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July 2021

## ABSTRACT BOOK



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# Keynote Abstracts

**Day 1: Tuesday, 6 July 2021**

## Moving backwards into the future: Indigenising the health professional curriculum

Dr Rhys Jones, University of Auckland

Health professional education has an important role to play in addressing health inequities between Indigenous and non-Indigenous populations. However, in settler societies such as Australia and New Zealand, educational programmes and institutions are founded on colonial values, ideologies and practices that undermine efforts to promote health equity. In recent years significant advances have been made in Indigenous health curricula, but their impact has often been limited by factors such as institutional racism in the broader educational environment. In this presentation I will reflect on our journey at the University of Auckland with respect to Indigenous health teaching, learning and curriculum development. Our approach has been underpinned by a Kaupapa Māori teaching and learning philosophy that centres Indigenous rights and health equity. Moving (backwards) into the future, this approach can provide the basis for broader systemic change – decolonising our curricula and embedding Indigenous ways of knowing, doing and being. I will share insights from our experience to date and explore current and future challenges in order to map out a pathway towards culturally safe, pro-equity health professional education.

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**Day 3: Monday, 12 July 2021**

## Probability, Complexity and Ambiguity: implications for health professions education

Prof Karen Mattick, University of Exeter

Probability, complexity and ambiguity are inherent features of healthcare practice, which can lead to feelings of uncertainty for individual practitioners and a range of associated cognitive, behavioural and emotional responses to these feelings. In this presentation, I will reflect on each of these terms (probability, complexity, ambiguity), first separately and then in combination. In many ways, these three terms seem to reflect the different phases of my medical education research career to date! My background is as a Clinical Scientist in microbiology and epidemiology, involving a training and day-to-day practice that was rooted in probability. As a Lecturer/Senior Lecturer in Clinical Education, I undertook research into workplace-based health professions education, which provided rich insights into the complexity of professional practice and challenged my previous assumptions. As a Professor, I supervise doctoral students and early career researchers, some of whom have a specific research interest in the conceptual basis of ambiguity and the implications of tolerance of ambiguity for healthcare practice and for wellbeing. This work has been undertaken with collaborators in the UK and Australia. Although initially thinking about tolerance of ambiguity at an individual level, we have been increasingly thinking about the implications of organisational contexts for individual's tolerance of ambiguity, and for their professional work and learning. In this talk, I will offer some ideas about probability, complexity and ambiguity, based on our own health professions education research and that of others, and share some unanswered questions that could underpin future research.

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## **Day 4: Wednesday, 14 July 2021**

### **Why we need to create the social leaders of tomorrow**

Dr Dinesh Palipana OAM, Queensland Health

Health professionals deliver not only professional services. They are drivers of social change. Historically, health professionals have affect society through politics, policy, law and entertainment. Now, more than ever, it is important for us to create a generation of health professionals that move social conversations forward. However, it is contingent on having diversity within the professional community to provide a rich perspective. It is the responsibility of health educators to enable this next generation to shape the direction of humanity.

A graphic of a ribbon that is red on the top half and black on the bottom half, forming a loop. The text "Moving Forward" is written in white on the red part, and "in Ambiguity" is written in white on the black part.

Moving Forward

in Ambiguity

# Day ONE

## Tuesday 6 July



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## Student Midwives Experiences of COVID-19: A Cross Sectional Study

**Dr Lesley Kuliukas<sup>1</sup>**, Professor Y Hauck<sup>1</sup>, Professor L Sweet<sup>2</sup>, Dr V Vasilevski<sup>2</sup>, Professor C Homer<sup>3,5</sup>, Dr K Wynter<sup>2</sup>, Dr A Wilson<sup>3</sup>, Dr R Szabo<sup>4</sup>, Dr Z Bradfield<sup>1</sup>

<sup>1</sup>Curtin University, Bentley, Australia, <sup>2</sup>Deakin University, Burwood, Australia, <sup>3</sup>Burnet Institute, Melbourne, Australia, <sup>4</sup>University of Melbourne, Parkville, Australia, <sup>5</sup>University of Technology, Sydney, Australia

The impact of COVID-19 has had far-reaching consequences around the world with a heavy burden falling on health care providers. One group of 'front-line workers' are midwifery students whose studies were affected in a variety of ways. The aim of our study was to explore Australian midwifery students' experiences of providing maternity care during the COVID-19 pandemic to determine how the changes affected their studies, clinical experiences, and other aspects of their lives. In a cross-sectional study 147 students were recruited through social media. Data were collected through an online survey with the final question asking if students would be prepared to be interviewed. All 13 volunteer students were interviewed by telephone or online in a semi-structured format. Surveys were analysed using descriptive statistics; interviews and open text responses were interpreted through qualitative analysis. Findings revealed students found communication channels from hospitals and universities were inconsistent and they relied on each other and the mass media to remain updated. In addition, online learning caused feelings of isolation and learning became more difficult for students. During clinical placements, students felt expendable in terms of their value and contribution to care, with experiences of exclusion from episodes of care and essential equipment not always being available to them. Witnessing perceived compromised midwifery care increased students' emotional burden, while personal household responsibilities and financial concerns added to their concerns. One silver lining students valued was women's appreciation of an improved 'babymoon', with fewer visitors, uninterrupted time to establish breastfeeding and enhanced connection with their baby. Findings may guide management of midwifery education during future health crises for universities and hospitals.

## Step to the Left: Creating a physiotherapy workforce that is adaptable to COVID-19 service demands through a safe and sustainable training program

Miss Kirby Adams<sup>1</sup>, Mrs Penny Schofield<sup>1</sup>, Mrs Victoria Schweitzer<sup>1</sup>, Miss Marnie McGorm<sup>1</sup>, Mrs Courtney van Putten<sup>1</sup>, **Miss Chanelle Louwen<sup>1</sup>**

<sup>1</sup>Logan Hospital, Metro South Health, Meadowbrook, Australia

**Aim:** To develop a safe and sustainable training program to ensure the Logan-Beaudesert physiotherapy department could meet service demands with predicted 30% reduction in staffing during COVID-19 pandemic peak.

**Methods:** Implementation of a COVID-19 support team (6 senior cardiorespiratory physiotherapists) who mapped clinical competency and capability of 67 staff, informing the development and implementation of a four pronged approach to intensively upskill and train physiotherapy staff via (a) theoretical and practical education program; (b) peer learning 'buddy' program; (c) secondary supervisor program; and (d) COVID-19 resource and knowledge hub program; between March – August 2020. Training was targeted to empower staff to 'Step to the Left' and achieve a new level of competency, particularly in clinical areas that were high risk of service delivery compromise if staffing reductions occurred.

**Results:** Department wide clinical competency growth varied across clinical areas. Clinical areas with greatest growth were Children's (86.9%), ED (58.2%), ICU (49.3%), MAPU (39.7%), Surgical (36.9%), Rehab (30.8%), and Ward Based Respiratory (14.4%) aligned with staffing profile requirements.

Staff self-reported >85% confidence to manage both the clinical and operational aspects of clinical areas they were upskilled. The buddy and secondary supervisor programs were factors in the success of competency growth. 100% of staff positively utilised the knowledge hub program and felt confident to implement what learnt into practice; 70% of staff felt confident to manage a variety of patient conditions; 100% of staff felt COVID-19 resources and education equipped them to manage a patient caseload specific to COVID-19.

**Conclusion:** Step to the Left program was established as an effective method to rapidly increase staff clinical exposure and competency across department wide clinical areas. The framework has now been incorporated as a sustainable method for staff skills and training with continued engagement aligned with individual clinician's goals and self-identified needs.

## The role of the pharmacist during the 2019-2020 Australian black summer bushfires.

Ms Toni Green<sup>1</sup>, [Alexandra Moss](#)<sup>1</sup>, Dr Simon Moss<sup>2</sup>, Dr Mary Bushell<sup>1</sup>

<sup>1</sup>University Of Canberra, Bruce, Australia, <sup>2</sup>Charles Darwin University, Casuarina, Australia

**Background:** Australia is vulnerable to natural disasters such as bushfires. For Australian universities and their pharmacy disciplines, the curriculum must prepare pharmacists to be flexible and innovative during natural disasters. Currently, limited research has explored the role of the pharmacist during a natural disaster. This study explores the role of the Australian pharmacist during the 2019/2020 black summer bushfires.

**Methods:** Semi-structured phone interviews were conducted with ten community pharmacists who worked through the black summer bushfires, whose daily tasks and work environment were directly affected by the bushfires. Transcription of interviews was shared by all authors. Field notes and interview data were coded and compared, and themes were developed, discussed, and defined. The authors analysed the data using a deductive method.

**Results:** Analysis of the transcripts generated six themes: collaboration; trauma and mental health; power and communication; triaging of acute burns, eye and respiratory problems, and emergency prescribing. Pharmacists worked in close collaboration with doctors and members of the local community. They provided triaging services, timely health advice about chronic health problems, and managed acute issues including burns management and mental health support, sometimes without power and communication.

**Conclusion:** The challenges presented to pharmacists in the bushfires warranted creative and flexible approaches. The recommendations of this study are that the undergraduate pharmacy curriculum must include mental health training, and education on acute burns, eye, and respiratory problems. In addition, registered pharmacists in bushfire-prone areas should update and maintain their knowledge of mental health, acute burns, eye, and respiratory problems.

## Training to our environment in the era of Covid-19: exploring high performance resus in intensive care and identifying the tacit knowledge and informal pathways used by expert level ICU nurses.

Kylie Moon<sup>1</sup>

<sup>1</sup>*Royal Melbourne Hospital, Melbourne, Australia*

**Background:** This research project has explored what high performance resuscitation looks like in intensive-care, and the challenges we face in resuscitating critically ill patients, specifically those in isolation for Covid-19. This research included interviews with 13 front-line ICU nurses and doctors and a 3-year retrospective review of cardiac arrests at Royal Melbourne Hospital ICU. This research sought to improve the constructive alignment of resuscitation education to the clinical demands of ICU in the era of Covid-19, including the challenges experienced in terms of PPE, communication and limited resources. This research also identified the tacit knowledge, leadership role and performance of expert level ICU nurses in peri-arrest and resus scenarios. It also identified how high levels of resuscitation performance can be achieved and the types of learning and informal pathways used to develop this high performance in expert level ICU nurses.

**Aim:** This study sought to improve the alignment of resuscitation education to the learning needs and clinical demands of ICU, specifically in the era of Covid-19. This study identified what high performance resuscitation looks like in ICU, the leadership role played by senior ICU nurses and tacit knowledge, informal pathways and communities of practice used to develop these leadership skills and high performance.

**Methods:** This was an exploratory mixed methods research project for Master minor thesis involving face to face interviews with 13 front-line nurses and doctors involved in CAs in ICU, and a 3-year retrospective review of CA in a large, high acuity, tertiary level ICU.

**Results:** This research has identified key factors that enhance resuscitation performance, and factors that make resuscitation more challenging in the ICU environment, specifically for patients with Covid-19.

It has identified the critical importance of the senior ICU nurse role in resuscitation and informal pathways and types of learning fundamental to developing this expertise.

## An interprofessional Peer Teacher Training program - 'blended learning' or 'online-only': how do they compare?

**Annette Burgess**<sup>1</sup>, Ms Christie van Diggele<sup>1</sup>, Dr Carl Schneider<sup>1</sup>, Dr Delyse Leadbeatter<sup>1</sup>, Mr Sascha Karunaratne<sup>1</sup>, Dr Jacqueline Bloomfield<sup>1</sup>

<sup>1</sup>*The University of Sydney, Faculty of Medicine and Health, Sydney, Australia*

**Introduction/background:** In 2020, following the disruption of COVID-19, we rapidly moved the Peer Teacher Training (PTT) program, traditionally delivered in blended learning format (online and face-to-face) to 'online only' format. Consisting of seven modules, the program is designed to provide senior health professional students with opportunities to develop skills in teamwork, communication, teaching, assessment and feedback, in preparation for peer teaching and future practice.

**Aims/objectives:** We sought to compare 'blended learning' with 'online only' delivery.

**Methods:** The PTT program was first delivered in 'blended learning' format, including a one-day face-to-face session, requiring 9 facilitators. Students participated in small group learning activities, and were formatively assessed on teaching and feedback skills. 'Online only' delivery occurred across three weeks, using asynchronous and synchronous activities, requiring 12 facilitators. Students completed a post-course questionnaire. Data were analysed using descriptive statistics and thematic analysis.

**Results:** 85 students completed the program; 36 in 'blended learning' and 49 'online only' format, from six disciplines: health sciences (32%), medicine (26%), nursing (22%), pharmacy (13%), oral health (6%), public health (1%). 100% 'blended learning' and 73% 'online only' participants completed the questionnaire. Both sets of participants achieved most of the learning outcomes. However, face-to-face participants were more positive towards interprofessional learning and intention to participate in teaching. Both sets valued the online reading, discussion boards, videos, with opportunities to practice teaching skills and giving and receiving feedback.

**Results:** In 'online only' format, the PTT program continued to provide an excellent framework for health professional students to develop their teaching skills. While the learning outcomes were met in both formats, 'face-to-face' delivery had associated benefits, promoting a more positive attitude towards interprofessional learning and intention to teach.

**Discussion/conclusions:** An 'online-only' PTT program provides an effective alternative to 'blended learning' format. However, face-to-face learning optimises interprofessional engagement and confidence to teach.

# Preparing healthcare students for the climate crisis starts with health professions educators

**Rosie Wotherspoon**<sup>1</sup>, Ms C Ilangakoon<sup>1</sup>, Ms P Schwerdtle<sup>1</sup>, Ms L Barbour<sup>2</sup>, Mr J Bonnamy<sup>1</sup>, Ms M Simmons<sup>3</sup>, Ms J Collins<sup>2,4</sup>, Ms B Carr<sup>1</sup>, Ms G Bedi<sup>5</sup>, Ms M Kim<sup>6</sup>, Ms G Brand<sup>1,7</sup>

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**Background:** Climate change is both the greatest threat and opportunity to human health. Health professions educators are currently teaching the last generation of students that can potentially mitigate climate change. These students will also be at the forefront of the adverse impacts of climate change. We must ensure environmental sustainability (ES) and climate change (CC) are integrated across all health professions curricula.

**Aim:** This research aimed: to explore health professions educators' sustainable healthcare education (SHE) knowledge, attitudes, self-efficacy and teaching practices across 13 health professions courses in one Australian university.

**Methods:** Using the consolidated framework for implementation research, we conducted a sequential mixed methods study with two phases. Phase 1 involved an online survey of health professions educators to determine their capacity to teach ES/CC. Phase 2 involved a 'Teach Green Hackathon' designed to bring educators from varied health disciplines together to explore, share, and create actionable recommendations to build educator capacity in this important area.

**Results:** Regarding SHE, survey data across 13 health professions disciplines (n=163) identified strong content knowledge (90.8%); however, only (36.9%) reported confidence to 'explain' and (44.2%) to 'inspire' students. Two thirds of participants (67.5%) reported not knowing how best to teach SHE. Hackathon data revealed three main influencing factors: regulatory, policy and socio-cultural drivers.

**Discussion:** The results will inform the design and implementation of a SHE curriculum framework to meaningfully apply this lens across all health professions teaching and learning.

**Conclusions:** The five actionable recommendations to strengthen interdisciplinary capacity to integrate SHE include: inspire multi-level leadership and collaboration; privilege student voice; develop a SHE curriculum and resources repository; and integrate SHE into course accreditation standards.

## PEP Talks: Inception of “Physiotherapy Education Program” – the innovative delivery of education for physiotherapists

**Miss Kirby Adams**, Elissa Addison<sup>1</sup>, P Schofield<sup>1</sup>, V Schweitzer, L Barnes<sup>1</sup>, K Adams<sup>1</sup>

<sup>1</sup>*Metro South Health - Logan and Beaudesert Health Service, Meadowbrook, Australia*

**Aim:** To transition, trial and implement the use of a contemporary, dynamic education program, which supports access, connection and rapid upskilling of physiotherapy staff during COVID-19 peak.

**Methods:** A new model of education delivery “Physiotherapy Education Program Talks” or “PEP Talks” was developed following focus group and qualitative analysis with key stakeholders. To facilitate access and connection to education, key features of the program included: creation of a centralised digital platform to inform staff of professional development opportunities; development of key expectations of PEP Talks in line with the Physiotherapy department mission statement; staff participation aligned with individual’s professional supervision learning goals; multi-modal delivery of content not restricted to clinical practice; increased accessibility for all PEP Talks utilising assistive technology and a centralised resource platform; and invitation to provide formal feedback to enhance ongoing learning opportunities and empower presenters’ growth.

**Results:** Since commencement, there has been an increase from 4 in-services per month to an average of 19.3 PEP Talks each month. While 61% of PEP Talks had a primary focus on clinical content; adjunct topics included self-care, research, service updates and clinical education skill development. COVID-19 specific PEP Talks provided staff to prepare for redeployment, with 70% of staff reporting they felt adequately prepared.

**Conclusion:** PEP Talks is a multi-modal, flexible education program that was implemented and will continue to connect physiotherapists to education across the health service. A centralised resource platform and assistive technology facilitated improvements in accessibility of education, communication and upskilling opportunities to a greater audience across the metropolitan, rural and multiple community facilities of the Logan-Beaudesert Health Service. The program empowers the achievement of both the learning goals of individuals as well as the whole department; facilitating physiotherapists to provide the highest level of patient care, whilst supporting the delivery of innovative, evidence-based best practice.

## What impact has the COVID pandemic had upon student performance and satisfaction across the health professions?

**Professor Dragan Ilic**<sup>1</sup>, Dr Nazmul Karim<sup>1</sup>, Dr Mahbub Sarkar<sup>2</sup>, Dr Arunaz Kumar<sup>3</sup>, Associate Professor Julia Morphet<sup>4</sup>, Professor Stephen Maloney<sup>5</sup>, Associate Professor Elizabeth Davis<sup>6</sup>, Associate Professor Claire Palermo<sup>2</sup>

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**Introduction:** The COVID-19 pandemic has raised significant challenges for the higher education sector in Australia. Teaching modalities traditionally delivered face-to-face were required to pivot to deliver the same content online. The impact of this rapid transition on student learning outcomes, performance and perception of teaching was uncertain.

**Aim:** The aim was to assess the impact of COVID-19 related adjustment in terms of student academic performance and satisfaction in the undergraduate health professions education environment.

**Methods:** Data from 32 health professions units/subjects, implemented in both in 2019 and 2020 were included for analysis. Aggregate data were generated on unit characteristics including demographic profile, completion, average student performance and student evaluation of the teaching unit (SETU) score. Multivariable linear regression models were fit to assess the predictor of student's grades and SETUs.

**Results:** International student enrolment was slightly higher in 2020 (17.9%) than 2019 (15.5%). Retention of enrolment was significantly lower in 2020 (80.7%), in comparison to 2019 (87.1%). In 2019, international and final-year students discontinued less, whilst in 2020 male and first-year students had a greater discontinuation rate. On average student marks were 5.0% (95%CI: 4.7-6.3) higher in 2020. On average, students of a unit were more likely to perform poorly if the majority of students in the unit were female ( $p<0.001$ ), or international students ( $p=0.01$ ). SETU scores were slightly lower in 2020, but not significant statistically different to SETU scores in 2019 (3.97 vs 4.02,  $p=0.631$ ).

### Discussion:

Transitioning teaching modes did not negatively impact upon student satisfaction with unit delivery. Conversely, the transition of teaching modes positively impacted upon domestic student grades, whilst international and first-year students were negatively impacted.

**Conclusions:** Further investigation is required to understand the impact of potential confounders including; changes to assessment, student learning environment and impact of social isolation, particularly with international students.



### Pre-registration nursing students' perceptions of their baseline digital literacy

**Zerina Lokmic-Tomkins<sup>1,2</sup>**, Dr Dawn Choo<sup>2</sup>, Ms Pieternella Foley<sup>3</sup>, Dr Samantha Dix<sup>3</sup>, Dr Pauline Wong<sup>3</sup>, A/Prof Gabrielle Brand<sup>3,4</sup>

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**Introduction/background:** Nurses are central to achieving universal health coverage and sustainable development goals. One opportunity to advance nursing education and professional roles is through increased education and engagement with digital health technology which requires effective digital skills. This is further necessitated by the ongoing COVID-19 pandemic.

**Aim/objectives:** To determine first year pre-registration nursing students' perceived baseline digital and computer literacy prior to commencing their first clinical placement.

**Methods:** Participants (N=205) were recruited from two Australian universities accredited to deliver pre-registration nursing programs at Bachelor and Master's level. Participants provided implied consent then completed an on-line survey composed of Likert-type scale, forced-choice items, and open-ended questions. Data was analysed with descriptive statistics.

**Results and Discussion:** Students engaged with communication technology relatively early in life, with 102 (49.75%) students exposed to some form of technology use (i.e., mobile phone, tablet) before 10 years of age. All but one student had access to internet and all students owned a communication technology device. The highest use of technology for daily use was to search the internet for information (92%), followed by online social networks (68.3%) while 67% of students reported watching videos (i.e., YouTube, Netflix). Interestingly, students reported less confidence in using spreadsheets to perform calculations, preventing computer viruses and identifying different computer or digital camera parts. Just over half of the cohort (53.7%) did not use social media for learning.

**Conclusion:** Although students had access to communication technology and internet and expressed high use of internet and social media, students require more support in developing digital capability to prepare them for the workplace. Data presented here suggests that targeted education interventions are needed to improve students' basic digital literacy when they start their pre-registration nursing studies.

1.State of the World's Nursing 2020: Investing in education, jobs and leadership. Geneva: World Health Organisation;2020.

