentation reports on a mixed-methods study, using semi-structured interviews and survey, designed to examine the extent of teaching activities undertaken by new graduates, how NPT experiences impacted on their graduate roles, and how the education program could be enhanced. Findings indicate graduates are required to undertake teaching for different health professionals early in their employment and that NPT experiences underpin and inform this engagement. Findings will directly inform future curricula, particularly undergraduate, around preparation for practice-based teaching by health professionals. The study also completes the quality evaluation cycle on the implementation of near-peer teaching in these disciplines.

O23

Longitudinal Patient Care as a Teaching Paradigm for Medical Students

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Background

This study investigated the impact of Patient Advocate Connection, a longitudinal community service-based learning program, on medical students at Albert Einstein College of Medicine in the Bronx, New York. This program paired students with community members with chronic health problems and complex social circumstances. Its mission is to teach the importance of social determinants of health, prevent the well-documented loss of empathy during medical education, and develop critical social and advocacy skills currently lacking in the medical school curriculum.

Methods:

Anonymous reflections were compiled from a subset of the first through third year students from 2012-2015 (n=45) through semi-annual in-person written reflections, annual surveys, and exit interviews. Students reflected on their program experiences and its influence on their skills and clinical work. Responses were independently coded by two researchers.

Results:

Through reiterative thematic coding, a coding scheme consisting of four primary codes and 21 subcodes was developed; primary codes include attitudes, skills, knowledge, and suggestions for program improvement. Statements were assigned one or two subcodes by each researcher. Preliminary analysis yielded 70 percent of statements with at least one agreed upon subcode ($\kappa=0.60$). Out of 504 instances of subcode agreement, the most frequent subcodes in descending order were: 'skills - insight into patient perspective' (16.7%) and 'skills - relationship building' (8.7%); 'skills - communication' (8.1%), 'knowledge - barriers to care' (7.9%), 'attitudes - frustration' (7.3%), and 'knowledge - understanding social context' (7.1%).

Conclusion:

Preliminary data showed that students perceived an increased awareness of social context in regards to healthcare and improved patient interaction skills. Students felt they developed greater insight into their patients' lives and the health barriers they face. Ongoing efforts include reaching final consensus on all statements using a third-party coder and developing a narrative summary of the data.

O24

Allied health teams and Inter-professional assessment of students: a natural progression?

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In allied health (AH) education there is increasing focus on inter-professional (IP) clinical placements to allow students to develop collaborative skills and AH students are increasingly being placed in non-traditional, IP settings. There is little literature on student assessment in these settings. Holt et al (2010) suggest that as practice placements become scarce, inter-professional assessment (IPA) will become a major source of feedback for students. IPA, where professionals have input into the assessment of students from other professions, could be seen as a natural progression (Dearnley, Walker & Fairhall, 2010).

When we developed our 'generic assessment form' and inter-professional assessment (IPA) process for a final year 'non-traditional' IP placement in Vietnam for physiotherapy, occupational therapy, speech pathology, and podiatry students, there was significant commonality across the professions (Tan, Flavell, Ferns & Jordan, 2015, Appendix 1). This 'generic assessment form' was based on the competency requirements for each individual profession, and was developed using a similar process to that used by Morison & Stewart (2005). Our team of clinical educators from four professions were involved in development of both the assessment tool and the assessment process. Collaborative review of the first year process was used to refine the process for subsequent years. A qualitative research project using focus groups with clinical educators who had been involved in supervising students on the Allied Health inter-professional Vietnam placement over the years 2012-2016 was then conducted.

This paper explores the strengths, challenges, and outcomes of this inter-professional approach to assessing undergraduate students, from the perspective of the clinical educators, and considers the potential for application of this approach to a broader range of non-traditional placements. It also discusses models of inter-professional assessment as an innovative way of preparing AH professionals for their future work.

O25

Does peer assessment during clinical examination teaching improve understanding of technique and reduce exam anxiety for medical students?

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Background:

Peer assessment is increasingly used for teaching medical students but research often focuses on peer marking of written assignments. Students report peer assessment exercises improve their understanding of the assignment, their reflective ability and the quality of their work. (1, 2)

Medical exams can be stressful, especially the OSCE testing clinical examination technique. There is evidence that engagement with marking criteria improves a student's ability in exams (3) and studies suggest the experience gained from using a mark scheme during peer assessment improves a candidate's knowledge of what is required to score well. (4)

This study investigates whether peer assessment of clinical examinations enhances learning, improves understanding of the marking process and improves confidence before exams.

Intervention:

Medical students were issued with mark schemes and instructed on their use. They observed their peer performing a clinical examination of a body system in practice exam conditions and marked them according to the mark scheme, including on skills such as communication and professionalism. Students completed a questionnaire of written and Likert scale responses to illustrate whether they felt the process increased their understanding of marking criteria or the quality of their examination technique.

Results:

Qualitative and quantitative analysis is in process.

O26

**Tough times don't last; tough people do -
Teaching resilience for the clinical setting**

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Research demonstrates that the persistent and high stress experienced by health professional students is disproportionate to their resilience and capacity to adapt to stress and adversity. This imbalance can ultimately lead to burnout and limit the capacity for empathy, which importantly can impact patient care. Building “resilience” in health professional learners is becoming a key concern for many health professional programs, due to rising rates of mental health issues seen in students. Studies show that contextual factors such as discrimination, bullying, harassment, and cultural expectations – both real and perceived - can lead to significant psychological distress in medical students and other health professional learners and result in anxiety, burnout and depression. This not only has an impact on learners themselves, but also on the provision of patient care. Training in resilience can be particularly important to prepare learners to participate effectively in clinical without adverse effects and to maximise learning. Resilience training is multi-faceted, ranging from specific strategies to manage stress to social support and development of coping mechanisms. This interactive workshop will explore some of the key concepts around developing student resilience for the clinical setting, both pre-, post-, and during clinical exposure. Activities such as case studies, discussion, and role play will be utilised to look at various areas of the curriculum where resilience training can be incorporated, and will investigate teaching strategies which can contribute to resilience development. Participants will have the opportunity to apply key principles of resilience training to their unique clinical setting, and to develop ideas for the inclusion of resilience training into their own curriculum.

O27

**A 21st-century transformation of the student
clinical assessment process at an international
medical school**

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Consistency in assessing medical students' clinical performance is challenging. Significant variability has been demonstrated even across the same institution. [1]As an international medical school with 30 clinical sites in the United States and United Kingdom, these challenges are amplified.

As such, we synthesized the Accreditation Council for Graduate Medical Education's competencies[2] and the Association of American Medical Colleges' entrustable professional activities[3]to create a student clinical assessment form (SCAF) that systematically combines these structures. Our master SCAF has 10 categories, encompassing critical aspects of student performance. Detailed descriptions of each category and element of the rating scale are included, providing comprehensive descriptions of student performance, setting appropriate faculty expectations, and creating a framework for revising the institution's student assessment process.

The SCAF was vetted by key stakeholders and implemented by our educational technology and Registrar teams. Iterative challenges remain in electronic implementation, faculty development, and data collection. The quantitative and qualitative impact of this transformation in student assessment will be presented.

1. Alexander et al, “Variation and Imprecision of Clerkship Grading in U.S. Medical Schools,” *Academic Medicine*, Vol 87, No. 8 / August 2012
2. ACGME Core Competencies (<http://www.ecfm.org/echo/acgme-core-competencies.html>)
3. AAMC Core Entrustable Professional Activities for Entering Residency, Faculty and Learners Guide (<http://members.aamc.org/eweb/upload/Core%20EPA%20Faculty%20and%20Learner%20Guide.pdf>)

O28

Using immersive mental health simulation to facilitate learning across disciplines

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Immersive simulation as a learning strategy in mental health education is not common, with a tendency for simulation to focus on clinical and technical skills. Health curriculum does not routinely assist students to develop communication and assessment skills above a foundational level. Students may subsequently experience significant anxiety before they engage in mental health placements, as they anticipate managing clinically difficult or challenging conversations with people in emotional distress. This presentation will describe how mental health simulation is used as a key learning strategy in for a university wide mental health course and addresses learning needs of students in disciplines such as nursing, paramedicine, psychology, education, tourism, sports studies and nutrition.

Methods:

The Satisfaction with Simulation Experience Scale (Levett- Jones et al., 2011) and course evaluation data were used to evaluate the learning experience of students (n=131).

Results:

Ninety eight percent (98%) of student agreed or strongly agreed that the simulation was a valuable learning experience, with 93% reporting that they felt more prepared for a clinical placement and more confident.

Conclusions:

The presentation will share student perspectives, highlighting barriers and facilitators to mental health simulation, and will include recommendations for moving forward with multidisciplinary and interprofessional learning.

O29

Using simulation video to facilitate learning and assessment in mental health

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Reflection is recognised as a powerful part of the learning process that enables students to critically examine their own professional practice. Critical reflection is routinely used within the curriculum of a university-wide mental health course designed to address the learning needs of students in a variety of disciplines such as nursing, paramedicine, education, psychology, law, and nutrition. The reflection is linked to simulation and to assessment tasks. Students are provided with access to individual videos capturing their professional practice during the simulation experience.

Methods

A survey using the Satisfaction with Simulation Experience Scale (Levett- Jones et al., 2011) and course evaluation data were used to evaluate the learning experience of students (n=131).

Results:

Ninety-eight percent (98%) of students agreed or strongly agreed that reflection enhanced learning and 97% reported that simulation helped them to reflect on their clinical abilities. Ninety-seven (97%) of students reported that the reflection helped them to recognise their individual strengths and weaknesses in personal and professional domains.

Conclusion:

This presentation will share results from the evaluation study and will share students' perspectives on the value of both simulation and subsequent reflection. Key insights into reflection by students using personal videos will be offered, and will demonstrate the importance of personal reflection as an agent for transformative learning.

O30

Developing professional touch - transitioning from laity to health professional: A qualitative research synthesis using Threshold Concept Framework

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Background:

Students and practitioners are required to develop skills using touch in assessment, delivery of care and treatment. This context is often different from normal social interactions involving touch, requiring students to become both competent and comfortable with professional touch (PT). We propose that PT could be usefully viewed through a Threshold Concept Framework (TCF).¹

Although professional touch is a ubiquitous skill, there has been limited synthesis and guidance on developing competence in the existing literature.

Objectives:

- Identify features that assist/interfere with the development of PT and to explore them within TCF

Methods:

A qualitative research synthesis approach was used. A search of health professional literature was performed, limited to the last decade. Abstracts were read against criteria and a final set agreed. Analysis and synthesis were according to Major & Savin-Baden.²

Findings to date:

Twenty-one papers were included. There are frequent and complex examples of the characteristics of TCF, particularly the transformative, troublesome and reconstitutive nature of PT.

Initial Conclusions:

Touch may be the figurative 'glue' that binds other concepts such as empathy, respect and compassion. It maybe be a catalyst for wider transformation, shaping how we conceive 'care'. We hope to offer new insights and ideas for future practice and curriculum design.

References

1. Major CH, Savin-Baden M. An introduction to qualitative research synthesis: Managing the information explosion in social science research. Routledge; 2010.
2. Meyer JH, Land R. Threshold concepts and troublesome knowledge: Epistemological considerations and a conceptual framework for teaching and learning. Higher education. 2005 Apr 1;49(3):373-88.

O31

Tag team patient safety simulation workshop: addressing patient safety by building students' confidence and resilience

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Background

The National Safety Quality Health Service (NSQHS) Standards indicate a need for greater attention to the teaching of patient safety. However, preparing undergraduate students to become patient safety advocates requires the skills, confidence and resilience to manage challenging clinical situations.

TAG TEAM Patient Safety Simulation

In 2016 academics from four Australian universities were awarded an Office of Learning and Teaching grant to design and evaluate the TAG TEAM Patient Safety Simulation (TTPSS) Toolkit. The Toolkit includes simulation scenarios and educational resources that can be used to enhance students' skills in addressing recurring patient safety issues in everyday practice clinical situations. Two novel features of the TTPSS Toolkit are (1) flexibility - it can be used in multiple contexts without the needs for costly equipment; and (2) inclusivity of participation - the challenges associated with large student cohorts are overcome by participants 'tagging' in and out of the unfolding simulation with each student having an active role.

O32

Students inspired feedback osce - a pilot study

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Since 2008, year 2 medical undergraduate students at a tertiary foreign institution participate in the Formative Objective Structured Clinical Examination (fOSCE) annually. In 2013, a 1-minute immediate verbal feedback by the examiners was introduced in the fOSCE. Following feedback from both students and examiners, the duration was increased to 2-minutes in the fOSCE the year after. Students' comments were consistently positive on the instantaneous feedback but there was insufficient dialogue for effective feedback. Further discussion to motivate and engage students to practice clinical skills outside the classroom led to development of a Feedback OSCE (feOSCE) activity this year. Students were invited to contribute a list of tasks that they preferred assessed during the feOSCE to the clinical skills coordinator. There were 14 different tasks. Each student was assessed on two tasks. Each task took 15 minutes for completion (reading time of 2 minutes; task time of 8 minutes and feedback time of 5 minutes). Students completed the tasks successively with no rest time between them. As the tasks were different for each student, there was no necessity for quarantine. 86% (76 out of 88) of the students registered to participate in the feOSCE. Preliminary data analysis with the first group of 38 students who completed the activity indicated highly positive outcomes. All found the session beneficial for their learning; the verbal feedback useful and they were keen to have more such sessions in future. Additionally, they all expressed intent to use the feedback for improvement of their skills. There were also positive comments such as 'feedback was the best'; 'casual nature of such sessions makes it a fun learning experience' and 'I hope my juniors can have the same formative assessment also'. In summary, some small but significant changes made to the OSCE were perceived positively by these students.

O34

Medical student perceptions and understanding of the cardiac arrest team and equipment

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During medical school, students are instructed in cardiopulmonary resuscitation. Some universities require competence in Basic Life Support (BLS) until graduation, whilst others require medical students to achieve Immediate Life Support (ILS) competencies by the clinical phase of their training. Within NHS Lanarkshire, students from a local university attend for clinical placements, and they are required to be competent in BLS as a student, with ILS training occurring immediately before graduation.

Anecdotal reports from students and clinicians suggest that students on clinical placements have poor knowledge of the cardiac arrest team and equipment used in emergencies. This study sought to determine the level of knowledge that 4th year undergraduate students had regarding cardiac arrest teams and emergency trolley equipment, through the use of a questionnaire which asked the students how much experience of attending cardiac arrests they had, and asked them to identify cardiac arrest team members and equipment from photographs.

Overall, previous exposure to cardiac arrests during hospital placements was low, with <20% having been at a cardiac arrest, with none having actively participated in an arrest. The students perceived that they had a lack of knowledge and confidence regarding cardiac arrests. The students struggled to identify cardiac arrest team members such as the anaesthetist or person in charge of defibrillation, which we posit is due to their previous limited experience of cardiopulmonary resuscitation. They also struggled to identify basic emergency equipment such as an emergency trolley, defibrillator or guedel airways. We conclude that offering more advanced programmes of cardiopulmonary resuscitation to students at the clinical stage is beneficial, as better knowledge and understanding of cardiac arrest teams and equipment would enable students to actively pursue appropriate learning opportunities during clinical placements.

O35

Hope, Engagement, and Self- directed learning among medical students

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Background:

Our aim is to (dis)prove the association of engagement in study (E), and/or Hope (H) with readiness for self- directed learning (SDL) among medical students.

Methods:

A self- report questionnaire comprised of demographic data, Adult Hope Scale (AHS), the Utrecht Work Engagement Scale (UWES) , and the Self-Directed Learning Scale (SDLS) was filled by 280 students at RAK Medical & Health Sciences University, UAE in 2016.

Results:

Sixty one percent of the sample were females, and the mean (SD) age was 20.65 (1.9). Around 52% of the sample were Arabs where the rest were of different nationalities. The AHS includes 2 subscales Agency and Pathways. The mean (SD) score of H- Agency, H- Pathways, and the overall Hope were 21.97(5.82), 22.69 (5.47), and 64.51 (12.83) respectively. Engagement comprised of 3 subscales: vigor, dedication and absorption. The mean (SD) score of E- Vigor, E Dedication, E- Absorption and the overall E score were 20.89(6.07), 18.74 (5.29), 21.26 (6.13), 60.89(16.42) respectively. The mean (SD) score of SDLS was 36.15(7.22).

Female students had significant higher scores of H- Agency and the overall Hope scale. Only E- Dedication was higher among Arab students. Hope and its subscales, engagement and its subscales and SDL are positively correlated. In stepwise linear regression only the overall Hope, H- Pathway, and E- Vigor predicted higher readiness to SDL controlling for sex, age and nationality.

Conclusion and Recommendation

Hope and engagement predicts SDL. Improving the students positive psychology could increase their readiness to self directed learning.

O36

Empathy, self-efficacy, hope and lifelong learning among medical students

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Background:

Our aim is to (dis)prove the association of Empathy (E), Self- efficacy (SE), and/or Hope (H) with readiness for lifelong learning (LL) among medical students.

Methods:

A self- report questionnaire comprised of demographic data, the General Self- Efficacy Scale, Academic Hope Scale (AHS), Davis Inter-professional Reactivity Index to measure Empathy (IRI) , and the The Revised Jefferson Scale of Physician Lifelong Learning (JeffSPLL- Medical Student Version) was filled by 221 students at RAK Medical & Health Sciences Univerity (RAK MHSU), UAE in 2016.

Results:

Sixty six percent of the sample were females, and the mean (SD) age was 19.94 (1.71). The IRI was divided into 4 subscales: (Perspective taking, Fantasy Scale, Empathetic Concern, and Personal Distress). The mean (SD) score of IRI was 67.3(12.54). For SE, the mean (SD) score was 34.1(9.01). The mean (SD) score of AHS was 28.92(5.54). The mean (SD) score of JeffSPLL- Medical Student Version was 40.76(6.8). Female students had significant higher scores of IRI and, SE whereas Non Arabs students had higher IRI scores than Arab students. Self efficacy, hope, and LL were significantly and positively correlated. In stepwise linear regression empathy, self efficacy and hope predicted lifelong learning controlling for sex, age and nationality.

Conclusion and Recommendation

Empathy, hope and SE independently predicted readiness to LL. Improving the positive psychology of the medical students increases their readiness to lifelong learning.

O37

The Immersive Community Communication project

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It is essential that during the first contact a health care professional demonstrates good interpersonal skills between themselves and the patient that will foster a trusting relationship and promote the values of the 6Cs (Clark 2014). The importance of effective communication is further stressed by The NMC (2008), which emphasizes that the information that people need or want to know about their health should be shared with them in a way that they can understand. Students need to practice and understand the consequence of communication. This is probably the most efficient means of developing their skills. However, they need to practice in a safe environment.

The Immersive Community Communication project is a multi-disciplinary resource that aims to develop communication skills through a simulated visit to a patient's home. The learning resource enables students to explore a range of perspectives in the community setting, such as the perspective of the practitioner, an unpaid carer or relative and the patient in the community healthcare sector. This experience will provide students' with an opportunity to practice communications skills, and also reflect on what it is like to be on the receiving end of varying degrees of communication. The resource will be evaluated by seeking students' perception of the usefulness of the resource; this will be a first step towards developing a more complex resource to be incorporated into the inter-professional health care curriculum.

O38

A 'mind's-eye' approach to assessing situational awareness

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Background

A half day inter-professional human factors (IPHF) course was provided over a two week period during August 2016 in a large district general hospital. In this course, awareness of non-technical skills (NTS) was explored via simulation of medical emergencies. As part of this, the most experienced participant was blindfolded in a random selection of scenarios in an attempt to enable the participant to use a 'mind's-eye' approach to assessing the patient.

Methods

Over a 2 week period, we blindfolded the most experienced participant in 6 out of 28 scenarios. They entered the scenario at an appropriate time and assumed a role. This approach enforced the use of mental processing, rather than physical involvement in the situation, and ensured increased focus on non-technical skills.

Results

Using this blindfolding approach ensured participants identified themselves, and their skill set, to the team leader. The blindfolded participant focused on the whole situation, directing questioning and statements to specific participants with concise closed loop communication. Interestingly, it magnified participant's ability to lead and exhibit clear situational awareness.

Conclusions

Using this blindfolding method was a fantastic way of demonstrating whether or not the participant displayed good situational awareness and clinical decision making. It will be used in future courses.

O39

Giving you a 'Taste of on call': Is it a useful way to assess prioritisation skills?

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Background

Being 'on call' is a daunting prospect for most new doctors. A mock 'on call' was provided for 5th year medical students prior to commencing work as a foundation year 1 (FY1) doctor.

Aims

To evaluate its usefulness and to assess task prioritisation.

Methods

21 5th year medical students underwent a 30 minute mock on call session between 3 simulated wards. They carried a pager and were given an initial task list. During the session, they were paged for a variety of tasks including venepuncture and to assess unwell patients. Immediately afterwards, the students received inter-professional feedback. Evaluation forms were emailed to participants.

Results

76.2% returned the evaluation form. Despite the experience being stressful, 100% rated the experience as useful. Many commented it was a useful way of experiencing how to prioritise tasks. Respondents suggested longer sessions, or run two sessions, one before and one after clinical shadowing of FY1 doctors, to see if they had improved. 100% rated the quality of the feedback as excellent or good and liked that it was inter-professional.

Conclusions

Students found this mock on call session useful in gaining experience in prioritisation of tasks when on call. In future, sessions will be of longer duration based on the feedback.

O41

Experiential Learning About Medication Adherence

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Background:

Medication nonadherence contributes to poor health outcomes and physician frustration. This study sought to determine if medical students' attitudes regarding adherence were altered by an experiential exercise.

Methods:

154 first-year medical students participated in an exercise demonstrating barriers encountered when taking prescriptions. Each student received a mock prescription to fill at a "pharmacy". Barriers such as limited business hours, insurance company denials, and frequency of medication administration were introduced. Students completed a retrospective pre-post survey assessing knowledge and attitudes surrounding medication nonadherence on a 5-point Likert scale (1=strongly disagree, 5=strongly agree).

Results:

Based on the experience, students had improved understanding of nonadherence (pre- 4.2, post 4.6, $p < .0001$) and perceived the term noncompliance as derogatory (pre- 3.1, post 3.5, $p < .0001$). Students were less likely to find it acceptable to label patients noncompliant (3.0 vs 2.7 p -value $< .0001$), and believe a patient should be able to follow medication instructions (2.3 vs 1.9, $p < .0001$), remember to take medications as prescribed (2.7 vs 2.3, $p < .0001$), and remember to take medications multiple times a day (2.4 vs 2.0, $p < .0001$). After participation, students' understanding of the difficulty of getting prescriptions filled increased (4.2 vs 4.5, $p < .0001$) as did their understanding of the challenges faced in taking medications as prescribed (3.8 vs 4.4, $p < .0001$).

Discussion:

These results demonstrate that participating in an active learning exercise simulating medication adherence can change medical students' attitudes regarding nonadherence and improve their recognition of barriers to adherence.

O42

The transition gap – the realities of preparedness for first time experiences of junior doctors

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Context

Risks to both patients and doctors have been demonstrated at times of transition (1). Apprenticeship models are considered key for preparation (2) but we do not know precisely what it is about apprenticeship, shadowing or other workplace activities that may best mitigate the risks of transition or what other transition gaps may remain. We chose to advance our understanding of the acknowledged difficulties of transition by considering the first time a newly qualified doctor undertakes high stakes activities with the responsibility of their recently acquired qualification.

What we did

We investigated three stages in the transition of final year medical students to early experiences of being a doctor as follows:

1. Anticipation of transition: lived experience of preparation for practice during final year assistantships, using data from learning logbooks, audio diaries and face-to-face interviews in 2013/4;
2. Lived experience in transition: self-reported 'firsts' – using data generated by the same cohort of participants recording audio diaries and interviews during the early days of their transition in 2014; and
3. Reflections on transition: 'look back data' from medical graduates at the school's three local hospitals from focus group discussions in 2013/4 and 2014/5.

What we found

32 Keele medical students participated of whom 14 consented to be followed through their transition to FY1. In addition, 57 FY1 and 13 CT2 doctors participated in 10 focus groups.

Significant 'Firsts' have been categorised into: firsts which were anticipated and deliberately prepared for in medical school, firsts for which total prior preparedness is not possible, and firsts which were experiences of failure.

Conclusion

Medical schools can do a lot to prepare graduates. There will still be a transition gap in the stepped change in decision-making and responsibility attending the new identity of doctor.

O43

Type 1 and Type 2 decision making: Who makes what decision?