## Nursing in a digital world: Pre-registration nursing students' perceptions of digital health technology and its impact on the future role of nursing

**Dr Pauline Wong**<sup>1</sup>, Associate Professor G Brand<sup>1,2</sup>, Ms S Dix<sup>1</sup>, Dr D Choo<sup>4</sup>, Ms P Foley<sup>1</sup>, Dr Z Lokmic-Tomkins<sup>3,4</sup>

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**Introduction/background:** For pre-registration nursing curricula to be accredited in Australia, programs must include health informatics supporting graduates' capability to use Digital Health Technology (DHT) to support their nursing practice. However, students' perceptions of DHT and its impact on their role as registered nurses is largely unknown.

**Aim/objectives:** To understand pre-registration nursing students' perceptions of DHT and its impact on their future role as nurses.

**Methods:** This study used a qualitative exploratory approach. A purposive sample was drawn from a larger cross sectional (n=165) study across two Australian universities in 2020. Students participated in an online interview (n=1) and two focus groups (n=10). Photo-elicitation and reflective questioning prompts were used to collect data. Images of DHT were used to stimulate deep discussion on the impact of technology on their current and future nursing roles. Data was analysed using thematic analysis.

**Results and Discussion:** Themes represented nursing students' perceptions of DHT and its impact on their future nursing role, including Fear of the Unknown and Needing a Real Person. Students recognised the efficiencies of automated, centralised systems to support their practice. They were however, concerned by an increased cognitive and emotional load due to a perceived lack of preparedness to manage evolving DHT in their clinical practice. Despite the reality of nursing in a digital world, students felt that human interaction was fundamental to their role, and that DHT had the potential to depersonalise future nursing care. This contrasted with their original reason for choosing a career in nursing.

**Conclusion:** Higher nursing education providers need to consider how best to prepare students for the challenges of using DHT in their clinical placements. The nursing profession needs to actively lead and shape how DHT will support nursing practice in the future, while countering the momentum for technology to direct our nursing roles.

## Using electronic health records to augment interprofessional health informatics literacy

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**Introduction/background:** Interdisciplinary engagement with digital health data such as electronic health records (EHR) makes competency in health information technology (HIT) systems an essential attribute for the workforce. Currently, nursing students in the entry-to-practice program in Australia get minimal exposure to HIT content in the curriculum with brief discussion of theoretical concepts. A practical component in the simulated environment is lacking as is an opportunity to participate in interprofessional education within digital environments.

**Aim/objectives:** This study describes an intervention to integrate informatics competencies into the curriculum whilst facilitating interprofessional practice and education during university training.

**Methods:** The project mapped HIT competencies to integrated professional practice of nursing, physiotherapy, optometry, speech pathology, audiology and social work. Theoretical, simulated and real-life components were integrated as part of each student's clinical practice that utilizes the framework of person-centred care.

**Results and Discussion:** Outcomes include producing graduates competent in EHR in interprofessional settings, and the ability to adapt and cope with the demands of the rapidly evolving HIT-driven healthcare. This interprofessional curriculum with an emphasis on HIT will produce healthcare professionals with best practice and navigation of digital health data.

**Conclusions:** Using simulated EHR will allow graduates to acquire essential informatics competencies that are embedded in good clinical practice within safe interprofessional settings. This will enhance clinical decision-making, patient safety and the quality of health care outcomes.

### Online Interprofessional Education: the journey from defeat to triumph

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It's 2019...and we're teaching in a pre-COVID world.

Zoom is already part of daily work practices due to our large geographic footprint, but we hadn't yet used it to deliver interprofessional education (IPE). Seeing this as an opportunity to be innovative, we designed and delivered a number of online IPE sessions to reach students placed in more remote locations who are typically unable to participate in our regular in-person program.

However, synchronous online interprofessional education presents significant barriers, including attitudinal, physical, pedagogical, and technological. Despite staff motivation, we experienced poor uptake and engagement and the program was ceased prematurely.

Fast forward to 2020, and students and staff alike are scrambling to engage with online learning. Capitalising on a renewed drive and momentum, our program of online IPE was revived and subsequently expanded upon. By necessity, it became imperative to overcome the barriers that seemed insurmountable in 2019. This allowed us to deliver a number of online activities, which were often oversubscribed and always well received.

With online delivery of IPE the only possible option, we learnt the importance of adapting our content and pedagogy for online vs. in-person teaching, the cruciality of responsive and targeted facilitation, and the value of dedicating time and space to ensuring technological challenges were adequately addressed.

In 2021, we choose to embrace ambiguity. In reviewing our interprofessional education program strengths, we will offer a mix of in-person and online IPE dependent upon space, time, content and facilitation needs. The challenges of delivering engaging content online remain. However, the learnings from this 'flying by the seat of our pants' experience have highlighted a range of tools and strategies we now use to avoid and better manage any pitfalls, ensuring we are flexible and responsive to ambiguity.

## WIL ROAR; the Repository of Additional Resources for allied health students

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### WIL ROAR; the Repository of Additional Resources for allied health students

**Background:** The foundational skills and professional attributes novice students need to master to prepare for workplace-based learning are common across health professions (Chipchase et al, 2012). Therefore, while students come from diverse backgrounds with individual strengths and learning needs, they may not require intensive, discipline-specific, individualised support if they can access strategies and activities to practice and develop foundational skills independently and with peers. Along with a shortfall in human resources to provide students with additional learning support, we were led to create WIL ROAR; the repository of additional resources.

**Educational Innovation:** WIL ROAR is an online living library which supports the proactive use of additional learning supports and remediation for underperforming students at a whole of school level. WIL ROAR is mapped to the four domains that make up the student's pre-clinical readiness assessment for constructive alignment. These domains cover professional and learner behaviour, information gathering skills, communication and clinical reasoning. Students can self-enrol and work through self-paced interactive activities or be guided by academics benefitting from built-in feedback. Any student that has a work or clinical placement as part of their degree can benefit from this site making it truly multidisciplinary.

**Results and feedback:** The WIL ROAR canvas site amassed over 21,200-page views and more than 200 logged hours of use in the first 12 months following a soft launch. Feedback from both staff and students has been extremely positive for WIL ROAR supporting quality learning and teaching. Further program-wide roll outs are planned for this year as well and more extensive evaluations.

## Clinical Evidence Synthesis in Remote settings

**Dr Nilakshi Waidyatillake<sup>1</sup>**, Narelle Bethune<sup>1</sup>, Dr Anita Horvath<sup>1</sup>

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**Introduction:** nMedical research in busy clinical environments requires effort, commitment, flexibility, a high level of mentoring and time in order to be effective. In addition to these challenges, the recent coronavirus pandemic has created new barriers to undertaking research especially in the context of remote learning. In response, a variety of models and approaches to facilitate the on-line development of research skills for medical students in the absence of a research environment have been explored. We developed a teaching model to provide clinical research mentors/supervisors and academic coordinators with a platform for optimal remote research skill learning in an on-line environment.

**Method:** To meet the challenge of acquiring competency in research skills and experience in evidence synthesis and clinical medicine students were tasked with the development of a systematic review. Our model was developed to support both the research mentor/supervisor and student for remote clinical research mentoring, learning and completing research tasks within the academic timeline and consisted of:

- 1) Allocation of two/three students per systematic review and supervisor and students collaborate to form the protocol
- 2) Each student completes an independent literature search with confirmation from supervisors for search completeness and consensus.
- 3) Title and abstract screening and full text screening completed independently by each student.
- 4) One final agreement of included studies, articles are divided between two students for analysis with an independent project report submitted for examination and combined report for publication.
- 5) Fortnightly written diary page describing progress and challenges, PIAZZA discussion board and regular milestones set by academic coordinators were added to the review process to achieve the timeline.

**The message:** This model is creative; incorporating traditional approaches for conducting systematic reviews and a non-traditional approach for remote clinical research mentoring which is high quality and effective in facilitating student learning under remote supervision.

## New-graduate physiotherapists' training needs and readiness for telehealth and a low-cost experiential learning activity for physiotherapy students.

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**Introduction:** For the past two decades, telehealth has been a method of service delivery for individuals who are unable to access traditional care due to distance, time or other factors. The COVID-19 pandemic has necessitated a rapid transition to telehealth for the delivery of many Australian physiotherapy services.

**Aim:** This presentation aims to explore the readiness and specific training needs of new-graduate physiotherapists for telehealth service delivery in Australia, and evaluate a low-cost experiential learning innovation to help prepare physiotherapy students for telehealth practice.

**Methods:** Qualitative telephone interviews of new-graduate physiotherapists (n=16) and two videoconference focus groups of supervisors of new-graduate physiotherapists (n=7) were undertaken to explore readiness and specific training needs. A low-cost experiential learning innovation to help prepare physiotherapy students for telehealth practice was then developed and evaluated. Evaluation included self-reported learning, readiness for telehealth, and satisfaction with the learning activity.

**Results:** Two global themes were generated from the interviews and focus groups; these being “support needs for novice practitioners” and “how to best prepare for telehealth”. Of the 123 students who undertook the learning activity, 109 completed the questionnaire. Sixty-four percent agreed or strongly agreed that they were more confident to apply telehealth theoretical concepts and physiotherapy telehealth guidelines in practice.

**Discussion:** New-graduate physiotherapists and their supervisors perceive that pre-professional exposure to, and practical skills training for, telehealth is essential. Students who undertook the learning intervention felt that they benefitted from the hands-on experiential nature and suggested modifications to enhance the activity's authenticity.

**Conclusion:** This presentation outlines that the preparation of new-graduates to adopt telehealth in the workplace is considered critical given the shift in Australian healthcare to online platforms. Key design considerations made during the development of an innovative and low-cost approach for preparing physiotherapy students for telehealth practice are discussed and evaluated.

## Learning Advantages and Challenges for a Paediatric Physiotherapy Telehealth Student Led Service under Telesupervision

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As COVID-19 emerged in Australia in March 2020, the University of South Australia transformed its physiotherapy clinical placements for undergraduate and graduate entry physiotherapy students from face to face clinics, to complete telehealth services with tele-supervision, in the area of paediatrics. This saw the educator, student and client all in different locations. The aim of this study was to explore the advantages and challenges of delivering a paediatric clinical placement via telehealth under tele-supervision and if there were any specific impacts on learning. Student assessment data, course evaluation data and customised surveys and interviews were used to answer these questions. Ten students and four clinical educators completed the survey, with 2 students and 3 educators completing follow up semi structured interviews. Preliminary findings suggest that a telehealth placement is beneficial for developing communication skills, but that there are restrictions in learning physical assessment and treatment skills. Technology reliability and skills were additional challenges. Educators felt that the telehealth allowed for better understanding of working within the child's home and meeting family centered practice principles. Future suggestions include having a hybrid placement experience of telehealth and face to face, and that telehealth services should be conducted with students and educators co-located at a specific telehealth facility. Adequate training must be provided to students and educators.





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### Deconstructing nervous system module (NSM) in the medical program to improve learner perceptions and outcomes

Awais Saleem Babri<sup>1</sup>, Mr Foo Shen Boey<sup>1</sup>, Professor Mark Midwinter<sup>1</sup>, Ms Charlotte Rose Penfold<sup>1</sup>, Mr Spinghar Yonus<sup>1</sup>, Mr Aaron Buiza<sup>1</sup>

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**Introduction:** Learners perceive nervous system module (NSM) as one of the most content heavy and complex body systems. The complexity of NSM is further compounded by system-specific terminology, complex anatomical topography and requirement of good analytics to understand associated clinical conditions. Each year, as a quality control measure, NSM is redesigned and redeveloped in the light of institutional feedback, which led to improving learner perceptions over the past 2 years, however valid module-related concerns (vide-supra) still persist. To address these concerns, a student-staff partnership (SSP) project, supported by an internal grant, was co-developed. This partnership deconstructed the NSM and proposed learner-centered recommendations to improve educational outcomes.

**Materials and methods:** Four partners, enrolled in the MD program, were recruited for a six month period. They were granted full access to module content on Blackboard to analyse weekly: (1) Case Base Learning(CBL) cases, (2) Lectures and relevance of lecture content, (3) resource lists and (4) order of weekly activities.

**Results:** Completed reports comprising of: (1) General observations (lectures and resources) and (2) Case-based learning specific recommendations were submitted to SSP academic team. Focused learner and neurologist interviews produced for inclusion a list of high-yield topics and resources to support learning. For example, all student partners agreed that there should be more emphasis on NSM-related biomedical content and neurologist led discussions on functional neurological disorders and these parameters were considered key to develop analytical skills.

**Conclusions:** Previously, evaluation of NSM relied on self-reflection and sporadic neurologists' input without contemplating learner perceptions, understanding and challenges. By partnering with advanced learners and drawing upon their front-line experience, this project has created/established a pedagogical avenue which helped develop NSM and improve student perceptions. It also generated an essential template to review other systems and meliorate learner outcomes.

## Teaching Broader Determinants of Health to Medical Students – Ambiguity, Agony and Implications for Practice

[A/prof Linda Selvey](#)<sup>1</sup>, Dr Karen Shelley<sup>1</sup>

<sup>1</sup>*School of Public Health, Faculty of Medicine, The University Of Queensland, Herston, Australia*

In 2019, as part of a Teaching Fellowship at The University of Queensland, a Student Staff Partnership was initiated to redesign a first-year course, Health, Society and Research 1 (HSR1), which is part of the Doctor of Medicine program. Following consistently poor evaluation ratings for the course, the course coordinator and a learning designer recruited four students who had undertaken the course the previous year to assist them in a complete redesign of the HSR1 assessment and associated pedagogy. After the redesigned course was implemented in 2020, six semi-structured focus groups were undertaken with 17 students aged 21-36 (ten domestic and seven international) to inquire about their thoughts on the course and the assessment. Our findings indicated a very mixed response to pedagogical and assessment approaches in the course. There were observable differences between the domestic and international students in their responses to the course. Participants identified various issues, many of which related to the intricacies of assessment tasks. However, overall, these issues reflected a strong belief by many students that the broader determinants of health were not relevant to their future work as medical doctors. This was in spite of our attempts to ensure that all assessment and learning experiences drew explicit links to future medical practice. The international students, six of whom were from the United States and one from Singapore, expressed stronger beliefs that the determinants of health were not relevant to them compared to the Australian students. While we have some small successes with student engagement in the redesigned course, the question of the course's relevance to medical students, which is well documented, remains a perennial problem for those involved in medical education, both in Australia and world-wide. We continue to revise the course and our learnings will be incorporated into UQ's MD Design.

## "I want to know how to be a doctor" - What do pre-clinical year 2 medical students want to learn in a longitudinal primary care placement during the COVID-19 pandemic?

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**Introduction:** The Urban Longitudinal Integrated Community Care program (Urban LInCC) gives University of Queensland year 2 pre-clinical MD students the opportunity to apply to spend half a day per week for 14 weeks in General Practice (GP). At the commencement of this placement, students are asked what they want to learn. In an international pandemic, when pre-clinical students had particularly curtailed clinical exposure elsewhere, we were especially interested to explore their self-identified learning objectives.

### Key Words

Longitudinal placement, general practice, pre-clinical medical students, COVID-19, objectives.

**Aim:** To explore what pre-clinical year 2 medical students want to learn on placement in General Practice during the COVID-19 pandemic.

**Methods:** Twenty-six second-year pre-clinical medical students consented to data collection following application to participate in the Urban LInCC program. Data collection included student submissions of 4 learning objectives; two personal and two related to General Practice themes identified by course coordinators. Qualitative methodology including thematic analysis was used to interpret the data.

**Discussion:** Five key themes were identified including decision making skills and "putting it all together", clinical skills, communication and the therapeutic relationship, and whole person care including how to best care for specific groups. Other less prominent themes of interest included General Practitioner self-care and career pathways. Students frequently expressed overlapping themes in their objectives signifying the complexity of learning to provide clinical care.

**Conclusions:** During the COVID-19 pandemic students were removed from clinical learning environments and therefore had limited clinical time and exposure to real patients, scenarios or skill development opportunities. Our overarching impression from the five key themes is that year 2 pre-clinical medical students "simply" and with rising appreciation for what a complex process this is, want to know how to be, and become, a doctor.

**Category:** Research; Work Ongoing, Free Scholarship Presentation.

## Application of clinical ward round pedagogy in a traditional learning environment- A pilot study

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**Introduction:** Clinical ward rounds (CWR), a gold standard for health professionals' education, is the most learner-centred approach and is by far the most sought after teaching philosophy, which fosters critical thinking and blends affective and cognitive learning. During a typical CWR session, educators guide their learners to offer ideas and construct analysis of clinical conditions. However, its benefits have not filtered into larger classrooms (> 400 students) where it could enliven learning. This pilot tested CWR philosophy by delivering cerebrovascular accidents (CVA) to a test cohort (N=30).

**Materials and Methods:** A 2-hour activity encompassing symptomatology, pathophysiology, diagnosis, management, and rehabilitation was prepared by a multidisciplinary team (MdT). A CVA survivor's account initiated in-class discussion with a panel of health-professionals. Statistical modeling required 30 participants to generate effective qualitative results. All recruited participants completed pre-activity survey. Upon completion of the activity, the same participants completed a post-activity survey. Both surveys comprised of seven-point Likert scale close- and open-ended questions.

**Results: Pre-activity survey:**

73% participants wanted in-class discussions similar to CWRs and preferred it over traditional lectures. 75% strongly supported guided approach from MdT. While 53% preferred an expert demystify stroke, the remaining endorsed a shepherded approach.

**Post activity survey:** 89% agreed that in-class discussions improved CVA comprehension. MdT was considered indispensable in decluttering clinical concepts. Almost all participants (95%) strongly agreed that having a specialist route discussions was monumental in enhancing understanding and 86% strongly agreed that patient's account was key to generate high-yield discussions.

**Conclusion:** Qualitative pilot data reinforces CWR's potential use in large classes. The results of this study support use of CWR philosophy to improve understanding of CVA and CWR is preferred over traditional lecturing. Study outcome also indicates that CWR is practicable for a large cohort and the experimental model is not confounded by cohort size.

## Basic science education at medical school: views of students at an Australian Medical School

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**Background:** A trend towards diminishing basic science education and highly variable anatomy teaching in medical schools has been reported in the literature. The aim of this study was to explore the views of medical students at an Australian University regarding basic science education in medical school, including a comparison between students with different career aspirations.

**Methodology:** A prospective, cross-sectional survey was administered to students in years 3 to 6 of a 6-year undergraduate medical program at the University of Adelaide. The survey explored the perceived importance of basic science to anticipated future career, quality of basic science education and suggestions for improvement. Career aspirations were also recorded and stratified as surgical and non-surgical.

**Results:** The survey was completed by 133 students (54.9% females; 28.6% surgically inclined). A majority (71.4%) agreed / strongly agreed that basic science held relevance to their future role as a doctor. Surgically inclined students were significantly more likely to attribute higher relevance to anatomy ( $P < 0.001$ ), embryology ( $P = 0.036$ ) and histology ( $P = 0.013$ ) to their future career. Regarding the quality of basic science education, anatomy, pathology and physiology were rated highest among the students. Surgically inclined students rated the quality of anatomy teaching significantly higher ( $P = 0.004$ ) than non-surgically inclined students. Most (72.9%) favoured more face-to-face basic science lectures and approximately half (56.4%) wanted greater integration of basic science into case-based learning scenarios.

**Conclusion:** A strong desire remains for basic science education and traditional learning activities among medical students, regardless of career aspiration. There appears to be a need for a tailored basic science education, ensuring the needs of students of all career aspirations are met.

## Meaningful integration of medical disciplines into a capstone pre-clinical course

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**Background:** The pre-clinical phase at The University of Queensland encompasses separate clinical science, practice, ethics and public health and research courses. Recognising the need for student flexibility, enhanced experience and exposure to an integrated curriculum as essential to future-ready graduates, the concluding semester of the pre-clinical phase included a new integrated course. Integrated Clinical Studies was introduced in 2019 and combines clinical science, public health and research.

**Summary of the work:** The aim was to successfully design and evaluate an integrated course that prepares medical students and forthcoming graduates to be future-ready in their capacity to manage not only the classical clinical aspects of a patient, but also develop expertise in public health medicine. Integration was pursued with public health and research topics embedded in lectures and case-based learning activities, and assessment was designed to encourage reasoning about individual, community and population factors relevant to clinical practice. Aspects related to environmental changes effects on health, inequity to health access indigenous health and, public health burden of mental health and domestic violence, but also issues related to global health were incorporated with clinical content.

**Summary of results:** Course evaluation was received from ~7% of students and ~40% of tutors. Students were divided in their perceptions: some appreciated the opportunity to think more broadly about clinical cases; others felt that integration reduced their opportunity to learn clinical science. Thirty percent of students agreed that integration expanded their understanding of the scope of medical practice. Less than 50% of students and tutors believed the assessment was well integrated.

**Discussion and conclusions:** The integrated course was partially successful. Co-design of teaching cases to integrate public health issues was an important contributor to success. Assessment design and the integration of research require further development.

## Peer teaching second-year medical students pharmacology utilising Pecha Kucha-based student presentations - a pilot study

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**Background:** Peer teaching involves learners with a similar knowledge base aiding each other's education. It has been used successfully in areas of medical education such as procedural skills, but there is a paucity of evidence on its impact on pharmacology teaching. This pilot study aimed to investigate the feasibility, acceptability and effectiveness of a peer-taught pharmacology educational intervention utilising structured PowerPoint presentations.

**Methods:** Second-year medical students were invited to participate in a peer-led pharmacology educational intervention. Students created PowerPoint presentations of "core" medications using Pecha Kucha principles, where restrictions on slide numbers and time ensured short (6-minute), succinct presentations. Presentations occurred over eight, one-hour sessions, facilitated by senior academics. After the final session, participants completed an anonymous questionnaire with 10 Likert-scale questions and two open-ended questions on the feasibility, acceptability and effectiveness (in terms of knowledge, confidence and development of presentation and independent learning skills) of the educational intervention.

**Results:** Of 62 eligible participants, 53 students consented to participate. 29 completed the post-intervention questionnaire. Overall, student perception of the intervention was positive. This included improved pharmacology knowledge (n=21, 72%), confidence with teaching (n=23, 79%), and independent learning skills (n=22, 76%). Satisfaction with being taught by peers was high (n=21, 72%) and expert facilitators were deemed necessary by 97% (n=28) of students. 84% (n=24) believed the timing during their second-year was optimal and the majority (n=21, 69%) found the sessions more stimulating than lectures. Some (n=3, 10%) found participating in the intervention burdensome to their existing workload, and most (n=23, 79%) perceived information overload. Despite this, most (n=23, 79%) deemed the experience valuable.

**Discussion and conclusion:** Peer-taught pharmacology utilising student presentations based on Pecha Kucha principles is feasible, acceptable and valuable to medical students. In addition to improving pharmacology knowledge, it may also enhance students' independent learning and teaching skills.



## Adapting to a Constantly Changing Environment: the Evolution of Case Based Learning in an Undergraduate Medical Program

**Dr Matthew Arnold<sup>1</sup>**, Dr Nicola Eastaff-Leung<sup>1</sup>, Dr Matthew Arnold<sup>1</sup>

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Case based learning (CBL) activities underpin the curriculum at many medical schools, enabling students to apply knowledge, consolidate learning, problem solve and develop essential team-based skills including effective communication and collaboration. In recent times, educators have been challenged by a necessity to deliver a remote curriculum, as well as respond to budgets constraints – while continuing to deliver a high-quality program which equips students with skills to be effective clinicians and life-long learners.

The COVID pandemic required a rapid response to deliver an online curriculum with little opportunity for “road-testing”. Prior to 2020, CBL at the University of Adelaide involved group tutorials where students were provided information through a learning management system. Groups met three times per week and a scribe documented the group discussion on a whiteboard; the discussion was supported by a senior tutor. While this format was achievable through the Zoom platform, it was desired that greater structure be provided to the students to ensure consistency across material discussed. A more modern and engaging approach was also sought given that so much of student learning would be online.

An online learning platform (Lt; AD Instruments) was utilised in conjunction with Zoom to achieve this goal. The level of guidance was scaffolded across the three years of CBL; first year students required regular prompts for discussion, while third year students preferred greater autonomy over the discussion. Student feedback was pivotal in adjusting the format to meet the needs of the students and encourage a move towards greater independence in learning.

A return to on-campus teaching demonstrated a change in student approach to CBL and has enabled a move into an interactive lecture space with smaller group sizes. Continued use of Lt has enabled halving in tutor numbers while maintaining the same level of student support for content discussion.

## Team Based Learning success in a remote teaching environment

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Team Based Learning (TBL) is a capstone student team activity based on the theme of the week in the MD program for both year 1 and 2. It is an evidence-based collaborative student-centred teaching strategy which aims to integrate, reinforce and consolidate key basic and clinical science topics covered in the preceding weeks teaching activities through student team activities around a clinical case scenario, and the generation of a capstone mechanistic concept map underpinning the patient case. TBL also provides opportunities to develop team skills. Problems encountered were recruitment of large number of skilled teaching staff, student dissatisfaction with perceived teaching inconsistencies across the TBL rooms, not enough time, and a lack of feedback. In the new era of physical distancing, there was the added problem of how to maintain this capstone experience, including team-work, in a digital format.

To maintain collaborative learning and tutor interaction, the TBL was moved to an online synchronous and asynchronous format. Students met online to work through the problem-solving case and then Zoom in online to engage with a small expert panel of clinicians and basic scientists to review the case and address student questions. Post session, the TBL teams completed a mechanistic diagram and received feedback.

Previous challenges were thus addressed by online delivery whereby students reported better organisation and structure, enhanced learning, more satisfaction with generating mechanistic diagrams and receiving feedback, and teaching consistency.

Even after these unprecedented times which demanded the change in the first place, the re-work of the TBL maintains the pedagogical framework and the critical aspects of teamwork and resulted in the continuation of the online TBL delivery model. The best of both systems is now being implemented in a hyflex model to allow for face-to-face groupwork but remote teaching for the tutor summary.

### On a Knife-Edge – Training for clinical competence in Gamma Knife. A highly specialised radiation therapy machine for brain tumour treatment, commissioned and implemented in a global pandemic.

**Mr Glenn Trainor<sup>1</sup>**, Ms R Gunewardena<sup>1</sup>, Mr B Chesson<sup>1</sup>, Mr R Nigro<sup>1</sup>, Mr J Bonett<sup>1</sup>, Mr K Bayley<sup>1</sup>

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In late 2020, the Peter MacCallum Cancer centre received delivery of a highly specialised radiation treatment unit, the Gamma Knife Icon, which is a non-invasive alternative to neurosurgery that utilises radioactive sources to predominantly treat brain tumours. No other Victorian hospital utilises such equipment and there is only one other unit in operation within the Australian public health system, located in Brisbane. Planning for the implementation and clinical training for this multimillion dollar machine had commenced in early 2020, however by the time machine installation was complete in the last quarter of 2020, the COVID-19 pandemic was at its 2nd wave peak in Victoria.

The original training plan for clinicians to gain competency in machine operation was to visit specialist cancer hospitals in the USA to gain first-hand experience with clinical experts. When international borders closed, the backup plan was to travel to Brisbane for training, however by this stage, domestic state borders were also closed due to the strict 2nd wave COVID lockdown in Victoria. The challenge was further compounded by an agreed clinical 'go-live' date for the treatment unit, with patients already aligned for treatment commencing in early 2021.

This presentation will explore the alternative approaches taken in order to gain specialised theoretical knowledge from international and interstate content experts in the operation of Gamma Knife during a state-wide lockdown, as well as the modifications required in order to fulfil local licencing requirements for practical competency regarding equipment operation and radiation safety. The utilisation of mixed-modality and blended learning approaches is highlighted as elements of particular importance. Focus will also be on the development of a unique blended-learning departmental training program utilised to support ongoing clinician competency development, which also has significant potential to address future local and national specialist training and state licencing requirements.

## Crafting Radiation: Implementation of a risk-free environment for self-directed upskilling

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Treatment with Radiation Therapy involves the delivery of and sculpting of dose via computer planning to irradiate the cancer while sparing vital organs. Continual advancements in techniques, machines and objectives require RT staff and learners to keep abreast of developments and competencies, especially in the computer planning of treatment. However, due to minimal rostering into planning, expertise in planning was being greatly affected. In 2019, a RT staff survey found staff are most likely to engage in continued professional development activities if related to their clinical work. In 2018, the implementation of a new planning system introduced an additional issue of unfamiliarity of using the planning system. Through informal communications with staff and observation of staff capabilities, an additional drawback is time availability to exercise skills and knowledge in planning. An initiative to address the demands of computer planning in a safe environment, the clinical educators at Peter MacCallum Cancer Centre developed a training library for learners and staff.

The project aim was to provide a library of patients of varied body sites and techniques for learners and staff to develop already existing planning skills. One of the deliverable outcomes consisted of an online library with useful resources to allow the participants to complete their work safely and in accordance with policies and procedures. The second outcome was populating the Training Eclipse Planning System with varied body sites and techniques. The medical physics team and RT staff worked together to ensure data was not compromised through anonymisation and the training patients passed quality assurance checks.

The Eclipse Training Library provided a safe platform for learners and staff to challenge their skills and knowledge, provided an opportunity for peer-to-peer knowledge sharing and reinforced optimal planning with comparable approved plans.

## Exploring the role of CT Simulation in Preparation for Clinical Placement

**Ms Kristal Lee**<sup>1</sup>, Mr J Mc Inerney<sup>1,2</sup>

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Clinical placement offers a unique environment for students to develop technical and interpersonal clinical skills. However, there is increasing pressure on clinical centres in providing educational opportunities due to increasing student numbers, staff resource pressure and more recently, the challenges arising from the COVID-19 pandemic. More than ever, students need alternative education opportunities to optimise their learning when on clinical placement.

Simulation has a strong research foundation, and through the challenges of COVID-19 in 2020, alternative learning avenues for students unable to attend clinical placement were developed. A CT Simulation software (Siemens SmartSimulator), which was originally used to teach qualified practitioners, was adapted to provide students with core CT education opportunities outside of the clinical environment. Using a replica of Siemens CT scanners used in practice, it offers a learning platform with the additional benefit (compared to other high-fidelity simulators such as remote-access or a real machine) where all students can access their own simulator at the same time, allowing more opportunities for student engagement and individual hands-on learning.

Currently in Victoria, Australia, clinical placements have resumed. However, this CT simulation advancement is now being used at Monash University, Australia to prepare the 3rd year Radiography students for a successful clinical placement. Students (n=67) were provided with a 1 hour introductory class, and then each student had 4 hours on their own simulator with the guidance of an educator (1 educator to 12 students). Students then completed 6 weeks of clinical placement, with 2 weeks dedicated to CT. Students were surveyed post-clinical placement on their experiences.

Evaluation of students' perceptions of using CT Simulation as preparation for clinical practice are in progress. The challenges COVID-19 presented and how new education opportunities are emerging from this will be shared, along with the results of this study.

## Medical students' expectations about digital health

Sisira Edirippulige<sup>1</sup>, Dr Buddhika Senanayake, Prof Anthony Smith

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Digital health is fast becoming an integral part of routine medical practice. The integration of digital health into traditional practice brings significant changes. Logic dictates that for medical practitioners to operate in this digitally enabled new environment, they would require specific knowledge, skill, and competencies relating to the aspects of digital health. However, very few medical programs in Australian and globally currently teach digital health within their regular curriculum. This pilot study aimed to explore medical students' perceptions and expectations of digital health education and training (E&T). An online survey and focus groups were used to collect information about medical students' perceptions and expectations relating to digital health and E&T within the medical program (MD) at the University of Queensland. Sixty-three students took part in the survey and 17 students involved in four focus groups. The majority of participants had no formal E&T in digital health. Many were interested in learning about digital health as part of their medical program. Primarily, knowledge and practice related factors have motivated students to learn digital health. The analysis of focus groups data identified two (2) superordinate themes. 1) Relevance of digital health for modern medical practice 2) Expectations relating to digital health education and training. Students agreed that digital health is an important emerging discipline that should be taught as part of their regular curriculum.

## Effective strategies for studying pharmacology in Medicine: a mixed method approach

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<sup>1</sup>*Monash Rural Health, Medicine, Nursing & Health Sciences, Monash University, Churchill, Australia*

**Introduction/background:** Knowledge and competence in pharmacology are crucial outcomes in medical education as this provides the rationale behind safe and rational prescribing of medicines. Significant challenges exist in educating medical students, given the ever-expanding array of medications available. It is therefore unsurprising that a significant proportion of medical students express concerns regarding pharmacology knowledge and prescribing competence. Numerous gaps exist in the literature with respect to optimising student understanding, retention and application of pharmacology knowledge.

**Aim/Objectives:** This project aims to explore medical student learning techniques and approaches with a view to identify predictors for success in pharmacology.

**Methods:** Baseline survey and thematic analysis of focus group interviews were conducted to understand student perceptions and identify unmet learning needs for pharmacology in a cohort of medical students.

**Results:** Baseline survey (103 responses) identified in-semester revision of pharmacology as a significant predictor of strategic and deep learning methods and improved quiz performance (5% higher score on average), compared to superficial learning methods. Yet, only 50% of respondents specifically report revising pharmacology in-semester; of these students, the most adopted technique was simply repeating readings/lectures and class activities (81.9%) due to availability and time constraints. Students also expressed more engagement with online references (83.8%), visual resources (92%) and preferred independent study. Thematic analysis of focus group interviews elicited five main themes for optimal pharmacology learning: integration, clinical relevance, time-efficiency, structure and memorisation.

**Discussion:** Responses from student feedback and focus groups highlight the unmet need for time-efficient and organised strategies for in-semester revision to promote long-term knowledge retention of pharmacology concepts to enhance academic performance and safe prescribing of medicines.

**Conclusions:** Strategic and personalised techniques for pharmacology learning that assist with in-semester revision and long-term retention are highly valued amongst students for examination preparation and preparedness for practice.

## Creating innovative and real-life learning environments for internationally-qualified nursing students: simulation and role play

Joy Penman<sup>1</sup>

<sup>1</sup>*Monash, Clayton Campus, Australia*

One of the recently concluded offerings of our university is the Australian Nursing Studies Program, which allowed internationally-qualified nurses to transition to the Australian workforce. In delivering the program, students were provided with online pre-clinical nursing learning packages, face-to-face workshops, a one-week intensive ward simulation at the university, and a six-week acute care clinical placement.

Simulated wards with simulated patients that provided authentic real-life Australian experience were used to prepare the nurses. Simulated wards were like hospital wards, while simulated patients were community members who took on the role of patients in the wards. Fiction contracts were also used to allow the nurses to engage actively in simulation and debriefings by establishing a psychologically safe context. In short, the nurses were required to act as “real” nurses and pretend the clinical scenarios were real even though they were in the simulation-based environment, and so with the patients.

Using a qualitative design, the impact of the educational intervention on the learning outcomes was determined by using a one-minute questionnaire. Some quotations on the best learning that transpired from the 2019 and 2020 cohort of nurses included:

“We just don’t practise skills, we gain insight and knowledge on the nursing practice here.”

“It will help us a lot on what to expect once we are in clinical placement. Allows us to be more aware of what to focus (on) more.”

“It aids me in providing guided structure and planning for clinical placement.”

“Familiarisation of the nursing practice here, providing me confidence.”

Simulation and role play enabled the nurses to meet the learning outcomes of the program and assisted their readiness and confidence for clinical placement.



## The future of Post-graduate Anatomy Education

**Upuli Pahalawatta**<sup>1,2</sup>, Dr Michael Bourke<sup>2</sup>, Dr Elizabeth Lun<sup>3</sup>, Dr Mark Fiorentino<sup>1,2</sup>, Dr Rajiv Rattan<sup>2,3</sup>, Dr Bernard Bourke<sup>2,3</sup>, A/Prof Amanda Dawson<sup>2,3</sup>, Prof Chris Dayas<sup>2</sup>

<sup>1</sup>John Hunter Hospital, Newcastle, Australia, <sup>2</sup>University of Newcastle, Callaghan, Australia, <sup>3</sup>Gosford Hospital, Gosford, Australia

**Introduction:** In this time of COVID traditional models of teaching anatomy in the postgraduate medical setting such as intensive face to face lab workshops are no longer possible. There is still a need to provide effective and engaging anatomy tutorials for radiology and surgical trainees. Over the past 20 years the amount of anatomy taught in medical school has continually declined. Additionally there has been a shift in the spatial reasoning required to interpret clinical anatomy with increased utilisation of imaging. This demonstrates a gap between formal anatomy teaching, often at the start of medical school and the depth and breadth of anatomy required for clinical practice. In order to bridge this gap, a multidisciplinary and multimodal approach is required.

A series of seven sessions were delivered via zoom by an anatomist, encompassing the thorax, abdomen, pelvis, neck and back, head and neck, nervous system and limbs. Additional facilitators included vascular and ENT surgeons and radiology trainees to provide clinical significance.

Incorporating Mayer's theory of multimedia learning, each session included a discussion of cadaveric specimens, anatomical models, schematics and radiological investigations using the SPECTRA workstation and IDS7 software to illustrate key points and topographical relationships.

**Methods:** Seven sessions (thorax, abdomen, pelvis, neck/back, head/face/skull, limbs, CNS) were delivered via Zoom during February and March 2021, prior to the radiological and surgical primary examinations. These were held from 6-8pm to maximise attendance.

Following the short course, a 24-item MCQ and 8-item radiological imaging test was administered. Results were correlated with attendance and will be reviewed in the context of examination pass rates to identify value.

The program was assessed qualitatively using a 5-point Likert scale, assessing logistical factors (timing, videoconferencing quality, length of session), clinical utility, examination preparedness and teaching components (use of imaging, use of topography, models, variant anatomy).

## Is there a home for hybrid? Responding to a state-wide COVID-19 lockdown with a blended learning clinical placement.

**Mr Jotham Bonett**, Eman Obeid<sup>1</sup>, Mr Kaj Bayley, Mr Bruce Ha

<sup>1</sup>*Peter MacCallum Cancer Centre, ,*

The COVID-19 global pandemic greatly impacted the ability of the Radiation Therapy Department at the Peter MacCallum Cancer Centre to accommodate undergraduate student clinical placements across the organisation's five campuses. From March 2020, clinical placements were postponed due to strict lockdown and staff siloing arrangements, with the plan to gradually reintroduce placements in May. The typical clinical placement for students encompasses the two main role of the Radiation Therapist; treatment, which is 'patient facing' and treatment planning, which is predominantly computer/desk based. To limit the number of students visiting clinical departments, allow for social distancing and provide a supportive environment, it was proposed that the clinical centre would offer a hybrid placement approach. The treatment aspect of placement would be provided on-site, whilst the treatment planning placement would be supported by a remote online placement.

Online support sessions were facilitated by the Clinical Educators via video conferencing, where students were provided with case studies to plan, using the cloud-based planning system. This ensured learners were completing work in a similarly way to being on-site and could be assessed appropriately with minimal drawbacks to their placement. Assessments included detailed presentations of their plans to either a panel of experts, clinical staff and their peers for feedback and discussion. This allowed students to gain valuable experience with an aspect of the traditional placement whilst adhering to COVID-19 restrictions.

With siloing of clinical teams and campuses, this online platform also allowed the provision of student orientation in a group setting, which would ordinarily be done face to face at the commencement of placement. The framework for online planning support and clinical training offers greater flexibility in the way clinical experiences and training can be delivered, to ensure that our future Radiation Therapists have the necessary clinical skills to deliver optimal patient care.



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### Working with shifting goalposts: the challenge of developing a program evaluation for a program that isn't sitting still!

Rebecca Aichinger<sup>1</sup>, Imogene Rothnie<sup>1</sup>, Libby Newton<sup>1</sup>, Louise Rigby<sup>1</sup>

<sup>1</sup>*The Royal Australasian College of Physicians, Sydney, Australia*

**Introduction/background:** Considerable investment occurs when modernising the design of health professional education programs, often with years expended redesigning and implementing programs. The literature suggests design and implementation approaches must flex in response to unforeseen and unavoidable issues that require problem solving along the way. At the same time program evaluation design needs to flex in response to changing education program design and implementation plans. This can present challenges for both program designers and evaluators.

**Purpose/objectives:** Drawing from a case study of the Royal Australasian College of Physicians renewed Basic Training program, we will present the challenges of planning for long-term, dynamic program evaluation and collectively explore how these can be approached. Together we will:

- Hear how other groups have developed their program evaluations
- Consider a rapid peer review of our programmatic evaluation strategy
- Consider different perspectives on how to undertake complex multi-year program evaluation.

**Issues/ questions for exploration or ideas for discussion:**

- What theoretical frameworks are others using for program evaluation?
- How can the work be distributed to make the evaluation manageable?
- What are the merits of using different methodologies?
- How can different evaluation needs (e.g. exploring short term implementation fidelity and long term program outcomes) be reconciled?
- How are competing priorities with participants / stakeholders effectively managed?
- How can quality evaluation plans be made when the program keeps getting tweaked and the timelines keep changing?

### What might the health workforce look like in a world where machines learn?

Dr Julie Gustavs<sup>1</sup>, **Dr Caroline Clarke**<sup>3</sup>, Ms Theanne Walters<sup>1</sup>, Dr Shaun Hosein<sup>1</sup>, Dr Mohamed Khalifa<sup>2</sup>

<sup>1</sup>AMC, Majura Park, Australia, <sup>2</sup>Australian Digital Health Agency, Sydney, Australia, <sup>3</sup>Royal Eye and Ear Hospital, Melbourne, Australia

Technology advancements over the next decade will significantly change the nature of work. The advent of artificial intelligence augmented decision making and support across all professions and fields, including health, will pose challenges and opportunities for the health workforce of the future. Technology change has significant implications for the focus of skills development of health professionals to ensure their employability in a world where machines can learn and health professionals will have access to huge data sets on which decision making about care can be made. The power of these new systems will outstrip the accuracy and speed of that a human can make based on their professional knowledge base alone.

This session shares findings of a research project undertaken by the Australian Medical Council and Australian Digital Health Agency on building a digitally capable medical workforce. We explore discussion questions related to digital health across the Australian and New Zealand Health Workforce:

- What ethical dilemmas will the use of AI augmented decision making and support bring to the fore for resolution in health and require of the health workforce?
- How can we better prepare the health workforce to focus on what they add to health by way of humanising care beyond what a machine can achieve more efficiently and cost effectively?
- What do healthcare workers of the future need to learn, their role in the inter-professional health team, as well as, how they should be assessed?

Integral to shifts in practice is workforce development and engagement of education providers, accreditors and health systems. The joint efforts of these key players in the health sector will involve curricula renewal, which reflects work practice change to technology integrated workflows, as well as, a focus on professional uptake and commitment to lifelong learning across the health workforce education continuum.

### How COVID19 aided culture change during the implementation of a new curriculum – success stories for students and staff at University of Sydney.