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Background

A half day inter-professional human factors (IPHF) course was provided during August 2016 in a district general hospital. In this course, awareness of non-technical skills (NTS) was explored via simulation of medical emergencies, with specific focus on Type 1 and Type 2 decision making.

Methods

The IPHF course participants included nurses, foundation year 2 (FY2) doctors, core trainees (CT) and consultants. Each simulated scenario was recorded for debriefing purposes. A random selection of these were reviewed independently by 2 faculty with analysis of the proportion of Type 1 and Type 2 decisions being made by the healthcare professionals involved.

Results

A mean of 5-6 decisions were made by each professional in each scenario. Type 1 decision making was evident in 60% of nursing, 65% of FY2, 49% of CT and 82% of consultant decisions. Type 2 decision making was present in 40% of nursing, 35% of FY2, 51% of CT and 18% of consultant decisions.

Conclusions

As expected, the majority of consultant decisions were Type 1, however interestingly, CT participants had the lowest proportion of Type 1 decisions. The reason is unknown, although a theory of overanalysing decisions due to lack of confidence and experience in a leadership role may explain this.

O44

Reconciling Professional Identity and Creating a Context for Authentic Rehearsal

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A grounded theory study was conducted to investigate role modelling by nurse academics. Participants included undergraduate nursing students from regional Australia and nurse academics from Australia and overseas. The resulting theory of "reconciling professional identity" describes the process that nurse academics go through to reconcile their clinical identity with their academic identity. Three categories comprise this theory: Creating a context for learning; creating a context for authentic rehearsal; and mirroring identity. The key findings from this study suggested that nurse academics create a context for authentic rehearsal in the process of role modelling for nursing students; clinical presence and clinical confidence are key factors that comprise nurse academics' clinical currency; nurse academics undergo a process of reconciling their clinical identity with their academic identity; and nurse academics shape nursing students' professional identity by role modelling behaviours that students mirror in their own lives. This paper will highlight the category of creating a context for authentic rehearsal which is comprised of two elements: clinical currency and safe-zoning. It will discuss how nurse academics draw on their clinical currency and provide a safe-zone for students as part of creating a context authentic rehearsal for students; developing professional behaviours essential to clinical practice.

O45

Assessing critical thinking in undergraduate nursing curricula: a literature review

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Queensland, Australia

Critical thinking is an essential part of nursing practice and a key domain of registered nurse professional standards. Critical thinking is vital for clinical decision making, and thus educators preparing clinicians for practice need to approach critical thinking development with excellence. This paper will present the evidence from the literature about the assessment of this vital cognitive skill. A review of the literature was undertaken using several databases including Scopus, CINAHL, and PubMed and the search terms nurs*, educat*, undergraduate, critical thinking and assessment methods. The initial search resulted in 497 papers. Following review of the abstracts, 63 full text papers were downloaded for deeper analysis. These papers were analysed using the Critical Appraisal Skills Programme (CASP) tools. The findings suggest that most research into the assessment of critical thinking of nursing students is outside of the nursing curricula. A significant research gap remains as few studies explore critical thinking as a formal assessment method and none do so from the broader curricula perspective. It is expected that participants will understand the current evidence regarding the assessment critical thinking in undergraduate nursing curricula, and learn more about the gap and research opportunities that exist in assessing this vital skill.

O46

Swipe right

Karen Donald^{1,2}, Jenepher Martin^{1,2}

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The last 10 years has seen an expansion of apps to support education in numerous fields of study including medicine, but most apps simply provide a means of accessing information, rather than engaging or connecting learners to teachers. In many commercial settings such as the banking and retail sectors and social networks real time updates via an app are a widely-used and accepted means of connecting to a service, an organisation or person. Given the ease of access to and familiarity with apps that “connect” in real-time why has medical education been so slow to embrace this technology?

The connectEd app was designed specifically to connect teachers and learners in real time in the clinical setting. This presentation provides an overview of the journey from concept to product. A demonstration of the user interface will provide the context for presenting the advantages of using this real time technology in the clinical setting to facilitate teaching. Equally, the difficulties encountered in testing the app in the clinical setting such as perceptions about patient confidentiality will be discussed. Future applications of the connectEd app will be presented.

O47

A pilot evaluating the connectEd app to facilitate teaching and learning in the clinical setting in real-time

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Background

ConnectEd is a newly developed and award winning app designed to connect teachers with learners and facilitate real-time teaching and learning in the clinical workplace. The app allows users to log and attend teaching events in real time. In a healthcare environment where patient stays are short the connectEd app will facilitate optimisation of all possible chances to teach and learn and increase the opportunities for students to customise and drive their clinical experience. A proof of concept pilot was undertaken to determine the usefulness and useability of this new technology in the clinical setting.

Method

Participants (medical students and trained clinicians from medicine, nursing and allied health) based at a Melbourne teaching hospital were invited to download (beta version) and use the app to log and book teaching events created and attended in real time. No restrictions were placed on what constituted a teaching event and might include an observation, an examination, technique or discussion. Learners receiving alerts determined if the event was of interested and booked a place. Users were supported by an onsite representative of the app development team, a Facebook page and website. Ethics approval was gained for this pilot

Results and future application

Detailed app usage such as users, the length and type of event and where events occurred will be reported on to demonstrate the usefulness of the connectEd app to facilitate teaching and learning in real time in the clinical setting. Qualitative feedback gained via the Facebook, website and onsite representative will be used to determine the useability of the app.

The potential benefits of the connectEd app to promote inter and intra disciplinary teaching at all practitioner levels will be determined and future applications of the app proposed.

O48

"Healthcare Designed in Dundee". The added value of "Design" in the space between science and art

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Healthcare education and clinical practice has a history based mainly on the scientific model of evidence based medicine. The true clinical interface between healthcare workers and patients/carer's is however a balancing act where quantitative evidence(science) and qualitative user experience(art) meets. Design introduces a new interface between art and science and a new way of thinking to facilitate genuine user engagement in the healthcare sector.

Dundee healthcare workers, Artists and Designers are challenging the traditional healthcare model and are actively creating opportunities for creative engagement between our newly formed Academic Health Science Partnership (University of Dundee + NHS Tayside) and the Duncan of Jordanstone College of Art and Design (University of Dundee). The City of Dundee is on a journey in Design, with the Dundee UNESCO City of Design 2016 stimulating new interprofessional ways of working and the V&A Museum of Design due to open in 2018, opening up a creative Design lead future for our City and beyond.

As part of this journey, we are exploring the true meaning of "Design" in a health and social care context. This presentation will share our journey and interprofessional activities so far and introduce the value of design thinking in relation to product design, service design, digital interactive design and environment design that is relevant to healthcare. The presentation will also introduce the added value that "Service Design" brings to our current Scottish Healthcare Quality Improvement strategies. We will introduce "Realistic Medicine" as the driver to a major shift in user centered medical thinking in Scotland.

O49

A Final year procedural skills learning package: was it worth it?

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New doctors transit into internship with varied levels of practical experience in procedural skills. To address this problem, many medical schools have introduced intensive skills training courses immediately prior to graduation.

This is a follow -up study using mixed methods to examine the impact of a pre graduation educational package, and the performance confidence of the same cohort(s), in practical skills as new doctors (interns)

We provided a three- day intensive educational package for our final year students during September of 2013, 2014, and 2015, just prior to graduation. The intensive course included: key situations that new interns were very likely to encounter such as attending to an emergency on the ward, identifying peripherally inserted cannulas (PIC lines) and naso- gastric (N/G) tube placement on X-ray and problems surrounding IDC insertion. Education was conducted as small group teaching sessions, and was designed to provide students with individualised practice, with real time feedback from experienced clinicians.

Summary of Results:

During the following years, (2014,2015,2016)at three months into internship, interns completed an anonymous electronic survey. They reported confidence in most areas, with the exception of emergency skills. Focus groups: Interns reported the benefits of the course and e.g. had identified situations where they were able to use their recent skills as new interns.

Discussion:

Results from our findings are important to patient safety and warrant further investigation. In particular, intern confidence in managing an emergency, as it is quite likely that the intern many be first on the scene, especially after hours.

Conclusion:

Interns perceived substantial benefit from an educational package specifically aimed at improving their practical skills immediately prior to internship. Knowledge and confidence in Pharmacy skills and the Management of procedural skills particularly benefitted from this educational package, therefore, assisting the transition of student skills knoweldge to practical application as a new intern.

O50

The influence of supervision, patients, and reflective practice on therapy student's emotional intelligence during clinical placements

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Background

Increasingly, emotional intelligence (EI) is a desired quality in healthcare professionals. EI skills are also critical to therapy students as they participate in their full-time clinical placements when working with patients in pain and emotional distress, as well as working effectively in healthcare teams. No previous research has investigated the key facets of clinical placements that influence students' EI abilities as they transition from student to practicing therapist.

Methods

This mixed methods, longitudinal study tracked the changes in EI scores over the final 18 month period of the undergraduate course of occupational therapy, physiotherapy and speech pathology students (n=296). Students were from four Australian universities. EI was measured using the Emotional Quotient Inventory. Interviews were then conducted with therapy students (n=24) to determine the key facets of clinical placements that were perceived to influence the changes in EI skills.

Results

Before students commence full-time, clinical placements, EI scores were significantly lower than the Australian Norms in the EI domains of self-expression, independence, problem-solving and stress tolerance. During placements, EI tended to shift in upwards and downwards directions in individual students with interviews showing that 95% of students agreed that clinical placements were a substantial influence on these fluctuations in EI skills. The key influences on EI scores during clinical placements were: supervision style, student's interacting with patients and reflecting and receiving feedback on EI abilities from clinical supervisors.

Discussion

Clinical supervisors are recommended to role model an array of EI skills to students, allow students to work closely with patients experiencing complex emotional distress, be emotionally in-tune and engaged with students, and to trust the students to work autonomously with patients in emotional turmoil. Supervisors are encouraged to reflect and give feedback to students on their EI skills, as well as practical assessment and intervention skills.

O51

Making a high fidelity low cost manikin. From idea to manufacture and sales

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After working for more than 10 years in a clinical skills department in the NHS I found many of our clinical skills manikins frustrating to buy/use/store and replace parts for.

Taking a simple idea we built a low cost, high fidelity manikin that met all our needs.

We would like to take you through the steps of conceiving an idea, making prototypes, perfecting designs, finding funding, registering patents to manufacture and beyond.

O52

An Innovative approach to Interprofessional Clinical Skills delivery in Emergency Medicine

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Introduction

Collaborative practice between paramedics and medical staff is essential in ensuring safe handover of patients presenting to both primary care and emergency departments. To encourage effective collaboration between paramedic students and medical students during their transition to healthcare practitioners, an innovative, practice-based simulation exercise, known as Interprofessional Clinical Skills (ICS) was developed at the University of East Anglia, UK.

Intervention

The ICS is a six-station, teaching-style OSCE, incorporating high and low fidelity simulation, human factors and values-based practice. Emphasising patient safety, effective handover of care and team working within the context of emergency medicine, the ICS promotes collaborative practice amongst undergraduate healthcare students.

Results

Of the 57 students from paramedic and medical disciplines, 100%* agreed with the statement "I enjoyed this session". Students also felt the ICS helped them build mutual respect (98%*), enhance understanding of roles (95%*), and develop as a collaborative practitioners (91%*).

Conclusion

The ICS is an innovative and enjoyable intervention for promoting collaborative practice between paramedic students and medical students in a simulated practice-setting. It also encourages students to gain core training in clinical skills, human factors and patient safety, within a safe, supervised environment.

* = % who strongly agree or agree

O53

Does improved knowledge of human factors impact on teamwork in the Emergency Department?

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Background

Whilst the importance of 'Human Factors' in providing safe care for our patients has been long recognised¹, it is still often perceived as a 'new' concept. Changes in Undergraduate medical curricula show that steps are being taken to rectify this however it remains poorly understood in the current workforce.

Aim

Improve teamwork by enhancing the understanding of Human Factors in our ED as we constantly strive to provide the safest care for our patients by maintaining a happy, motivated workforce.

Method

We will deliver a simulation session in our clinical working environment, involving the team working there; a combination of nursing and medical staff from a variety of grades.

Following this we will run a six week course of Human Factors workshops approximately 45 min each followed by another in-situ simulation².

The programmes of simulation and workshops have been widely advertised to the entire department and will be run at multiple times throughout the week to ensure maximal attendance possible.

Evaluation

To determine if the intervention has had an impact we will ask all participants to complete pre and post questionnaires to establish how effective teamwork is and their understanding of Human Factors. We also plan to run focus groups both pre and post intervention.

Conclusion

We will share the experience and results of pre and post questionnaire information of our planned educational intervention.

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O54

An Innovative Approach to the Transition from Medical Sciences to Clinical Sciences in a Geographically Dispersed International Medical School

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Medical education is moving increasingly off-campus, as more learners are participating in remote or distance clinical education opportunities. Universities with significant “off-campus” student learning struggle with connecting a geographically dispersed student body.

As an international medical school with 30 clerkship sites across the US, Canada, and the UK, it can be difficult for students to feel connected to each other and the University. The Medical Sciences campus for years 1 and 2 has devoted faculty, peer networks, geographically bound space, and a strong sense of community. Once students proceed to Clinical Sciences for years 3 and 4, they reported feeling disconnected.

Through our innovative Transition to Clinical Medicine Program (TCM), new Clinical Sciences students are divided into groups of 10 and assigned a recent graduate. They meet weekly for five weeks in advance of their first clerkship and then monthly for 10 months; meetings occur through video conferencing software accessible on smart phones, tablets, and computers, as well as via toll-free numbers. During meetings, students can ask questions about clinical cases, navigating medical school, professional development in the context of a written professionalism guide, and the residency application process. They take part in constructivist learning activities centered on United States Medical Licensing Examination (USMLE) Step 2 preparation through virtual cases, mock interviews, case write ups as well as didactic sessions and interactive games.

Since 2014, over 800 medical students have gone through TCM. A survey was created to assess students’ attitudes toward TCM, their sense of community among each other, and their connectedness to the University. Preliminary results are very positive, program evaluation is ongoing, and the most current data will be presented in detail. These results will help tailor TCM to meet student and University needs to support success during a critical transition in medical education.

O55

Which educational model best prepares students for successful procedural skill performance in Objective Structured Clinical Examination (OSCE)?

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The aim of the pilot project was to compare the performance of IV cannulation skills between medical students from two tertiary institutions and to uncover the most effective model of preparation to maximise competence in this skill as indicated by Mock OSCE performance. The main difference in the curricula of these two courses in relation to IV cannulation proficiency is the way in which the skill is assessed.

We were also interested in other factors that may impact on students’ performance, in particular, recency of practice relative to the Mock OSCE and the number of times IV cannulation has been recorded in a clinical logbook

The IV cannulation station was incorporated into a Mock OSCE session that was planned for both Universities. Educators agreed on failure criteria of the MOSCE and assessors were blinded to this criteria.

The pass rate for University A was 47% (n=8) and for University B, 63.3% (n=7). Students who reported to have inserted an IV cannula within the last 3 months had more success in passing the MOSCE than those students who had not performed this skill in this time frame (64%). The time frame in which University A students are encouraged to complete this non-mandated hurdle is 18months in comparison to University B which is within 10 months.

Findings from this pilot study indicate that curricula design can impact on skill acquisition such as IV cannulation competence. In particular, it appears that a non-mandated, nebulous log book requirement (University A) is less effective in promoting clinical competence in IV cannulation than mandating 3 assessments in the clinical setting (University B).

Generalizability of results is limited by the relatively small sample in this pilot study. A larger-scale study is planned for November 2016 and will be reported on at the conference.

O56

The Usefulness of Heart Rate Variability On Trauma Team Members In Weightlessness, Difficult Oceanic Conditions, and Mass Casualty training

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Human performance is affected by situational stressors in unusual environments. This includes mass casualty, space exploration and difficult sea states. Currently, evaluating human performance is mostly subjective. Our group (Rocky Vista University, U of Calgary, Canadian Army, and US Naval Surface Warfare) has developed a change in our technique of measuring stress with salivary hormones and added heart rate variability (HRV) to evaluate the stress of surgeons, team members and students performing in multiple training environments.

Design/Methods:

HRV was utilized in 3 different experiments to identify stress components in 3 different environments. All performing in trauma scenarios

1. Surgeons at 1G versus Surgeons in 0 G parabolic weightlessness with the Canadian Space Agency.
2. Surgeons versus surgical scrubs technicians performing Surgery at Sea states 3 and 4.
3. Utilizing HRV to identify stress habituation and improvement of skills in second year medical students.

All environments included total immersion into the situation. Real weightlessness, real sea state motion, and living in a deployed unfriendly environment. The Advanced Brain monitoring system with HRV was used on sea state The Equivax EQ02 in weightlessness and the First beat with OVERSKUUD technology on the mass casualty.

Results:

In weightlessness there was increased stress in weightlessness. This was greater in the 2 most senior surgeons. Surprisingly, there was no difference in the surgeons from sea state 0 to sea state 4. The surgical technologist did show stressful physiologic response.

Those involved in scenario 3, multiple increasing terror events, showed significant decline in

physiologic stress response as the increasingly difficult week progressed.

Conclusion:

The understanding of heart rate variability will lead to the ability to plan training and courses directed at the appropriate training level of personnel. This true objective measurement of training regardless of skill level or age will help develop age and skill related courses.

O57

Check-In and Check-Out: Promoting student engagement in their learning

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The foundational principles of adult learning support partnering with the student in a collaborative learning space; however, few practical measures and techniques to facilitate these aims are widely discussed and researched. The Check-in and Check-out (CICO) review process was developed to support partnerships between students and teaching staff in learning spaces. This process places the student at the centre of the learning experience, promotes both student preparedness and reflection on goal achievement. It also leverages Bandura's (1977) sources of self-efficacy to identify positive aspects of their learning and encourage critical reflection on professional practice (Henderson, et, al. 2016).

The BNSc program piloted CICO in the clinical nursing laboratories in 2016. The pilot program was positively appraised by students; feedback indicated the majority of students engaged with and valued the CICO process. It is now being rolled out across all nursing laboratories, simulation suites and clinical practicum. The CI part of the process supports self-preparation. Students are empowered to seek clarification of the learning in the session they are about to participate. The time between CI and CO supports students to engage in their learning and practise clinical skills. The CO part of the process reinforces student reflection of their learning and encourages students to clarify understanding prior to the next session. Adopting CICO also influenced teaching staff behavior; the pilot program enhanced collaboration and facilitated student focused teaching.

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O58

Establishing the Collaborative Care Curriculum at Monash University

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Collaborative practice is required to deliver safe and efficient healthcare. To prepare students for collaborative working, interprofessional learning opportunities are required. To strategically address this agenda, the Faculty of Medicine, Nursing and Health Sciences (FMNHS) at Monash University has brought together key representatives from nursing, nutrition and dietetics, medicine, occupational therapy, paramedics, pharmacy, physiotherapy, psychology, radiation therapy and radiography to design a Collaborative Care Curriculum.

The aim of the initiative is to develop and endorse a framework for interprofessional or collaborative practice for entry-level health professionals. Representation from all professions and students was gathered. Existing interprofessional education frameworks were analysed and applicability to our context discussed. Accreditation documents from all professions were perused by profession representatives to identify items relating to collaborative practice and after synthesis, discussion, debate and then broader consultation, consensus on themes for the curriculum were established.

An overarching education framework for collaborative practice with learning outcomes at novice, intermediate and entry to practice levels is now under development. Alignment of the isolated interprofessional activities to the emerging framework is underway, and new interprofessional learning opportunities are under development in alignment with the overarching framework.

This presentation will discuss the process, content and current status of the Monash University Collaborative Care Curriculum.

O59

Firefighter First Responder Training & response - Improving patient outcomes

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Background

Internationally firefighters have often been involved in emergency response. However in Australia this is a relatively new concept. Emergency Medical Response (EMR) is a Victorian (Australia) Government First Responder initiative to improve cardiac arrest survival rates by reducing response times to patients in sudden Cardiac Arrest (SCA). As fire stations are strategically placed around the state and are often in station they are well placed to respond to priority cases simultaneously with Ambulance Victoria. When Country Fire Authority (CFA) Firefighters arrive prior to Ambulance they are able to commence life saving resuscitation.

Aim

To improve community safety through improving efficiency of emergency response through using the CFA as a first Response to a select number of priority cases on behalf of Ambulance Victoria

Methods

First responder training incorporates Teaching and Learning Skills that enable CFA staff to use specific first response skills. This skill set includes the use of Semi Automatic External defibrillator (SAED) / Oxygen / Suction / First Aid Kit / Cervical Collars.

Results

In many cases (data to be presented) CFA Firefighters are arriving prior to Ambulance paramedics, commencing resuscitation that has lead to some very positive outcomes (data to be presented).

Discussion and Conclusion

Ambulance Victoria is dedicated to the delivery of a high quality-training program for firefighters. In a collaborative working environment Paramedic Educators are training Firefighters and providing ongoing Continuing Education (CE) sessions to every Firefighter on a monthly basis to ensure first response skill competency. These CE sessions focus on excellence in resuscitation, based on evidence-based practice, what's new and happening in pre hospital care. The outcomes of this program are many as well as improved patient outcomes there is also the improved collaboration between the CFA and Ambulance Victoria.

O60

Cultural considerations in clinical encounters

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Context

Discordance between patient and clinician values, preferences, and expectations contribute to poorer outcomes for provision of healthcare. Achieving successful therapeutic relationships in the context of culturally diverse societies hinges on clinician cultural knowledge and ability to utilise culturally compatible approaches. Despite this, there is limited research guiding clinicians to act in culturally responsive ways. Innovative approaches for adopting culturally compatible patient-centred care are required to ensure clinicians engage culturally and linguistically diverse (CALD) communities.

Aims

To explore the clinical utility of an assessment tool to approach health encounters with CALD patients.

Methods and Results

The Pictorial Representation of Illness and Self Measure (PRISM) was modified following literature review and qualitative enquiry with CALD communities to allow clinicians to explore cultural dimensions of illness. Evaluation of the reliability and validity of the tool is underway and preliminary analysis suggests it is well understood by CALD communities and allows for cultural dimensions of an illness to be incorporated into treatment in non-confrontational ways.

Conclusion

Clinicians need to explore the values, beliefs and explanatory model of health held by diverse patients if healthcare is to be culturally responsive and patient-centred. The value of cultural adaptation of clinical assessments and subsequent treatment approaches should be further explored.

O61

Can we have another go after the debrief please? The genesis of the redo station

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Our second year nursing students expressed the desire to repeat their high technology simulation scenarios after their debrief. Now our third year nursing students proceed to a newly created After Action Review 'redo station': an educational experience occurring immediately after their simulation debriefing. Scoresby and Shelton (2014) demonstrated how students can improve their learning when they are thinking about their thoughts and become more aware of their reflective abilities and how to apply those abilities. The experience without the pressure or feeling like they were being assessed was perceived as less stressful than when doing the original simulation scenario and debrief (Ignacio et al., 2016; Levett-Jones & Lapkin, 2013).

Progression of this innovation has continued to develop from a student driven redo station (Sivertsen, McNeill & Muller 2016) to an academic staffed station to having students be the voice of the patient in the redo station. The re-do station also enables rotation of student roles such as primary, treatment and documentation nurses and observers. This presentation will explore our learning journey and how the redo station helps to reinforce the clinical skills of communication, delegation, clinical reasoning, identification of deteriorating patients and situational awareness.

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O62

Exploring Teacher Perspectives of Interdisciplinary Co-teaching Relationships in a Clinical Skills Course

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Purpose:

Co-teaching involves two professionals with complementary expertise delivering meaningful instruction, with equal ownership, responsibility, and accountability for the planning, conduction, and assessment of instruction across the duration of a course.[i] Interdisciplinary co-teaching between physicians (MD) and social behavioral scientists (SBS) is a pedagogic model used in some longitudinal undergraduate clinical skills courses (CSCs), yet there is insufficient research to guide its use. The purpose of this study was to explore teacher perspectives of factors that promote and impede these relationships to address theoretical and practical gaps surrounding the practice.

Methods:

We conducted 12 semi-structured interviews (6 MD and 6 SBS) and two focus groups at Brown University. The data was analyzed using the constant comparative method to develop a grounded theory.

Results: Five major themes emerged that outline a framework for interdisciplinary co-teaching: 1) respect (for individuals and the co-teacher's profession), 2) shared goals, 3) shared knowledge and understanding (especially concerning the roles each faculty play in teaching a biopsychosocial approach), 4) communication, and 5) complementary pairings (described as combining in ways that enhanced the personal qualities of the other, or contributing something to the pair that the other lacked.) The first four themes align with elements of relational coordination theory, an organizational theory of collaborative practice that describes how work roles interact. Complementary pairings extend this theory from work roles to individuals, with unique identities and personal beliefs and values about teaching. In addition to providing linkage to theory, this study has practical relevance for co-teaching practice. The participants suggest ways to make effective pairings, and the themes suggest areas for targeted faculty development once pairs are made.