Associate Professor Kellie Charles<sup>1</sup>, Dr R Howard<sup>1</sup>, The M MD2020 Curriculum Renewal Team<sup>1</sup>, Professor J Bleasel<sup>1</sup>  
<sup>1</sup>Medical Education Office, Sydney Medical School, The University Of Sydney, Sydney, Australia

In 2018, the Sydney Medical Program started a two year program of curriculum review, renewal and structural redesign in the teaching for the MD program. The plan was to consolidate pre-clinical teaching into one year and increase the clinical immersion experience for students. The traditional lecture-based didactic teaching model of Year 1 and 2 teaching was also to be transformed to a new flipped learning model.

While 2020 brought many challenges to higher education, it also brought about a radical change to how we thought about teaching. Through solid planning, an agile Medical Education team and highly enthusiastic academic staff and student body, the University of Sydney pivoted to remote teaching over one weekend and successfully implemented the innovative MD curriculum as planned with no major disruptions to teaching.

Purpose: The purpose of this PeArLs session is to discuss how COVID19 assisted the rapid pivot from didactic teaching to a new forum format that included components that encouraged active, experiential learning and cross-disciplinary teaching models.

We will briefly outline our approach to faculty development, guided learning strategies for students and real-time course improvement through the use of Staff-Student Partnerships that led to our improved delivery of the new MD2020 program during the pandemic.

The following issues and questions will be explored and discussed.

1. How to transform your lectures to interactive forums?
2. What are the essential components of faculty development, consistency in teaching and establishing a model of site champions of change?
3. How to generate buy-in from students who are used to learning in a traditional on-campus learning environment using didactic lectures?
4. What is a Staff-Student Partnership Program and how does it provide a forum for two-way communication required for course improvement?
5. How do you plan for return to campus while experiencing random site specific closures?

# How might we remediate problems with student professionalism? Progressing from the MDANZ 'Professionalism and professional identity of our future doctors' report

Professor Zsuzsoka Kecskes<sup>1</sup>, Dr Charlotte Denniston<sup>1,2</sup>

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A recent report on the professionalism and professional identity of our future doctors represents a collaboration across Australian and New Zealand Medical Schools to develop practical and relevant guidance for defining, teaching and assessing professionalism and effectively remediating unprofessional behaviours.

Recommendations from the report regarding remediation included: a clear description of the desired outcome from remediation; ensuring student perspectives are captured and inform remediation approaches; clearly communicating processes for remediating lapses in professional behaviour to all parties involved; using documentation and handover to improve ongoing support for learners who experience lapses in professional behaviour; and ensuring all staff and students are aware of channels of reporting and notification of concerns.

Remediation was identified as an area in need of further development in many medical schools, and was the focus of several proposed next steps for research, including multi-centre collaboration and the facilitation of networks across each school to share experiences and examples of good practice in the remediation of professional behaviour.

As a first step to informing future research and practice change, this PeArLS seeks to initiate networking across schools and professions and draw upon the experiences and ideas of those involved with remediation of professionalism lapses in a range of contexts.

We will briefly introduce the findings and recommendations from the report and seek participants' responses to the following:

- What experiences do you have in managing staff and/or student lapses in professionalism (process focus)? What works?
- How do you measure the short- and long-term success of remediation approaches and synthesise information about repeated lapses in professional behaviour?
- How can students and supervisors in clinical learning environments be empowered to identify and report professionalism lapses?
- How can the student perspective be captured in processes for managing professionalism?



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## Voice Behaviour in Healthcare : A Scoping Review of the Study of Voice Behaviour in Healthcare Workers.

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**Background:** Patient safety and quality care require learning organizations. For organizations to pivot and progress they need a workforce skilled and confident in voicing ideas and errors. Expressing issues related to patient safety and quality improvement can be defined as voice behavior (VB).

**Methods:** This scoping review aimed to answer two questions: (1) what is the scope of the study of VB in the healthcare setting? (2) how do new graduates in allied health use their voice? The Joanna Briggs guidelines were used to identify 76 articles that were explored using a descriptive and evaluative approach to map the depth and breadth of this topic and identify research gaps.

**Findings:** The review revealed that nursing and medicine feature in VB studies, but few studies focus on allied health. An exploration of the concepts emerging from these studies revealed eight topics: power, risk, tenure, leadership, intervention, self, climate and strategies.

**Conclusion:** Synthesis of the reviewed studies highlights that we know little about allied health new graduates' VB in healthcare. Exploration of VB with this group will inform education and workplace settings about ways to grow professionals who are confident and competent in speaking up for patient safety and quality improvement.

## Grit, resilience, mindset-type and academic success in health professional students

**Marlena Calo**<sup>1</sup>, Dr C Peiris<sup>1</sup>, Dr B Judd<sup>2</sup>, Professor L Chipchase<sup>3</sup>, Professor F Blackstock<sup>4</sup>

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<sup>4</sup>Western Sydney University, Parramatta, Australia

**Introduction:** University student wellbeing is a global concern with students experiencing high rates of stress, anxiety and depression (National Youth Mental Health Foundation 2017). Poor mental wellbeing can impact on academic success (Stallman 2011). Grit, resilience and a growth-mindset are important factors underpinning positive wellbeing and academic success for students (Stoffel & Cain 2018). To date, it is unclear the presence or impact of these characteristics in health professional students. **Aim:** To determine levels of grit, resilience and mindset-type in physiotherapy students and explore relationships of these factors with academic success.

**Methods:** A cross-sectional study utilising self-administered surveys was undertaken with final year physiotherapy students across four Australian Universities. Participants completed four established questionnaires measuring grit, resilience and mindset-type. Academic transcripts were obtained to quantify academic success using weighted average marks. Results were summarised using descriptive statistics. A backwards elimination multi-regression analysis explored predictors of academic success in relation to demographic factors and grit, resilience and mindset-type.

**Results:** A total of 266 students (55% females) participated in the study. Overall, 25% of students were determined to have low resilience, 25% low grit and 30% a fixed or undecided mindset-type. Male students, international students, students with a mental health condition or a disability and students with low grit were all at least twice as likely to fail a clinical placement than other students ( $p < 0.05$ ). Significant predictors of lower theory-based unit marks were being male, having lower grit, being a graduate entry student and having a mental health condition.

**Discussion:** One in four physiotherapy students have low grit and/or resilience. Grit was an independent predictor for academic success. Early screening may assist pro-active implementation of strategies to improve well-being and academic success. Interventions specifically targeting students with low grit or resilience may be beneficial.

## Ethics in health professional education: The development of a novel teaching resource for ethics and anatomy education

**Dr Jon Cornwall**<sup>1</sup>, Professor Tom Champney, Dr Sabine Hildebrandt

<sup>1</sup>*University Of Otago, Dunedin, New Zealand*

**Introduction/background:** In already crowded healthcare curricula, reinforcing key educational messages across subjects as part of spiralled delivery is an element of good educational practice. However, implementing or developing resources for such practice can be difficult, as subject teachers may not have expertise that encompasses two disparate subject areas or have access to resources that may exist behind a paywall.

This work describes the establishment of a suite of open-access educational resources for health professional education that focuses on providing educational opportunities on ethics, ethics history, and ethical concepts for anatomy programmes. Resources were developed through a social constructionist lens, with social constructivism broadly envisioned as a framework for item use and delivery.

**Aim/objectives:** The aim of this project was to develop a free educational resource for health professional courses, focusing on integrating the teaching of ethics into anatomy education, in order to provide a globally accessible resource that could be easily and quickly integrated into teaching practice.

**Discussion:** A suite of free, brief, open-access educational resources have been developed to facilitate the delivery of ethics and ethical concepts in healthcare professional anatomy education. Resources were intentionally developed as brief units, mostly one to four slideshow pages, to encourage uptake and facilitate utility. To date, 29 individual resources have been developed and are currently available. Resources are posted on the website of the largest anatomy association in the world, the American Association for Anatomy. Further resources are being developed, and contributions from community authors are encouraged to develop a community of practice and raise awareness of the topics.

**Issues/questions for exploration or ideas for discussion:** Why is integrating resources like these, that bring together two different subjects, important in health professional education?

How can educators use resources that focus on integrating two different topics, in practice?

## Teaching sensitive physical examination skills online: Improving student readiness for in-person examinations

Dr Siobhan Bourke<sup>1</sup>, Dr Katharine Reid<sup>1</sup>, Dr Narelle Bethune<sup>1</sup>, Ms Prudence Holt<sup>1</sup>

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The Sensitive Physical Examination Program (SPEP) is a unique approach to teaching second-year medical students the communication skills, consent process and examination technique for genital (physiologically male and female) and breast examination. Clinical Teaching Associates (CTAs) teach the program and act as patients, thus teaching using their own bodies. The face-to-face, small group aspect of the SPEP is highly valued by students and CTAs; this approach was, however, significantly disrupted by the COVID-19 pandemic.

When face-to-face teaching was suspended because of the pandemic, the SPEP was significantly challenged to deliver relevant and effective teaching in these sensitive examinations. Ongoing restrictions on face-to-face learning meant that the practical examinations could not be taught during 2020; program developers thus rapidly redesigned an online introduction to these examinations. These online sessions comprised a preliminary online Sensitive Communications Skills, Practical Tips and Consent component and were to be followed by the face-to-face component for practising the examinations when restrictions eased. The aim of these tutorials was to: a) ensure continuity of sensitive examinations teaching for second-year medical students during the pandemic and b) improve students' readiness to undertake the face-to-face component of the examination.

Delivery of the online tutorials for the SPEP were delivered effectively by the CTAs. Students engaged well in the online context. Evaluation of the online program indicated that students developed relevant knowledge about the examinations and improved their communication and consenting skills and had less anxiety about undertaking the examinations. The online learning environment was regarded as highly supportive, despite variable perceptions as to the efficacy of online teaching for these examinations. Overall, the evidence suggests that these tutorials were effective and highly regarded by students, with evidence that the online introduction to these sensitive examinations improved students' readiness to undertake the face-to-face examination.

## Working with students as partners for educational excellence

**Adrienne Torda**<sup>1</sup>, Ms Dayna Duncan

<sup>1</sup>*Unsw Sydney, ,*

**Introduction/background:** Student feedback has been shown to be a valuable improvement tool, and powerful stimulus for teacher reflection. It also opens a dialogue around teaching that empowers the student voice and allows the faculty to identify obstacles and opportunities in learning.

**Aim/objectives:** The aim of this project was to examine different avenues, types, and approaches to student feedback in the medical program at UNSW Sydney. We also reviewed both faculty initiated and student initiated approaches, the benefits and limitations of the different approaches and avenues for feeding forward (for action) and feeding back to students (outcomes).

**Discussion:** There are 5 formal faculty tools for student feedback currently used within the medicine program with various levels of student engagement. One of the biggest issues is student engagement with the process largely due to 'survey fatigue'. Generalisable feedback is also complicated by the multi-disciplinary nature of each course. The UNSW Medical Society has even more avenues for student feedback and more recently has developed an approach that involves small groups of students giving focused feedback on a particular course which allows high level granularity. It has been found that synthesising feedback from a variety of forms is the most effective method of gathering reliable, actionable feedback.

**Issues/questions for exploration or ideas for discussion:** The main issue in obtaining high quality useful student feedback that can enhance the quality of educational deliverables is the creation of a culture of psychological safety in which students feel that they can give feedback safely and that their voices are valued.

## Adherence to national consensus statement on informed consent: Medical students' experience of obtaining informed consent from patients for sensitive examinations

**Harsh Bhoopatkar<sup>1</sup>**, Dr Carlos Campos<sup>1</sup>, Associate Professor Andy Wearn<sup>1</sup>, Associate Professor Phillipa Malpas<sup>1</sup>

<sup>1</sup>*University Of Auckland, Auckland, New Zealand*

**Introduction:** The teaching and learning of sensitive examinations (male rectal, female rectal, female breast, male genital, and female vaginal/pelvic examinations) to medical students is complex. One of the challenges specific to sensitive examinations involves the conflict between ethical and educational needs (Coldicott 2003). Obtaining informed consent from patients has been key to the ethical debate. Unconsented examination, particularly when the examination is under anaesthesia, is now regarded as inappropriate and unacceptable practice. In New Zealand, a national consensus statement on medical students and informed consent was developed to protect the patient, students and staff (Bagg 2015).

**Aims:** Determine whether the guidance from the national consensus statement on obtaining informed consent from patients for sensitive examination are being met.

**Methods:** A self-completed, online, anonymous questionnaire was developed. Data were collected in the period just after graduation from the medical programme at the University of Auckland in late 2019.

**Results:** The response rate was 35% (93/265). The percentage of students who performed sensitive examinations on a patient under anaesthesia was 28%, 12%, 28%, 10%, and 86% for the male rectal, female rectal, female breast, male genital, and female pelvic examinations, respectively. For anaesthetised patients, the percentage of students who reported that they were 'not always compliant' with guidance from the national consensus statement was 65%, 63%, 67%, 56%, and 11% for the male rectal, female rectal, female breast, male genital, and female pelvic examinations, respectively.

**Discussion:** A significant number of students are performing sensitive examinations on patients under anaesthesia. Adherence to the national consensus statement on obtaining informed consent is poor. Health professional educators need to review policy and practice to ensure a safe learning environment for our students and patients.

Bagg W et al (2015). N Z Med J. 128(1414):27-35.

Coldicott Y, Pope C, Roberts C (2003). BMJ. 11;326(7380):97-101.

## The Health Humanities in health professional education: A scoping review of curricular and evaluation approaches

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**Background:** The Health Humanities is increasingly seen as a means of balancing the positivist teaching of the Sciences with critical, reflexive, humanistic skills in health professional education. As future health professionals, students need to engage with creative practices to develop flexible, innovative thinking, creative problem-solving and sound judgement. Research into the learning processes, outcomes and evaluation of introducing the Humanities into health curricula has been scattered and relatively unconvincing. To substantiate the rationale for the Humanities as core material in health professional curricula, we synthesised the relevant research.

**Methods:** Through the Worldwide University Network's Health Humanities International Research Collaboration, we conducted a scoping review of qualitative and mixed-methods studies of Health Humanities teaching in pre-registration health professional education. We explored the focus of learning, learning outcomes and evaluation. We searched four databases (March 2015-November 2020), then extracted and analysed relevant data through an iterative approach involving multiple reviewers at each stage.

**Findings:** Following an initial review of 8606 titles, 24 papers were included. Diverse Health Humanities courses were included in pre-registration health professional programs, focusing on: knowledge, mastering observation and reflection skills, interactions, behaviour formation and transformation, wellbeing and self-care, critical evaluation and evidence synthesis. Learning outcomes involved: observing astutely, self-reflection, appreciating ambiguity, collaborative critique, practising evidence synthesis, engaging in dialogue, interpreting perspectives, valuing narratives, valuing person-centred care, appreciating innovation and acting relationally. Evaluation emphasised satisfaction, with some evaluation of knowledge and skills but little evaluation of change in behaviour or practice.

**Discussion:** Within pre-registration professional programs, a range of Health Humanities programs have been introduced, differing in learning focus and outcomes. Among these programs, evaluation has lacked consistency and consideration of higher levels of learning.

**Conclusion:** An integrated approach to evaluating the Health Humanities is needed to support educators and enable collaboration in Health Humanities teaching and research internationally.

## Grappling with linguistic subtleties when teaching interprofessional practice: Can theory help move us from 'bewilderment' towards 'clarity'?

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The complexity of language is largely overlooked in strategies helping students learn to work with other professions. Literature relating to this area is generally silent on embracing the linguistic embeddedness of professional practice. Instead it focuses on simplifying language between professions, seeking out the lowest common denominator to ensure shared understanding.

Through a collaborative dialogical inquiry involving six educators and researchers from five different professions, we explored the question: How might our educational practice transform by embracing linguistic complexities? Two recent 'aha' moments within our research were identifying different 'languages of practice' (used within own profession, with patient/client/caregiver, and with other professions), and using theory (in particular Communication Accommodation Theory) as a way of valuing these languages in preparing students for interprofessional practice.

The notions of convergence, maintenance and divergence are key to the framework provided by Communication Accommodation Theory. In assisting students to navigate the 'languages of practice', these notions provide guidance for grappling with linguistic subtleties when teaching interprofessional practice. Accordingly, during interprofessional learning activities we are deliberately making different languages explicit. In doing so we are creating opportunities for (i) educators to role model transitioning between these languages, and (ii), for students to use and transition between the different languages as appropriate.

As educators we must value the recognising of 'bewilderment' and seeking of 'clarity' through being open to theories that originate beyond the (usual) interprofessional space. As part of this ongoing challenge it will be important to continue seeking ways to create time and space in order to grapple with theory that may inform our ongoing practice.



## How does settler colonialism contribute to perpetuating health care inequity? Reflections on ambiguity, complicity and praxis

[Alison Francis-cracknell](#)<sup>1</sup>, Dr Mandy Truong<sup>1</sup>, Professor Karen Adams<sup>1</sup>

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In settler colonised countries such as Australia and New Zealand, health disparities including life expectancy between Indigenous and non-Indigenous peoples persist. These disparities include healthcare, education and research and continue to be shaped by settler colonialism. An International Consensus Statement regarding educating for Indigenous health equity, outlines colonisation, privilege and racism as crucial issues that must be addressed in curricula components. A factor in preparing a culturally safe health workforce, is having health professional educators that can prepare students to challenge dominant paradigms and identify when systems and practices are complicit in perpetuating inequity. Educators and researchers need to undertake deep critical self-examination to understand the ambiguities and influences of settler colonialism within their teaching practice and the systems they working within. The aim of this presentation is to explore and discuss settler colonialism and how ongoing impacts of this in health professional education can contribute to ongoing health inequity. This presentation will use reflections from a study of non-Indigenous educators to explore examples of experiences of ambiguity and complicity in teaching and learning. It will identify strategies to enable educators to understand their own position in relation to settler colonialism and incorporate this into praxis.



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## Assessment 1A

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### How evaluative judgement development varies between medical specialties

**Professor Elizabeth Molloy**<sup>2</sup>, Margaret Bearman<sup>1</sup>, Associate Professor Rola Ajjawi<sup>1</sup>, Dr Damian Castanelli<sup>1,3</sup>, Ms Natalie Ward<sup>1</sup>, Professor Chris Watling<sup>4</sup>

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**Background:** There are many reports of trainees in the clinical environment feeling not being good enough despite success (1). Learning what constitutes quality work or “good practice” in self and others is called evaluative judgement (2). However, “good practice” is widely variant between specialities and trainees may develop their evaluative judgement differently across specialty cultures. **AIM:** This presentation explores how learners in different specialties come to know about the quality of their work and the work of others (evaluative judgement).

**Methods:** Interviews were conducted with 9 surgical trainees and 9 intensive care trainees.

**Results:** Surgical trainees identified some concrete markers by which to judge the quality of their own technical performance. They had a defined sense of where they were aiming in terms of patient outcome: “When I'm close to skin, I look at the clock and see how long it takes me. If the wound comes together nicely, if it looks right...That's how I look at my progress...” This contrasted to the ICU trainees: “you won't see the outcome for a long time, and even if the outcome's good, it doesn't necessarily mean your decision was right...”

**Discussion:** Explicitly discussing these specialty specific markers of performance and their relationship to patient outcome may provide a means to develop practice and counter the self-doubt. It may also be that some aspects of specialty practices need a specific focus if they are intangible or rarely observed.

1 LaDonna, K. A., Ginsburg, S., & Watling, C. (2018). “Rising to the level of your incompetence”: what physicians’ self-assessment of their performance reveals about the imposter syndrome in medicine. *Academic Medicine*, 93(5), 763-768.

2 Tai, J., Ajjawi, R., Boud, D., Dawson, P., & Panadero, E. (2018). Developing evaluative judgement: enabling students to make decisions about the quality of work. *Higher Education*, 76(3), 467-481.

## Failure to fail in workplace learning in the health professions

**Dr Jayne Lysk**<sup>1</sup>, Dr Jonathon Knott<sup>2</sup>, Dr Debra Virture<sup>1</sup>, Dr Brett Vaughan<sup>1</sup>, Dr Felicity Crombie<sup>1</sup>, Dr Karen Donald<sup>1</sup>, Dr Anthea Cochrane<sup>1</sup>, Dr Zerina Tomkins<sup>1</sup>, Dr Renata Aliani<sup>1</sup>

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A phenomenon exists in healthcare training known as 'failure to fail'. During a learner's clinical placement their performance may have been unsatisfactory, yet they have been given a pass grade for the requisite assessment(s). This occurs because many clinical educators find it challenging to fail learners; failure to fail is evident across all health professions. This is problematic for both the students' learning and career potential, and for ensuring the best outcomes for future patients. Consequently, it is imperative to better understand this failure-to-fail, as well as the strategies and approaches clinical educators employ to support but fail underperforming students.

This paper reports on the findings of a Learning and Teaching Project incorporating cross-discipline perspectives of clinical educators and clinical placement coordinators. The research seeks to address the questions:

- What are the barriers to supervisors/educators failing underperforming health professional students on clinical placement?
- What strategies have supervisors/educators implemented to support underperforming health professional students on clinical placement?

## Multiple attempts at a high-stakes postgraduate exam – exploring the impact of failure and how trainees achieve success

**Mary Pinder**<sup>1,2,3</sup>, Prof S Carr<sup>1</sup>, Dr B Phillips<sup>1</sup>, Dr C Denniston<sup>4</sup>

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**Background:** The assessment process for intensive care specialist training with the College of Intensive Care Medicine of ANZ (CICM) includes a final high-stakes exam (FCICM Second Part), with 35-65% pass rate and a maximum of five attempts allowed. Current remediation strategies focus on knowledge acquisition and exam rehearsal without an evidence-based approach.

**Purpose:** There is a paucity of research exploring behaviours enabling previously unsuccessful candidates to pass. This study aims to improve understanding of the impact of exam failure and how CICM trainees can then go on to succeed. The findings will potentially help future trainees and their supervisors and improve the assessment process.

**Methods:** This is a qualitative study using a narrative approach, grounded theory and thematic analysis. Participants have been recruited by open invitation sent to all CICM Fellows and trainees, and have given informed consent. Participants take part in a semi-structured, one-on-one interview, exploring the impact of a poor result, how they made sense of it, and how they achieved success. The interviews are recorded, and then de-identified, transcribed into text and coded to identify themes.

**Findings:** Six interviews have been conducted to date. Effects of exam failure include marital breakdown, suicidal ideation and persisting loss of self-esteem. Factors identified as instrumental in exam success are having a mentor, supportive colleagues, a peer study group and the use of psychological strategies to boost confidence. Current feedback processes are ineffective.

### Conclusion

The findings highlight the adverse psychological impact of failing a high-stakes exam and the value of peer support. Recommendations are to improve feedback to trainees, both before and after exam attempts, and to establish a support network with Fellows who have also experienced exam failure.

## Assessment 1B

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### Shadow systems in assessment: how supervisors make progress decisions in practice

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**Introduction/background:** Medical educators must make decisions on trainee progression and credentialing for independent clinical practice, which requires robust evidence from workplace-based assessment. It is unclear how the current promotion of workplace-based assessment as a pedagogical approach to promote learning has impacted this use of assessments for decision-making; meeting both these purposes may present unforeseen challenges.

**Aim/objectives:** In this study, we explored how supervisors make decisions on trainee progress in practice.

**Methods:** We conducted semi-structured interviews with 19 supervisors of postgraduate anaesthesia training across Australia and New Zealand and undertook thematic analysis of the transcripts.

**Results:** Supervisors looked beyond the formal assessment portfolio when making performance decisions. They instead used assessment 'shadow systems' based on their own observation and confidential judgements from trusted colleagues. Supervisors' decision making involved expert judgement of the perceived salient aspects of performance and the standard to be attained while allowing for opportunities and constraints in local learning environments. Supervisors found making progress decisions an emotional burden. When faced with difficult decisions, they found ways to share the responsibility and balance the potential consequences for the trainee with the need to protect their patients.

**Discussion:** Viewed through the lens of community of practice theory, the development of assessment 'shadow systems' indicates a lack of alignment between local workplace assessment practices and the prescribed programmatic assessment approach to high-stakes progress decisions.

**Conclusions:** Avenues for improvement include cooperative development of formal assessment processes to better meet local needs or incorporating the information in 'shadow systems' into formal assessment processes.

**Reference:** Castanelli DJ, Weller JM, Molloy E, Bearman M. Shadow systems in assessment: how supervisors make progress decisions in practice. *Adv Health Sci Educ Theory Pract.* 2020 Mar;25(1):131-147. doi: 10.1007/s10459-019-09913-5. Epub 2019 Sep 3. PMID: 31485893.

## It's just not fair: Learners and supervisors' perspectives of the attributes of fair judgement in assessment

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**Introduction:** Within health professions education, there is an increasing emphasis to better embrace subjective judgements in assessment. Concerns have been raised however, that these judgements are subjective and are thus 'unfair' based on objective methods of determining fairness. New paradigms for determining fairness of modern workplace-based assessment are needed, to better embrace these important subjective judgements.

Unfortunately fairness is an elusive, intuitive construct which is difficult to define. This study aimed to characterise learners and supervisors' perspectives of what is fair judgement in assessment.

**Methods:** A constructivist grounded theory approach was used. A purposive sample of 12 supervisors and 8 post-graduate trainees were recruited from two universities and multiple post-graduate colleges in Australia. Semi-structured interviews using vignettes were undertaken. Collection, analysis and coding of the data occurred simultaneously in an iterative manner, each informing the other until saturation was reached.

**Results:** Fairness is a multi-dimensional construct with components at an individual level, system level and environmental level. At an individual level, contextual, longitudinally-collected evidence, which is supported by narrative, and falls within ill-defined boundaries is essential for fair judgement decisions. Assessor agility and expertise are needed to interpret and interrogate this evidence, help identify the fuzzy boundaries and provide narrative feedback to ensure learners can improve.

At a system level, factors such as multiple opportunities for learners to demonstrate competence and improvement, multiple assessors to allow for different perspectives to be collected and triangulated, and documentation are all needed for fair judgement. These system features are supported through the concept of procedural fairness which provides transparent expectations, allows for fit-for-purpose, individualised, proportional judgements, and supports dialogue and engagement with the learner.

Finally, the environment in which the assessment decisions are made needs to be considered for fair judgments. A conceptual model to demonstrate these relationships has been developed.

## Assessment 1C

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### Decreasing Ambiguity in feedback- Developing a standard Allied Health Assistant (AHA) student performance evaluation tool

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Supervised clinical placements are an essential part of Allied Health Assistant (AHA) training and workforce demands have seen Monash Health increase AHA student numbers by over 400% since 2016. Consequently, a need for consistent education practices across Monash Health's multiple locations and settings to support this growth has emerged. Historically, delivery of student feedback and formative assessment from clinical educators (CEs) to AHA students varied from site to site.

**Aim:** To develop a standardised Allied Health Assistant student performance evaluation tool to inform formative assessment, feedback and learning for AHA students undertaking clinical placement at Monash Health.

**Method:** A mixed methods multi-phase approach using qualitative and quantitative methods has been employed to design, pilot and evaluate the tool. Existing single institution feedback tools were compared, contrasted and mapped to the Vocational Education and Training (VET) Sector AHA training package.

Focus groups of CEs were conducted to determine requirements for feasibility and utility of a standardised tool.

A pilot Monash Health AHA student performance evaluation tool was developed and tested for user acceptability.

The pilot tool will be used to provide mid placement feedback to all AHA students at all Monash Health AHA placement locations. Further evaluation using mixed methods consisting of anonymous evaluation surveys and purposive focus groups will determine validity and feasibility of the tool.

**Results:** Initial user feedback gathered during the pre-pilot exploratory phase has demonstrated acceptability of the tool. Testing is currently underway with the pilot phase with students, CEs and education partners. The tool will be used to inform mid-placement performance evaluations, feedback between CEs and students and between Monash Health and education partners.

Further evaluation of the tool will be undertaken throughout 2021 to determine validity feasibility and acceptability. Testing of the tool in multiple healthcare settings offers potential for use elsewhere.



## Time to trust entrustable professional activities: Findings from WSU School of Medicine

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**Background:** The literature is generally positive of Entrustable Professional Activities (EPAs) supporting the progressive development of medical students to become interns/junior doctors, and resident doctors to become specialists (1, 2). Evidence supports EPAs as a construct to assist observation and feedback for year 5 medical students who are becoming intern doctors the following year (3).

Graduate preparedness to be intern doctors is also under the national medical spotlight (4); Western Sydney University School of Medicine, introduced EPAs in Year 5 MBBS students to improve frequency and quality of formative feedback during clinical placements and demonstrate preparedness for graduation and internship.

**Aim:** The project aims to: 1) evaluate the effectiveness of EPAs to improve formative assessments and feedback for medical students. 2) to review the incorporation of many EPAs toward progressive summative assessment. 3) explore whether these EPAs, which are related to intern doctor work tasks, can be used to demonstrate work readiness for internship.

**Method:** During 2020, 120 final year MBBS students at Western Sydney University were assessed during their clinical placements using EPAs. Fourteen EPAs were developed and students could access these EPAs via their smart phones using the MyProgress software app. Students were instructed to complete a minimum of 2 EPAs per week during their clinical placements.

**Discussion:** The number of EPAs completed was 3200, students completed on average 26 (range 12-60). There was strong engagement from both students and supervisors in the completing EPAs. The data collected identifies clinical skills progressively developed by students that are now working as interns.

## Assessment 2A

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### Laying anchor in a sea of validities: applying Kane's framework and the many facets Rasch model in a validation study of medical student OSCE ratings.

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Introduction: Performance-based assessments of clinical ability, such as the objective structured clinical examination (OSCE), play a significant role in certifying student progress in medical education programs. Developers of performance-based assessment must provide evidence that the interpretations of performance ratings and decisions based on these are valid; they are accurate and fair representations of students' ability. However, the prevailing approach to validation studies in performance-based assessment practice and research predominantly invokes outdated definitions of validity and measurement or lack a theoretical framework altogether. One possible explanation for the relative scarcity of research adopting contemporary conceptualisations of validity is the absence of clear guidance on applying these in research practice. This study aims to provide some clarity in the field by demonstrating how Kane's interpretation/use argument provided the framework for a validation study of a medical student OSCE.

Aims: To demonstrate an empirical example of building a theoretically integrated conceptual framework to a validation study of OSCE scores, applying Kane's interpretation/use argument and the many facets Rasch model (MFRM) from modern measurement theory.

Method: The study applied Kane's two-step approach to validation studies by first specifying an interpretation/use argument for the students' assessment ratings, analysing the assessment activities, the meaning of inferences drawn from the ratings and processes used to produce them, and the assumptions that underpin the inferences. The entire framework was aligned to the requirements of the measurement model (MFRM), which provided the mechanism for evaluating the claims to validity for the argument.

Results: This research demonstrates the importance of identifying and making explicit conceptualisations of validity and the assumptions that underpin the interpretation of performance assessment ratings. The research shows how to activate a comprehensive theory-based frame of reference for validation studies in practice.

## Large cohort remote OSCEs

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Objective Structured Clinical Examinations (OSCEs) are widely used in health professional assessment. The contemporary literature on OSCEs is notable for wide variations in station numbers, domains of interest and marking rubrics; nonetheless a consistent feature of OSCEs is that they are almost always delivered in-person (particularly for large cohorts).

During the 2020 academic year, many universities were challenged to rapidly implement some form of modified OSCE to comply with restricted patient access, campus closures and social distancing requirements. While the existing literature included limited descriptions of remote OSCE delivery, this was generally focused on small numbers of participants and often involved co-location of subsets of participants (such as examiners). Such examples provided no guidance on implementing wholly remote OSCEs for large cohorts.

This presentation describes our recent large-scale delivery of entirely remote OSCEs across three cohorts (more than 350 in each cohort) of medical students throughout the 2020 academic year. These OSCEs were delivered with all participants (students, examiners, invigilators and simulated patients) situated in their own homes using their own devices leveraging a combination of popular enterprise videoconference, survey and collaboration solutions. The process involved extensive logistic planning with a focus on technical affordances and unpredictability, alongside bespoke student, examiner and simulated patient orientation and training.

Our evaluation processes incorporated examiner, simulated patient and candidate perspectives and integrated comparison of the statistical properties of similar OSCEs delivered previously in face-to-face format. Implementing remote OSCEs progressively across the year allowed for refinement of our approach in response to evaluation findings, prior to the large end-of-year delivery of OSCEs for all cohorts. We share our lessons learned from this rapid and large-scale OSCE adaptation with the aim of empowering others to replicate and build on our experience should the need for this form of delivery continue or reoccur.

## Assessment 2B

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### The acceptability of student-produced videoed physical examinations as a substitute for a standard OSCE during pandemic restrictions.

Dr Priya Acharya<sup>1</sup>, Ms C Joyce<sup>1,2</sup>, A/Professor L Kairaitis<sup>2</sup>, Professor Sanjay Swaminathan<sup>2</sup>, Professor Ian Turner<sup>1</sup>  
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**Introduction:** The COVID-19 pandemic created the need and desire to replace the Objective Structured Clinical Examination (OSCE) with an alternative to assess physical examination (PE) skills of medical students.

**Aims:** To explore student perceptions of a novel assessment of PE skills proposed as a COVID-safe alternative to a traditional OSCE.

**Method:** Western Sydney University (WSU) Year 2 students (traditional OSCE in Year 1) were asked to produce 4 unedited, single-take videos of themselves performing PEs (maximum 7-minutes each) as a modified OSCE (MODSCE) assessment. PEs were chosen from the taught curriculum following a rigorous internal process. 2/4 videoed exams were assessed, but assessors and students were not aware of which until assessment. Students were given the freedom to alter the second video based on the feedback from the first. Assessment was competency-based and graded as satisfactory/unsatisfactory with immediate feedback provided. Students were then invited to complete an online survey. WSU ethics was existing.

**Results:** N=80(61% response). Overall 52(65%) students indicated being 'extremely'(23) or 'somewhat'(29) pleased' (with the MODSCE as a substitute for the OSCE) 58(72.5%) thought MODSCEs helped them gain proficiency; 70 (87.5%)thought the assessors were fair in their assessment and feedback. However, only 39(48.75%) were in favour of MODSCE replacing a traditional OSCE. There were 44 qualitative responses, including "The MODSCE was incredibly useful considering the circumstances but would not be preferred to completing an OSCE", the exercise was a useful "motivation", and performing a "single video MODSCE after each major block" would result in "less pressure" around exams.

**Conclusion.** Students were generally satisfied with MODSCEs and felt that the assessment was fair. They were however ambivalent about MODSCEs replacing the standard OSCEs. Evaluation of student examination skills via video is a promising alternative for demonstrating competency of PE techniques but requires further evaluation as a potential graded assessment.

## One problem, three solutions – lessons learned from OSCE alternatives during COVID

**Dr Debbie Baldi<sup>1</sup>**, Mary Lawson<sup>1</sup>, Elena Pascoe<sup>1</sup>, Karen Dwyer<sup>1</sup>, Claire McKie<sup>1</sup>, Laura Gray<sup>1</sup>

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One of the many challenges faced by medical schools in 2020 was the delivery of Objective Structured Clinical Examinations (OSCEs). Deakin University normally runs three OSCEs for Years 2, 3 and 4 (final year) students. In response to the pandemic we designed and implemented three alternative approaches. These approaches aimed to align with the objectives of an OSCE, to best utilise available resources and to fairly assess the content that was delivered to students. Importantly, the approach was tailored to the context of each student cohort and capitalised on the learning environments available.

In Year 2 we developed a multi-part Clinical Skills Passport, which capitalised on both the students' access to simulation spaces for teaching, and their growing familiarity with online assessments. This included an online simulated clinical interview, direct assessment of examination and procedural skills, and an online written assessment of clinical interpretation and reasoning skills.

In Year 3 the approach was a combination of an online written assessment focused on clinical reasoning, and telehealth-style assessment with live examiners and simulated patients. The live assessment followed from this cohort's exposure to telehealth consultations during periods of limited clinical placement.

In Year 4 we implemented a Targeted Internship Performance of Skills (TIPS) assessment to assess high frequency skills performed in the workplace by junior doctors. This approach involved a combination of four performance-based assessments which aligned with our existing Workplace-based Assessments, and a standardised simulation assessment.

These different approaches enabled us to take advantage of assessment opportunities embedded within the different learning environments particular to each year level. A common theme emerging was the ability of these approaches to drive learning towards authentic clinical practice, aligned to modes of teaching, rather than towards preparation for a specific assessment task.

### Lessons learned from Outcome of Programmatic assessment of International Medical Graduates

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**Introduction:** Australia depends on international medical graduates (IMGs) to meet workforce shortages. In 2016, Medical Board of Australia's statistics revealed 32.2 percent of the employed medical workforce obtained their qualification overseas. Workplace based Assessment (WBA) is method of programmatic assessments that provides Australian Medical Council accredited alternative pathway for registration for IMGs working in the healthcare system. The WBA program in Newcastle involves 6-month longitudinal programmatic assessments comprising of twelve Mini-Clinical Evaluation Exercise, five case-based discussions, two in-training assessments and two multisource feedback assessments. We conducted a survey to assess the outcomes of candidates participating in this programmatic assessment method in Hunter New England Local Health District (HNELDH).

**Methods:** We surveyed 254 candidates from 2010-2020 after obtaining ethics clearance and their consent.

**Results:** We received 60% responses. 92% of the candidates did not require supervised practice for general registration, 84% candidates currently hold general or specialist registration. The positive themes indicated that the candidates found the program useful, felt supported during their candidatures and appreciated real patient encounters. The feedback with positive critiquing was helpful in improving their clinical practice. The negative themes were: 'high' course costs and frustration with the length of the assessment program.

**Discussion:** Upon completion of the WBA program and acquisition of the AMC certificate, most of the doctors were able to gain general registration. 50% of the WBA candidates chose to continue their careers within the local area and 80% of them within the state. Our survey shows that having such an assessment program produces competent doctors to fill in the medical workforce shortages. The lessons learned are that programmatic assessment methods are the ideal way assessing performance of doctors and this can be implemented in other settings.

## Using safety criteria to develop insight in undergraduate medical students to perfect procedural skills performance

**A/professor Patricia Green<sup>1</sup>**, A/Prof Jennifer Williams<sup>2</sup>

<sup>1</sup>*Bond University, Robina, Australia*, <sup>2</sup>*Griffith University, Sunshine Coast, Australia*

**Background:** A major aim of the WHO and Australian Commission on Safety and Quality in Health Care is to embed safe practice teaching in medical curricula. Currently, there are limited Australian data and insufficient evidence regarding the best approach to ensure medical students are 'safe' to practice procedural skills independently in the clinical environment. Assessing safety practices in procedural skills is currently limited to OSCEs and workplace-based assessments (WBAs).

**Summary of work:** This study investigated the use of a competency DOPS-type assessment tool for assessing patient safety aspects during formative procedural assessments. The tool included criteria relating to risks to patients such as communicable diseases, exposure to hazardous materials, and needle stick and sharps injuries. This format allows discussion points to be raised with medical students, so they could reflect on their procedural skills performance during formative assessments.

Pre-clinical tutors are ideally positioned to provide guidance, encouragement and evidence-based information about hitherto unrealised safety aspects of procedural skills during observed performance. It is anticipated that identification of patient safety issues during procedural skill acquisition and assessment in a simulated environment will translate into a reduction in accidental injuries and infections (in the clinical setting).

**Summary of results:** The additional components in the DOPS-type assessment permitted an algorithm to determine the risk of harm to a patient that aided the discussion with students. Analysis indicated good construct validity and reliability consistent with procedural assessments. All stakeholders rated the assessment tool as useful in the discussion of the procedure.

**Conclusions:** Highlighting safety criteria during discussion of the procedure allowed medical students opportunities to reflect on how safely they performed their procedural skills. Taking this forward, the modality of learning with formative assessment could be analysed with respect to clinical incidents to determine whether there is a measurable improvement in student performance.

## Factors associated with undergraduate students' academic and clinical performance success in an innovative nursing curriculum: a mixed-methods study

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**Background:** Research exploring factors that influence nursing students' academic and clinical performance success prior to entry to practice is scarce.

**Objective:** To identify factors influencing the academic and clinical performance of undergraduate nursing students throughout the course.

**Design:** Mixed-methods study utilising a retrospective cohort and a qualitative study.

**Setting:** A Higher Education Institution in Melbourne, Australia.

**Participants:** Longitudinal existing data of nursing undergraduate students who commenced in 2017 (n=176) and 2018 (n=76) and two focus groups with final year nursing students were analysed.

**Methods:** Multivariate linear regression was used to determine predictor factors of academic and clinical performance. Variables include entry cohort (with no previous nursing qualification vs diploma of nursing), admission category (domestic vs international), campus (metropolitan vs outer metropolitan) and secondary school (year 12) results. Academic and clinical outcome measures were assessed using the weighted average mark of theoretical and clinical units. Two focus group discussions were conducted and thematically analysed.

**Results:** More than two-third of students were aged 18-20 years and mainly female. Almost 20% of the participants were international. Students with higher secondary school (year 12) results and studying at the outer metropolitan campus achieved a higher academic performance while international students had significantly lower academic performance compared to domestic students. Students with a previous diploma of nursing and international students had lower clinical performance. Students identified a comprehensive orientation, interactive curriculum, formal and informal supports and inspiring educators as influencing their performance.

**Conclusions:** A supportive educational environment with an interactive curriculum may enhance students' academic and clinical performance. Furthermore, targeted interventions for international students, those with a lower secondary school (year 12) results, and with diploma of nursing may increase academic and clinical performance.



# WORKSHOP 1 Tuesday 6 July 2021

## Workshop 1

### Reviewing accreditation standards for medical programs in challenging times

Authors: Theanne Walters; Sarah Vaughan; Kirsty White Australian Medical Council

The AMC is undertaking reviews of two sets of standards. This workshop provides opportunities for the AMC to present the proposals for change to standards and gather stakeholder feedback to inform the further development of the standards, resources to support implementation of revised standards, and review of accreditation practices. The two sets of standards being reviewed are:

- The standards for assessment and accreditation of primary medical programs. The AMC began consultation on its initial thinking about changes in April 2021.
- The National Framework for Medical Internship, which provides standards for intern training, assessment and accreditation of intern posts and programs. This work includes new developments: a two-year Capability and Performance Framework, Entrustable Professional Activities and specifications for an e-portfolio - work commissioned by the Australian Health Ministers' Advisory Council. The AMC has undertaken several rounds of consultation, and is continuing to refine its proposals in consultation with stakeholders.



Moving Forward

in Ambiguity

# Day TWO

## Thursday 8 July



## **IPL Thursday 8 July 2021**

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## An exploration of factors influencing Australian physiotherapists' involvement in entry-level student clinical education.