Conclusions: These findings contribute to the sparse research on interdisciplinary co-teaching, and have implications for teaching, administrative practices, and faculty development in CSCs using or considering using a co-teaching paradigm.

O63

Changing perceptions of variation in demonstration of physical examination among clinical students preparing for Finals Examination – a follow-up study

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Aim

Variation in examination technique causes frustration, confusion and indifference in preclinical students. Respiratory examination is particularly problematic. This follow-up study investigates changing perceptions among clinical medical student during the transition to ward-based teaching and preparation for Finals.

Background

Accuracy of physical signs increases when performed according to original descriptions in the literature. Their utility should be taught and then judged against these ⁽¹⁾. Students may prefer a more rational approach to the physical examination ⁽²⁾. Non-standardization of techniques is one reason for the variation both within and between examiners⁽³⁾. Students report discomfort when observing clinical teachers performing the physical examination in different ways.

Method

Qualitative phenomenological analysis of semi-structured interviews of clinical medical students after one year of clinical practice and immediately before Finals examinations. Data analysis facilitated by Nvivo 10.

Results and findings

We will present the changing perceptions of our original students during transition to clinical practice and specialty rotations. We will discuss their inferences about how the examination should be performed, perceived reasons for observed variation in technique and their conclusions about the diagnostic utility of the physical examination. We will discuss these experiences in the context of preparation for Finals.

O64

Experiences of Graduate Entry Medical Students in development and further evolution of professional values and ‘professionalism’ during the clinical course

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Aim

To explore the evolution of the professional attitudes and values of clinical Graduate Entry Medical students during clinical course.

Background

Students showing a lack of professionalism early in the course are more likely to encounter problems during their subsequent careers⁽¹⁾ and that there is erosion in professionalism during their time at medical school^(2,3). The ‘hidden curriculum’ is pivotal in erosion of professionalism during medical school⁽⁴⁾. Our study in preclinical students identified four themes – defining professionalism, burnout, differences between teaching and practice, and self-awareness. This study looks at further evolution of our students’ professional values during transition to clinical phase and at imminent qualification as doctors.

Method

Interpretative phenomenological analysis of interviews with clinical Graduate Entry Medical students in the first year of clinical practice and then before qualification. This facilitated deeper exploration of students experiences and their changes in attitude to professionalism over time and how the students felt about these changes.

Data analysis

Transcribed interviews are being analyzed using an interpretative phenomenological data analysis facilitated by Nvivo 10.

Results

Our presentation will discuss subsequent evolution of themes and sub-themes identified in the preclinical phase together with additional experiences emerging during the clinical course.

O65

Are eighty percent of diagnoses made on the basis of the history? A systematic review of the evidence

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Aim

To summarise evidence on the diagnostic yield of the history including between primary and secondary care and between acute and chronic settings.

Background

'Eighty percent of diagnoses are made on the history'⁽¹⁾. Despite technological advances this has remained surprisingly constant⁽²⁾ but is it accurate and in which setting and among which patients?

Data Sources

The review was conducted according to the PRISMA statement. Databases interrogated included PubMed, Medline, Embase, Cochrane Library, CINAHL, Prospero, ClinicalTrials.gov, Web of Science, Google Scholar, Ethos and reference screening. Search terms included diagnosis, diagnostic accuracy, specificity, history and history-taking.

Study Selection

Studies originating from primary or secondary care and including presenting symptoms with follow-up to final patient diagnosis.

Data Extraction

Independent extraction of data by the reviewers using predefined data fields including quality assessment using a validated appraisal tool.

Data Analysis

Studies were examined for heterogeneity. Overall accuracy of history-taking was calculated for published studies together with the relative contributions of examination and investigation. Analysis of studies in different clinical settings including acute and chronic and between specialities was undertaken.

Results

We will present results of the review and discuss their significance for teaching the importance of the history in clinical practice.

O66

Interprofessional clinical scenarios for supporting the acquisition of clinical skills in undergraduate health care students- what's the evidence?

Jacqueline Bloomfield

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Interprofessional collaboration is viewed as fundamental in health care education due to the increasingly complex health care environment and the need for health professionals to work together effectively to provide safe, high quality patient care (Turrentine et al, 2016). Simulated scenarios, that mimic clinical experience are gaining popularity as means of interprofessional education for healthcare students. These aim to to promote teamwork, communication and to develop interprofessional understanding and positive attitudes while also providing a valuable means of clinical skills education (Liaw et al. 2014).

The development and organisation of interprofessional simulated scenarios can be challenging and it is therefore important their use within healthcare education is supported by current research (Rossler and Kimble, 2016)

This presentation will report findings from an integrative review undertaken to examine research to answer the question "What is the effect of interprofessional education on the attitudes, knowledge, confidence and skill acquisition of undergraduate healthcare students"? Details of literature search conducted using both the Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Medline databases will be described and key findings from relevant international studies conducted within the past 10 years will reported. Gaps in the current literature will be identified and priorities for future research discussed.

References

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O67

Facilitating inter-professional learning and teamwork in simulation using two tiered debriefing

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Introduction

The ability to perform as a member of a health care team is necessary for the provision of competent clinical care. This presentation reports a pilot study undertaken in partnership between Queensland Health, the University of the Sunshine Coast and University of Queensland which resulted in the development and testing of a two tiered debriefing model to enhance learning in interdisciplinary simulation.

Methods

The sample (n=21) comprised fourth year Medical and third year Nursing and Physiotherapy students. A modified Simulation Satisfaction Scale survey (Levett-Jones et al. 2011), TEAM STEPS™ observation tool (Zhang et al., 2014) and interviews were used to collect data evaluating student engagement and learning in a series of simulations requiring interdisciplinary teamwork.

Results

A mean score of 4.4 on a 5 point Likert scale (1 = strongly disagree to 5 = strongly agree) indicated high levels of satisfaction. The implementation process, team performance and feedback using the two tiered debrief approach impacted on the success of the simulation and learning.

Conclusions

The two tiered debrief design, results, lessons learnt, recommendations and plans for expansion of the research will be presented. This will be of interest to academics and clinical staff developing simulation scenarios for interdisciplinary teams.

References:

Levett-Jones, T., et al., (2011). The development and psychometric testing of the Satisfaction with Simulation Experience Scale. *Nurse Education Today*, 31(7), 705-710.

Zang, C., et al., (2014). Team performance observation tool. In evaluation of the team performance observation tool with targeted behavioural markers in simulation-based interprofessional education.

Journal of Interprofessional Care, DOI: 10.3109/13561820.2014.982789

O68

Performing and dramaturgy: managing safety for children working as simulated patients simulation

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Introduction

Utilising children as simulated patients presents distinct challenges in simulation. Ethical and practical considerations including: consent, preparation and fatigue demand attention. A small pilot study designed to establish best practice principles, explore ethical processes, preparation, specialist needs and support of child actors 7-10yrs and the learning experience of nursing students working with children in immersive simulation was implemented.

Methods

Participants included children and parent (n= 6) and nursing students (n=17). Group interviews were used to evaluate the experience of children as simulated patients. A survey modified Simulation Satisfaction Scale survey (Levett-Jones et al. 2011), and group interview evaluate the learning experience of nursing students working with children in simulation.

Results

Observation highlighted the need to monitor and adapt scenarios to mitigate risk and stress to the child actors. Post scenario reflection is essential to protect the child with adult actors monitoring and adapting behaviour during the unfolding scenario. Nursing students reported high levels of satisfaction with the learning experience indicating that debriefing and reflection including videoed feedback from children and parents, communication with paediatric clients and development of clinical reasoning improved understanding of the practice of caring for children.

Conclusions

Performing and dramaturgy requires specialist knowledge and preparation when utilising child actors in simulation. The simulation design, results, lessons learnt, specialist needs of children, recommendations and plans for expansion of the research will be presented.

References

Levett-Jones, T., et al., (2011). The development and psychometric testing of the Satisfaction with Simulation Experience Scale. *Nurse Education Today*, 31(7), 705-710.

O69

Using video simulation to enhance safety and improve quality health outcomes

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Introduction

Partnering with the University of the Sunshine Coast a series of patient journey simulation videos based on ISO audit data were created for The Sunshine Coast Private Hospital. Framed within the National Quality Health Service Standards, video's captured a patient's hospital Journey. Optimal and sub optimal versions of patient encounters including medication administration, infection control and prevention, patient identification and procedure matching, clinical handover and preventing falls were developed and incorporated into annual mandatory professional education during 2016.

Methods

A mixed method study utilising, quality data (pre and post education intervention), surveys and interviews were used to evaluate the effectiveness of the education programme.

Results

Data collection is in progress. To date high levels of satisfaction with the education programme, improved understanding of documentation requirements, improved risk management, collaboration and communication amongst teams rank highly in evaluations. The impact of the programmes is evidenced in quality data with a 22% decrease in falls within the first 6mths.

Conclusions

The Ruby Tuesday Video Simulation Project actively promotes a culture of safety and learning that includes engaging with clinicians and others, to share knowledge and practice that supports person-centred care. This presentation will report the project design and results demonstrating how simulation teaching clinical skills translates in practice and can improve patient safety.

O70

Learning intimate examinations: medical students' experiences viewed through the lens of Activity Theory

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Introduction:

The learning of intimate examinations by students in clinical skills sessions and on patients during clinical placements shines the light on learning as a cultural and historical activity, as analysed through Activity Theory (Engestrom, 1999).

Setting:

The research was undertaken at a northern hemisphere four year graduate entry medical school, where students learnt intimate examinations on manikins in years 1&2 and on real patients in years 3&4.

Method:

Students in years 2-4 were invited to attend semi-structured individual or focus group interviews. The interviews were transcribed, de-identified and the data was analysed using Cultural Historical Activity Theory (Engestrom, 1999). Ethics approval was received for this research.

Results:

The different aspects of learning intimate examinations can be viewed through the lens of Activity Theory, from the role of the plastic models as mediating artefacts to the cultural rules of learning on real patients.

Discussion:

One of the key findings is that the act of learning intimate examinations, which is the 'object' in Activity Theory, is completely removed from the 'outcome' which is being able to perform the examinations competently to assist with patient management. While the focus of students on this 'object' is understandable, given the fact that they are students, this focus pervades their discussion, leading them to be more self centred in their quest to obtain intimate examination experiences on patients, rather than being patient centred (Manninen et al, 2013).

Conclusions:

There is a significant body of literature on the difficulties of teaching and learning intimate examinations. Whilst the experiences reported here are unique to the university where the research was undertaken, the insights provided by viewing the data through Activity Theory are useful to promote discussion on how to enhance this learning activity in order to lead to the best outcomes for students and, more importantly, patients.

O71

Becoming a Doctor - transitioning from student to medical professional

Sheree Conroy

Toowoomba Hospital, Queensland, Australia

Toowoomba Hospital is a regional hospital in Queensland which welcomes 39 interns starting their medical career each year. It has medical students from the University of Queensland rural clinical school on site as well as Griffith medical students in nearby rural facilities. These close geographical links help to soften the transition from student to clinician and help vertical integration of training as members of the Medical Education Unit (MEU) in Toowoomba work with both students and junior and senior doctors.

The orientation to work begins in the middle years of medical schooling when local students have access to online student preparation modules. These are interactive modules aimed at encouraging self-reflection around the work required of an intern. They are also involved in ward work and patient care in many settings.

Interns then attend a week long orientation program prior to commencing work. These were originally lectures covering mandatory training topics and had very few interactive components or useful information about the day to day work that would be required. To address this issue, changes were made to the presentation of mandatory content. Firstly, online modules were developed which were more intern specific and thus shorter than previous presentations. Secondly, the mandatory topics were incorporated into case presentations delivered during the orientation week. Ongoing evaluation feedback has shown positive responses to the program with continual quality improvement occurring from feedback each year.

Early support is also critical to transitioning into the role of a medical professional. Personalised support from the MEU through the intern year is integral to ensuring a seamless transition to the responsibilities of medical practice.

Over the last 10 years, Toowoomba has been very successful in retaining junior medical staff both through their prevocational and early speciality training years, and in having previous interns return as seniors doctors.

O72

Training together in rural hospitals

Sheree Conroy

Toowoomba Hospital, Queensland, Australia

The Darling Downs Hospital and Health Service (DDHHS) has a regional Hospital, Toowoomba, and 18 smaller rural hospitals. The rural hospitals see 100 000 emergency presentations/year with no specialist emergency doctors working in these hospitals when the EMET program started.

The program was developed to provide onsite multidisciplinary emergency training in rural emergency departments.

Training is provided weekly by two emergency specialists from Toowoomba travelling to a rural site. Sessions include online pre-learning, skills sessions, case discussions and simulations. Each session focusses on one topic (eg airway, respiratory, cardiac) and concludes with team based multidisciplinary scenario training using both role play patients and a simulation manikin. The scenarios use content from the online material and skills stations and discussions early in each session, and help reinforce the training. These are run in the rural emergency department to enable participants to learn in their own environment, and in their usual working teams. Each scenario is debriefed by facilitators, focussing on teamwork and communication, as well as the clinical content and skills.

During the first 18 months we have driven over 16 000km and trained 750 participants including doctors, nurses, students and ambulance officers. All sessions are evaluated and data shows high satisfaction and learning needs being met. Sessions are also able to address quality activities, and are both a communication portal for information, and for developing and strengthening relationships though the DDHHS. It has enabled us to further standardise our assessment and management of emergency presentations through the DDHHS.

Providing education in rural settings has the advantages of allowing teams to train in their usual environment, and with the staff they work with. It enables greater understanding of the rural context to staff that travel to provide the teaching, and allows quality improvement measure to be spread through the DDHHS.

O73

cARdiac ECG: Using Augmented Reality to enhance ECG teaching

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Students report poor knowledge of Electrocardiography (ECG) despite receiving interactive tutorials, and accessing 2-dimensional resources (textbooks, image-banks and internet). Hence, we designed an interactive 3-dimensional model using Augmented Reality (AR) for students to explore (a model of the heart), learn (perform an ECG and interpret traces) and assess their understanding of ECG traces during the cardiac cycle.

This AR 3D model is available to Deakin Medical students via the App store. Using an app engages learners through interactive use of touch and spatial manipulation of the heart. An app on a smart phone/tablet places this resource literally within the student's pocket - providing mobile, "just in time" learning. This app stimulates learning by blending emerging and traditional resources, embedding new technology within an established curriculum.

Students gain deeper understanding of performing and interpreting an ECG, and correlation with underlying electrical and physiological abnormalities in the heart, with the future potential to translate this learning into increased detection of critical cardiac events and enhanced patient safety. Students describe "I am very much a visual learner and being able to have learning that corresponds to my needs is amazing. Being able to move the heart and orientate it truly adds to my understanding as does the ability to see it all happens at the same time".

A reference group of medical students rated their confidence in applying and understanding ECGs on a scale of 1 (strongly disagree) to 5 (strongly agree). The average score pre-cARdiac ECG was 2.45, and after using cARdiac ECG increased to 4.18 ($p=0.000$). *Further evaluation data will be presented during the research presentation, as will a demonstration of the cARdiac ECG app.*

In conclusion, emerging technologies can add to student learning when designed and implemented in response to curriculum needs, when medical educators and software developers collaborate.

O74

"To teach is to learn twice" exploring peer teaching experiences of first and third year nursing and midwifery undergraduate students

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Background:

The enhancement of the student learning experience is fundamental to contemporary nursing and midwifery education. In the words of Joseph Joubert "to teach is to learn twice" and peer teaching is one way to meet this objective (Owens & Walden, 2001). However, due to limited research peer teaching is too often underutilised. Integral to professional nursing and midwifery practice is the ability to teach both peers and patients. Many graduates report feeling unprepared for this component of their nursing or midwifery role as few undergraduate programs provide authentic learning experiences where students are afforded opportunities to engage in peer teaching (McKenna & French, 2011)

Using a mix method study design the evaluation of a peer teaching experience from the perspective of first and third year nursing and midwifery students was undertaken. The aim was to enhance understanding of how to implement peer teaching into the nursing and midwifery undergraduate curriculum.

Third year nursing and midwifery students as part of their final semester coursework, elected to undertake clinical teaching in the first year clinical skills laboratories. To evaluate this experience the third year students completed the self-report instrument Peer Teaching Experience Questionnaire (PTEQ). First year nursing and midwifery students participated in their scheduled clinical laboratories and were invited to complete the Clinical Teaching Preference Questionnaire (CTPQ). Both groups participated in focus groups to explore their experiences in greater detail.

Findings:

The experience was equally positive and both the learner and peer teacher reported an increased self-confidence. This presentation will provide an overview of key findings from two years of data collection that supports the importance of the role of peer teaching both for the personal and professional growth of third-year students and as a way of providing support and guidance to first-year students.

O75

Application of clinical skills: Linking theory to practice

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Outline of work

During the pre-clinical years students are expected to develop many clinical skills but have limited opportunities to develop this expertise in the clinical environment with real patients. By aligning learning practices to their problem-based learning cases during teaching of the respiratory system, we have found clinical skills learning to be more meaningful and effective.

Relevant background

Students learn more effectively if the skill acquisition takes place in context and actively builds on their knowledge and skills. We used 'situated learning' in scenarios using respiratory devices from the clinical ward and general practice areas to provide educational opportunities appropriate for the learner.

Evaluation findings

Clinical practitioner tutors used five respiratory scenarios including acute hyperventilation, asthma attack, exacerbation of COPD, airway obstruction and cardio-respiratory arrest to actively engage students in problem solving, use of airway equipment, patient observation and reporting of symptoms. Using a nominated lead, students worked in groups of 4-6 on each scenario and provided a rationale for the question: What would you do? This strategic selection of scenarios was used to illustrate specific skills such as choice of airway device or other intervention.

Conclusions

Undergraduate medical education opportunities in clinical environments are limited. Pre-clinical skills acquisition can be enhanced in sessions with contextualised content prioritised to promote discussion and reflection.

O76

Bridging the gap between simulation centre and clinical practice

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Teaching clinical skills through simulation has transformed the approach to teaching practical skills. Many studies have demonstrated the benefits and most UK medical schools have adopted this technique (1). The students are being assessed on developing these skills by practical examinations such as OSCEs in undergraduate education (2). As a teacher I found the undergrad students are keen to practice the skills in the simulation centre for assessment purposes rather than performing these on patients in clinical settings.

At Hillingdon Hospital we introduced video feedback to third year medical students, providing opportunities for self-reflection and peer discussion under teacher's guidance. This gives the students the prospect of developing their communication skills such as empathy and also to discuss different techniques they have come across in clinical setting.

We carried out a qualitative research on exploring students' perspective through semi-structured interviews with aim of maximising students learning these skills in a non-clinical environment.

The results revealed opportunities for deeper learning, through self-reflection and peer discussion under teacher's guidance which may help towards a competent clinical practitioner.

O77

Using multiple assessments to enhance English communication skills and self-learning among Chinese health professionals aiming for clinical rotations overseas

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Background:

Today, the need to enrich one's clinical insight and experience has encouraged health care professionals (HCPs) in China to go overseas for training and collaboration. This requires them to learn English as medium of communication. However, the high use of local languages and Mandarin has limited the use of medical English among HCPs. Workload, age and learning styles are considered added constraining factors. In this study, we explore the use of multiple authentic assessments in developing clinical communication skills (CCS) and self-learning strategies in English among HCPs from Guangdong.

Methods:

Using blended learning 31 HCPs enrolled in a 24-week modular training course that consisted of on-the-spot roleplays with feedback, short quizzes, activities on medical humanities and self-directed learning, case presentations, and ward rounds. Delivered in English, these activities were designed to improve their CCS, self-evaluation, and professionalism. A post-test, conduct of a ward round, an interview, and sequential surveys will be used as final assessments in the course.

Results, Discussion and Conclusion:

We expect that the use of multiple assessments would provide trainees various scenarios that could improve their CCS, confidence and engagement in clinical conversations in English. Other details and the conclusion will be provided during the conference. (The study finishes in December 2016.)

O78

Safe environments: A serious game transforming competency based health and safety simulation training

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Australia faces the challenge of supporting a growing and ageing population, where health & safety is paramount in ensuring that care is economically sustainable. Workers involved in health care have a responsibility to protect themselves and those being cared for against health and safety risk, and training is paramount to reducing injury.

The Safe Environments application is a serious games that addresses Australian National Safety Standards. The application improves knowledge and assessment skills in managing health concerns for clients with alternations in perception coordination and movement. It provides an opportunity for skills based education to be translated by means of virtual interactive environment, incorporating tasks such as hazard identification and categorisation; risk identification and risk containment, minimisation and elimination. Training is applicable to all levels (family and friends, volunteers, employed carers).

The application incorporates competency based health and safety simulation training and assessment to those involved in the health care sector and has applicability for clients and their families. It provides a means for users to develop knowledge and demonstrate skills in assessing a variety of environments (across community and facility care environments). Comprehensive analytics for assessing in-depth user behaviour are included which target Australian National Safety Standards.

This presentation reports the results of product testing and how the application is being incorporated in the education of health care workers and Bachelor of Nursing students. The benefits and limitations of using technology and gaming as an innovative approach to teaching safety assessment in health care education will be highlighted.

O79

Using MP4 Files to Assess First Year Nursing Students' Skills in Health History Assessment

Didy Button

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This assessment was developed to provide semester one first year nursing students yet to undertake a clinical placement, with a realistic opportunity to document and analyse a health history while also building Digital Information Literacy (DIL). Nine patient MP4 health history interview files were created by the topic coordinator using a digital voice recorder and digital camera. The ten week syllabus included anatomy and physiology linked to health assessment and fundamental developmental life span concepts. The health history interview instrument was adapted from one presented in the required text so students were familiar with the interview format. Students were randomly allocated an MP4 file to download and view on the University Learning Management System (LMS). The file was able to be replayed and paused at any time to allow student to recheck information. This feature was appreciated by students when English was not their first language. The assessment required students to download and complete an enabled PDF health history interview file that permitted students to enter data they collected from the interview directly into the PDF. Students were then provided with a template document to complete using the data they had collected. Students were required to critique the interview process, expand on one area of anatomy and physiology and align the patient in the interview with the appropriate lifespan developmental phase according to Erikson's stages of psychosocial development. Students downloaded a detailed marking rubric detailing what was required in the assignment to achieve a high distinction through to a fail. This assessment used instructional technologies to build student digital information literacy and provide consistency over nine patients to increase marking consistency. The presentation will demonstrate the resources and how students interacted with the assessment.

O80

Expanding the Calgary-Cambridge Guide: New Growth or Unwieldy Renovation

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Expanding the Calgary-Cambridge Guide: New Growth or Unwieldy Renovation?

Background

The Calgary-Cambridge Guide has been leading the way in teaching medical communication skills for 20 years, with a major enhancement in 2003 designed to marry communication skills and the traditional medical history taking process. "Clinical practice", which incorporates the use of communication skills, is essentially the sum of the skills a doctor uses to put his or her knowledge to use to benefit the patient. These skills have been added piecemeal to medical curricula over the last half-century and as a result they tend to be taught in isolation from other skills and from the students' knowledge base. For example, communication skills are taught in communication courses by health behavioural scientists and physical examination skills by clinical tutors in separate classes.

The expansion of the Calgary-Cambridge Guide to include history taking content begs the question: Why not add other skills?

Moving forward

For the curriculum re-design in the Joint Medical Program of the Universities of Newcastle and New England, Australia, we have developed an expansion of the Calgary-Cambridge Guide: the JMP-MD Clinical Method. This is intended as a scaffold to incorporate and integrate all the skills (both process and content) that are required in the interaction between doctor and patient, including communication skills, history-taking skills, physical examination skills, diagnostic and procedural skills, cognitive skills and professional skills. This will require changes to the way the individual skills are taught to provide the skills with context in the Clinical Method.

O81

A model to facilitate authentic learning through simulation based learning in a clinical diagnostic radiography programme

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Work Integrated Learning (WIL) according to the Higher Education Qualifications Sub-Framework (HEQSF): “may take various forms including simulated learning, workdirected theoretical learning, problem-based learning, project-based learning and workplacebased learning (WBL)” (HEQSF, 2013: 16). Therefore a move away from the traditional WBL towards a more integrated approach using these other forms of learning is required. Diagnostic radiography has seen an increase in student numbers and training centres accredited in South Africa which leads to a wide variety of training opportunities for the student. Therefore it is essential to provide a model that will ensure all students receive the same learning opportunities during their clinical training.