**Clint Newstead**<sup>1,2</sup>, Dr Catherine Johnston<sup>2</sup>, Dr Luke Wakely<sup>3</sup>, Dr Gillian Nisbet<sup>1</sup>

<sup>1</sup>The University of Sydney, Camperdown, Australia, <sup>2</sup>The University of Newcastle, Callaghan, Australia, <sup>3</sup>The University of Newcastle Department of Rural Health, Tamworth, Australia

**Introduction/background:** Clinical educators play a critical role in the professional and social development of entry-level students during clinical placements. There are many benefits associated with being a clinical educator however the role can also be challenging and complex. Challenges are often accentuated in a context of balancing competing demands of clinical caseload with educator responsibilities, coupled with increasing numbers of students requiring placements. The willingness of individual physiotherapists to engage in clinical education may be influenced by many factors. Understanding these factors is important to enhance the capacity of clinical education experiences and meet growing placement demand.

**Aim/objective:** To explore factors influencing physiotherapists' involvement in clinical education.

**Method:** A cross-sectional survey of Australian physiotherapists using a valid and reliable survey instrument was used to explore factors influencing physiotherapists' involvement in clinical education. Guided by qualitative content analysis, responses to open-ended questions related to the study aims were thematically analysed.

**Results:** A total of 170 participants from varied geographical settings responded to the online survey. The majority of participants were female (n=111, 65%) with an average age of 37 years old (s.d.  $\pm$  11, range 22 – 73) and 13 years of clinical experience (s.d.  $\pm$  11, range 0.25 – 46). Four themes emerged: resourcing to support clinical education; preparedness for clinical education; opportunities for clinical education, and perceptions regarding clinical education. The themes described factors influencing participants' involvement, positively or negatively, in clinical education.

**Conclusion:** This study identifies key factors that need to be addressed to positively influence physiotherapists' decision to assume the clinical educator role and hence ensure the sustainability of student training in the clinical setting. The findings of this study will inform future translational research focussing on the development and implementation of evidence-based support and preparation strategies for physiotherapy clinical education.

## Reconceptualising progression through physician training: a novel application of competing risks survival analysis

**Rebecca Aichinger<sup>1</sup>**, Ms Libby Newton<sup>1</sup>

<sup>1</sup>*The Royal Australasian College of Physicians, Sydney, Australia*

**Introduction/background:** Basic Physician Training at the Royal Australasian College of Physicians is a minimum three year intensive vocational program. To date there has not been quantitative exploration of the factors that are associated with disrupted progression or withdrawal from the training program.

To identify the likelihood of trainees completing Basic Training within a six-year study period (2014-2019), retrospective longitudinal modelling was conducted using competing risks survival analysis. The two competing events that trainees were 'at risk' of experiencing during their training were defined as either completion or withdrawal from the training program.

**Aim/objectives:** To examine how the use of competing risks survival analysis can inform our understanding of variances in trainee progression through vocational training.

**Discussion:** Competing risks survival analysis is most commonly applied in the field of epidemiology when determining survival rates from competing causes of morbidity. The application of this methodology in medical education is novel but offers valuable insight as it allows us to examine trainee 'survival' probabilities at different timepoints while also generating cause-specific hazard ratios to account for the impact of covariates such as demographics and program factors. This case study will illustrate the potential of this methodology for use in the evaluation of training programs and for informing educational design.

## Health professions educators' system-oriented roles as educational advocate, quality improver and broker in an uncertain environment

Dr Koshila Kumar<sup>1</sup>, Adrian Schoo<sup>1</sup>

<sup>1</sup>*Flinders University, Adelaide, Australia*

**Introduction/background:** Health professions educators have many facets to their educational role. This has become even more obvious when the COVID-19 pandemic worsened and educators had to design new models of clinical fieldwork placement for students and optimising safety in a challenging clinical environment. The literature focuses mainly on what they do in facilitating learning, leadership or scholarship. Roles and activities oriented towards the organisation and its' broader educational mission are far less prominent in the literature.

**Aim/objectives:** This presentation highlights the system-oriented roles and activities that health professions educators undertake as part of their educational work.

**Methods:** Qualitative data was gathered using survey and interview methods from health professions educators from different clinical backgrounds and teaching settings, who had a formal role in clinical education. W Thematic analysis was used to interpret data and involved an iterative process of theme development.

**Results:** Health professions educators engage in a number of system-oriented roles. These include being an: 1) educational advocate focused on helping to build education visibility and capacity in the system; 2) educational quality improver focused on critically examining and questioning existing educational practices, identifying opportunities for change, and considering the educational evidence; and 3) educational broker who is focused on connecting clinical and educational communities, working with different stakeholders and gaining consensus.

**Discussion:** Health professions educators engage in a range of system-oriented roles as educational advocates, quality improvers and brokers in support of the educational mission of their organisations. Education and professional development for clinical educators can prepare and support these professionals for these roles.

**Conclusions:** By recognising and responding to the breadth and diversity of roles, continuing professional development initiatives can help to prepare educators within various health settings for these vital system-sustaining educational roles and responsibilities in a clinical environment that can change so rapidly.

## “Community Based Medical Education – CBME - Moving forwards or backwards”

**Inayat Ullah Memon**<sup>1</sup>

<sup>1</sup>*Indus Medical College, T.M. Khan, Pakistan, Tando Mohammad Khan, Pakistan*

**Introduction:** Few decades ago, physicians were traditionally trained in tertiary health institutions. Realizing this practice at least relatively overlooked the patients and their suffering living in rural communities., having minimal access to tertiary hospitals. Medical education has experienced important reformations with more emphasis on the suffering of rural communities; with emergent notion, learning strategy, knowledge and skills i.e., Community Based Medical education (CBME).

**Method:** Responding to World Federation of Medical education (WFME) and Eastern Mediterranean Region (EMRO), our overseeing body made it mandatory for the medical institutions to include Community Based Medical Education (COME) in the curriculum. To implement COME, a second pilot study was formulated. A 4-week long programs for 8 residents of Year One was prepared, and carried out at nearby primary health facility of ‘Bulri Shah Karim’ . The training topic (anaemia) was ascertained by need assessment, based on the “Complete Blood Count” performed at the Indus Medical College Hospital laboratory. Intended Learning Objectives (ILOs) included all three domains i.e., knowledge (types/causes of anaemias); psychomotor skills (preparation and interpretation of morphological pictures); and affective one (history-taking and communication skills).

**Result:** Based on the Table of Specification (TOS) formulated by Curriculum and Assessment Committee, appropriate weightage was given to each LO, relevant to the training theme. Assessment of residents using such tools as MCQs, OSCE, WPBA, DOPS, Short Essay Question (SEQs) and Practical demonstrations etc. revealed; out of 8 residents, 5 secured >80%, 2 between => 70% and one secured <70% score. Based on these results, it can be adjudicated that COME training should be part of in-trainee doctors.

**Conclusion:** The results obtained were consonant with earlier study. Score of COME trained residents was compared with residents trained within institution of same year in the matched subject, with conclusion that COME residents had at least 22% higher score.

## Purposes of morbidity and mortality meetings. A scoping review.

**Emma Jeffs<sup>1,2</sup>**, Associate Professor Sharon Kinney<sup>1,2</sup>, Professor Fiona Newall<sup>1,2,3</sup>, Professor Clare Delany<sup>1,2</sup>

<sup>1</sup>Royal Children's Hospital, Parkville, Australia, <sup>2</sup>The University of Melbourne, Parkville, Australia, <sup>3</sup>Murdoch Children's Research Institute, Parkville, Australia

**Background:** Morbidity and Mortality meetings (M&Ms) are commonplace in hospitals, however aims of the meeting can be poorly defined and understood. Meeting effectiveness cannot be established without adequate understanding of the purpose.

**Aim:** The goal of this scoping review is to define purposes of the M&M from the perspectives of meeting attendees, using both qualitative and quantitative sources.

**Methods:** A scoping review was undertaken using the Joanna Briggs Institute framework. Included papers were empirical peer reviewed studies about Morbidity and Mortality meeting attendees' understanding of the meeting's purpose. Two-step analysis included qualitative meta-synthesis which organised data into themes. Quantitative data were categorised under these broad themes and used to demonstrate the centrality of the perceived purposes to M&M attendees.

**Results:** 524 papers underwent abstract review, and 159 full text review. After removal of papers that did not meet criteria, 22 papers were included in the review. 14 papers used quantitative or mixed methods, and 8 used qualitative methods. Six themes were identified among papers, with the most prominent meeting purposes being quality improvement and attendee education. Additional purposes ascribed to the meeting included establishing workplace culture, management of professional risk, justice promotion, and peer support. Defining the core purposes was fraught, with overlap between themes and a vagary of terms revealing author assumptions about terms such as 'quality improvement' and 'education' which were not universal.

**Conclusion:** Differing goals can lead to differing views on ideal meeting conduct. We recommend that future researchers appreciate the complexity in defining meeting purposes when investigating efficacy of meeting outcomes.



## Reversing the flow – Benefits of upskilling from below

**Kaj Bayley**<sup>1</sup>, Mr J Bonett<sup>1</sup>, Mr G Trainor<sup>1</sup>, Mr B Chesson<sup>1</sup>

<sup>1</sup>*Peter MacCallum Cancer Centre, Melbourne, Parkville, Australia*

The healthcare field of radiation therapy has undergone significant technological changes over the past 15 years - more so than many other health professions, with parts of the profession unrecognisable to recent times.

Therefore it is critical intraprofessional staff training and knowledge-maintenance is methodically provided, utilising educational principles aligned with key clinical strategic objectives to guarantee both staff development and patient care are delivered in synchrony with the technological advancements.

As radiation therapists (RTs) move through seniority, their roles transform from an individual who works closely with healthcare delivery systems to one who oversees other junior staff operating the healthcare delivery systems.

This professional structure, combined with significant technological change, has seen many senior RTs become less familiar and proficient in these day-to-day technical operations – resulting in senior RTs experiencing declining confidence in technical operative and clinical decision making.

The education team at the Peter MacCallum Cancer Centre in Parkville, Victoria, Australia therefore devised and constructed an in-house upskill package in coordination with management and the physical sciences department to be delivered to senior RTs - ensuring they are equipped with the skills and knowledge to meet or exceed strategic clinical objectives mandated by technological advancements.

This presentation will discuss the dynamic of junior RTs who possess greater technological familiarity training senior RTs.

The use of pedagogical methods such as constructivist thinking skills, reflective self-assessment and personalised peer-to-peer teaching to ensure senior RTs possess both the knowledge and confidence to practice at a high level in modern day radiation therapy will also be explored. While also discussing pre and post survey results from the upskill package participants.

## Making paediatric education accessible for allied health and nursing professionals in regional and rural settings.

Sarah Temby<sup>1,2</sup>, Mrs V Beckerman<sup>1,3</sup>, Ms H Codman<sup>1,4</sup>

<sup>1</sup>Allied Health and Nursing Education Outreach Program, The Royal Children's Hospital, Melbourne, Australia, <sup>2</sup>Physiotherapy Department, The Royal Children's Hospital, Melbourne, Australia, <sup>3</sup>Emergency Department, The Royal Children's Hospital, Melbourne, Australia, <sup>4</sup>Nursing Education, The Royal Children's Hospital, Melbourne, Australia

### Introduction/background:

The Royal Children's Hospital Allied Health and Nursing Outreach Program (AHNEOP) is an innovative education and training program, developed in response to demand for paediatric education to support community clinicians across Victoria and Australia.

**Aim/objectives:** This program aims to improve the skills and knowledge of regional and rural nursing and allied health practitioners therefore improving the health and wellbeing of children. This program facilitates a supportive and productive learning culture by enabling this specialised high quality education to be easily accessible with the participants not having to travel and the financial costs kept to a minimum.

**Discussion:** Commonly expressed challenges for health professionals in regional and rural areas are lack of exposure to high quality education and difficulties in attending educational opportunities. Issues arise from a travel and financial perspective and the inability to leave their healthcare facility understaffed. The AHNEOP successfully delivered multi-modal high quality education to over 1200 health professionals throughout regional and rural Victoria and Tasmania in 2019 via webinars and local face-to-face study days. In 2020, the program adapted to the COVID-19 restrictions and delivered education solely via web conferences to over 2300 health professionals. Feedback has been overwhelming positive with health professionals expressing gratitude for the accessibility and quality of the education.

This program supports a productive learning culture which assists in development of paediatric skills and knowledge and encourages safe and quality patient care. It has improved the accessibility and availability of high quality education to regional and rural health professionals and demonstrated adaptability during the COVID-19 pandemic.

## New graduate paediatric occupational therapists' experiences of learning to make intervention decisions: A case study approach

**Elizabeth Moir**<sup>1</sup>, Associate Professor Jodie Copley<sup>1</sup>, Dr Merrill Turpin<sup>1</sup>

<sup>1</sup>*School of Health and Rehabilitation Sciences, The University of Queensland, St. Lucia, Australia*

**Introduction:** Current literature highlights that the transition from student to occupational therapy practitioner is challenging. Research has explored the general demands on new graduate occupational therapists as they develop clinical and professional skills, and the organisational strategies that are facilitatory such as supervision, support and education. However previous research has not focused on the experience of learning to make intervention decisions across diverse paediatric workplace contexts.

**Aim:** To explore how new graduate paediatric occupational therapists' experiences of learning to make intervention decisions varied across three different workplace contexts: private practice, acute settings and non-government organisations.

**Methods:** Case study methodology emphasises the importance of context. Data collection methods included semi-structured interviews, researcher field-notes, document/resource review, and reflective journals. Inductive analysis was used to identify themes and patterns within the data.

**Results:** Eighteen new graduate and eight experienced paediatric occupational therapists provided both 'in the moment' and more long term perspectives. Findings indicate that new graduates working in an acute setting often draw on support within the workplace context, such as supervision and discussions with colleagues when learning to make decisions. New graduates working in private practice and non-government organisations appear to draw on a variety of professional and personal resources in addition to workplace support. This includes seeking out friends and family with relevant knowledge, and drawing on technical skills and knowledge learnt during their practice placement experiences. However, factors relating to the workplace context such as time constraints impact new graduates' ability to draw on support and resources when learning to make intervention decisions.

**Conclusions:** Understanding how new graduates learn to make intervention decisions when working with children and families in practice is vital for supporting the transition from student to occupational therapy practitioner. Organisational and personal factors shape new graduate learning and skill development.

## Nutrition Care by Primary Care Providers: Advancing our Understanding using the COM-B framework

**Jennifer Crowley**<sup>1</sup>, Assoc Professor Lauren Ball<sup>2</sup>, Professor Gerrit Hiddink<sup>3</sup>

<sup>1</sup>*1, Auckland, New Zealand,* <sup>2</sup>*2, Gold Coast, Australia,* <sup>3</sup>*3, Wageningen , The Netherlands*

**Objective:** To investigate the nutrition education provided by primary care physicians (PCPs).

**Design:** An integrative review was used to examine the literature on nutrition care provided by PCPs from 2012 to 2018. A literature search was conducted in MEDLINE, PubMed, Cumulative Index of Nursing and Allied Health Literature (CINAHL) and Scopus using key search terms.

**Setting:** the United States, The Netherlands, Germany, Denmark, United Kingdom, Lebanon, Australia and New Zealand.

**Subjects:** Primary Care Physicians

**Results:** Sixteen qualitative and quantitative studies were analyzed thematically using meta-synthesis informed by the COM-B model of behavior (capability, motivation and opportunity), to understand the influences on PCPs' behaviors to provide nutrition care. PCPs' perceive that they lack nutrition capability. While PCPs' motivation to provide nutrition care differs based on patient characteristics and those of their own, opportunity is influenced by medical educators, mentors and policy generated by professional and governmental organizations.

**Conclusions:** Development of PCPs' capability, motivation and opportunity to provide nutrition care should begin in undergraduate medical training and continue into PCP training to create synergy between these behaviours for PCPs to become confident in providing nutrition care as an integral component of disease prevention and management in contemporary medical practice.

## Accessing student & academic perspectives to develop a framework to optimise work integrated learning across the health professions

Dr Charlotte Denniston<sup>1</sup>, Dr Leonie Griffiths<sup>1</sup>, Dr Tim Clement<sup>1</sup>, Professor Elizabeth Molloy<sup>1</sup>

<sup>1</sup>*The University Of Melbourne, Melbourne, Australia*

**Introduction:** There is a long history of learning through work in health professions education; the success of which relies on the preparation and support offered to stakeholders (e.g. educators, students, health services). However, the design of work integrated learning experiences (WIL) is varied. This may be partially due to a lack of consensus about what constitutes the elements of WIL, let alone effective WIL. Through engaging with stakeholders across a large health faculty, representing 17 professional programs, we aimed to explore experiences and perspectives of WIL to develop a framework to optimise WIL.

**Methods:** A two-phase participatory approach was taken. Phase 1 sought students' perspectives using an online survey (n= 172). Phase 2 explored perspectives and practices of academic/clinical educators (n=13) using iterative focus groups and a discipline self-review benchmarking activity.

**Results:** Through engaging with stakeholders, we developed an actionable WIL framework based on 7 emergent elements of 'Good WIL.' These elements included equipping students to learn in the workplace, developing support structures which focus on WIL transition points, highlighting an intentional integration of learning and work, emphasizing the clear and identifiable roles of students in the workplace, providing faculty development for and recognition of clinical educators, emphasizing a comprehensive orientation to the training program for health services, and utilising quality assurance measures for universities and health services that focus on an effective learning environment. Examples of learning activities derived from the student survey are used to provide evidence for these elements of WIL curriculum design.

**Discussion:** This work enabled stakeholder involvement in the construction of a foundational framework to guide, and potentially evaluate, WIL. The resultant framework will aid in developing 'WIL-focused' curriculum design, faculty development and novel communication systems between workplace and the university.

## Pivoting our core business: creating future certainty in allied health student placements.

**Ms. Rebecca-Kate Oates**, Helen Van Huet<sup>1</sup>

<sup>1</sup>Charles Sturt University, Albury, Australia, <sup>2</sup>University of Melbourne, Wangaratta, Australia

**Introduction:** Sourcing clinical placements is an issue particularly for first year students. Establishing a professional identity early can be key to a student continuing with their chosen course of study. COVID 19 required being responsive and changing perceptions about how to enable quality placement experiences for students. Online placements may be undervalued by clinical educators and students as being unauthentic. This presentation details how a peer-assisted onsite placement was pivoted to an online format facilitated by collaboration between Charles Sturt University (CSU) and University Department of Rural Health - Melbourne (UDRH).

**Planning and Implementation:** Twelve occupational therapy (OT) students undertook a two-week placement with UDRH remotely, based from home. Adopting a collaborative long-arm supervision model, students conducted interviews with occupational therapists and researched their areas of practice. Students utilised this data collectively to develop an infographic illustrating OT scope of practice and the promotion of service-learning placements for other students. Work placement objectives were aligned with online delivery and reciprocal benefits were meeting an unmet service need. Students understanding of scope of practice was broadened by peer learning and embedded reflection on practice during supervision.

**Outcomes, sustainability and transferability:** This approach promoted the development of student competencies in communication, adaptability, self-direction, teamwork, and time management. Resulting deliverables benefitted both the host organisations and clients.

Online peer-assisted placement models create efficiencies in resource utilisation, supervisor workload and the ability to take more students and will be replicated within and beyond the OT discipline in 2021. This facilitates building capacity in our rural and remote regions. Shorter placements can achieve positive outcomes in student learning including 'being excited' by career choice.

**Conclusion:** Online placements provide authentic learning experiences for allied-health students. Undertaking this online service-learning placement, positively changed perceptions for both students and workplace learning staff about what is possible.

## Ambiguity as a driver for improvement in Interprofessional student placements.

Kay Skinner<sup>1</sup>, K Robson<sup>2</sup>, K Vien<sup>3</sup>

<sup>1</sup>Charles Sturt University, Orange, Australia, <sup>2</sup>Charles Sturt University, Albury, Australia, <sup>3</sup>OT Collective, Melbourne, Australia

Interprofessional education opportunities for students in clinical settings have been shown to facilitate the development of effective teamwork and collaborative skills critical to the delivery of effective healthcare (Brownie et al., 2014; Buring et al., 2009). The literature indicates a range of barriers and challenges impacting on effective integration of interprofessional education into student placements (Skinner et al 2021; Jacob et al., 2012), including aspects such as logistical issues (Jacob et al, 2012) and differing theoretical frameworks across the professions (Morison & Stewart, 2005). Some challenges relate to situations of interprofessional ambiguity, where aspects of the placement are open to more than one interpretation. Skinner et al (2020) report on an iterative action research cycle of developing, implementing, and evaluating an interprofessional placement utilising an interprofessional assessment approach. A qualitative research project explored the strengths, challenges, and outcomes from the perspective of the student supervisors. This presentation discusses additional findings from the research, addressing those aspects where interprofessional ambiguity presented the challenges that drove the improvement process. Specific aspects include ambiguity within the way in which professional language is used; ambiguity around professional assumptions as to the focus of the learning experience, and ambiguity around the priorities of the placement for different professional stakeholders. We discuss these ambiguities within the framework of complexity theory, with particular reference to key principles that characterize complex systems: emergent and self-organizing; more than the sum of their parts; and ecologically nested (Weaver et al, 2011). We conclude that ambiguity is inherent in interprofessional clinical education experiences. The presence of ambiguity and associated tensions in interprofessional placements can be predicted, planned for, and used to both drive improvements in the quality of placements and to enhance interprofessional learning, not only for students but also for their supervisors.

## Interprofessional communication workshops during undergraduate workplace learning in a regional health service

**Nikki Lyons**, Ms Nikki Lyons<sup>1</sup>, Ms N Lyons<sup>1,4</sup>, Ms O King<sup>1,2,3</sup>, Ms L Edwards<sup>1</sup>, Mr M Kelly<sup>1</sup>, Ms L Kavanagh<sup>1</sup>, Ms J Dow<sup>1</sup>  
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Opportunities for undergraduate students to partake in interprofessional education (IPE) during workplace learning can confer many benefits; including increased knowledge of other professionals' roles, improved collaborative practice and the development of an interprofessional identity. Enduring challenges inherent in IPE in the university and workplace setting have limited its widespread implementation. With these challenges in mind, a unique IPE workshop was developed and delivered by interprofessional student coordinators to undergraduate students in a regional health service. All workshop participants were invited to complete an anonymous survey at the end of each workshop. Analysis of the participants' open text responses identified a prominent theme that illustrated interprofessional learning opportunities as a valued attribute of the workshop due to learning in situ. Other key themes valued by the participants included clinical simulation, learning a structured approach to communication and receiving timely feedback from multiple sources.



## The Diagnostic Thinking Inventory for Optometry (DTI-O) as a reflective tool to promote development of clinical reasoning and active learning

**Amanda Edgar**<sup>1</sup>, Ms Lucy Ainge<sup>1</sup>, Prof James Armitage<sup>1</sup>

<sup>1</sup>*Deakin University, Waurn Ponds, Australia*

**Introduction:** Clinical reasoning (CR) is a central component to optometrists' professional responsibility. Despite a need to teach this skill there is a paucity of research on evaluating the development of CR in optometry students. The Diagnostic Thinking Inventory developed by Bordage, Grant & Marsden (1990) was adapted to optometry to create a self-reflective tool that is independent of knowledge and promotes the development of CR and active learning.

**Aim:** To validate the Diagnostic Thinking Inventory for Optometry (DTI-O) as a reflective tool to evaluate CR in optometry.

**Methods:** The DTI was adapted with context-based changes to create the DTI-O (41 question survey). This was given to optometry students, at various stages of their course and qualified optometrists with varied experience.

**Results:** Item discrimination was performed. Internal reliability was high (Cronbach's alpha 0.94) for total scores and test-retest reliability was also strong (Pearson's correlation 0.86). Validity was confirmed as scores increased with clinical experience (One-Way ANOVA  $p=0.0001$ ).

**Discussion:** The validity of scores enables benchmarking against peers for comparison and results suggest standard scores for the DTI-O that can be used to investigate learning characteristic, evaluating interventions and developing curriculum. The internal validity demonstrates the DTI-O can be used as a reflective tool to self-evaluate CR for optometrist or for optometry students

**Conclusions:** With comparison to the original DTI these results validate the use of the DTI-O to evaluate CR in the optometry profession. The content neutral design allows the DTI-O to be applied to a broad range of clinical contexts as a self-reflective tool.

## Development of an authentic clinical reasoning assessment for optometrists

**Amanda Edgar**<sup>1</sup>, Ms Lucy Ainge<sup>1</sup>, Ms Jaqueline Kirkman<sup>1</sup>, Ms Darci Taylor<sup>2</sup>, Prof James Armitage<sup>1</sup>

<sup>1</sup>School of Medicine, Deakin University, Waurn Ponds, Australia, <sup>2</sup>Deakin Learning Futures, Deakin University, Waurn Ponds, Australia

**Introduction/background:** Developing type I & II clinical reasoning skills in student clinicians poses a challenge as it requires a safe environment for students to make decisions and mistakes regarding patient care whilst preserving patient safety. We developed a framework, the Clinical Diagnostic Assessment (CDA), to foster these skills across 3 consecutive units of an optometry training program. The CDA serves to better prepare students for the demands of providing clinical care. It incorporates a pattern recognition quiz to assess non-analytical reasoning and simulated cases designed to assess analytical reasoning. Feedback and reflective practice are integral to the framework.

**Aim/objectives:** To evaluate the effectiveness of the CDA framework in fostering clinical reasoning skills and reflective practice in a preclinical Optometry program.

**Methods:** Second year optometry students (n=52) participated in a mixed methods study that incorporated a validated self-reflective tool, CDA's and semi-structured interviews.

**Results and discussion:** A Wilcoxon signed-rank test showed students reported a significant improvement in confidence in their clinical reasoning ability using the validated reflective tool ( $Z=2.769$ ,  $p=0.006$ ). This increase was seen in both structured knowledge and flexibility in thinking domains. Thematic analysis showed relevance of the framework to practice and self-awareness of their clinical reasoning. Students reported that even though the assessment was challenging they valued its authenticity, relevance and used it to benchmark their progress.

**Conclusions:** This integrated framework for clinical reasoning has positive effects on student's confidence in their ability to undertake the metacognitive process underpinning clinical reasoning. The emphasis on dialogical feedback that drives self-reflection is a key to the success of this teaching tool

## Oral Health Education for Non-Oral Health Professions – a literature review on toothsome solutions for an ongoing problem

Hannah Lochore<sup>1</sup>, Dr M Smith<sup>1</sup>, Associate Professor L McBain<sup>1</sup>

<sup>1</sup>*University Of Otago, Wellington, New Zealand*

**Objective:** This study aims to review current oral health curriculums for non-oral health degrees, in order to devise an oral health education program for New Zealand medical students and general practice health staff.

**Methods:** A search strategy using MESH headings and keywords was designed and adapted for Medline, EMBASE, CINAHL, and Scopus to identify academic publications from 2010 to 2020 which discussed oral health educational interventions for non-oral health practitioners. This search strategy was also applied to Google and various Ministry of Health websites to identify any grey literature on the subject. The articles included in the scope of the review were then analysed qualitatively, with descriptive and thematic review.

**Results:** From 4080 identified academic publications and 1763 grey literature results, 62 publications were included in the study (52 academic publications and 10 grey literature publications). Five themes and three sub-themes were identified, with the most frequently discussed themes being 'common oral health presentations' and 'oral examination skills'.

**Discussion:** While all papers described some useful aspects to their interventions, some of them were not evaluated, some described interventions that were too long or too specific for our needs, and some required inter-professional education which is difficult to deliver in New Zealand due only having one dental school. The review did not include sources from non-English speaking countries with different medical systems and thus may have missed some possibly useful sources.

**Conclusions:** General oral health knowledge, the ability to perform a basic oral examination, and being able to provide basic education on oral health prevention techniques to patients/parents were identified as simple concepts that could be easily taught to medical students and general practice health staff to decrease oral health inequities in New Zealand.

## An Inter-Disciplinary Tale: The Clinical Educator Professional Development Credential

[A/prof Calvin Smith](#)<sup>1</sup>, Ellen Dearden<sup>1</sup>, Professor Nick Shaw<sup>1</sup>, Ceara Swyripa

<sup>1</sup>*The University Of Queensland, St Lucia, Australia*

This is the tale of a teaching and learning project endeavouring to cross Faculty boundaries and develop an online credential that clinical educators, regardless of discipline, could use to enhance their education practice.

While the creation of clinical education modules is neither rocket science, not very original, this story is being told to acknowledge an attempt to build recognition that clinical education advocates share experiences and understandings, across disciplines and Faculties.

A volunteer 'working group' of placement coordinators, 'conjoint staff', health education researchers and specialists (some wearing a few of these hats) was asked to support the project's curriculum development. Initially a large group, but dwindling to a dedicated core, the team, through workshops and remote-working processes, sought common ground on essential clinical education themes, to develop learning outcomes, and to provide feedback on potential program content. Barriers of language, disciplinary differences in the structuring of placements, and the expectation of novices, at times caused confusion in discussions. Most participants were, however, surprised by how much they shared key learnings and core principles.

The project aims to produce an easily accessible and engaging introduction to clinical education fundamentals, particularly for those new to the role. The learner embarks on a journey of orientation to their role, preparing and sustaining a supportive clinical learning environment, facilitating learning in the clinical environment, with a particular focus on clinical reasoning and clinical skills, and on monitoring, feedback and assessment.

A 'learning-by-doing' approach has been adopted, engaging learners in activities that require them to apply their knowledge in activities and scenarios that develop across the learning journey.

Self-paced online learning modules, some 60 hours in length, are being built to form a professional development shorter form credential. Our working group is giving critical feedback as we build: many perspectives, many choices to make.

## Will they ever happen again, and is it worth it? The influence of international clinical nursing placements on career planning and cultural competence.

**Dr Shelley Gower**<sup>1</sup>, Associate Professor R Duggan<sup>1</sup>, Professor J A R Dantas<sup>1,2</sup>

<sup>1</sup>Curtin University, Perth, Australia, <sup>2</sup>Public Health Association of Australia, , Australia

Prior to the COVID-19 pandemic, universities in developed and developing countries offered international clinical placements to prepare nursing students to work with diverse cultures within their own country, and globally. Now that a global vaccination program has commenced, it may be possible to reconsider international clinical placements in the near future. However, will they be useful or relevant to the post-pandemic health teaching environment?

Using an exploratory longitudinal approach this mixed methods study examined the influence of an international clinical placement on career planning and cultural competence in undergraduate nursing students from four Western Australian universities. Placements were undertaken in Tanzania, Cambodia, the Philippines, Thailand and India, and were up to 4 weeks duration.

Analysis of interview data pertaining to future career planning revealed Australian nursing students who participate in international clinical placements are intrinsically motivated. They have a desire to care holistically and are interested in roles that promote equity and social justice. Some participants wished to pursue leadership and policy roles where they could influence the provision of care for marginalised groups.

Through various cultural encounters participants learned to value and understand patient-centred care and cultural safety in resource poor settings. Whilst the placements mostly confirmed their capacity to engage in positive cultural interaction in diverse settings, some participants found some contextual, systemic and clinical challenges difficult to reconcile. Despite these challenges, the international placements confirmed participants' desire to work globally.

With the current focus on global public health, frontline clinical care and community development, the role of nurses in providing quality healthcare, improving social justice and working with communities is well-recognised. In a time where global connections and resolving health disparities are critical, this presentation will argue that re-instating international clinical placements in nursing programs should be a priority in post-pandemic educational planning to promote health equity.



## **EDTEC Thursday 8 July 2021**

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### Online approaches harnessing the challenges of COVID-impacted ‘face to face’ clinical learning.

Melanie Fentoullis<sup>1</sup>, Prof B Shulruf<sup>1</sup>, A/Prof A Torda<sup>1</sup>

<sup>1</sup>UNSW Sydney, Sydney, Australia

Clinical placements are a significant medical student experience. UNSW Medicine’s Clinical Transition Course aims to:

- develop students organisational skills for learning in the clinical environment
- promote reflection on clinical experiences to refine clinical practice.

For 2020 restrictions on clinical learning impacted student's face-to-face clinical experiences. We responded to this challenge by creating a “Tele-Hospital”-using the Microsoft Teams platform—a specifically designed online ‘workplace’ learning community.

Objective:

- Evaluate the platform’s efficacy in:
- enabling student collaboration
- promoting flexible, self-directed learning
- facilitating professional and organisational skills

Data: Medical students participated in a survey utilising the Perceived Utility of Learning Technologies Scale (PULTS) with data de-identified and collected online. We investigated engagement, user experience, learning gains and the inter-relatedness of objective outcomes above.

Analysis: Linear regression (stepwise) model was used to identify the predictors for the level of understanding of material learnt after utilising the platform. The analysis controlled for the reported level of understanding prior to learning within the platform. Using the predictors identified in the linear regressions, structural equation modelling was used to identify the moderating impact of understanding prior to learning within the platform and on student’s post learning perceived level of understanding.

Results: Three factors predicted student’s post learning perception of understanding:

- motivation to learn clinical medicine instigated by the platform
- engagement with the platform for senior-peer assisted learning
- the platform’s utility in organising learning opportunities (beta's 0.219-0.281,  $p < 0.05$ ).

Prior learning had no significant direct or moderation impact on student’s perceived post learning understanding.

Conclusions: The ‘Tele-hospital’ provided a motivating learning environment helping students organise their learning and engage with senior-peers, despite restrictions on physically entering the clinical environment. Although this is not a replacement for real clinical placements, it was a valuable addition, allowing students to continue to develop their clinical practice.

## Maintaining social connection during online clinical placements: A virtual reality

Alexandra Little<sup>1</sup>, R Urquhart<sup>2</sup>, K Perram<sup>3</sup>

<sup>1</sup>University Of Newcastle Department Of Rural Health, Tamworth, Australia, <sup>2</sup>University Of Newcastle Department Of Rural Health, Coffs Harbour, Australia, <sup>3</sup>University Of Newcastle Department Of Rural Health, Port Macquarie, Australia

What do you get when you cross chaos and uncertainty with speech pathology students who still need clinical placement time to graduate? A virtual placement in the form of “Our Saint of Good Virtue Hospital” set in Coviscotia.

Delivered entirely via Zoom, this comprehensive, five week, COVID-safe placement brought six students and three educators together from nine separate locations. Students were able to demonstrate and be assessed on professional competencies required for registration compliance. Zooming directly to the bedside, students assessed and treated simulated patients across our virtual emergency, acute, rehabilitation and outpatient settings whilst also engaging in interprofessional interactions with colleagues, patients and families. However, replicating authentic clinical learning experiences was only half the challenge.

Social connectivity between students and educators, between students and patients, and between the students themselves in the presence of such physical disconnect, was much harder to replicate. Underpinning our approach was a deliberate motivation to address the connectedness of social learning. In addition to structuring the clinical learning we intentionally scaffolded the usually taken-for-granted connectedness and relationships typically developed during in-person clinical placements. Activities were deliberately designed utilising the technology available to generate meaningful and achievable learning outcomes addressing communication, teamwork and collaborative patient-centred practice. Students valued opportunities for social connection and created their own additional virtual social structures which intersected with those embedded within the placement.

In moving forward, what is certain, is that learning via technology will continue to play a significant role in graduate preparation. While careful and deliberate design is required for any learning opportunity, strategically focussing on social connectedness during online clinical placements, among the plethora of other challenges, will be important for enhancing the student learning experience.



## Qualitative evaluation of an online learning module designed to enhance dignity within work-integrated learning

**Ms Kadheeja Wahid<sup>1</sup>**, Tammie Choi<sup>1,2</sup>, Paul Crampton<sup>3</sup>, Corinne Davis<sup>1,2</sup>, Nicky Jacobs<sup>4</sup>, Olivia King<sup>1</sup>, Tui McKeown<sup>5</sup>, Julia Morphet<sup>6</sup>, Charlotte Rees<sup>1</sup>, Kate Seear<sup>7</sup>, Mahbub Sarkar<sup>1,2</sup>

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**Introduction/background:** Students and workplace-based supervisors often encounter dignity violations during work-integrated learning (WIL). Both parties have varied concepts and understanding of dignity and limited awareness of support pathways to deal with dignity violation during WIL. A research-informed 30-minute online learning module was developed to increase dignity awareness among students and supervisors and promote application of principles of dignity during WIL, while maintaining safe and constructive workplace relationships.

**Aim/objectives:** This study aimed to evaluate the module from the perspectives of its key stakeholders—students and practitioners involved in WIL including workplace-based supervisors and academics involved in WIL-based study units.

**Methods:** Underpinned by social constructionism, this study employed a descriptive qualitative methodology. Data were collected via individual and group interviews with ten students and nine practitioners who completed the dignity module. Interview questions sought to understand the perceived acceptability of the module including its usability, implementation and participant motivation to complete it. Data were analysed using team-based framework analysis.

**Results:** Stakeholders valued the module for (a) enhancing understanding of their own dignity rights, as well as facilitating their empathy for others' dignity; (b) encouraging them to change their workplace practices with respect to upholding dignity; and (c) the transferability of dignity principles to the wider context beyond WIL placements. Further improvements of the module were also suggested, adding more culturally relevant examples and altering the pitch to stakeholders to promote their motivation to complete the module prior to placements.

**Discussion:** Our results reinforce the necessity of dignity education for an optimal WIL experience. The module could improve on engagement and motivation of students and supervisors to complete the module.

**Conclusions:** This study provides a model by which universities can promote awareness of the centrality of dignity to work, as well as how to promote and uphold dignity during WIL and beyond.

## How Do Intensive Care Medicine Trainees Learn the Collaborator Role?

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The collaborator role must be learned by intensive care medicine (ICM) trainees so that they can participate effectively and appropriately in the interprofessional health care team to provide effective, high-quality and safe patient care. The ICM trainee must be able to recognise and respect the diversities of roles, responsibilities and competences of other professionals in relation to their own and also respect differences, misunderstandings and limitations in themselves and other professionals to develop competence in this role.

There is little understanding of how an ICM trainee actually develops competence in this role or how we should teach this skill, nor do we understand how members of the interprofessional health care team, specifically nurses and allied health professional perceive their role in supporting intensive care medicine trainees learn this skill.

The purpose of this study was to gain an understanding of how intensive care medicine trainees develop competence in the collaborator role through working within interprofessional health care teams, and how members of these teams were involved in the learning process.

This study used constructivist grounded theory and semi-structured interviews with a purposive sample of junior and senior intensive care medicine trainees, frontline intensive care nurses and allied health professionals from a single large tertiary intensive care unit in Australia. Iterative data collection and analysis is currently in progress. Results will be presented during the conference.

Exploring how ICM trainees learn the collaborator role may translate into better collaboration within the interprofessional team in the intensive care unit and result in improved outcomes for critically ill patients.

## Educator perceptions of student-initiated conversations about perceived deviations from evidence-based clinical practice.

**Samantha Sevenhuysen**<sup>1,2</sup>, Fiona Kent<sup>1</sup>, Caroline Wright<sup>1</sup>, Cylie Williams<sup>1,2</sup>, Kelly-Ann Bowles<sup>1</sup>, Kristie Matthews<sup>1</sup>, Darshini Ayton<sup>1</sup>, Stephen Maloney<sup>1</sup>

<sup>1</sup>Monash University, Frankston, Australia, <sup>2</sup>Peninsula Health, Frankston, Australia

Students on clinical placement may encounter practice that deviates from what they perceive to be evidence-based, and they are well-positioned to discuss their queries through dialogue with their clinical educators. It is however unclear how these conversations occur, and what impact such a discussion may have.

Our study aimed to explore clinical educators' experiences of student-initiated discussions about observed clinical practice which deviates from evidence-based practice and determine what strategies clinical educators would consider safe and palatable for students to use when initiating these types of conversations.

Individual interviews were conducted with 23 clinical educators from five professions at three different hospitals in Victoria, Australia. Semi-structured interviewing techniques were employed to help the authors understand participants' context and experiences.

Participants described student initiated conversations about deviations from evidence-based practice as challenging encounters with potential for positive or negative impact on clinical educators, students and patients. They noted that the perceived appropriateness of the discussion could be influenced by the method utilised by students to approach the conversation.

During this presentation we will share the elements identified by clinical educators as barriers or enablers to support students to appropriately initiate conversations about clinical practice. These elements may be utilised by education and health providers to enhance opportunities for learning conversations to occur.

## Teaching Problem-Based Clinical Evaluation During COVID-19: Clinician as Simulated Patient

**Dr Rahul Barmanray**<sup>1,2</sup>, Dr Catherine Seymour<sup>1,2</sup>, Prof Peter Morley<sup>1,2</sup>

<sup>1</sup>The University of Melbourne, Melbourne, Australia, <sup>2</sup>The Royal Melbourne Hospital, Melbourne, Australia

The COVID-19 pandemic forced the suspension of ward-based medical education worldwide, necessitating novel approaches to medical education.

Video case-based education has been successfully trialled in specialty medicine, however, problem-specific clinical evaluation is difficult to be taught via non-interactive video cases.

In March 2020 the University of Melbourne instituted a virtual problem-based patient evaluation program for second-year Doctor of Medicine students commencing clinical training. This involves students interviewing expert clinicians in a simulated clinician-patient interaction through a real-time videoconferencing platform. The clinician uses a case précis to portray a presenting complaint and patient behaviour in a realistic manner as per their experience. Differential diagnoses are then generated and consideration given to whether elements of the history make each more or less likely. Examination findings are displayed and evaluated with regard to the differential diagnoses, followed by viewing (and discussion) of an expert performing the relevant physical examination.

An experienced clinician acting as the patient allows demonstration of usual patient behaviours. Unlike a student peer-portrayal of a patient, responses can be matched to the phrasing of questions and manner in which they are asked (e.g. when evaluating chest pain a student's question "Do you have any associated features or symptoms?" might be met with simulated confusion while "Could you tell me, other than the pain were you experiencing anything else unusual, for example..." would be met with a more fruitful response from the clinician). Elements of real-world patient interactions can also be modelled (e.g. inaccurate recollection of medication names/doses, "metmorphine" for "metformin"; or frustration at having to recount their history yet again, "Don't you have all the information in your computer?!"). Feedback and guided reflection on the simulated encounter allows students to refine their interviewing skills to manage such real-world difficulties. The program has thus far been found engaging and valuable.

# Part 2 - Surveying the digital literacy landscape through the lenses of academics and employers

**Kwang Cham**<sup>1</sup>, T Celeste<sup>1</sup>, L Kruesi<sup>1</sup>, M-L Edwards<sup>1</sup>, T Hennessey<sup>1</sup>

<sup>1</sup>*The University Of Melbourne, Parkville, Australia*

**Introduction/background:** We previously explored students' digital capabilities. To enhance understanding of the digital intersection between students, academics and their future workplace, we seek to explore academics and employers' perceptions of digital skills and competencies.

**Aim/objectives:** The project aims to understand academics' and employers' opinions regarding desirable graduates' characteristics, and the digital skills requirements to enhance employability.