The aim of this research is to develop and assess a model to facilitate an authentic learning experience using simulation based learning in the university setting for radiographers. The research objectives are:

- Conduct a conceptual analysis of authentic and simulation based learning.
- Develop a model for simulation based learning radiographers in higher education institutes.
- Operationalize and assess the model that has been developed and refine the model based on the experience of the students.

Once the model has been developed it is envisaged that the integration of the simulation based learning and the work based learning will provide a holistic experience for the student. Ensuring our students have a real world experience with decreased radiation exposure for the patient.

O82

Revisiting the abdominal examination: Encouraging deliberate practice using spiral learning in a flipped classroom

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Context

Clinical skills teaching in the pre-clinical environment provides a key opportunity to develop clinicians confident to perform core physical examination as part of their reasoning framework. Cognitive load limits support the use of chunking of information and integrating prior knowledge to support easier retention of new material. Our program covers the history and examination of systems within a single pre-clinical year with graduate entry students in a rural campus. A “flipped classroom” approach to clinical skills teaching was adopted in July 2012. The curriculum includes examinations for the gastrointestinal, renal and haematological systems taught in separate workshops. Specific reinforcement of a structured abdominal examination is provided whilst introducing new peripheral examination content for each subsequent system encountered.

Methods

Students completed a questionnaire following the semester 2 formative OSCE in the years 2013-2016, evaluating the effect of the clinical skills “flipped classroom” approach on students’ behaviours and attitudes. The survey explored levels of preparation and confidence levels following a full year of the program. Summative OSCEs taken within three weeks of each year’s survey included an abdominal examination in either the gastrointestinal, renal or haematological system examinations. OSCE results were compared with the level of confidence expressed by students.

Results

Students in 2013 – 2016 reported high levels of confidence to perform the abdominal examination taught through the gastrointestinal, renal and haematological systems. OSCE results supported the acquisition of the key physical examination skills related to the abdomen in the majority of students, consistent with survey results.

Conclusions

This method provides an example of a curriculum structure that reduces cognitive load by classifying skill components into revised plus new material. Exploiting the overlap of different systems to reinforce abdominal examination skills facilitates clinical skills acquisition.

O83

Compassionate care awareness training within the undergraduate curriculum; as important as clinical skills training?

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We undertook a multiprofessional study involving undergraduate students in medicine, physiotherapy, nursing and occupational therapy. Students were asked to record acts of compassion seen within their clinical placements on a web based platform. The students wrote narratives about the impact this study had on them.

We showed that this simple study had powerful effects on students around self-compassion and resilience, 'seeing' the shared values of teams in practice and empowering students to have an effect on the clinical environment by mimicking compassion acts witnessed by themselves.

Discussion:

Students are asked to record clinical skills within their placements. The GMC's Outcome for Graduates does not include compassion and yet compassionate care is at the heart of postgraduate training. By asking students to record compassionate acts alongside their clinical skills would give prominence to the importance of compassionate care.

O84

Reaching a dispersed workforce during an Ebola outbreak - distributed simulation to improve clinical skills in infection prevention control (IPC)

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Introduction

Many healthcare workers died in the recent Ebola outbreak in Africa, whilst caring for infected patients. Local healthcare facilities were decommissioned due to decreased confidence in IPC procedures. Distributed simulation (DS) replicates authentic clinical environments with low cost training solutions that provide standardised training to areas of need in a crisis.[1] [2]

Methods

Sequential steps for Personal Protective Equipment (PPE) use were identified from international guidelines and merged into an interactive learning sequence with participants playing the role of on-screen avatar. Near peer tutoring was employed by an onscreen virtual buddy who provided learning points, instruction and feedback, in the participants own language. Training was targeted at clinics in Liberia where healthcare workers were expected to re-open and maintain clinical services during the Ebola outbreak. Quasi-experimental study design to assess differences in skills related to modular training and use of checklist. Pre / post testing to ascertain differences in attitudes and skills.

Results

236 participants recruited. 91% had already received training through traditional workshops within the previous 12 months. DS training significantly improved mean scores for performance in donning and doffing PPE compared to the control group ($P < 0.001$ in both cases). Use of a checklist also improved donning and doffing performance scores ($P < 0.001$) but DS training was the strongest predictor in the linear regression model, with performance score as the output variable.

Discussion and conclusions

DS training provided added value compared to traditional training and was effective in raising healthcare workers' confidence and skill levels in PPE use. The use of a checklist also improved performance scores in donning and doffing. Distributed simulation can provide 'just in time training' to rapidly upskill local workers during major healthcare crises.

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O85

Internalisation of the research supervisor: Experiences and of Psychology Master's Students at a Historically Disadvantaged University

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Many governments see universities as engines for change and expansion of prosperity. There is an increasing recognition that a market-driven, consumerist service ethic characterizes Higher Education that may have an impact on the style of research supervision that academics adopt for a new knowledge economy. Research education or training is attracting greater scrutiny as research itself is seen of greater importance in the global knowledge economy. Students conduct research projects as a requirement to complete degrees. A thesis or dissertation develops the ability to work independently and critically, the ability to develop arguments, and awareness and use of advanced methodological designs that pertain to the student's discipline of study. Thus such learning is argued to be facilitated in the context of research advisement or supervision. Internalisation of the research supervisor may in turn, place during supervision thereby developing more researchers. Theoretical framework chosen for this study is that of social constructionism. The aim of this present study was to explore the perceptions and experiences of students in relation to the internalisation of the supervisor that may take place during research supervision. Ethics clearance was obtained and all ethics principle upheld. This collective case study was conducted with a purposive sample of 11 participants from various supervisors. Transcribed interviews were analysed thematically. The findings indicated that positive internalisation of the supervisor facilitated the transition into the role of researcher. Conversely negative internalization hampered the transition into the role of researcher. Skills and knowledge levels of supervisors, as well as responsiveness and feedback impacted internalization. Prior experiences of supervision impacted expectations in current supervisory relationships. Transition into the role and identity of a researcher is a social construction that is embedded in personal, social, cultural and political contexts. Thus research supervisors must demonstrate contextual and interpersonal sensitivity in the provision of supervision.

O86

Women with depression: how immersive mental health simulation can challenge a dominant biomedical understanding of emotional distress

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Introduction

Women's emotional responses to life stressors are often viewed as dysfunctional and needing medical treatment, which include antidepressant medication and electroconvulsive therapy (ECT). This PhD research will describe how GPs, psychiatrists, psychologists, paramedics and nurses tend to position the experiences of emotional distress in women as worthy of being labelled with the diagnosis of depression. This can lead to a cascade of medical interventions that can result in women eventually receiving ECT, which is often accompanied by side effects that impact upon memory, identity and quality of life.

Methods

Using a qualitative feminist narrative approach, women who had received ECT as treatment for depression were interviewed at length and a thematic analysis applied to their stories to reveal key themes.

Results

It was found that women are often left isolated and disempowered by health professionals who viewed their emotional responses to life as worthy of medicalization. It was recommended that the use of creative and innovative learning strategies, such as immersive mental health simulation within undergraduate education, could facilitate a change in the perceptions and clinical practice of emerging clinicians.

Conclusion

This presentation will share results from the study and will recommend ways of using immersive mental health simulation to challenge the dominant biomedical understanding of emotional distress in women by health professionals.

O87

**Anxiety in Simulation is like an onion:
It has layers**

Lysa E. Owen

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Background

Simulation is widely used in healthcare education, but research exploring barriers to simulation has been scarce. It is known that learner attitudes deeply influence learner behaviour and outcomes (1). This presentation describes the results of qualitative research into the attitudes of medical learners to simulation based medical education. In particular it will provide insight into the causes of anxiety described in this setting.

Methodology

Semi-structured group interviews were carried out with a range of medical learners including medical students, Foundation year doctors (first year after graduation), General practitioners and anaesthetists. Transcribed data was analysed for content and theme.

Results

The results showed that learners all describe anxiety in simulation. This was categorised into three levels of anxiety.

Firstly, there was anxiety about self-consciousness in role-play, secondly, about having one's practice or expertise scrutinised by peers or faculty, and thirdly there was anxiety that participants might be 'tricked' into making a mistake. The three layers of anxiety combine, resulting in the idiom 'looking like an idiot'.

This presentation contributes to the debate on understanding motivation and attitudes to simulation, and can inform course designers about the causes of anxiety among learners, and makes suggestions to address this.

References

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O88

The evaluation and effectiveness of a trauma course for senior medical students

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Objective

The objectives of this study are to evaluate a compulsory trauma course for senior medical students; show if, over time, there is a decline in the knowledge gained from the course and determine if there is effective transfer of skills from the learning to the clinical environment.

Background

Large proportions of UK medical graduates receive little teaching on how to assess and manage trauma patients (Mastoridis, Shanmugarajah & Kneebone, 2011). We introduced a compulsory one-day "Trauma Course for Medical Students" for final (fifth) year students in 2011.

Methods

All fifth year medical students in this University, in the academic year 2015/16 were invited to participate in the study. Course evaluation included an evaluation questionnaire, with free-text comments and a self-assessment log detailing exposure to trauma; reflection on trauma knowledge and skills before and after the course.

Results

Results from students' self-assessment logs and a questionnaire e-mailed at 12 weekly intervals (asking about exposure to trauma and clinical use of skills attained from the trauma course) will be shared to ascertain the impact of the course.

References

Mastoridis S., Shanmugarajah K. & Kneebone R. (2011). Undergraduate education in trauma medicine: the students' verdict on current teaching. *Medical Teacher* 33(7): 585-587.

O89

Clinical reasoning skills: Do what I say not what I do

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Background Some models of clinical reasoning (CR) theory suggest that medical students can improve their skills by understanding the process, others that deliberate practice is necessary^{1,2}. Prior to applying these models into a programme, we explored students' engagement in clinical reasoning in the workplace and their teachers' perceptions in a UK medical school with no programmatic focus on clinical reasoning learning.

Outline Students completing their first year clinical studies (n=490) and their teachers (n=125) were recruited to a prospective mixed method study. Data collection was through self-reported questionnaires, reflective student diaries and semi-structured interviews with tutors.

Results to date Students (response rate 57%, n=254) recognise the importance of clinical reasoning. 46%(n=116) plan to apply reasoning processes in patient encounters and actually do so. Less than half ask about tutors thought processes (46.8%), rationale for a clinical decision (46.7%) or reflect on their own clinical reasoning (45.7%). In contrast, teachers (54% response rate, n=67) describe behaviours that support clinical reasoning (80%, n=100)

Conclusions to date Students do not actively engage in behaviours that maximise the clinical reasoning process despite recognising its importance. Teachers' behaviours do not improve this. Implementing programmatic CR requires methods that resolve the mismatch between beliefs and actual behavior.

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O90

Interprofessional Clinical Experiences With Vulnerable Populations: Learning Together and About Each Other

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Healthcare professions educators are challenged to prepare students to meet the needs of a range of vulnerable populations in the community, such as refugees and immigrants arriving in unfamiliar countries and cultures, people in socioeconomic crisis in the wake of a recent global financial catastrophe, and increasing numbers of elders living with a myriad of chronic illnesses. The healthcare challenges for these groups are rooted in social determinants of health (SDH), such as lack of employment, inadequate housing, poor health literacy, social isolation, racism, crippling mental illnesses, and lack of access to healthcare.

Interprofessional didactic courses have burgeoned in the past decade, but it is critical for students to collaborate together to apply their clinical skills and learning. The Interprofessional Care Access Network (I-CAN), in one US state, is a model for healthcare delivery that enhances clients' health experiences, reduces care costs and addresses population health outcomes by marrying practical theory with robust service-learning experiences in urban neighborhoods and rural communities (Wros et al., 2013). Nursing students provide care coordination for disadvantaged clients within underserved neighborhoods and communities in collaboration with dental, medical, physician assistant and pharmacy students. With faculty supervision, interprofessional teams of students partner with vulnerable clients to assist them to address barriers to their health and well-being. The program maintains partnerships with community service agencies that focus on SDH, such as governmental and non-governmental organizations and community-based clinics that provide healthcare to vulnerable populations and individuals. I-CAN students have responded positively to this interprofessional learning opportunity, which has captured national (US) attention as a model program for learning about population health.

References

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O91

Laying the Foundations: Reflections on the development and delivery of a national programme of simulation

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Context

The Foundation Programme was established in the United Kingdom in 2005 and provides two years of structured, generalist training to newly qualified doctors prior to specialisation. The Foundation curriculum consists of an extensive set of competencies, a number of which are difficult to consistently cover during clinical placements (Collins 2010).

What we did

An action research approach was used to identify the needs of these doctors, design a programme of simulation to support their clinical placements and help address these needs, and then to evaluate the effectiveness and impact of this intervention. Initially, an analytic hierarchy process was used to identify and prioritise the perceived needs, to understand where the intervention would be best focused. This informed the development of a programme of immersive simulation. The programme was then piloted with all second year Foundation doctors (FY2s) working within NHS Tayside in Scotland. The pilot exercise was evaluated using questionnaires and focus groups.

What we found

We demonstrated, using the collected data, that we had accurately identified areas of the curriculum in which doctors were struggling to get sufficient training during their clinical attachments. The evaluation of the simulation events confirmed that we had successfully addressed these learning needs. Focus groups brought further insight into how the programme could be improved and, importantly, identified examples of where doctors' practice had been positively influenced by this intervention. As a direct result of the work undertaken in this study, this programme of simulation will be rolled out across Scotland in 2016/17.

Conclusion

We intend to present this study, its findings and our reflections on the process of developing a national programme of simulation.

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O92

How Do Students' Backgrounds Shape Clinical Judgment Development?

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Academic educators must foster clinical judgment development in a diverse workforce. Clinical judgment is a critical skill for making quality decisions about patients' care. Nurses' past experiences influence what they notice and how they interpret patient data (Tanner, 2006), but what about students' development of clinical thinking? The primary purpose of this in-progress, international study is to determine what background factors influence what students notice and explore how they interpret patient data.

Sample:

The study includes participants from 3 countries, enrolled in courses in which they are introduced to perioperative care.

Data Collection:

A simulated case study provided the focus for noticing and interpreting. Upon watching, all participants completed an online survey, comprised of multiple descriptive, demographic questions and 7 open-ended questions.

Data Analysis:

For the content analysis, codes will be determined from a subset of responses to the open-ended questions. Two different coders will assign codes to participants' responses to determine correlation with demographic variables.

Findings:

Among the 536 participants, a wide range of sociocultural and educational backgrounds will provide insight into what students notice and how they interpret their findings as well as how academic educators can best facilitate their clinical judgment development.

References

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O93

Can manikin simulation meet students learning needs for the assessment and management of the deteriorating learning disability client?

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The simulation was designed to improve knowledge and skills in assessing and managing a deteriorating patient, with learning disabilities. The rationale was:-

- 1) Learning disability (LD) is an under researched field in manikin simulation.
- 2) People with LD have a higher degree of health inequalities when compared with the general population (Emerson and Baines 2010) leading to premature death (CIPOLD 2013).

This simulation included team working, leadership and problem solving to ensure high quality, safe client care. We wrote three scenarios -Seizure, Pneumonitis solids / liquid in trachea: as these are the most common causes of premature death and Hypoglycaemia; due to an increased prevalence in LD clients. These were reviewed by a LD service user for authenticity. Each simulation scenario ended with a debrief.

The students' completed a post simulation evaluation and attended a discussion group. Initial feedback from the group was positive. They enjoyed having the simulations in a controlled environment with immediate feedback from staff and peers.

The negatives were they would have like a staged approach across the programme progressing to more complex interactions in year 3 and that they hadn't had more simulations! We are transcribing the tapes from the discussion group for more evaluative information.

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O94

SHaRE: Simulation in Health and Rehabilitation Education - Who's doing what in simulation in my own backyard?

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Background:

Simulation has enjoyed a surge in health professional education, yet there is often limited awareness of "who's doing what" in one's own backyard. This presentation will describe findings from a multidiscipline scope of health simulation practices at The University of Queensland (UQ, Australia). Outcomes of this project will be discussed, including the current landscape of simulation locally as well as further afield. It is anticipated this scoping project will reveal strategies to enhance efficiencies of simulation practices and to facilitate wider simulation uptake. A local driver is to identify untapped opportunities for simulation as a vehicle for collaboration and interprofessional education. A key outcome will be establishment of the SHaRE (*Simulation in Health and Rehabilitation Education*) collaborative, a local community of practice for those in simulated learning to share ideas and experiences, streamline resources, spark enthusiasm and create visions for sustainable simulation practices, firstly at UQ, with likely national and international relevance.

O95

Using simulation to teach undergraduate medical students to recognise clinical learning situations -AMUSE: Acute Medical Unit Simulation Exercise

*Joanne Sloan, Audrey Gregory
University of Dundee, Dundee UK, UK*

Background

In their final two years of medical school students undertake clinical attachments where the majority of learning opportunities are unplanned, dynamic and dependent on students engaging with the available opportunities. Arabshahi et al¹ describe the need for preparation for these clinical attachments thus:

"There should be some changes in educational planning before starting the internship period so that the students get ready to learn the experiences of internship period"

Aim

Through simulation students were exposed to clinical learning opportunities common to an acute medical unit. The value of simulation is that these opportunities can be highlighted, supported and then consolidated through debriefing.

Innovation

Students attended a simulated consultant led teaching ward round. They then worked under the supervision of the registrar to complete tasks from the ward round and clerk acute admissions. They presented patients to the consultant at the end of the exercise. A group debrief highlighted their ability to recognise and engage with learning opportunities and their engagement in those.

Findings/Results

Over 2 weeks, 179 students undertook this exercise. Student feedback showed an overall appreciation and recognition of available learning opportunities with subsequent engagement in them. Some of the findings were the opportunity to practice pre-learned skills, work closely with nursing staff and to become cognisant with the functioning of an acute medical ward.

References

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O96

Clinical Debrief: an innovative model supporting the development of professional competence in undergraduate medical students

*Lisa Collins, Niall Jordan
Manchester University, Manchester, UK*

Aim

Making sense of the complexities of the clinical workplace is challenging for students. In addition to developing emergent clinical reasoning skills, the provision of a safe, peer-driven environment is essential to support students in developing the "habits of mind" required of a professional. We aimed to achieve this through small group sessions facilitated by GPs.

Method

Within the context of programme revisions at Manchester Medical School the opportunity arose to expand and refine existing teaching models. A focus group of students exploring the concept of Clinical Debrief identified the importance of content being generated from real cases and professional experiences, whilst providing structure to the sessions. These ideas were developed in light of a literature review resulting in a novel learning experience.

Outcome

Details of clinical debrief will be presented. The sessions provide a non-judgemental environment to explore and make sense of the students' real experiences, supporting learner transition in both clinical and professional domains. There is considerable emphasis on continuity of tutors supporting effective clinical supervision.

Discussion

Medicine is more than knowledge; students need to learn to think and behave like doctors. Although this may be 'caught' we believe it should also be 'taught'. Clinical Debrief provides this opportunity.

O97

Concept-based learning in academia and practice: Supporting new nurses as they transition to professional practice

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OR, USA*

Title:

Concept-based learning in academia and practice: Supporting new nurses as they transition to professional practice

Background:

The current health care environment worldwide demands rapid development of professional practice and competence, yet nurse executives report that new nurses are not fully ready for practice (Berkow et al, 2009). Within academic health centers (AHC), opportunities for collaboration between academia and practice are often missed (Manatt, 2016). Strategic collaboration between academia and practice is needed to support transition to practice. Concept-based learning has been used to integrate theory with practice and improve thinking about nursing practice in academic settings (Nielsen, 2016).

Methods:

In one AHC, the focus of new nurse hospital orientation was changed from psychomotor skill acquisition to concept-based learning to promote improved thinking for professional nursing practice. Concept-based learning activities (CBLAs), a strategy developed at the school of nursing that links theory with practice, are being used in the hospital orientation to promote in-depth understanding of concepts related to safe patient care. A study guide directs learners to prepare by reading information relevant to a concept being applied to practice, then collect and analyze data for decision-making. Then a group of learners comes together with an experienced nurse facilitator to debrief the concept and experience toward specific goals related to safe nursing practice and professional development. The result has been enhanced new nurse professional practice through the application of theory to practice and self-assessment to support the development of decision-making.

Conclusion:

Concept-based learning is one way to deepen understanding of key aspects of patient care, clinical decision-making, and safe care in order to support transition to professional practice. In this presentation use of concept-based learning activities across academic and practice settings will be described.

O98

PsychSim: Introducing A-E assessment of the acutely unwell patient to a new demographic

*Amanda Collins, Gemma mcGrory, Julie McQuade,
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The challenging nature of assessing patients with psychiatric emergencies can result in medically unwell patients being admitted to psychiatry¹⁻³. In addition to this, having a psychiatric problem does not make patients immune to medical illness⁴. NHS Lanarkshire psychiatry consultants identified a need for training in medical assessment of the acutely unwell patient, particularly basic management of emergencies and onwards referral.

We have developed a one-day simulation based programme which consists of a morning of interactive sessions with interprofessional facilitators, mannequins and equipment on the A-E assessment of the unwell patient. The afternoon is then used to run simulation scenarios in which participants can consolidate the skills and knowledge gained into practice. Each scenario is debriefed and reflected on by the group as a whole.

A questionnaire is completed before and after the course. Pre-course questionnaires consistently indicate that psychiatry participants are not confident of their skill level when managing acute medical emergencies.

Feedback collated to date suggests that this session markedly increases psychiatry consultants confidence and self-reported knowledge in assessment of acutely unwell patients. Psychiatry colleagues consider the A-E assessment is a valuable tool, which will impact on their future clinical practice.

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O99

Debriefing clinical experiences: Supporting new professionals as they transition to professional practice

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USA*

Background

In today's complex healthcare environment worldwide, newly graduated nurses are often not prepared for the realities of practice and the clinical decision-making needed for safe patient care (Whitehead, et al, 2013). Skilled debriefing contextualizes practice and moves learners from "knowing what" to "knowing how" to "knowing why" and is recommended for learning activities beyond simulation (National League for Nursing, 2015). Discussion with an experienced educator is a critical aspect of clinical learning to support development of thinking (Nielsen, 2016).

Methods

In one academic health center (AHC), nurse educators from academia and practice extended use of debriefing principles from simulation to another strategy, concept-based learning activities (CBLAs). Through a guided framework, CBLAs direct the learner to collect and analyze information related to key concepts for practice. Structured debriefing, in which an experienced nurse facilitator debriefs the concept with a group of learners, follows. The goal is to create an environment for peer feedback about safe decision-making in practice and reflect on learning needs to support safe practice. The result has been enhanced decision-making and support of the development of new nurse professional practice.

Conclusion.

Debriefing, extended to learning activities beyond simulation, supports deep learning about patient care, mentoring of decision-making in new professionals, and promotion of safe patient care. In this presentation, specific debriefing strategies will be described in the context of the clinical learning activities in which debriefing is used.

O100

'Blending flipped with integration': A new approach to teaching integration of primary and secondary care

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Integration between primary and secondary care is widely recognised to benefit both patient care and health systems such as the NHS. However, medical schools producing the doctors and leaders of the future tend to teach each of these aspects separately, both in the classroom and on clinical placement. Understanding the relationship between primary and secondary care and the patient's health care journey is integral to enable future improvements. The flipped classroom approach has been used in medical teaching with success, however there is little published evidence of its implementation in the UK.

To overcome this gap in the curriculum, we have developed eight 'integrated' cases to be delivered during general practice teaching to 4th year medical students. These showcase how a patient's condition may develop overtime, general practice theories and the interaction between primary and secondary care in providing healthcare to patients. The teaching is a facilitated session with a GP tutor to a small group of 8-10 students.

Students are expected to conduct 'pre-work' prior to the session. This consists of viewing a video of a patient's initial GP consultation (filmed using patient actors) and other selected materials relating to the case.

During the facilitated session, discussion focuses on this initial consultation. Showing further video clips, referral letters, discharge paperwork from secondary care and audio clips creates the patient journey and promotes further topics for the group to consider.

The session is delivered via the Nearpod system, which allows students to follow the session on their own devices and participate in online quizzes. To integrate the student experience further, the interactive case is based on a clinical topic relating to the secondary-care module studied at the time (8 x 5 week rotations).

This innovative programme has been introduced in September 2016 and the preliminary evaluation discussed at conference.

O101

Trauma simulation and validation of SAGAT (Situation Awareness Global Assessment Technique) in undergraduate medicine students

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Situation awareness has been described as "the perception of the elements in the environment within a volume of time and space, comprehension of their meaning, and the projection of their status in the near future" and has also been described as an essential human factor when improving patient safety and team performance.

The aim of this study is to test the Situation Awareness Global Assessment Technique (SAGAT) for validity and reliability for further use in an upcoming intervention project with a focus on interprofessional education and team training. The importance of measuring and developing team performance and non-technical skills has been clarified previously. There are challenges, e.g. variations in age, gender, experience, training, team composition, hierarchies and complexity in environments. The question that ought to be answered is if patient safety can be improved in acute care interprofessional teams by increasing their knowledge in situational awareness. In the present study, reliability for the used instruments will be confirmed by analyzing internal consistency, interrater correlation and intraclass correlation. The validity will be tested, partially via the participant's experience of the instrument and partially via experienced trainers. The context is scenario based team trainings in a full scale patient simulator lab. The participants are medical students (Year 4) during their clerkship in Anesthesiology and Intensive Care. Video will be recorded to allow for later analysis. The analyses will include SAGAT, Team scale, and a checklist for ABCDE with scores for time to initiation and for completion of task. Data collection takes place spring 2016 - autumn 2016. Data analysis will take place January - February 2017.

O102

The West Coast Interprofessional Clinical Knowledge Evidence Disseminator (WICKED) Project: A novel approach to teach evidence informed health care

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Context:

There is a need to improve teaching of evidence informed health care (EIHC) across all professions as, despite its importance, EIHC is not widely used by clinicians and the current teaching approaches are not meeting the needs of learners. To address this gap, The West Coast Interprofessional Clinical Knowledge Evidence Disseminator (WICKED) Project team developed five EIHC modules using virtual patient technology and an interactive, e-learning platform. The impact of the modules on knowledge gain; and user satisfaction and engagement with the EIHC modules was evaluated.

What we did:

The module development process included: setting learning objectives, developing the virtual patient storyboards, reviewing and modifying the storyboards, producing the modules, and reviewing and testing the modules. A cohort of residents and health professional students were recruited from Family Practice, Physical Therapy, and Occupational Therapy. Knowledge and skill gain was assessed using the Fresno tool; and learner and instructor satisfaction and engagement was evaluated through questionnaires and focus groups/interviews.

What we found:

Five modules were developed to reflect the five steps of EIHC: Ask, Acquire, Appraise, Apply and Assess. Participants (n = 150) were recruited. The Fresno tool (n = 66) demonstrated a pre/post mean difference in knowledge gain of 20 points (95%CI 16 to 24). Learners reported that the modules were engaging, easy to use and should be integrated permanently into the program by educators.

Conclusions:

The EIHC modules seem to address the research-to-practice EIHC "gap". Virtual patient cases offer a simulated learning environment for students to learn, experience, and practice, while providing flexibility for time and geography. The modules complement and supplement classroom and clinical learning. These online modules allow for a flexible learning approach that enhances the teaching of EIHC.

O103

Training for trauma in the ultimate austere environments-high sea states and weightlessness

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Exsanguination is the leading preventable cause of post- traumatic death, a risk faced by civilians, soldiers, sailors and astronauts alike. Immediate intervention is mandatory. Space adventure, difficult sea states, and austere environments all have similar identifiable problems.

Design/Method

The visceral compartment of the human worn partial task surgical simulator (Cut-suit) was contained within a custom-made, sealable surgical "bathtub" on board both a small National Research Council of Canada jet. 10 damage control laparotomies were performed within 168 parabolas in microgravity. A new class of naval vessel designed for "shallow water" littoral combat was simulated at the US Navy Bio dynamics Laboratory. 36 procedures were performed at calm sea, sea state 3, and sea state 4.

Results

Blood loss was easily measured by the delivery system thus easily telling the effectiveness of the trainer. At simulated sea, there was no statistical difference identified between the twelve procedures at calm seas versus either sea state 3 or 4. Blood flow at each state was reduced 35% and the stopped. Sea state roughness did not alter the ability to perform hepatic hemorrhage control. In parabolic microgravity, all open damage control laparotomies were performed in the allotted time. Blood loss at 1G was 408.2 ML (SD 102) vs Zero G 307.6 ML (SD 178.1)

Conclusion:

Previous conclusions that surgery is not possible at any sea state other than sea state 1 are not supported. The results of this study have generated a 21-day at sea study to continue this research. All damage control surgery was completed in microgravity with data available by meeting date. It is now time to combine the remote training capabilities with non-surgeons to determine if non-surgeons can truly become proficient at damage control. This surgical phantom created a training/research tool to further studies of torso exsanguination.

O104

Enhancing early interprofessional learning through community engagement

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Student engagement in Community Health Centres aligns with the Australian National Health Workforce Innovation and Reform Strategic Framework for Action (2011), which identifies primary care as a priority focus for national action. Interprofessional student placements in the community explores an alternative to traditional clinical education and extends capacity for clinical education beyond acute hospital placements.

Aim

This study aimed to establish a volunteer interprofessional placement opportunity at a Community Health Centre for second year medical and nursing undergraduate students over a 12 week period.

Method

A mixed methods design was adopted to evaluate this innovative placement experience. Quantitative and qualitative feedback was collected using the Interprofessional Clinical Placement Learning Environment Inventory (ICPELI)¹. Students (n= 40) completed the ICPELI at the end of each clinic sessions, which were based across the Community Health Centre's three sites. Two focus group interviews were undertaken with the health care practitioners, mid-way through the students' placements and at the end of the placements.

Findings

Preliminary analysis of the ICPELI has indicated that students agreed or strongly agreed (100%) that this clinical placement was interesting, 78% found the placement provided them with sufficient learning opportunities, 88% indicated they belonged, and 94% rated the placement had given them new insights into how community health is managed along with a better understanding of the patient's role in health care decision making. Thematic analysis is planned for the reflective questions from the ICPELI and the focus group interviews.

Discussion

Innovative approaches to clinical education and learning are needed to prepare a healthcare workforce capable of working in a collaborative, interprofessional manner that is patient centred.

Reference:

Anderson A., Cant R. & Hood K. Measuring students' perceptions of interprofessional clinical placements: development of the Interprofessional Clinical Placement Learning Environment Inventory. *Nurse Education in Practice*. 2014; 14(5):518-524.

O105

One week of community and sixty seconds - a reflective innovation

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Research has clearly identified that students spend their first week assimilating into a new clinical setting and it is only in subsequent weeks that they are able to focus on their learning needs. Yet, in a graduate entry Master of Nursing Practice program (MNP) students undertake just a one week of clinical placement for community health. There is no post-practicum follow-up to establish or share what the students learnt through this very brief placement. This pilot study is one of 14 projects across five Australian universities funded through the auspices of an OLT project grant which is focused on enhancing the post-practicum learning experience.

Aim

This project aims to provide an engaging student-led platform for the sharing of students' key learning experiences of a community health placement. It is anticipated that making a 60-second video on completion of their community health practicum maybe an appealing interaction and facilitate students' learning about the diversity in community health.

Method

A mixed method design is being used in this project. To get a base understanding of MNP students' experiences of the learning from this community placement, an analysis of the summer semester (2015/2016) students' clinical portfolios was undertaken. This guided the structuring of an on-line forum and video activity development. Second semester, 2016 MNP students undertaking the community health practicum are currently being recruited to participate. Collection of data will occur in October/November on completion of the unit. A survey will be used to determine students' processes, monitoring of the Moodle site discussion forum (number of students' post) and reviewing of students' videos. Thematic analysis will be undertaken of the students' forum posts and videos while the survey will be analysed using SPSSv22.

Findings & Discussion

These unknown learnings are work in progress to be revealed at this presentation.

O106

Newly qualified (Foundation Year 1) Doctors feel underprepared in leading ward rounds; what would help?

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Ward rounds are a fundamental part of hospital life. As the predominant daily patient-doctor interaction they have a significant impact on patient safety and experience. Newly qualified doctors (Foundation year 1 doctors / FY1s) play a key role in ward round delivery- FY1s are not only integrated into the ward round team but situations may arise where they are expected to conduct a ward round alone. Yet, many foundation year doctors have received no formal training in how to conduct a ward round. This means vital elements of the round are at risk of being overlooked which makes for unsafe medical practice and increases the chance of error and preventable deaths.

We plan distribute an online survey to all FY1s in the Yorkshire and Humber area of the UK to inquire about their ward round experiences.

We plan to analyze the data collected via our survey to examine any deficiencies in ward round knowledge of FY1s. In light of these results, we will design a poster for wards and a credit-card sized aide memoire for each doctor suggesting aspects to cover on ward rounds. We also plan to lead instructive sessions in delivering ward rounds to foundation year doctors. In an attempt to standardize the practice of ward rounds within our area we are also working closely with Hull York Medical School and Leeds Medical School to incorporate ward round teaching into the undergraduate curriculum.

Knowledge of what ward rounds involve and how to conduct them is an area that is poorly covered in the period of transition from a medical student to a new doctor and we hope we can improve the safety of this transition.

Our results will be ready for presentation at the conference.

O107

Closing the normative gap for novices in Cardiopulmonary Resuscitation C.P.R.

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Keywords:

C.P.R. experience; philosophical hermeneutics (P.H.); symbolic interactionism (S.I.); experiential learning theory (E.L.T.); professionalism (self-care)

Introduction:

Life as a healthcare professional balance care of the patient with self care. Using three theoretical frameworks (S.I., E.L.T., P.H.), the personal experiences of a junior doctors undertaking C.P.R., were studied, initially to determine the adequacy of undergraduate training.

Literature review:

Wilkinson (2009) identified that the balance between self-care and patient care is not well understood/taught in current medical curricula. Medical workforce burnout is recognised to be an outcome of high stress jobs and life-death decision making (Balch, 2009), and may reflect sub-optimal self care. One to one interviewing of C.P.R. performers (Ranse and Arbon, 2008) has been suggested as the most appropriate method for a hermeneutic study of experience.

Methodology:

A qualitative study, using one to one interviews, and a single researcher, was undertaken with 18 participants to uncover their experiences of early professional life C.P.R. Recruitment was undertaken in the state of Victoria: interviews lasted between 30 to 60 minutes; sampling was opportunistic, later analysis revealed coverage of many characteristics associated with purposive samples.

Results:

Whilst all participants predictably narrated distressing C.P.R. experiences, some unexpected narratives emerged that demonstrated a normative gap between personal understanding and professional consensus. This gap (usually relating to premature exposure to high levels of clinical responsibility) was defended vigorously by participants for its subsequent heuristic benefit and personality formation. Objectively the long term consequence of such memory is less clear.

Conclusion:

All human experience is uniquely encoded. When experience is linked with strong emotions, memory is powerful, enduring and influential. Self-care strategies targeting normative gap closure may reduce long term burnout, and improve long term functioning of safe and effective practitioners.

O108

Implementing clinical practice guidelines in chronic wounds: identified barriers to research uptake by clinicians

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Context:

The gap between research evidence and clinical practice is widening for people with chronic wounds. Venous leg ulcers (VLU) on the lower limbs are the most common chronic wound seen in the community in Australia. More than 500,000 people suffer with this condition which has a high burden on patients and health care systems costing the Australian health system over \$3 billion per year. Evidence based guidelines uptake by clinicians is suboptimal and variation in clinical practice continues to the detriment of healing rates in the country. This research reports on the reasons clinical practice does not comply with EBP guidelines.

Objectives:

This workshop discussion will highlight gaps between evidence-based care and actual practice; discuss barriers and enablers to evidence-based care in VLU management; and evaluate effects of implementation interventions to increase uptake of evidence-based care into clinical practice.

Conclusion:

This session will answer the following questions to help us better understand translational activities using the validated theoretical domains framework (TDF) four-step approach:

1. Who needs to do what, differently?
2. Using a theoretical framework, which barriers and enablers need to be addressed?
3. Which intervention components (behaviour change techniques and mode(s) of delivery) could overcome the modifiable barriers and enhance the enablers?
4. How can clinician behaviour change be measured and better understood?

O109

Guided scenario design by simulation participants rather than faculty- the ultimate learner-centred approach to simulation?

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Scenario design is often taught in train-the-trainer and debriefer courses. We supervised a group of emergency trainees and guided them through simulation scenario design, with content and objectives selected by the trainees. Trainees then ran the scenarios on another trainee group with faculty assistance, and were then debriefed on the scenario design. They provided comments on the experience.

Outcome:

The experience was seen by participants to be a worthwhile introduction to simulation construction, with comments applicable to psychological safety, content, reflection and enthusiasm for a repeat of the exercise. Scenario design was based on two real cases experienced by group members and perceived as difficult. The group were experienced simulation participants with a high degree of exposure both to simulation and to the particular faculty involved.

Conclusion:

There are opportunities to expand learner centred simulation with learner driven scenario design

O110

Family Presence During Resuscitation (FPDR): Development of an education training package

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Aim:

The aim of this presentation is to report and showcase the development of an education training package using video scenarios utilising the acronym ER-DRIP to teach clinicians on how to implement FPDR.

Method:

The acronym ER-DRIP² (emergency personnel, reassurance, diagnosis, regular up-dates, interventions and prognosis) was developed following a state wide survey³, a period of resuscitation observation and interviews with emergency personnel in Victoria, Australia as part of a PhD study. An education training package was developed, which provides students with a series of videos together with discussion notes which aims to develop the skills necessary to successfully implement FPDR for both paediatric and adult patients. A team of experienced academics, emergency clinicians together with trained actors and emergency personnel developed three clinical scenarios which represent common presenting conditions while demonstrating practically how to engage with family during resuscitation events. The three scenarios include a paediatric respiratory arrest, a myocardial infarction and a stroke victim.

Results:

A total of three scenarios were written and filmed with the use of simulation trained live actors, emergency personnel and paramedics aiming to mimic resuscitation events. The paediatric respiratory arrest depicts a child's interaction with staff and his mother, while the myocardial infarction scenario occurs in a backyard and is attended by a team of paramedics. The third scenario depicts an elderly stroke patient, demonstrating the implementation of FPDR in the emergency department. The FPDR education training package was developed for introduction into an undergraduate bachelor of nursing degree program and a postgraduate paramedic program.

Conclusion:

FPDR, although widely endorsed is practiced inconsistently in the emergency department clinical setting, in particular with adult presentations. Additional training and education around the implementation and practice of FPDR was identified as essential.

P01

Teaching observational skills to undergraduate medical students using contemporary photography

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The increasing availability of radiological and laboratory investigations has resulted in decline in the art of inspection¹. Some undergraduate medical courses utilise Visual Thinking Strategies (VTS) in the form of teaching inspection and critical thinking through observation and discussion of fine art²⁻³, and there is evidence to suggest that this improves students' abilities to reason diagnoses from visual cues¹⁻³. This work in progress describes a teaching session with a novel adaptation of VTS through contemporary photography, as previous work indicates that not all students enjoy fine art which can impact on engagement. Using photography may make VTS more accessible, as this is a more familiar medium to today's medical students. Students are shown a series of photographs and invited to comment on what they see, before a wider group discussion around the photographs takes place. A bedside teaching session follows which concentrates solely on observational skills and inspection of patients, before concluding with observation of a further series of photographs. This study has shown that students' observational skills improve after exposure to this observational skills programme, and that observations of the second set of photographs are of better quality and demonstrate attempts to draw inference compared to the first set of photographs. This is in keeping with findings from similar work in fine art that observational and diagnostic skills are improved.

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P02

MedSTOC: Non-Technical Skills for Higher Medical Trainees

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Higher physician training emphasises the acquisition of knowledge and skills, but places less emphasis on the acquisition of non-technical skills¹. A simulation project was designed to develop higher trainee physicians' non-technical skills through challenging clinical scenarios.

This pilot wished to determine whether the course is acceptable to the target population, and whether it develops non-technical skills. Scenarios included multiple sick patients, challenging interactions, multidisciplinary teamworking and critically unwell patients, using a mix of SimMan and actors.

Feedback was universally positive. Candidates found the course useful for developing non-technical skills and indicated what they had learned would impact on their clinical practice. The use of actors alongside SimMan was highlighted as excellent. Future suggestions for scenarios included difficult communication with other specialties and inter-speciality conflict.

Whilst there are a number of studies looking at the development of non-technical skills in airline pilots², anaesthetists³ and surgeons¹, there are none looking at the development of these important skills in higher trainee physicians. This course has been developed to fill this gap in training, which often neglects formal training in non-technical skills, which are arguably as important as technical skills.

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P03

The use of a modified SBAR to develop undergraduate case presentation skills

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Undergraduate history taking skills are formally taught, however presenting clinical cases is a skill often acquired by trial and error¹⁻². SBAR has been established as an effective communication tool, which is widely used in the NHS³⁻⁴. A novel modification of the SBAR tool was used to develop clinical presentation skills in medical students. This study wished to determine what students thought of the modified SBAR, whether they were able to use it effectively, and whether it increased their confidence in presenting clinical cases.

The SBAR tool was modified to change 'Recommendation' to 'Reflection', to allow for personal reflection on the case being presented. All third year medical students attending Hairmyres Hospital for medical attachments were introduced to the modified SBAR and encouraged to use it. All students chose to utilise the tool and universally students stated that they would use the modified SBAR in future, as they found it concise, structured, an aide memoire and increased their confidence when presenting clinical cases on the wards.

A novel adaptation of the established SBAR tool has been successful in developing medical students' case presentations skills and confidence, and has provided a structured foundation on which to build students' case presentation skills.

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P04

A Tricky Tracheostomy Test - The Results are In!

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Airway emergencies are thankfully uncommon, but carry a high morbidity and mortality risk. In 2012, McGrath published the current guidelines that are in use across the UK for Emergency Tracheostomy Management. (1) Our study was to review and re-evaluate the current guidelines and to create a new protocol to be used at a local level.

A single page protocol was developed based on the 2012 guidelines. We asked 15 doctors from various backgrounds and stages of training to follow the protocol during a given airway scenario. Whilst they were following the protocol, we assessed 21 different aspects on a set "test sheet". All information the candidate required was on the protocol and no other knowledge was assessed.

15 doctors completed the scenario and ranged from CT1 to Consultant level. Their background specialties include surgery, anaesthetics and emergency medicine. Only 6% of candidates commented on the "Red Flags", 80% called for help, 53% and 83% commented on the patients breathing. Candidates had difficulty with checking patency and this has been noted as an area for review. Also, only half of those starting CPR checked for a pulse.

Further development of certain areas of our protocol need re-examined. In addition, this highlights the need for further airway training and education for both primary and secondary responders.

P05

Introduction of Ultrasound in Clinical Medical Student Training

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Introduction of Ultrasound in Clinical Medical Student Training.

Until recently, ultrasound imaging has been the domain of radiologists/sonographers and also obstetricians. Ultrasound has also been used over the past few years for teaching anatomy. Recently, ultrasound teaching been introduced in a few medical schools as a diagnostic tool in the clinical setting.

The cost of ultrasound equipment is likely to fall. Battery powered, near-pocket sized equipment is being used at the bedside by some clinicians. This modality could come into routine use by doctors in the future, and may even replace the stethoscope.

AUC School of Medicine has initiated the training of ultrasound at an undergraduate level to introduce skills at an early level of training, at two of its affiliated, UK hospitals.

“FAST”, “AAA”, pneumothorax, and musculoskeletal scanning techniques are taught, and can be practiced repeatedly with normal subjects and patients, whilst under supervision. One hospital has also introduced training on a mock-up simulation of an ultrasound guided core biopsy of a lymph node mass to improve coordination skills of learners. Other easily learnt, valuable techniques are vascular access and fluid aspiration.

Students enjoy and become proficient quickly. Frequent practice is needed to maintain skills. Training is time intensive.

P06

‘Know Your Blood Pressure’. How Cardiff University Medical Students have engaged in a Public Health initiative

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Context

Approximately 7 million people in the UK live with undiagnosed hypertension, without knowing they are at risk¹. The Stroke Association ‘Know Your Blood Pressure’ (KYBP) campaign helps people understand the link between high blood pressure and stroke².

What we did

We linked with Rotary International and the Stroke Association to run KYBP in public venues. Students rotated between three roles: bringing in members of the public, clerking them using Stroke Association documentation, and taking blood pressure measurements. Advice was given following guidelines from the Stroke Association². Students did not offer diagnoses or recommend treatment, other than to visit a GP.

Findings

Almost 700 people had their blood pressure measured, some being asked to visit their GP urgently, such as a gentleman whose BP was found to be 181/115. Following a General Practitioner visit, the gentleman was diagnosed with hypertension, hypercholesterolaemia and type II diabetes. This was the students’ first experience of performing clinical skills with members of the public. Feedback indicated they felt more confident afterwards.

Conclusion

Members of the public can be helped to understand links between hypertension and stroke through public health campaigns. Medical students can gain experience in clinical skills through involvement in these campaigns whilst performing a public service.

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P07

Peer to peer venepuncture in the curriculum – providing a stepping stone to clinical practice

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Context

Clinical procedure teaching is an important part of the Medical School curriculum. However, performing skills such as venepuncture can create anxieties in medical students, and is often linked to lack of experience or fear of harming patients¹. One approach, to bridge the 'gap' that exists between learning in the Clinical Skills and Simulation Centre (CS & SC) and carrying out the procedure on a patient, is to allow students to practice the procedure on each other².

What we did

Three hundred second year medical students completed an on line tutorial then attended a teaching session on venepuncture using simulated arms. A 'live' session followed with students working in pairs. Each student was instructed to prepare their 'patient' by discussing the procedure, explaining the risks and obtaining informed consent before attempting to take a blood sample from their peer.

What we found

The majority of students successfully obtained a blood sample from their peer. Questionnaire evaluation produced overwhelmingly positive ratings from students. In addition, free text comments provided supporting evidence to the quantitative data.

Conclusion

Direct experience of discomfort whilst acting as a 'patient' during the 'live' session was reported by many students to be a 'good thing' and is more likely to provide empathy for patients who undergo the procedure². The CS & SC is a safe environment where students can practice what they have learned without the distractions of a real ward. Emotional talk evident within the evaluations indicating a sense of fulfilment and decreased anxiety may suggest that performing skills is a 'big deal' for many. Providing peer to peer venepuncture opportunities may act a safe 'stepping stone' into the clinical environment.

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P08

Can a teaching programme for newly qualified doctors be learner-centred and improve engagement?

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Background:

Weekly teaching is vital in the ongoing education of newly qualified doctors.¹ Peer teaching is a valuable method in providing knowledge while developing the clinical educator. Despite utilising this approach, attendance often falls below minimum standard (70%).² Factors influencing attendance include clinical pressures and perceived lack of educational benefit.³

Aim:

We investigate whether a flexible teaching programme designed to integrate expert and peer teaching, focussed on the curriculum and learner centred goals will improve engagement.

Intervention:

Anonymous feedback & attendance from the previous cohort's teaching was analysed and used to form the basis of a new programme. The content of the revised programme is reactive to ongoing feedback & engagement.

Results:

2 of previous cohort (n=26) met the minimum attendance standard. The presence at teaching sessions became more variable later in the year. Feedback was periodically sought with response rates of 59-77%. Overall, 86%-94%, of the doctors felt the sessions were useful. Qualitative feedback on teaching topics/styles was also collated indicating practical sessions may provide more learner-centred education.

Ongoing:

This academic year, collation of qualitative and quantitative feedback will allow completion of the evaluation loop. We will assess whether a learner-centred approach will improve attendance, engagement and satisfaction.

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P09

E-Valuating the impact of an E-Portfolio: Health science students' ability to reflect on their *Communication in Health* behaviours and skills

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Within the context of health practitioners' communication skill development self-reflection is a fundamental aspect of developing interpersonal relationships within the health care setting. Further, it is a key professional competency which has been shown to improve health outcomes across a range of health care settings and disciplines. This project evaluated students' development of self-reflection through engagement with an individually assessed e-Portfolio within a large first year health science unit (650+ students enrolled in *Communication in Health*). Within *Communication in Health* an e-Portfolio is a formal assessment worth 50% of students' overall mark. It is designed to encourage students to engage in their learning process, therefore, allowing better engagement with the content of the unit and to improve their ability to be critical thinkers. In doing so the e-Portfolio aims to equip students with the skills to analyse situations in the workplace, improve their ability to react in complex situations, and increase their level of truth-seeking in academic and professional situations. The e-Portfolio asks students to reflect on themselves in the context of 12 specified topics related to communication in health. Reflections on each topic require students to analyse and apply academic evidence specific to their profession in the context of how they might reproduce those clinical behaviours and skills to better address the needs of their clients, patients or community. In doing so, students can better understand the process of reflection in clinical/professional practice (reflexivity). In order to evaluate student's development of self-reflection (pre and post-intervention) the Groningen Reflection Ability Scale (GRAS) was used. The content of students' e-Portfolios were also analysed qualitatively to identify thematic indicators of developing self-reflection. The preliminary findings of this study and their implication for the development of clinical skills will be presented.

P10

Emotional intelligence, self-efficacy and academic performance among two students' groups at Cairo University

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Background:

The relationship of emotional intelligence (EI) with academic performance is controversial. Our aim is to (dis)prove the association of EI and/or Self-efficacy (SE) with the students' GPA of a group of nursing school students and another group from non-medical colleges at Cairo University, Egypt.

Methods:

A self-report questionnaire comprised of demographic data, trait Emotional Intelligence Questionnaire-Short Form (TEIQue-SF), the General Self-Efficacy Scale (GSE), and the students GPA was filled by 462 students of different sex at Cairo university during the second semester of the academic year 2015/16.

Results:

Around 44% of the sample were from nursing school whereas the rest were from non medical colleges. Sixty percent were females, and the mean (SD) age of the sample was 20.06(1.27). The TEIQue-SF was divided into 4 subscales: (Wellbeing, Emotionability, Self Control, and Sociability) and a Global score of all items. The mean (SD) score of EI- Global Score was 127.95(18.88). For SE, the mean (SD) score was 28.15(4.42). Female university students showed higher GPA and EI scores than males. The mean of EI was significantly higher among the non medical students compared to the nursing students. There was no sex difference in SE. The mean score of EI was higher among the group with the top 10th percentile of GPA.

Conclusion:

Nursing students showed lower EI and SE than the other non-medical group. Therefore, it is important for nursing students and faculty to understand the concept of EI and to include it in the curricula.

P11

Speciality preferences among two samples of medical and nursing students and its relationship with Emotional intelligence, and self-efficacy

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Background:

Our aim is to (dis)prove the association of emotional intelligence (EI) and/or Self-efficacy (SE) with specialities' preference (SP) among medical and nursing students.

Methods:

A self-report questionnaire comprised of demographic data, trait Emotional Intelligence Questionnaire- Short Form (TEIQue-SF), the General Self-Efficacy Scale, and students SP was filled by 451 medical and nursing students at RAK MHSU and Cairo University in 2016.

Results:

Around 66% of the sample were medical students. Sixty two percent were females, and the mean (SD) age was 19.82(1.67). The TEIQue-SF was divided into 4 subscales: (Wellbeing, Emotionability, Self Control, and Sociability) and a Global score of the all 30 items. The mean (SD) score of EI- Global Score was 127.95(03). For SE, the mean (SD) score was 28.56(5.47). Both EI and SE were significantly higher among the medical students and positively correlated in the whole sample. No sex or age differences for EI and SE was noticed. The variables predicted preferring surgical specialities and emergency medicine versus all other specialities among medical students in bivariate and multivariate analysis were male gender and high SE. The variables which predict preferring Medical/ Surgical and Pediatric nursing versus all other nursing specialities among the nursing students were older age and high SE. Emotional intelligence did not show any positive association with SP.

Conclusion and Recommendation:

EI and SE were positively correlated. SE is related with SP whereas EI did not. Improving both EI and SE among health professional undergraduates is recommended for many reasons.

P12

Reflections on simulated learning experiences of occupational therapy students in a clinical skills unit at an institution of higher learning

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Background: Global and national changes in healthcare create challenges in providing suitable and quality fieldwork placements for skills training of undergraduate health professions students. The department of occupational therapy (OT) at a Higher Education Institute (HEI) in South Africa decided in 2013 to incorporate simulated learning experiences on assessment skills as part of the new curriculum for second-year occupational therapy students. The aim of this study was to explore and describe the experiences of those students who had benefitted from simulated learning in the Clinical Skills Unit (CSU).

Methods:

A qualitative methodology was used to describe the reflections of the second-year occupational therapy students of 2013 and 2014 (81 students.)

Results:

Four themes and ten sub themes were identified from the content analysis of the reflections, namely (i) personal experience (personal emotions, initial stress, confidence) (ii) Teaching and Learning: clinical assessment skills (communication, occupational performance components and occupational performance activities) (iii) professional skills (therapeutic use of self, co-operative learning) and (iv) benefits and challenges experienced.

Conclusions:

The majority of students reported a positive experience and satisfaction with learning from the simulated experiences, which succeeded in creating a "safe" learning environment for them and opportunities to hone their clinical assessment skills prior to their first clinical fieldwork placements. Challenges associated with simulated learning experiences (SLE) were, more clear instructions; the amount of assessments covered and the provision of a time frame to complete each task. It is recommended that current occupational therapy lecturing staff, trained in the use of simulation during teaching, develop a manual for the planning of SLE and present training sessions to other staff. This manual may also be of value to other institutions of higher learning in South Africa.

P13

Pedagogical, evidence based and enjoyable tools for clinical skill practice for nursing students

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An increasingly technical medical care requires that nurses manage a number of clinical skills. In nursing programs in Sweden numerous of clinical skills are practiced. Students are given only one opportunity for practice with a teacher and then the student is responsible for further practice. Students have different learning styles and therefore different needs for pedagogical tools (2).

The national guidelines available (1) is written for health professionals, who already possess a basic knowledge, and is not adapted to students' needs. Many students are therefore looking for information on the Internet, where compliance with the national guidelines not always linking.

We have started to produce Clinical Skill films tailored to students' needs and national guidelines. The development of a pedagogical board game has begun and designed as a quiz game where the theoretical basics of the clinical skills are addressed. The game plays in groups or individually, and stimulates learning in an enjoyable way. These pedagogical, modern and accessible tools can facilitate students' learning. The quality of teaching can be raised through meeting different learning styles. Students can then in more ways than today practice before performing on real patients. That is important for a safer health care system.

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P14

Emotional intelligence, self-efficacy and specialty preferences among medical students: A multisite study

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Background:

Our aim is to (dis)prove the association of Emotional Intelligence (EI) and/or Self- efficacy (SE) with Specialty Preference (SP) among medical students in two subsamples.

Methods:

A self-report questionnaire comprised of demographic data, trait Emotional Intelligence Questionnaire- Short Form (TEIQue-SF), the General Self- Efficacy Scale, and SP was filled by 508 students at RAK Medical & Health Sciences University (RAK MHSU), UAE and Baqai Medical University, Pakistan in 2016.

Results:

Around 59% of the sample were medical students from RAK MHSU. Sixty two percent were females, and the mean (SD) age was 19.9 (2.21). The TEIQue-SF was divided into 4 subscales: Well-being, Emotionability, Self-Control, and Sociability, with a Global score of the all 30 items. The mean (SD) score of EI- Global Score was 130.43 (20.55). For SE, the mean (SD) score was 29.64 (5.82). There was no significant differences between the EI and SE among the medical students in the two subsamples but both EI and SE were positively correlated. No sex or age differences for EI and SE was noticed. The variables predicted preferring surgical specialties and emergency medicine versus all other specialties among medical students in bivariate and multivariate analysis were male gender and high SE for the overall sample. Both SE and EI predict SP in logistic regression model but with more strength in the second subsample of Pakistan.

Conclusion and Recommendation:

EI and SE were positively correlated and could predict surgical specialties preferences among medical students. Improving EI and SE levels among medical students is recommended.

P15

What's the message? Common themes in Human Factors simulation debrief

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Background

Local audit of all serious clinical incidents (SCI) demonstrate 80% are related to human factors, principally communication errors. A half day inter-professional human factors (IPHF) course was provided over a two week period during August 2016 in a large district general hospital. The focus of the course was to highlight non-technical skills (NTS) in the context of medical emergencies.

Methods

Several half day events were delivered. Each session consisted of four scenarios with subsequent debrief. A random selection of these were selected for analysis. The 'take-home messages' were also randomly chosen to establish what had been achieved by the participants.

Results

Discussion points were split into the four main topics. The most common discussion points were: clinical decision making, specifically focusing on escalation (42.2%), situational awareness and handover (the most common discussion point relating to communication) were both 34.1%. Conversely, the least discussed topic was that of leadership and team working (27.4%).

Conclusion

Despite all scenarios being complex medical patients, items on the debrief agenda, subsequent discussion and take home messages all related to specific categories of NTS. This demonstrates acknowledgement of their importance by the inter-professional team, over and above the traditional technical learning objectives.

P16

Going Digital: Enhancing self-directed learning through the implementation of Quick Response (QR) codes

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Context and what was done

Quick Response (QR) codes expand the delivery of knowledge beyond the classroom walls¹. QR codes literally hold any kind of information up to several thousand bytes² and when coupled with a moderately equipped mobile device, open up new horizons for education by instantly connecting the physical environment with that of the electronic world^{3, 4}.

The Clinical Skills Centre hosts a designated Self-Directed Learning (SDL) area where students practice the skills they have been formally taught. Each skill is supported by an e-tutorial which provides the key theoretical underpinnings of the clinical procedure undertaken. This project has seen QR technology provide a low cost, dynamically changeable, easy to use, and easy to implement² means of e-tutorial access. Now stations within the SDL area are supported by over thirty QR codes which link directly and unrestrictedly to supporting material. The scope and provision of resources in the SDL area has expanded dramatically and now affords the students additional access to videos in order to enhance their learning.

Evaluation and scope

Evaluation data gleaned through a Bristol Online Survey (BOS) has shown the project to have been positively received. Students have been forthcoming with ideas of improvement and scope including the provision of interactive quizzes. It is here where the focus of the poster lies.

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P17

Bridging the gap in procedural skills training for undergraduate medical students

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Background

The GMC's 'Skills for Health' survey¹ considered how prepared newly qualified doctors were for practice. This acknowledged that newly qualified doctors struggled with their first experiences of working on the wards. Studies^{2,3} suggest that the more practiced and proficient students are at undertaking core technical skills the better prepared and more confident they will be in their early clinical careers.

To date training on cannulation & venepuncture has included videos, checklists, demonstration on task trainers and small group practice on task trainers. However, each year senior students seek further practice and support in these skills before or during their clinical attachments.

Aim

To develop a strategy for bridging the gap between learning and practice of procedural skills on task trainers and real clinical practice.

Innovation

Supported Clinical Skills provides supported practice and real time feedback on the practice of cannulation and venepuncture in real clinical practice. 4th year students were offered individual teaching sessions where they met a member of teaching staff in clinical areas and were supported in their practice of venepuncture and cannulation, receiving immediate verbal and written feedback.

Results

Students were engaged and keen to utilise this teaching strategy. All students who participated reported an increase in confidence in their own practice following Supported Clinical Skills and all expressed that it had been a useful undertaking.

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P18

Are there educational advantages to low cost manikins for learners

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A low cost manikin central venous catheter manikin (CVC) was produced. Groups of senior experienced clinicians in the skill were asked to insert catheters in the three leading high cost manikins and the low cost manikin and evaluate the pros and cons of the design.

The manikins were then used in a like for like cost situation for students in which multiples of the low cost manikin could be provided for teaching groups in comparison to the same cost of one larger popular manikin on the market. The students evaluated the pros and cons of these different teaching modalities.

P19

How to design an innovative education program to teach feedback skills to busy clinicians

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Workshop overview

Feedback is widely acknowledged to be critical in health professional education playing a vital role in shaping and supporting effective learning. The time pressured and unpredictable work environment presents particular challenges to effective feedback interactions such as time constraints, learner privacy, timeliness and frequency. Few studies describe educational interventions that teach postgraduate health professionals how to improve the quality of their feedback and there is evidence of a lack of training. This workshop will present ideas on how to design successful teaching and learning experiences for busy clinicians to improve the quality of feedback.

P20

Physicians and Social Behavioral Scientists Focus on Different, Yet Mutually Important Aspects of Communication and Physical Exam Skills

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Purpose:

Physicians often fail to use patient-centered history and physical examination (PE) techniques. Some medical schools use social behavioral scientists (SBS) to complement physician instruction in undergraduate clinical skills courses (CSCs)[i],[ii] as an innovative solution to this problem, but there is added cost. This qualitative study explores teacher perspectives of the impact of interdisciplinary co-teaching on student learning of communication and physical exam skills.

Methods:

12 semi-structured interviews and two focus groups were conducted at Brown University. The data was analyzed using the constant comparative method to develop a grounded theory.

Results:

Physician and SBS faculty emphasize different aspects of communication and PE skills. SBS faculty tend to focus on the *process* or the "how" (active listening, presence, non-verbals, rapport building, empathy, and patient comfort) and physician faculty tend to focus on the *content* or the "what" (thoroughness and pertinent elements, clinical reasoning, synthesis, technique, economy of movement and efficiency). "For the physician it's bringing together that differential diagnosis, forming the synthesis of what you're learning from the patient as you're performing the interview. The wheels are turning in your head, trying to calculate what is going on, what diagnostically, what tests, what possibilities, what other information is needed . . . for (SBS) it's that mindfulness of listening, active listening to the patient . . . for the student to just be present in that moment with that person, . . . knowing there is an actual person in front of you."

Discussion:

Both *process* and *content* aspects of clinical skills instruction are important. Ideal physician trainees must develop skills that also allow them to arrive at sound differential diagnoses with technical precision while being patient-centered. This study's findings suggest having both physician and SBS faculty ensures instruction and feedback in a holistic manner that honors the importance of both.

P21

Teaching Pediatric clinical skills to pre-clerkship medical students across Canada: A national survey and a description/cost analysis of one program

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Background:

Little is known about how Canadian medical schools teach Pediatric clinical skills (history & physical exam) to pre-clerkship students, or its cost to the institutions.

Methods:

Clinical skills leads/directors from all 17 Canadian medical schools were contacted to complete an online questionnaire focused on teaching methods, barriers/ strengths of their Pre-clerkship Pediatric Clinical Skills program. The questions were piloted at two medical schools. A detailed cost/ description of one school's program was undertaken.

Results:

Seventeen schools (100% response rate) participated. Half of schools (53%) dedicate <10 hours to pre-clerkship Pediatric clinical skills. Didactic lectures were the most common teaching method (94%). Over half of the schools (59%) include a total of ≤6 hours of patient interaction (real/simulated). Simulated parent/child dyads were used by 12 schools (71%), with simulated adolescents used most commonly (47%). The most significant program barriers were limited time for sessions and limited patient availability. The most common program strengths were standardized patients and small student groups. Examples of innovative curriculum changes included sessions where students had to guess a toddler's age and attending community outpatient clinics. We will describe Dalhousie's program where every student is guaranteed experience with all age groups (\$938/student).

Conclusion:

This study is the first to summarize Canadian pre-clerkship Pediatric clinical skills programs, of which there exists great variability and commonly experienced barriers. Medical schools can use this information to strengthen this important and challenging aspect of the curriculum, while being mindful of its fiscal implications.

P22

The "hidden curriculum" in newly qualified doctors: knowing how as well as knowing . . .

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Introduction

The "hidden curriculum" relates to skills that are not specifically taught but are crucial to function well as a junior doctor. (Lempp & Seale, 2004).

This study explores how new doctors perceive their initial professional skills and how they develop in their first year.

Method

3 focus groups (total 25 FY1s) evaluated their educational experience and discuss possible improvements. The qualitative results were reviewed and presented within the context of the existing literature.

Summary of results

FY1s identified weaknesses including prioritisation, applying theoretical knowledge, organisational skills and working with colleagues.

Clinical exposure and mentorship improved team working, organisation and having detailed knowledge of a greater numbers of patients.

They suggested more undergraduate focus on prioritisation, delegation and organisation could be achieved through inter-professional workshops, online problem based learning and greater on-call exposure.

Discussion

Newly qualified doctors described lacking skills such as prioritisation, organisation and working with colleagues. These are important especially during busy on-call shifts.

The challenge is preparing medical students for the 'real-life' clinical situations that await them. The use of more simulation, clinical apprenticeships and close mentoring may support the development of the required professional skills.

Greater focus is needed on the "hidden curriculum" to ensure that newly qualified doctors and prepared for clinical practice so patient safety is maintained.

P23

Enhance the learning effectiveness of clinical skills training courses

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Background

In order to understand the learner satisfaction, by which the course provider would improve teaching quality and adjust facilities, the scores of learner satisfaction will be recorded and analyzed after each regular clinical skills training.

Method

The PGY 1 and medical students trained in Chang Gung hospital from 2013 to 2016 were enrolled, the learner satisfaction of pre-employment training and clinical skills training were recorded in a standard form. Total 424 samples were included in the analysis. The questionnaire include 8 items. The scores of each item range from 1 to 5, and the average score of 8 items is recorded as the final satisfaction scores. The collected samples were divided into 2 group, before and after (1) the time of teaching site rebuild (2) the time when ultrasonography courses were added (3) the time when teaching content adjusted according to learner's opinion, and were analyzed with independent samples T test, using SPSS software.

Results

The samples collected before and after "the time of teaching site rebuild" demonstrated significant difference in " Lecturers explain coherent" (P=0.023) "the tools are properly used" (P=0.022) " Provide new knowledge and ideas" (P=0.012) " the teaching course is helpful" (P=0.006) and final satisfaction scores (P=0.045). Finally, the samples collected before and after" the time when teaching content adjusted according to learner's opinion" were found to be significant difference in" Lecturers explain coherent" " the tools are properly used" " teaching methods are impressive" " Contribute to the clinical work" " Provide new knowledge and ideas" " the teaching course is helpful" and final satisfaction scores (P=0.008, 0.033, 0.050, 0.022, 0.014, 0.018, 0.042 respectively).

Conclusion:

The learner satisfaction is improved if their expectations would be considered and arranged in the teaching course. The update of teaching site and ultrasonography courses enhance the effectiveness of teaching and learner satisfaction.

P24

The correlation between 360 degree feedback and specialty choices of post graduate year 1 residents

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Background

360-degree feedback, which is first introduced in this training program in 2010, is feedback that comes from colleague, nursing staffs, and clinical teachers. Choosing a specialty has always been a difficult process. Influences can be numerous including student-related factors and curriculum-related factors. This study aimed to examine the scores of professionalism and communication skills from 360-degree feedback would affect residents' subsequent specialty choices.

Method

There are ten questions for each item, including professionalism and communication skills. Reliability analysis was underwent for these two items, the value of Cronbach's Alpha were 0.92 and 0.93, respectively.

The residents of PGY1 were enrolled in this study from 2012 to 2014 (total 330 samples), the following data were collected including (1) desired specialty; (2) applied specialty; (3) specialty which trainees enrolled (4) consistency between desired specialty and applied specialty; (5) consistency between applied specialty enrolled specialty; and (6) consistency between desired specialty and enrolled specialty. The relationship between target items and specialty choices related variants was analyzed with binary logistic regression analysis. The statistical software is SPSS Version 20.0.

Results:

The scores of professionalism from clinical teachers significantly related to "applied specialty" (P=0.043) and "consistency between desired specialty and applied specialty" (P=0.040). The scores of communication skills from clinical teachers significantly related to "applied specialty" (P=0.036) "consistency between applied specialty enrolled specialty" (P=0.034) and "consistency between desired specialty and enrolled specialty" (P=0.032). The feedback from nursing staffs significantly correlate with each variants (P<0.05). The odds ratio of communication skills is better than professionalism.

Conclusion

The feedback from nursing staffs has more impact on the specialty choices of residents of PGY1, especially the communication skills. The nursing staffs are the ones who have worked with the residents in a long time period. The feedback would reflect the most real situation.

P25

E-learning in Teaching Pharmacology and Toxicology as Tool to Minimize the Risk of Prescribing Errors

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Prescribing errors are a common occurrence and can affect patient safety. In the EQUIP study (1-2) it was found that prescribing errors in hospitals occur in approximately 7% of orders, 2% of patient days and 50% of hospital admissions and junior doctors were twice as likely as consultants to make a prescribing error. Most frequently cited mistakes due to inadequate knowledge of drugs including mode of action, dosing, adverse effects and interactions or inadequate knowledge of patients. The aim of our effort was to provide additional support to the standard curriculum of our medical school. Therefore, we have integrated e-learning tools like learning modules and online quizzes. Furthermore, video clips with patient interviews were provided to deepen the level of knowledge and skill of students. In a next step, we are planning to provide an online learning module whereby students will have to study a virtual patient file and have to develop a treatment scheme including the right prescribing (drug, dose, route, time). Finally, they will receive feedback by a specialist in pharmacology. In summary, we hope that e-learning will afford an opportunity to increase students' knowledge and skills to reduce prescribing errors by future graduates of our medical school.

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P26

Operating room crisis-training realistically for the rare but inevitable

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Formal training of surgical teams to the creation or perpetuation of an Operative Crisis (IOC) is necessary for teams to be functional in all circumstances. Unfortunately, the lack of this formal training is exacerbated by a progressive reduction in resident experience and decline in self-confidence. Because IOCs are rare, few will have gained notable experience.

This course will be designed to teach the utilization of total immersion, the hallmark of the medical and other education in the US military. This style immersion training has also been adopted by Rocky Vista in teaching cognitive, technical, and stress related life realistic training to students. Participants will be allowed to choose a role that they are familiar with. If it is not available participants will be assigned an open role and the educated as to any expertise that is necessary. In addition role players will be involved in developing the story and scenario utilized. Others with roles similar to the role of extras in a movie. Personnel that wish to play the injured during the acting would require an email discussion with Dr. LaPorta that would advise them as to the significance or difficulty or any possible concerns while wearing the suit. Those participants that wish to be in the suit as the injured patient would be the stars of the event. All patients in the suit will have a safety officer assigned.

This teaches how to develop the total immersion from point of injury or illness utilizing Hollywood style techniques for its development of as real as simulation as possible. Scenarios, moulage, sound, smell, and all of the techniques to add realism to your training will be shown. You will be immersed in a true-life event where you will have a role in a real scenario where the surgery is on a live person.

P27

Methods of team training when all members of the interdisciplinary team are experts

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Combat casualty care relies heavily on effective teamwork and efficient communication. An immersive injury scene to RR course developed for fleet surgical teams addresses this team care. An effective training course must not only provide knowledge and skills to pass the course evaluation, but must sustain the knowledge and skills acquired. 24 teams participated with 11 in the sustainment portion. A mean improvement of 10.5 ± 4.50 minutes in time to disposition, from 24.68 ± 5.39 minutes to 13.4 ± 2.63 minutes with sustainment of 16.2 ± 4.12 minutes; an increase of 2.82 ± 5.02 minutes from the post-test, but an improvement of 7.18 ± 7.05 minutes from the pre-test (P0.0001 and 0.007). Critical errors were also counted. The teams improved from 5 errors (5.2 ± 1.3) to 1 (1.0 ± 0.82). Errors made during the sustainment testing decreased further to 0.82 ± 1.1 errors per encounter, a reduction of 0.36 ± 1.3 errors per encounter from the post-tests. This change pre- to post-test and pre-test to sustainment test represented statistically significant changes with P values of <0.0001 in both instances.

P28

Biologic Objective Measurements of the Future. Will This give us the Tools to Change Training

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Introduction:

Objective markers for the quality and cost effectiveness of simulation training especially for high acuity high-risk training need to be established. The hypothesis that hyper realistic simulation allows us to evaluate objective hormone and cardiac human factor data is the basis of the current research. To accomplish this goal we produced an artificial environment that duplicates, as close as possible real environments. Students lived on a movie set as if deployed in a mass casualty or military medical organization. Over 2 years a total of 44 second year students were evaluated with salivary hormones. In addition on the second year 25 students were simultaneously evaluated with 1/1000 of a microsecond cardiac R-R micro-variability human factor data. The differences in these two methods will be discussed.

Salivary hormones(cortisol and amylase) and noninvasive micro variability cardiac electrophysiologic activity to the 1/1000 of a second were utilized to evaluate 44 students in hyper realistic training. Salivary hormones were evaluated by the methods described by Granger. Heart micro variability was measured continuously to the 1/1000th of a second utilizing Firstbeat BG continuous technology for the entire 4 1/2 days. Intermittent real-time wireless analysis was also performed on 8 students.

Researchers did not anticipate response differences in the initial stress event. The initial course given to the first group showed the typical expected dramatic rise in cortisol because of a stressful event. (Table 1).But in the second year unexpectedly the initial response was not startle but relief with a drop in initial cortisol levels. Importantly however peak combined amylase data shows habituation on every day of the training when compared to pre-training levels. P value for each day was between $P>0.002$ and 0.004 for both 2014 and 2015.

P29

Using a Directly Observed Procedural Skills Assessment (DOPS) Tool To Drive Simulation Based Mastery Learning In a Central Line Workshop

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In order to evaluate our workshop programme, we developed a DOPS assessment tool focusing on key components of safe practice relating to ultrasound guided intravascular needle and guide wire placement during simulation based real time central line (CVC) insertion¹. Using this tool, we were able to demonstrate that a standardised structured training programme could result in key competencies being successfully achieved in the majority of participants. However, it also identified several components of the simulation based training programme which required further refinement in order to improve performance and allow mastery to be attained. We incorporated deliberate practice using mastery learning methods in order to improve the components of the training highlighted by the DOPS tool as requiring refinement. Initial results in our on going study suggest that we are able to demonstrate further improvement in the attainment of mastery and achievement of key competencies amongst participants. Mastery learning methods during simulation based central line insertion may contribute to improving clinical outcomes in patients by reducing CVC related complications; both mechanical and infective². Further study would be required to confirm this.

RTD01

Feedback - not bite-back

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Clinical skills are generally learned by a process of understanding theory, observation of process and repetitive practice with feedback. Despite its importance, effective feedback remains difficult to achieve within the context of clinical education. Clinical tutors may have limited opportunity to give feedback due to work pressures. Learners want feedback but may be motivated more by fear of failure than by the desire to improve their skills. It is not always easy to know what feedback will be useful to a learner. There is a recognised feedback gap (between feedback given and what is received by the learner (1)). What this means for clinical tutors is that delivering feedback without first diagnosing our learner's need and receptiveness risks wasting effort and could do harm. There is plenty of evidence that helps the clinical tutor to give effective feedback (2). The workshop aims to help participants make sense of this evidence in their own teaching practice.

Format of the workshop

The workshop will involve a combination of plenary and small group discussion. Participants will be asked to discuss personal experiences and to consider how they might change their feedback practices in the light of evidence for what works.

Initial group activity Discussion of positive and negative feedback experiences.

Plenary Presentation of models of feedback.

Group activity How do you encourage engagement? Using trigger materials discuss how feedback might be given.

Final plenary To draw on group experiences and crystallise what helps the clinical tutor.

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RTD02

Compromising content for context?: Debating the perceived dichotomy between clinical skills preparation and basic science teaching within healthcare education

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Currently there is a worldwide trend in healthcare education towards the promotion of increased clinical experiences, potentially at the expense of basic science teaching. While many of these initiatives strive for true integration of basic science knowledge and clinical skill practice, the literature suggests that these attempts typically result in sequentially located coursework without true content integration. There are many motivations for working towards maximum integration of these interdependent aspects of healthcare practice which include: improving clinical relevancy and contextual application of basic science content, existing evidence of inadequate time for clinical skill practice and competency development, and a lack of professional role models when the basic sciences are separated from the clinical teaching. However, there is also evidence that the decreased dedicated basic science teaching time accompanying these efforts negatively impacts clinical care efficacy. The authors have worked on alternative pedagogy, relying on professionalism and professional identity curricular paradigms as context for integration of basic sciences and clinical skills. This work has directly addressed a primary conference theme "professionalism as part of clinical confidence". These curricular innovations, which use professionalism and clinical confidence themes for addressing the apparent dichotomy between basic science curricula and clinical skills, will be briefly described as sparks and stimulate discussion. The purpose of this roundtable discussion will be to ask: *Can we effectively teach competency in both basic science knowledge and clinical skill acquisition in our current curricular infrastructure? What learning contexts may help improve (or hinder) competency in both of these essential curricular components and can these be integrated? And finally, what methods are best for achieving competency on both of these fronts? Is the solution professionalism and/or a professional identity curricular framework?*

RTD03

Snapshots of interprofessional education to enhance clinical team work and self-efficacy

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The increasingly complex and dynamic nature of contemporary healthcare requires an interprofessional approach to patient care (Levett-Jones, Oates & MacDonald-Wicks, 2014). The capacity to work effectively as a team member requires interprofessional education (IPE) prior to and following graduation. The fundamental premise of IPE is that if health professional students learn together they will be better prepared for working within interprofessional teams, ultimately leading to improved patient care (Barr, 2005). However, in many contexts IPE is either absent or ad hoc and healthcare graduates are often ill-prepared to collaborate and communicate effectively in teams. Consequently, tensions inevitably arise and the very basis for interprofessional teamwork - to work together to enhance patient care - is undermined.

Internationally there are examples of innovative IPE activities and educators who have overcome the many barriers to its implementation. This presentation will provide creative snapshots of IPE from five countries and seven universities. We will discuss situations in need of improvement, the IPE activity and evaluation data illustrating positive outcomes. Expected outcomes of the presentation are that educators will be inspired to draw on and adapt these ideas in their own educational practice, so as to improve interprofessional teamwork and ultimately patient outcomes.

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RTD04

Assessing Competency in Nursing: A Roundtable Discussion for Best Ideas and Potential Solutions

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A method to gauge the competency of both student and licensed nurses' readiness for practice remains elusive, however simulation may provide an answer. This workshop, led by 3 nurse researchers, will provide discussion time for current best practices or emerging ideas with simulation for dealing with the problem of competency evaluation.

An overview of the current research and findings associated with (1) competency vs. clinical hours (2) preceptor/faculty understanding/interpretation of competencies and the (3) politics of competency evaluation. assessing nursing competency using simulation will open the dialog. We will then pool our collective audience and facilitator wisdom and knowledge to generate and evaluate new ideas. Known problems include: lack of faculty trained in evaluation and assessment, numbers of students requiring such assessments, issues with assuring reliable and valid assessments etc., political influence with competency evaluations.

RTD05

Use of simulation consolidates student learning in non-technical and technical skills on regular hospital placements

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Background

Students often feel there is a substantial gap between what they learn at medical school and their role as a foundation year 1 doctor (FY1). The aim of this evaluation was to assess the perceived benefit of simulation based education (SBE) during hospital placements with respect to non-technical and technical skills in assessing the unwell patient

Methods

There were 32 4th year students involved in the evaluation. The simulation courses were run in groups of 4-5. Students were asked to fill in a pre and post-course questionnaire to evaluate the simulation experience.

Results

On the pre-course questionnaire, there was a marked discrepancy between theoretical knowledge and practical application (61% vs 24% respectively). Post course, this improved to 100% and 87%. With regards structured handover methods, knowledge (31% to 83%) and practical use (16% to 67%) improved. All felt the learning environment was excellent, non-judgemental and provided opportunity to discuss learning points. Small group size enhanced involvement.

Conclusions

Overall students felt that SBE during their hospital placements consolidated their learning on the management of acutely unwell patients. It was felt by the students that a course run at the beginning as well as the end of the block would further improve and consolidate learning.

RTD06

The transition from graduation to competency: the new doctor perspective

Luke Forster

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Introduction

Many newly qualified doctors have less experience with clinical skills than stakeholders would expect.

This study is a formative evaluation of the education of surgical FY1s, discussing their perception of their clinical skills on starting their first job and their journey to competency.

Method

This pilot study involved 3 focus groups (total 25 FY1s) to evaluate their educational experience and discuss possible improvements. The qualitative results were reviewed and presented within the context of the existing literature.

Summary of results

Newly qualified doctors described confidence in blood taking but found cannulation of sick patients more challenging they had previously encountered.

For some procedures, such as nasogastric tube placement, their prior experience was with learning models only. They felt their undergraduate opportunities for certain procedures was limited

Learning came from 'deep-end learning' with support from senior colleagues, peers and other health care professionals.

Discussion

Newly qualified doctors described a lack of competence and confidence when starting work, particularly in the on-call setting. Opportunistic learning with mainly informal coaching from colleagues supported their learning.

The main suggestions to improve the transition were the use of more simulation, boot camps and more of a clinical apprenticeship prior to graduation.

More focus is needed to enable newly qualified doctors to reach competency in core clinical procedures, without patient safety being compromised.

RTD08

Resident as Student Teachers (RAST): The evolution of a sustainable bi-directional near-peer learning program

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Introduction:

The Resident as Student Teacher Program (RAST) commenced at Nepean Hospital in 2011. This near-peer, bi-directional learning program, recognised, and fostered the links, that, Residents (Junior Medical Officers) provide between medical students and senior clinicians (1).

Program design:

Medical student teaching is a required professional activity for Residents (2), however this normally occurs without adequate training and supervision. The RAST program provides a curriculum including; educational theory; educational and clinical assessment; and professional career development and supervised teaching opportunities; within a supportive and mentoring framework of senior clinicians.

Results:

Formal qualitative and quantitative evaluation demonstrates the success of this program. Participating residents identifying professional opportunities and skill enhancement as core benefits, "*I believe that skills . . . taught in RAST will be beneficial for future exams and clinical assessments.*" and "*The opportunity to learn from clinicians more experienced than myself*", valuable.

The medical students benefited from improved quality via the benefits of near-peer learning, highlights were the practical lecture program and clinical scenarios.

Conclusion:

The RAST program demonstrates enhanced learning and teaching outcomes for Residents and medical students, and provides practical, pedagogical scaffold for new medical graduates to transition to roles as senior educators.

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FO01

Problem-based learning (PBL) versus Team-based learning (TBL) in Year 1 of a medical program

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Background

Problem Based Learning (PBL) has provided a traditional form of teaching within medical curricula. However, this method of teaching is resource intensive, requiring one tutor for every ten students. An alternative to PBL is Team-based learning (TBL), which has gained recent popularity in medical education. TBL maintains the advantages of small group teaching and learning, but in contrast to PBL, does not require large numbers of tutors. Our study aimed to evaluate the efficacy using TBL in place of PBL during the 2016 Year 1 Musculoskeletal sciences block.

Methods

56 Year 1 students completed three weeks of tutorials in PBL format, followed by three weeks in TBL format. Mixed methods, including questionnaires and focus groups were used. Data were analysed using descriptive statistics and thematic analysis.

Results

89% of students completed a questionnaire regarding PBL; 93% of students completed a questionnaire regarding TBL; and 27% of students attended a focus group. The use of smaller groups, the readiness assurance tests, immediate feedback from expert clinician, as well as time efficiency, were all aspects of the TBL experience that students found positive. Students noted that during TBL they would have liked greater opportunity to discuss their completed drawings of pathophysiology flowcharts. Although students enjoyed the opportunities for clinical reasoning and discussion in PBL, they reported that variable experience of tutors; limited direction; and large group size hindered their learning.

Conclusion

Findings suggest that students prefer TBL over PBL, as the optimal teaching strategy. Although the use of TBL required an instructional approach, needing direction from the tutor, it remained student-centred, generating a range of positive outcomes. Further, the application of TBL principles meant the sessions were not reliant upon a large teacher to student ratio.

FO02

Evaluation of a new inter-professional Peer Teacher Training program for health professional students

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Background

On entering the workforce, and throughout their careers, health professional graduates are expected to teach, assess and provide feedback to colleagues across health disciplines. However, these skills are rarely taught at university. In 2016, we developed a new inter-professional Peer Teacher Training (PTT) program across three faculties (Medicine, Health Sciences and Pharmacy). The purpose of this study was to evaluate the PTT program.

Methods

The PTT program is designed to provide health professional students with opportunities to develop skills in teaching, assessment and feedback, in preparation for peer assisted learning activities, and future health professional practice. Delivered as a six module program, participants are provided with theoretical background and opportunities for active participation in small group inter-professional learning teams. Senior students were invited to take part in the PTT program, which was run four times. Participants (n=90) were invited to attend focus groups. Thematic analysis was used to code and categorise data into themes.

Results

A total of four focus groups (n=35) were conducted. Students felt the required pre-class preparation, including on-line pre-reading, discussion board, videos, and teaching activities enhanced their face-to-face learning experience. In class, students enjoyed the small-group activities, and the opportunities to practice their teaching skills with provision of feedback. Students reported increased confidence to plan and deliver peer teaching activities, and increased awareness of the roles and responsibilities of health professionals outside of their own discipline, and use of different terminology and communication methods

Conclusion

The PTT program was successful in providing students with a useful basis for developing and implementing peer teaching strategies, as well as improving students' perceived ability to plan learning activities and provide effective feedback to their peers. By providing a teacher training program that is inter-professional, health professional increased their awareness of the various roles of health professionals.

FO03

Bridging technology and simulation: use of empathy suits in a Technology Enabled Care Studio (TECs)

Janet Hunter, Karen Rawlings-Anderson
City University, London, UK

The main focus of simulation is based in hospital settings. However, nurses are required to adapt their clinical skills in the transition from acute to community care. In this innovative project academics and researchers from nursing and Telehealth developed a learning activity which took place in TECs and was video streamed to a satellite classroom. The activity included the use of bariatric and older age simulation suits.

City TECs is a purpose built learning-hub, designed to simulate a studio flat. Simulation suits are used within nursing education at City to enhance students' understanding and appreciation of some of the physical, psychological and emotional difficulties that older adults and those who are morbidly obese experience.

Student nurses undertook an activity that simulated community nurse visits to service users in their own homes. Students not actively taking part in the simulation had the opportunity to observe the interactions via live streaming. They then offered constructive feedback during debrief, which occurred after the simulation (Prion, 2008). Sections of the video recordings were played to stimulate discussion.

This poster will identify the issues and challenges that needed to be addressed in order to undertake this project. Student evaluations will also be discussed.

Reference:

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FO04

Teaching the art of caring for the simulated patient who is vulnerable and in need of intimate care

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¹CQUniversity, Queensland, Australia, ²The University of Newcastle, NSW, Australia

Background

Teaching nursing students how to care for patients' personal needs such as toileting and bathing in the safety of a classroom is an area that has not been adequately explored in the literature. Nursing programs have traditionally used manikins or task trainers to teach students the care involved in dealing with the naked body, however, the real human responses associated with such care cannot be authentically simulated using these modalities. Too often students' first encounter with a naked body is during their first clinical placement and these experiences can be confronting if students are not adequately prepared. For this reason we piloted a simulation experience where the educator wears a realistic full body silicone suit (Mask Ed, KRS Simulation) and assumes the role of an older person requiring support with personal hygiene.

Aim

The aims of this presentation are to: demonstrate the use of the full body silicone suit to address intimate human care; to provide participants with an explanation of the underpinning pedagogy; and to profile preliminary findings from a pilot study of this innovative educational initiative.

Findings

Participants included 32 first year nursing students from one regional university in Queensland. Preliminary feedback indicated that the number of students who felt confident in the provision of intimate care rose from 18% to 93% pre-post simulation. Feedback also demonstrated that students were more confident to manage real human responses in a safe and supportive environment; felt empathy towards the 'character'; and reported a greater appreciation of the importance of patient dignity and safety.

Conclusion

Mask Ed (KRS Simulation) can create meaningful learning opportunities about the provision of intimate patient care. However, educators need to be trained to facilitate these types of simulations in order to optimise the learning experience and manage the complex classroom dynamics that can occur.

FO05

The implementation and evaluation of an innovative and immersive disability empathy simulation

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You never really understand a person until you consider things from his point of view . . . until you climb into his skin and walk around in it ~ Lee, 1960.

In Australia almost one in five people have a disability and 3% of people (634,600) have severe disabilities and require help with mobility, communication and/or self-care (ABS, 2011). Although empathy is an integral component of professional practice and person-centred care, people with disabilities frequently report that health professionals have limited understanding of their experiences, needs and healthcare preferences. Having a disability has been found to negatively affect nurse-patient communication and multiple examples of marginalisation and discrimination have been reported in the literature (Iezzoni, 2003).

The project described in this presentation sought to enhance empathy and understanding towards people with a disability. Second year nursing students were exposed to an immersive simulation experience where they were allocated the role of either a person with an acquired brain injury or a rehabilitation nurse. The simulated patients wore a hemiparesis suit that replicates the experience of aphasia, dysphagia, hemianopia and hemiparesis. The simulation is immediately followed by a group debrief and guided reflection.

Over 400 second year students have been involved in this simulation. The impact and effectiveness the experience has been evaluated using a pre post Comprehensive Empathy Scale (CES) and Satisfaction with Simulation Experience Scale (SSES). There were statistically significant differences pre-post simulation. These results will be presented at the conference along with findings from thematic analysis of open-ended questions.

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FO06

Emergency Nurses' rationalisation of non-adherence to clinical practice guidelines

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Queensland, Australia*

Background

It is universally acknowledged that early recognition and response to acute deterioration reduces mortality rates. Published evidence confirms that physiological signs of clinical decline are often present in the hours preceding life-threatening events such as respiratory and cardiac arrest. Given this, it is clear that regular and accurate monitoring of patients' vital signs whilst in acute care settings is imperative. However, the Australian Commission on Safety and Quality in Health Care reveal that the main contributor to undetected patient deterioration is inconsistent monitoring of vital sign observations. The research reported on here presents a theory explaining the transgression in recording methods.

Research

A grounded theory analysis of qualitative data collected from 79 emergency department (ED) registered nurses (RN) working in Australia, contributed to the generation of the theory "Rationalising Transgression". This new theory explains how ED RNs account for their behaviour when they decide not to follow clinical guidelines and/or organisational requirements. It was found that this cohort employs three main strategies to rationalise noncompliance. Compensating occurs when nurses believe they are compensating for errant behaviour by adding value to the patient's outcome. Minimalizing is employed when nurses believe that the patient's outcome would be no different if the guideline was followed or not. The Trivialising strategy sanctions negligent behaviour; found to occur when nurses 'cut corners' to get the job done and experience no associated guilt.

Conclusion

This research reveals that despite continuing education regarding best practice guidelines, ED RNs continue to believe they can rationalise noncompliance. It is evident that the methods currently employed to transfer knowledge to this cohort must be reconsidered. These clinicians need to receive education in a way that permeates their understanding of the relationship between the adherence to clinical guidelines (regular collection of accurate vital sign observations) and optimal patient outcomes.

FO07

Developing Cultural Competence through Self-Reflection in Interprofessional Education: Findings from an Australian University

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Interprofessional education and cultural competence are both necessary for health professionals working in interprofessional teams serving diverse populations. Using a pre-post-survey case series design, this study evaluates a novel learning activity designed to encourage self-reflection and cultural competence in an Australian interprofessional education context. Undergraduate health professional students in a large subject viewed three 7-15 minute videos featuring interviews with persons of a minority cultural, linguistic or sexual group who were living with a disability or managing a health condition. Immediately afterwards, students in interprofessional groups completed a structured activity designed to promote interprofessional and cultural reflection. A localized version of a validated scale measured cultural competence before and after the learning activity. Results suggest the value of video-based learning activities based on real life examples for improving cultural competence. Despite initially rating themselves highly, 64% of students ($n = 273$) improved their overall cultural competence, though only by $M = 0.13$, $SD = 0.08$, of a 5 point rating scale interval. A nuanced approach to interpreting results is warranted; even slight increases may indicate improved cultural competence. Suggestions for improving the effectiveness of video-based cultural competence learning activities, based on qualitative findings, are provided. Overall the findings attest to the merit of group discussion in cultural competence learning activities in interprofessional education settings. However, the inclusion of group discussions within such learning activities should hinge on group dynamics.

FO08

Communication Idol: Using popular culture to engage students in the development of entertaining interprofessional teaching and learning resources

Tinashe Dune, John Bidewell, Rubab Firdaus, Morwenna Kirwan

Western Sydney University, Penrith, NSW, Australia

Bringing popular culture to tertiary education can potentially increase student engagement with learning tasks and content, especially when the learning task has students producing the content. Using a single-group intervention plus post-test design, this study implemented and evaluated a purposely developed learning and teaching innovation capitalising on popular and consumer culture to promote active over passive learning in a large, interprofessional health science unit. Students were invited to develop educational video presentations in a friendly competition based on high-rating television musical and vocal talent quests, with cash prizes based on peer ratings, this being the intervention. From a cohort of 569 students in 12 undergraduate allied health programs, 14 students in seven teams of 1 to 3 students produced seven, high-quality videos about communication in professional health practice, and recorded their experiences of doing so. Ratings showed the majority found the process fun (85%) and instructive (64%), with 29% finding the task harder than expected. The prospect of prizes along with intrinsic motivators were reasons for producing a video. A further 285 students viewed the productions and for extra marks completed evaluation of the videos' educational value. Videos were perceived as an educationally valuable yet entertaining way to engage unit content. Producers of videos rated the teaching and learning experience significantly more positively than students not involved in production. Qualitative analysis of open-ended responses supported relevant numerical findings. Barriers to producing videos were identified as time, resources, confidence and lack of a team. Results should encourage educators contemplating similar initiatives. The project highlights benefits of harnessing popular genres with which students identify, to encourage involvement in producing educationally justifiable content that rewards both performer and audience. The project shows how learning content and tasks created and presented in familiar and entertaining formats can catalyse students' agentic engagement in tertiary curricula.

FO09

What are the educational needs of clinicians who create, maintain and use vascular access for haemodialysis?

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Published curricula, which should reflect patients' clinical needs, define the specialty training requirements for consultants in the United Kingdom. For patients with kidney failure, who require a means of bloodstream access for haemodialysis, it is important that clinicians are trained in the creation, maintenance and routine use of "vascular access" - especially as some options (arteriovenous fistulae and grafts) confer substantially improved morbidity and mortality compared with alternatives (central venous catheters).

We reviewed Scottish vascular access services, conducting semi-structured interviews with patients and key clinicians in every Scottish renal unit. A prospective, six-week census of vascular access clinical activity was also performed. The described technical and non-technical skills, clinical workload, and reported local training programmes were compared with published curricula.

Technical skills were required for several procedures relating to the creation, maintenance and routine use of arteriovenous fistulae, arteriovenous grafts and central venous catheters. These skills were required by various clinicians including nephrologists, vascular surgeons, interventional radiologists, vascular access coordinators, dialysis nurses, sonographers and others. Non-technical skills were also essential to vascular access services, including electronic patient record use, complex caseload prioritisation and communication with colleagues and patients.

None of the identified technical skills feature in the current Renal Medicine curriculum. Fistula procedures feature in the latest Interventional Radiology curriculum but are optional for Vascular Surgery training. Only one Scottish renal unit operates a formal training programme for dialysis nurses; others rely upon informal "see one, do one" approaches. No "continuing medical education" requirements exist for consultants and other substantive staff working in this area.

Specialty training curricula and continuing medical education programmes for clinicians working in vascular access services require updating to provide patients with safe, effective haemodialysis care that minimises the associated burden of morbidity and mortality.

FO10

Inter-professional Human Factor training: A method to reduce morbidity and mortality

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Background

Local audit of all serious clinical incidents (SCI) demonstrate 80% are related to human factors, principally communication errors. Using simulation based education (SBE), we have developed and delivered an inter-professional education program to highlight the importance of human factors on delivery of healthcare.

Method

We deliver a half day event, incorporating two nursing staff, two foundation year 2 doctors, 2 core trainees and one consultant. Scenarios are curriculum aligned but mainly act as a springboard to demonstrate human factor elements and the influence they have on team dynamics, patient safety and care. Each session is recorded, and facilitated debrief uses selected recordings to augment the debrief process.

Results

Using an on-line questionnaire, the course has been well evaluated by all participants. Since commencing the training, there has been a reduction in cardiac arrest calls to the admissions unit from 4.7/1000 admissions to 1.2/1000 admissions, a 23% reduction in hospital-wide cardiac arrest calls but no change in peri-arrest calls (8/1000 admissions). High-dependency admissions have reduced as have 'true' cardiac arrest calls (now half the national average).

Conclusion

SBE has been part of an overall hospital strategy to improve patient safety, with inter-professional education highlighting the importance of Human Factors in identifying the deteriorating patient.

FO11

Transition to Clinical Practice: What Can Academics Learn from New Graduate Nurses' Experiences?

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³*Monash University, Melbourne, VIC, Australia*

Recent research revealed that transition to professional nursing practice is a global issue. Clinical judgment is a critical skill for all health professionals and has been identified as a common deficit in new graduate nurses (NGNs), contributing to the gap between educational programs and practice readiness. Clinical judgment development depends on many factors, including reflective thinking and a supportive workplace culture that fosters learning. The aim of the study was to determine if a structured reflection activity with peers, using a clinical judgment framework, had potential to diminish the gap between academics and practice, resulting in more practice-ready NGNs; we also wanted to learn what deficits might be better addressed in academic programs

Seventy-four NGNs from both US coasts participated in this mixed-methods, experimental study in their first year in practice.

References

Lasater, K. (2007). Clinical judgment development: Using simulation to create an assessment rubric. *Journal of Nursing Education*, 46, 496-503.

FO12

Does a clinical skills assessment practice session help prepare students for the USMLE Step 2 Clinical Skills exam?

Kimberly Kirkland¹, Gregory Gilbert¹, Stephen Ash^{1,4}, Robert Hecht^{1,2}, Julie Taylor^{1,3}
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²*Florida Atlantic University, Boca Raton, FL, USA*, ³*The Warren Alpert Medical School-Brown University, Providence, RI, USA*, ⁴*Ealing Hospital, London, UK*

Introduction:

Medical schools acknowledge their roles in preparing students for the high stakes USMLE Step 2 Clinical Skills (CS) exam¹; yet little is known about the relationship between performance on clinical skills assessments (CSAs) during medical school and performance on licensing tests.² Although age, gender, United States Medical Licensing Examination (USMLE Step 1), and the National Board of Medical Examiners (NBME) OB/GYN Exam have been positively associated with passing the USMLE Step 2 CS,^{3,4} the degree to which CSAs help prepare students for the CS is largely unknown.

Purpose:

To assess whether passing an optional 6-station, 4-hour CSA including H&P, communications, and written documentation is associated with increased likelihood of passing the CS.

Methods:

Descriptive statistics are presented for the cohort as well as unadjusted and adjusted odds of passing the CS. A likelihood ratio test approach was used for model building.

Results:

Over two years, there were 325 participants; the cohort was 47% female with a mean age of 29. Non-participants were demographically similar.

In a univariate analysis, 8% of participants passed the CSA and then failed the CS. If a student passed the CSA, the unadjusted odds of passing the CS were 2.8 (95% CI: 1.6-4.8; P value<.0001). NBME exams were not significant predictors (P value=0.4374) so they were dropped from the model. Students who passed the CSA were 3 times more likely to pass the CS (OR: 3.0; 95% CI: 2.0-5.1; P value: <0.0001). While statistically significant, this value is also very meaningful in practical terms.

Discussion:

The CSA appears to help students prepare for success with USMLE Step 2 CS. Given the importance of this high stakes examination, resources should be invested to expand the practice examination to all students. Next studies will investigate the importance of timing of the two exams to maximize impact.

FO13

Affiliating an accelerated nursing program with self-regulated learning

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The Master of Nursing Practice (MNP) at Monash University is an accelerated program offering a qualification for individuals who have gained a non-nursing undergraduate degree. Transitioning and adapting to an accelerated program is challenging and may impact student learning. However, little is known about student approaches to learning or the strategies students use to learn in accelerated nursing programs, despite them increasing in availability.

Self-regulated learning (SRL) is an effective approach to student learning and students exercising a high degree of self-regulation are known to perform better. Although few studies in nursing have explored self-regulatory learning (SRL). The aim of this study, was to examine SRL strategy use of students, at two different points in an accelerated Masters level nursing program.

This presentation reports on a repeated measures design, using a self-report questionnaire, the Motivated Strategies for Learning Questionnaire (MSLQ), to examine the motivational and learning strategies of students participating in an accelerated program. Following ethics approval, 29 full time MNP students completed the questionnaire at two different points, at the beginning and again at the end of their first semester of the MNP program.

Wilcoxon Signed - Ranks test was used to compare the SRL scores of students at two time points in the program. The Wilcoxon revealed no statistically significant differences in learning strategies, however statistical difference in the areas of the motivational strategies was evident. There was a significant increase in self-efficacy ($Z = 2.226$, $p < .026$), with a significant decline in task value ($Z = -2.085$, $p < 0.037$) and control of learning ($Z = -2.189$, $p < 0.029$).

This presentation will discuss how findings may impact students' learning and performance in an accelerated program and the significance for nursing education. Methods to improve SRL, implications for pedagogy and recommendations for future research will be discussed.

FO14

Development, implementation and evaluation of an integrative approach to patient-centred clinical communication education for first year nursing students

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Context

The Bachelor of Nursing (BN) programme at our institution is underpinned by a fully integrative teaching model, based on knowledge and skills being structured and delivered in a way that maximises the ability for learners to link theory to practice. A patient centred clinical communication skills framework was recently developed and integrated across all years of the BN. It included a new core communication skills programme for beginning nursing students and was taught using interactive lectures, tutorials, role-play, communication skills laboratories and immersive simulations.

What we did

Using a mixed method approach three surveys were administered pre and post the teaching and following clinical placement to measure student's knowledge of important communication issues; their self reported ratings of confidence in performing 24 communication tasks; and their views on the integrative teaching methods. Surveys were also administered post the immersive simulations to measure student perceptions of the learning experience and their confidence in applying the communication skills.

What we found

A statistically significant increase in student's knowledge of important communication considerations and self reported ratings of confidence was observed post the teaching period, which was sustained at the conclusion of the clinical placement ($p < 0.01$). The combined integrative teaching methods were scored significantly higher than any singular method of teaching. Students rated the simulations highly. Qualitative responses were positive about the integrative communication skills curriculum and its usefulness in supporting the application of theory to practice.

Conclusion

A well-structured communication skills programme based on an evidence based curriculum framework develops beginning nursing student's knowledge of, and confidence in performing a range of core communication skills. The integrative teaching methods, particularly simulation are a powerful driver to support student's ability to put these skills into practice.

FO15

What to do and say when things go wrong: a patient-centred interprofessional education program on medical error and open disclosure

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Context

Guidelines for incident management and open disclosure (OD) emphasise the importance of collective responsibility and the need for education, yet there is little known about the views and experiences of junior clinicians. Collaboration between patients and health professionals is also a central tenet of modern healthcare and has positive outcomes for patients, healthcare providers and staff. Patients have not been actively involved in initiatives in OD training, despite research highlighting considerable misalignments between patient and clinician perspectives of disclosure practice. Few interventions to support OD specifically target practising clinicians.

What we did

We conducted an exploratory mixed methods study of views and experiences of junior doctors and nurses to provide a baseline on medical error and OD. An advisory group including representatives from a patient association was established to develop an interprofessional education program. Consumer advocates (CAs) were recruited and, following training, participated in delivering the workshops. This intervention was delivered to junior health professionals during 2014/2015. The CAs were interviewed post the educational intervention. Participating clinicians were surveyed before and after to explore their attitudes, perceptions and confidence to disclose errors. Workshops were evaluated by a questionnaire.

What we found

Knowledge gaps, lack of educational opportunities and divergence of views and experiences on medical error and OD were evident between junior doctors and nurses. Thematic analysis revealed four major themes in the CA interviews. These focussed on the insights gained through participation and benefits to the individual. The program was highly valued by clinicians with a sustained increased confidence to disclose errors post the education intervention. The CA contributions in the workshop were highly rated.

Conclusion

Patients benefit greatly from being involved in education opportunities where their stories can be shared. Junior clinical staff also benefit with changes in confidence and attitudes evident beyond the immediate training period.

FO16

Student satisfaction of simulation: A comparison of simulation modes to enhance clinical reasoning

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Introduction:

Within the healthcare simulation literature, efforts to justify the value of approaches to simulation-based learning often compare simulation activities with other pedagogical approaches such as role-play or lecture. However, few studies directly compare simulation modes.

Objective:

To explore final-year nursing students' satisfaction with different modes of simulation-based learning (manikin-, simulated patient-, video- and game-based), designed according to a clinical reasoning framework.

Methods:

A descriptive, correlational study was carried out at an Australian University School of Nursing. This study comprised a convenience sample of 430 final semester nursing students enrolled in a capstone unit, comprising simulation-based learning followed by clinical practicum. Four simulations (10 hours in total) were designed according to the Clinical Reasoning Cycle (Levett Jones, 2013) with Debriefing for Meaningful Learning (Dreifuerst, 2010) employed as the post-simulation debrief. The Satisfaction with Simulation Experience Scale (SSES) (Levett-Jones et al., 2011) was used for data collection.

Results:

Currently, data are collated and analysis of data is in progress.

Conclusion:

This presentation will provide evidence about the satisfaction of final semester nursing students with their participation in different modes of simulation, designed according to a consistent framework and debriefing approach aimed to enhance clinical reasoning.

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FO17

Effect of a curriculum re-design to enhance clinical reasoning skills in final semester nursing students using simulation-based learning

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Introduction:

Well-developed clinical reasoning skills in graduate nurses are highly desired attributes sought by employers. However, development of clinical reasoning skills requires purposeful curriculum design.

Objective:

This presentation reports on the outcomes of an innovative curriculum redesign involving a simulation program that aligned the Clinical Reasoning Cycle (Levett-Jones, 2013) and Debriefing for Meaningful Learning© (Dreifuerst, 2010) debriefing model to enhance clinical reasoning skills in final semester nursing students.

Methods:

A pre/post test study to examine the change in clinical reasoning skills in nursing students enrolled in a capstone unit comprising four (10 hours in total) simulations was carried out across five campuses of one School of Nursing at an Australian university. Each simulation was designed according to the Clinical Reasoning Cycle (Levett Jones, 2013) and employed Debriefing for Meaningful Learning© (Dreifuerst, 2010) for the post-simulation debrief. The Health Sciences Reasoning Test© (Insight Assessment) was used for data collection. 56 students volunteered to participate.

Results:

Statistical analysis of quantitative data using paired t-test demonstrated a significant positive change (p value = 0.018) in participants' clinical reasoning score after completion of the simulation program.

Conclusion:

Evidence pertaining to the relevance and effectiveness of simulation-based learning in nursing education, resulting from through rigorous inquiry, is essential in order to advance healthcare simulation practice. This study provides evidence about the effectiveness of simulation-based learning, designed to enhance clinical reasoning in final semester nursing students, by aligning two existing approaches to developing clinical reasoning skills.

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FO18

Achieving professional competencies through a simulated clinical placement

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Introduction:

Increasingly, simulation in healthcare education is being explored as a substitute for in-field clinical placement. However there are few examples of simulation-based learning that are designed according to a framework of authentic learning and authentic assessment.

Objective:

To determine whether occupational therapy students attending a 40-hour Simulated Clinical Placement (SCP) achieved the expected assessment requirements of a traditional clinical placement (TCP) contexts of vocational, mental health or physical rehabilitation.

Methods:

This pragmatic, non-inferiority, single-blind, multicentre, randomised controlled trial involved 1st and 2nd year undergraduate, and 1st year graduate-entry students from six universities. The SCP comprised a 40 hour simulation designed to replicate occupational therapy practice in vocational rehabilitation, mental health, and physical rehabilitation. Facilitator guides and training were developed and provided to ensure a consistent implementation of the SCP. Primary outcomes were assessed using the Student Practice Evaluation Form - Revised (SPEF-R); a tool used to evaluate professionalism of occupational therapy students during TCP in Australia. Analysis compared the outcomes of the professional competencies that comprise professionalism, defined according to the SPEF-R, between the SCP and TCP groups.

Results:

583 students were recruited with 295 participating in the SCP. Data is currently being analysed. Results will be detailed in this presentation.

Conclusion:

This study will provide evidence about the effectiveness of simulation as part of occupational therapy students' professional practice education in achieving professional competencies in a range of practice contexts.

FO20

Facilitating the transition of international nursing students' identities as learners within Australian communities of nursing practice through immersive simulation

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Introduction:

International culturally and linguistically diverse (ICALD) nursing students experience significant stress and confusion in relation to identity, purpose and expectations of being a nursing student in Australia during the clinical placement. Many studies have explored the challenges experienced by ICALD nursing students by focussing on language and communication. This study explored the sociocultural dimensions of learning, and the potential of immersive simulation as a learning and teaching intervention, to facilitate ICALD nursing students' participation with members of an Australian community of nursing practice during the clinical placement.

Objective:

This presentation reports on the outcomes of a PhD research project that employed Communities of Practice to facilitate ICALD nursing students' identities as learners in Australia through immersive simulation.

Methods:

12 1st year undergraduate ICALD nursing students from one Australian university participated in this qualitative multiple-case study. Phase One comprised a literature review and focus group interview to inform the design of a three-simulation simulation program. Phase Two comprised the implementation of the simulation program. Phase Two data collection included video recordings of each simulation, audio recordings of each post-simulation debrief, and audio recordings of one-on-one interviews after participants' completion of their first clinical placement in Australia. Data was transcribed verbatim and analysed using thematic analysis.

Results:

The findings of this research indicate that immersive simulation experiences, designed according to Communities of Practice, can facilitate the development of ICALD nursing students' identities as learners within an Australian community of nursing practice. A significant outcome of this research was the Situated Learning Design Framework for Simulation, which will be presented.

Conclusion:

This research represents a step forward in understanding healthcare simulation design, and, importantly, how immersive simulation can develop ICALD nursing students' identities of participation within Australian communities of nursing practice.

FO21

Using simulation to ease the transition from campus-based to the clinical learning environment

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Medical students report increased stress and anxiety during the transition to commencing the clinical phase of the medical course, both in the existing literature and at our medical school. Specific areas of concern include seeing patients independently, interacting with staff, intimate examinations on 'real patients' and managing their 'unstructured' time. Clinicians involved with medical students commencing the clinical phase sometimes report that students look like "a bunny caught in the headlights", and that it takes a while for these students to gain confidence in the clinical environment. Given the increase in postgraduate medical courses in Australia, and the associated reduction in medical course length, ensuring that students are rapidly oriented to their new learning environment is of the utmost importance in enhancing their learning and reducing their stress.

We designed a simulation program to specifically address the above mentioned themes. Final year medical students and clinical staff responsible for supervising students in the clinical environment had input into the simulation content, which was unrolled to students during their Transition to Clinical Practice block at the end of Year 2, "just in time" for entry into the clinical phase of our medical program in Year 3.

The simulation program involved 6 mini-sim sessions, focussing on key areas for student development: meeting staff, meeting patients, performing intimate examinations/procedures, maximising learning on a ward round or in clinic, and how to use 'downtime'. The mini-sims were staffed by senior medical students, nursing staff and senior clinicians.

Medical student evaluation of the simulation course pre- and post-simulation, as well as after the first rotation in the clinical environment will be discussed; as will survey data from the Directors of Clinical Training.

FO22

A focus on medication safety- an interprofessional simulated learning experience with pre-registration nursing and pharmacy students

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Background:

Interprofessional collaboration has become recognised as a necessity in health care education due to the increasingly complex health care environment and concern for patient safety (Palaganas, Epps & Raemer, 2014). In this study an interprofessional collaboration (IPC) between final year pre-registration Master of Nursing and Pharmacy students was implemented with a focus on medication safety for patients.

Aim:

The aim of the study was to evaluate the pedagogical value of interprofessional clinical ward simulation activities related to medication administration. Specifically it aimed to evaluate student attitudes toward IPC; student perception of other health professionals and their role in effective patient care; and student's perceived educational value of interprofessional collaboration.

Method:

Two interprofessional simulation activities were undertaken by students (pharmacy n=46, nursing n=38). Student attitudes were measured in a pre-post design using the Interdisciplinary Education Perception Scale (IEPS). Qualitative feedback was also gathered via survey following the second IPC simulation activity.

Results:

Overall there was an increase in scores across all four factors of the IEPS for both disciplines with the exception of Factor 2 score (perceived needs for professional co-operation) for pharmacy students. Ninety one per cent of students found the simulation activities either good or very good and eighty per cent self-reported a change in attitude in how they relate to and understand other healthcare professionals. Qualitative feedback indicated perceived educational value in learning about each other's roles and collaborating to improve the safety of medication management for patients.

Conclusion:

This study indicates that interprofessional collaboration between nursing and pharmacy students using clinical ward simulation activities may be used as an effective trigger to increase understanding of the value and contributions of other health care professionals. IPC also has the potential to promote positive learning outcomes for students in the area of medication safety.

FO23

Identifying the learning priorities of clinical supervisors

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Context

Clinical supervisors have an educative role but require faculty development to improve their educational skills. Curricula for faculty development programs are often based on expert frameworks(1) however there is little published information about the learning priorities as defined by clinical supervisors themselves. This research investigated what clinical supervisors considered relative priorities. We sought to provide curricular guidance for faculty development programs through answering the research question: what do clinical supervisors identify as relative strengths and areas for improvement in their teaching practice?

Methods

As part of a multi-institutional and interprofessional faculty development program in the foundations of clinical teaching, clinical supervisors completed a modified version of the Maastricht Clinical Teaching Questionnaire (2)(mMCTQ) as a reflective exercise. Descriptive statistics were calculated and content analysis was conducted on the free text comments.

Results

481 (49%) of 978 clinical supervisors submitted their mMCTQs for the research study. Clinical supervisors identified relatively strong capability with interpersonal skills or attributes and indicated least capability with assisting learners to explore strengths, weaknesses and learning goals. The category 'establishing relationships' was the most reported strength with 224 responses. The category 'feedback' was the most reported area for improvement, with 151 responses.

Discussion

Key areas for curricular focus include: improving feedback practices; stimulating reflective and agentic learning; and managing the logistics of a clinical education environment. The main point of difference with expert frameworks is clinical supervisors' emphasis on managing logistics. Additionally, the data suggests that clinical supervisors are challenged by letting students take responsibility for their own learning.

Conclusion

Faculty development curricula should take into account the learning priorities of clinical supervisors, including managing teaching within a logistically challenging environment

FO24

Learning to prescribe in clinical practice: the purple pen process

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Introduction

All doctors must be able to prescribe safely at the point of graduation. Newly qualified doctors perceive themselves to be relatively poorly prepared for this task, a perception shared by their Educational supervisors [1]. In the UK, prescribing errors occur in 8.4% and 10.3% of medication orders written by Foundation year 1 and 2 doctors respectively [2].

To prepare graduates for prescribing we needed a system to help medical students develop their knowledge and skills to enable them to prescribe safely in the complex context of the clinical workplace.

The purple pen process

By means of a multi-disciplinary collaboration, we developed a process in which final year students use a pen with purple ink to prescribe for real patients. Their prescriptions can thus be clearly identified as requiring checking and counter-signature by a qualified doctor before they can be dispensed. Feedback is given on students' prescribing skills and adverse events are collated by the hospitals' reporting systems. Students are encouraged to reflect on their errors.

Evaluation

The innovation was evaluated using three outcome measures; a review of adverse events, a student survey, and students' self-evaluation of their ability to prescribe safely. Results were reassuring; eight adverse events were reported, none involving harm to patients. Students found the process useful. The full results will be reported at the conference.

Conclusion

The purple pen process is effective in providing experiential learning for medical students safely in the clinical workplace.

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FO25

Small-scale assessment in a large-scale educational environment: Implementing a new format of skills assessment

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Assessment should contribute to learning.

After 35 years of experience with annual OSCEs at the Skillslab, Maastricht University¹, current literature^{2,3} and experienced disadvantages of the OSCE (stress-provoking, snap-shot approach, quantitative anonymous feedback, disregard for causes of failure) inspired us to change this assessment practice in the pre-clinical years.

Student classes (320/year) are divided into groups of 80 students. These 80 students follow trainings with a limited team of 5 of our 40 teachers. Each teacher is a personal 'skillscoach' of (80/5=)16 students to achieve a stronger bond between students and teacher. Regularly students participate in formalized 'Teacher Feedback Sessions' (TFS) in which they demonstrate their skills. The skillscoach provides written feedback.

In two academic years (2014/15-2015/16) this assessment format was implemented.

Research Question: *How do the major stakeholders appreciate the new assessment format?*

Results from both formats were (transversally) compared. Focus Group Discussions revealed students' and staff's opinions. Questionnaires allowed additional quantitative analysis of students' appreciation.

The Exam Committee supported the transition.

Similar percentages of students passed OSCE and the new assessment format.

Students initially were dissatisfied about insufficient information (3.3/5). Next year this improved, and they were very positive about instructiveness (4.1/5) and agreed with feedback they received (4.4/5).

Staff had more initial reservations: *subjectivity* and *small sample* of students' performance were foreseen. Yet, after the second year staff became convinced that the new format gave a more valid impression of students' performance.

All were positive about the increased bond between Skillslab staff and students. It was unanimously reported that staff 'knew' their students (and vice versa) and could relate the TFS performance to performance in regular training. Remediation plans became more tailored.

We seem to have succeeded in benefiting from the creation of small-scale teaching and assessment in a large-scale educational environment.

FO26

The subjective experiences of students who withdraw from a professional Masters programme in Psychology at a historically disadvantaged university

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The shortage of mental health care staff in the South African healthcare system is a major concern. Clinical psychologists complete a professional Masters programme in Psychology and subsequently register as such with the Health Professions Council of South Africa (HPCSA). Small intakes of students are selected into Professional programmes, but not all students complete. Some are terminated from the programme and others choose to self-terminate. There is a lack of systematic exploration of the factors contributing to non-completion due to self-termination. This collective case study explored the experiences of five students from a university in the Western Cape region, who self-terminated from a professional Masters programme and identified the factors contributing to the decision. Ethics clearance was obtained and all ethics principle upheld (Ethics Clearance# 15/4/44). Data was collected through programme records and semi-structured interviews. Thematic analysis was applied to transcribed interviews. Data collection and analysis occurred simultaneously until saturation was reached. Trustworthiness of the findings was achieved through continuous interrogation of multiple readings of the data, reflexivity, and external auditing. Findings identified difficulty transitioning into the reality of clinical training and the identity of a student psychologist as key motivations for termination at a personal, programmatic and contextual level. The complexity of the decision-making process was underscored. Participants' interest in psychological work, prior work experience and a need for skills capacitation served as motives for enrolment and termination. Participants experienced incongruence between their expectations and the nature and requirements of clinical training. Dissatisfaction; unpreparedness (academic, physical and emotional), uncertainty about career, and perceived competence were obstacles to academic integration. Financial support, interpersonal dynamics in cohorts, and personal belief systems were key considerations. Self-termination heightened the pursuit or realisation of personal goals thus becoming meaningful. Participants continue to engage in psychological work drawing on their fund of knowledge in psychology.

FO27

Deliberate performance appraisal: Establishing inter-rater reliability of an instrument designed to evaluate clinical competence

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The aging of the baby boomer generation continues to pressure schools of nursing to produce more graduates that are more prepared to easily transition into the workforce practice setting. Although transition to practice programs are helpful, there continues to be a gap between academic perception of new graduate competence and the perception of competence by those in the workforce. To narrow this gap, nursing programs need more robust measurement of performance appraisal, focused deliberate feedback and opportunity for sequential repeated performance appraisal across the curriculum. The setting of simulation, with the ability to design and consistently implement highly realistic clinical situations, is an ideal location. The Oregon Simulation Clinical Competence Rating scale (OSCCRs) is a performance appraisal instrument designed for use in simulation. It addresses 5 elements of nursing competence – anticipatory thinking, clinical reasoning, skillfulness, safety, evidence-based nursing and patient centered care. The instrument is a behaviorally anchored 5 level rating scale with performance categories ranging from Unsatisfactory, to Needs Improvement, then Satisfactory, Good, and ending with Exemplary. The purpose of this study was to evaluate inter-rater reliability of the instrument across 3 levels of students: sophomores, juniors, and seniors. The study design was a nonexperimental, two rater, and fully crossed assessment of reliability applying the OSCCRs instrument to 102 students. As the OSCCRs used categorical data, analysis of inter-rater reliability used Cohan's kappa statistic. The level of agreement between two raters across all three groups of students was found to be substantial to almost perfect. Conclusions: The OSCCRs performance appraisal tool is a promising new measure of competence for undergraduate nursing students. While this instrument does require the use of well-established simulation scenarios, careful attention to standardized implementation, and rigorous rater training, it demonstrates that consistent performance appraisal in simulation is possible.

FO28

Nurse practitioner transition in Australia: A story of turmoil, tenacity and triumph

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Background

Whilst nurse practitioners have been an integral part of healthcare systems around the developed world for more than 50 years, they were first endorsed in Australia in 2000 following much resistance from powerful medical groups. Although the number of nurse practitioners has slowly increased, they still face significant challenges during the transition to their new role.

Research Design

The aim of this study was to explore the transition experiences of registered nurse to nurse practitioner in Australia. A critical ethnographic approach was used to provide insights into the participant's experiences during transition. Data collection involved interviews with ten newly endorsed nurse practitioners who were interviewed 3-4 times during their first year of practice. Data were analysed thematically.

Key Findings

Analysis of the data revealed four key factors that influence transition: personal, intraprofessional, interprofessional and organisational. The findings reveal an unsupportive nursing culture and lack of organisational support impacting newly endorsed nurse practitioners during transition. Rather than collegiality and support from their colleagues, nurses experienced bullying and power struggles that left them feeling isolated, powerless and alienated. Several of the participants resigned from their nurse practitioner positions, leaving their rural and remote communities without much needed healthcare services.

Conclusion

The findings illustrate that for many of the participants, transition was a time of turmoil and a great deal of tenacity was required to navigate the journey. However, despite the challenges, some of the participants were triumphant and able to forge a successful role for themselves within the healthcare team.

This study has highlighted the need for the nursing profession to support new nurse practitioners during their transition to practice. This study has also demonstrated that many nurse practitioners have significant reserves of strength and determination to succeed and make a difference to patient outcomes.

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We gratefully acknowledge the generous support of the following organisations:

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