**Methods:** Academic staff and university alumni were invited to complete an online anonymous Qualtrics survey.

**Results:** 158 academics across 13 disciplines and 37 employers across 20 sectors participated in the survey. Both academics and employers were not confident in creating digital applications and using augmented/virtual reality (AR/VR) technologies but reported high confidence in using basic tools and technologies. There is low demand for graduate capabilities in creating digital artefacts, but some understanding in AR/VR technologies is seemed as beneficial. Employers regarded communication tools such as video conferencing technologies are relevant. This echoes the realities of multi-site organisations and flexible working methods.

**Discussion:** Higher education institutional structures and systems in partnership with workplace demands are strong drivers for students' digital capabilities around tools and technologies.

**Conclusions:** A stronger connection needs to be made between digital skills and employability outcomes. There is a need for Universities to increase awareness, training and support in digital literacy competency.

## Are Australian nurse educators technology ready? Exploring Australian nursing academics attitudes to technology in teaching

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<sup>1</sup>Federation University, Berwick, Australia, <sup>2</sup>LaTrobe University, Bundoora, Australia

**Background and Aim:** The role of technology in nursing care has been increasing (Huston, 2013). At the same time, the use of technology in tertiary education has also been increasing (Adams Becker, Cummins, Davis, & Yuhnke, 2016). Technology in tertiary education can prepare nursing students for an increasingly technology rich profession. The role of nursing academics in integrating technology into their teaching is significant, the behaviour of the instructor towards technology impacts the students behaviour and learning process with technology (Hammoud, Love, & Brinkman, 2008). The aim of the research was to explore Australian nursing academics attitudes to technology.

**Methods:** This research was part of a larger mixed methods PhD research. The attitude of Australian nursing academics to technology was explored using semi structured interviews. Eighteen semi-structured interview were conducted and thematic analysis was used to examine the interview data using the process outlined by Braun and Clarke (2006).

**Results:** Four main themes were identified: Purpose of teaching with technology, Requirements to engage with technology, attitude to technology and stakeholders. The attitude to technology is the focus of this presentation and has 5 sub-themes: openness to technology, aversion to technology, technology for the sake of it, pedagogy and technology, and nursing and technology.

**Conclusion:** Overall the themes revealed a willingness of the nursing academics to use technology in their teaching. However the technology had to add value to the teaching and not be used "for the sake of it". Nursing academics were very considered in their use of technology, weighing up the impact on student learning and if technology suited the learning outcomes. There was concern that the interpersonal skills required of nurses may not be able to be replicated in teaching through technology. The implications of this research may be applied to health professional teaching.

# Adapting the delivery of clinical skills teaching to suit the pandemic climate – is attaining basic clinical competence still achievable for our pre-clinical medical students?

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<sup>1</sup>University of Notre Dame, School of Medicine, Sydney (SoMS), Sydney, Australia

**Background:** During the NSW COVID-19 lockdown in March 2020, clinical skills teaching urgently shifted from a traditional face-to-face format to an online platform. On-campus clinical skills teaching resumed by July 2020, with additional, 'catch-up' sessions scheduled. Noting that clinical skills learning usually requires regular, hands-on practise, the disrupted delivery during the pandemic constituted a seismic pedagogical shift for Year 2 students at University of Notre Dame, SoMS. This is particularly relevant as basic clinical competence is a requirement for transitioning to clinical rotations in Year 3. Given the ongoing COVID-19-related uncertainty in Australia and abroad, it is necessary to elucidate the educational impact of an adapted clinical skills teaching model for pre-clinical medical students.

**Aims:** To investigate:

- (1) Year 2 student perceptions regarding their clinical skills acquisition during 2020; and
- (2) Explore the impact of the disrupted teaching on the end-of-year clinical assessment results.

**Methods:** In Phase 1, Year 2 student perceptions regarding their clinical skills learning in 2020 were obtained via online semi-structured interviews and a follow-up online survey. In Phase 2, the 2020 summative Year 2 OSCE performance data was compared with the results of identical stations at the 2018 and 2019 summative OSCEs using statistical analyses to evaluate differences in assessment scores.

**Results:** Year 2 students reported a degree of efficacy in learning history-taking, investigations interpretation, and clinical reasoning skills online. However, most students found that an online model was not effective for practising physical examinations and procedural skills.

**Preliminary Phase 2 analyses** suggest that Year 2 students in 2020 performed no worse than previous cohorts, although final analyses are pending.

**Discussion:** While medical students may perceive their opportunity to learn clinical skills was adversely impacted by COVID-19 disruptions during 2020, there is likely less impact detected when objective assessment tools are used to measure skills acquisition.

## Adaptive Tutorials versus Web-Based Resources in Radiology: A Mixed Methods Analysis in Junior Doctors of Efficacy and Engagement.

**Dr Stuart Wade**<sup>1,2</sup>, Dr M Moscovia<sup>5</sup>, Professor N Tedla<sup>1</sup>, Professor D Moses<sup>1,2</sup>, Associate Professor N Young<sup>3</sup>, Dr. M. Kyaw<sup>4</sup>, Professor G Velan<sup>1</sup>

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**Introduction/background:** Junior doctors need training to adequately interpret diagnostic imaging in emergency situations. However, they are often time poor and balance multiple commitments. Online adaptive tutorials may offer an alternative form of radiology education which junior doctors utilise in their own time.

**Aims/objectives:** Evaluate the effectiveness of adaptive tutorials in radiology education for junior doctors compared with peer reviewed web-based resources.

**Materials:** A randomised controlled crossover trial was performed to evaluate the impact of adaptive tutorials on engagement, indications and interpretation of CT scans of the head and chest. Ninety-one volunteer junior doctors, 53 post graduate year 1 and 38 post graduate year 2, were randomly allocated to one of two groups. In the first phase of the trial, one group accessed adaptive tutorials on head CT while the other received web-based resources, followed by an online assessment. A crossover was performed prior to the second phase of the trial, in which participants were exposed to resources on chest CT, followed by an online assessment. At the conclusion of the study, participants completed an online questionnaire evaluating perceived engagement and efficacy of each type of educational resource.

**Results:** There were no significant differences in mean quiz scores between groups. However, junior doctors completed the adaptive tutorials in significantly less time than web-based resources. Both groups reported significantly higher engagement with the adaptive tutorials, which were also perceived to be more valuable overall for learning

**Discussion:** Junior doctors' learning of radiology did not objectively benefit from adaptive tutorials when compared with existing peer-reviewed web-based resources. However, the learning gains from adaptive tutorials were achieved in significantly less time.

**Conclusions:** Adaptive tutorials might be a more time-efficient and engaging means for junior doctors to learn radiology.



## Using electronic health data to design personalised Continuing Medical Education (CME) programs for Australasian medical practitioners

**Carol Pizzuti**<sup>1</sup>, Prof T Shaw<sup>1,3</sup>, Dr C Palmieri<sup>1,2</sup>, A/Prof R Cavalcanti<sup>4</sup>

<sup>1</sup>The University of Sydney, Sydney, Australia, <sup>2</sup>The Royal Australasian College of Physicians, Sydney, Australia, <sup>3</sup>The Digital Health CRC, Sydney, Australia, <sup>4</sup>University of Toronto, Toronto, Canada

**Background:** Both academic and industry research is increasingly focusing on the potential use of existing electronic health data to gather quality information on the clinical and professional performance of medical practitioners. In particular, there is a strong interest in investigating how data mining on electronic health data can be used to improve CME and strengthen Continuing Professional Development (CPD).

Unfortunately, few studies have provided evidence around these matters, and little research examines regulatory requirements, organisational culture and processes, stakeholders' insights, and medical practitioners' behaviours in order to develop ad hoc recommendations.

**Aims:** This research project intends to understand how electronic health data can be used to inform future design of personalised CME programs for Australasian medical practitioners and to establish effective CPD practices in the Australasian health-care landscape.

**Method:** Primary research will be conducted using a qualitative approach.

As a first step, existing literature will be analysed performing:

- 1) a scoping review on the use of electronic health data to improve CME design and strengthen CPD for medical practitioners.
- 2) a documentary analysis of current CME and CPD regulatory frameworks in selected countries.

Concurrently, consulting sessions with thought leaders will be run for both studies.

Successively, two fieldwork studies will be carried out:

- 1) an environmental scan of the Australasian health-care system, including a gap analysis and focus groups with key informants.
- 2) an ethnographic study in multiple Australasian health-care services, comprising data/people journey mapping through participant observation and semi-structured interviews.

**Results:** Research findings are expected to provide medical regulatory bodies, medical education providers, and health-care service organisations with unique insights on how to use electronic health data to develop personalised CME programs and establish effective CPD practices for Australasian medical practitioners.

**Conclusions:** Preliminary findings will be shared during the presentation. Final considerations will be disseminated at project completion

## Transitioning from Face-to-face to Online: A National Allied Health Assistants Conference

Tony Sheng<sup>1</sup>

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**Background:** Monash Health Allied Health Assistant (AHA) Day is an annual professional development conference specific to AHAs all over Australia. It originated in 2017 in a face-to-face format with over 300 attendees and to similar numbers in the following two years. In 2020, the global pandemic and arrival of COVID-19 in Australia meant that large-scale gatherings were not a possibility. Therefore, a transition from a face-to-face format to a virtual online experience was a necessity for the continuation of AHA Day for a fourth year.

**Aim:** To transition AHA Day from a face-to-face professional development conference to a virtual event.

**Method:** The inaugural Online AHA Day event was run via the Cisco WebEx platform in partnership with IT technology adoption partners Taleka. Planning, preparation and promotion of the event began in the first quarter of the year during Victoria's first lockdown. A range of presenters were enlisted, including those internal to Monash Health, various external bodies, other consumers and AHAs who submitted abstracts for innovation presentations. The majority of presentations were pre-recorded and streamed on the day, with posters also on display during and after the event. The event was open and accessible to virtual attendees nationally.

**Results:** AHA Day 2020 ran successfully and garnered excellent feedback from all those who attended. 501 tickets were sold, consisting of attendees from every State and Territory across Australia.

**Discussion/Future plan:** The use and uptake of virtual platforms has been kick-started by COVID-19. Following positive feedback and an increased reach to attendees across Australia, AHA Day 2021 will follow a similar online format. The limitation is the difficulty in developing the same peer networking opportunities online. This will be a focus of design for the 2021 event.



## PeArLs Thursday 8 July 2021

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### Describing our "learning to make a difference" through social learning spaces and deliberate value-creation to respond effectively to deteriorating patients

[Dr Manisa Ghani](#)<sup>1</sup>, Dr Kerry Chen<sup>1</sup>, Ms Crystal Park<sup>1</sup>, Dr Adam Trytell<sup>1</sup>, Dr Jarrod Rawson<sup>1</sup>, Dr Anthony Cocco<sup>1</sup>, Ms Clarissa Torcasio<sup>1</sup>, Ms Nicole Sellar<sup>1</sup>, Dr Angus Pritchard<sup>1</sup>, Dr Aaron Bloch<sup>1</sup>, Dr David Williams<sup>1</sup>

<sup>1</sup>*St Vincent's Hospital, Melbourne, Australia*

**Introduction/background:** Effective care of deteriorating patients requires early recognition, timely initiation of treatment, and appropriate escalation. Robust and adaptive systems are required but equally important is the need for higher level collaboration between interprofessional and interdisciplinary teams. Attempts to rectify longstanding and complex issues affecting the care of deteriorating patients, usually with a top-down approach, have often been unsuccessful. We formed an interprofessional, inter-departmental, and inter-generational working group called the Deteriorating Patient Collaborative to make a difference in this area.

**Aim/objectives:** To use value creation in social learning spaces framework to describe our hospital-wide clinician-driven collaborative to improve care for deteriorating patients.

**Discussion:** The Deteriorating Patient Collaborative is presented as a case study of the concepts of social learning space and value creation framework as outlined in the book "Learning to Make a Difference: Value Creation in Social Learning Space" by Wenger-Trayner and Wenger-Trayner. The presenter will share her value creation stories as a participant of the social learning space to highlight how the value-creation framework can be used to accelerate learning.

**Questions for exploration:** On its own, learning what is already known is not agile enough to deal with the complex and evolving challenges of modern clinical medicine. Learning to make a difference is a different type of learning. Can we apply this framework for our everyday work?

### Art in a modern era of health professions education: where have we been and where should we go with moulage?

Jessica Stokes-parish<sup>1</sup>

<sup>1</sup>*Bond University, Gold Coast, Australia*

Introduction: Moulage is an art that dates back to the 17th century. A French word to describe the use of moulds to create wax replicas of illness and injury, it was an often-clandestine activity to preserve anatomical replicas to share learnings amongst physicians. Now stored in musea around the world, the word moulage now encompasses the use of special effects makeup techniques and prosthetics to replicate illness and trauma in health professions education. Despite its long history and its widespread use in simulation, there has been very little research to inform the theoretical and practical application of moulage.

The literature on moulage heavily focuses on dermatology and trauma simulations, with a small focus on wound management or other ongoing cares. In this Personally Arranged Learning Session (PeArLS), we will explore the underpinning theories of moulage in health professions education and the future of moulage in health professions education. We will cover the following key questions:

- Where is moulage utilised across the health professions education spectrum?
- What theories & pedagogy guide the use of moulage in your profession?
- What are the barriers to the use of moulage in health professions education?
- What are the enablers for the use of moulage in health professions education?
- What are the key areas for growth in moulage research and scholarship?

### Moving Forward through teaching Uncertainty Tolerance: Lessons from Humanities and Social Science Tertiary Educators, a qualitative study.

Associate Professor Michelle Lazarus<sup>1</sup>, Dr. Amany Gouda-Vossos<sup>1</sup>, Dr. Angela Ziebell<sup>1</sup>, A/Prof Gabrielle Brand<sup>1</sup>

<sup>1</sup>Monash University, Clayton, USA

Uncertainty tolerance (UT), how individuals perceive and respond to uncertain stimuli, is increasingly gaining attention across healthcare. While the COVID-19 pandemic generated collective healthcare uncertainty, uncertainty is unavoidable throughout clinical practice; complexities and ambiguities exist in clinical presentations, differential diagnoses, patient responses and prognoses. Research suggests links between healthcare providers' UT and a variety of healthcare outcomes, with low UT tied to burnout and increased health expenditure. Healthcare education is responding by incorporating UT as a graduate-attributed competency, with some beginning to evaluate UT at a programmatic level.

Practical guidelines for educators interested in developing UT pedagogy, however, are noticeably lacking. Given the widespread recognition that humanities and social sciences (HASS) are core for effective clinical care, and that HASS educators are well known for embedding uncertainty into their teaching practices, our study sought to explore HASS academics' UT educational approaches using a qualitative, exploratory study design. Our research question was: What teaching practices do HASS educators engage in for helping students develop UT, and how do they accomplish this?

Mapping themes onto the prevailing conceptual model for healthcare uncertainty, we identified teaching practices which foster, and hinder, learner UT. These practices translate well beyond the HASS discipline, informing UT pedagogy more broadly.

Importantly, this study adds to the growing literature that UT is a teachable, changeable, contextually-driven construct. Thus, being aware of, and purposefully addressing classroom moderators, healthcare educators are empowered to pedagogically foster healthcare students UT – preparing them for their future careers on the frontline.

With this in mind, this PeArL will engage participants to come together to explore practical curriculum design for introducing uncertainty/uncertainty tolerance into their classrooms, teaching activities and assessments. This PeArL will include many opportunities to interact with both the facilitators and peer participants.

### Longer-term workforce impacts of rural immersion programmes

**Prof Phillipa Poole**<sup>1</sup>, Dr Charlotte Connell<sup>1</sup>, Professor W Bagg<sup>1</sup>, Mr E Jo<sup>2</sup>

<sup>1</sup>The University Of Auckland, Auckland, New Zealand, <sup>2</sup>Ministry of Health, Wellington, New Zealand

Background: Australasia faces an ongoing shortage of rural doctors. To increase interest in rural practice, since 2008, the University of Auckland has offered a rural immersion programme, Pūkawakawa, in Northland, Aotearoa. Most medical schools have similar programmes.

Research has shown that participation in such programmes is associated with a greater intention to practice rurally. What is less well-established is how these intentions materialise into longer-term outcomes, as well as wider benefits to the communities in which the programmes take place. A direct assessment of the impact of Pūkawakawa on workforce outcomes has been made possible via the linking of University collected datasets (from the Medical Student Outcome Database and Tracking Project and medical programme data) with government datasets on actual practice. This yields new avenues for investigation on how rural immersion interacts with student, programme and other factors to affect eventual practice. The latest outcome data for 980 students show those who undertook Pūkawakawa are more likely than those who did not to be in rural practice (RR 2.7), especially in Northland (RR 6.6). More details will be provided in the session.

Purpose and outcomes:

- Develop a deeper understanding of the potential and real impacts of rural immersion programmes on workforce outcomes
- Share contemporary experiences of designing, implementing and evaluating medical school rural immersion programmes in Australasia
- Tease out if there is a “Pūkawakawa effect” or if other factors are more important in determining future practice location

Key discussion questions:

- What constitutes a ‘rural’ immersion programme?
- Who are the ‘best’ students to select into these resource-intensive programmes, and how should they be identified?
- What outcomes are useful in evaluating the impact of rural immersion programmes?
- What are the best practices for impact evaluation of a rural immersion programme on workforce development and outcomes?

### eOSCE delivery and remote quality assurance (eQA) during a pandemic, and its future implications

**Shannon Saad**<sup>1</sup>, Dr C Richmond<sup>1</sup>, Dr K Jones<sup>2</sup>, Dr H Rienits<sup>3</sup>, Dr M Schlipalius<sup>4</sup>, A/Prof B Malau-Aduli<sup>2</sup>

<sup>1</sup>University Of Notre Dame, Australia, Sydney, Australia, <sup>2</sup>James Cook University, Douglas, Australia, <sup>3</sup>University of Wollongong, Wollongong, Australia, <sup>4</sup>Monash University, Clayton, Australia

**Background:** Pandemic disruption to medical education has driven innovation in the delivery of assessment tasks. As a standardised method of assessing clinical competence, Objective Structured Clinical Exams (OSCEs) have traditionally relied on the congregation of large numbers of people - which would contravene COVID-19 social distancing requirements. In response to this, modified OSCE formats were rapidly developed to incorporate web-conferencing services, with a range of underlying architectures (eOSCEs). Quality assurance of these new formats is crucial to ensure that they retain the ability to derive robust information for fair and accurate measurement of student clinical performances.

The Australian Collaboration for Clinical Assessment in Medicine (ACCLAiM) is a benchmarking consortium involving 14 medical schools across Australia and New Zealand. A major aim of ACCLAiM is to provide quality assurance (QA) of exit-level OSCEs. During 2020, ACCLAiM QA visits continued in both face-to-face and online (eQA) formats. To explore participating school stakeholders' experiences of eQA and the novel eOSCE delivery formats, a qualitative study was conducted by Quality Assurance Research Group (QARG), a subspecialised research team within ACCLAiM.

**Purpose/objectives:** This PeArLs will facilitate an interactive discussion of your views and experiences regarding the feasibility of eOSCE (or similar) formats and how to assure quality in their delivery. The presenters will share their study findings following these discussions.

Issues/questions for exploration or ideas for discussion:

1. How do online formats differ from the traditional OSCE? What are the advantages and disadvantages of these differences?
2. How can assessment teams assure the quality of their online clinical assessments?
3. What are the opportunities and disadvantages of eQA and how can it contribute to the quality of online clinical assessments?
4. What is the future of the traditional OSCE, in light of the lessons learned from the adaptation of assessments due to the pandemic?



### A Place-based Approach to Rural Medical Education

Professor Jennene Greenhill<sup>1</sup>, Professor David Atkinson<sup>1</sup>

<sup>1</sup>UWA, ,

Australian medical education programs are changing through rural clinical schools delivering good student training but there continues to be ambiguity in medical workforce distribution. Locally grown solutions are required, leading to establishment of 26 Regional Training Hubs (RTHs) nationally. RTHs aim to facilitate seamless rural training pathways from medical school into postgraduate vocational training.

Our research was a mixed methods critical realist evaluation. We examined qualitative and quantitative data from reports and undertook 21 interviews with RTH leaders.

Findings highlight RTHs achievements since establishment, in mid-2017. Most notably they facilitate local partnerships for novel training opportunities; support and mentor medical students and graduates interested in rural practice; produce podcasts promoting rural practice; mapped different speciality training pathways; maximise training and supervision capacity; and provide clinical leadership. However, they have experienced challenges including access to workforce data, navigating complex recruitment and training cycles, influencing organisational change and limited funding for new positions. RTHs are a linchpin to bring together organisations to co-design training opportunities in rural and remote contexts.

Our analysis culminated in a new way to theoretically conceptualise postgraduate medical training called a place-based approach to medical education. Currently, RTHs can be classified into four types: 1) emerging 2) collaborative 3) networked 4) sustainable.

This presentation will discuss this typology and highly contextualised, place-based approach not previously been applied in medical education. This approach is applicable to rural medical education in disadvantaged geographical locations. Whilst difficult to determine direct causal effects, it enables an understanding of how RTHs work towards achieving rural workforce outcomes.

Place-based medical education takes account of local knowledge about different actors and community needs. RTHs are making valuable, unique contributions to building the rural and remote medical workforce by working with a multitude of organisations to co-design creative local training opportunities and seamless rural training pathways.

# Examining learning environments which acknowledge students' lived experience of the health curriculum

**Christina Grove**<sup>1</sup>, Associate professor R Grainger<sup>1,4</sup>, Ms E Osborne<sup>1</sup>, Dr I Lomax-Sawyers, Professor T Wilkinson<sup>2,3</sup>

<sup>1</sup>University of Otago, Wellington, New Zealand, <sup>2</sup>University of Otago, Christchurch, New Zealand, <sup>3</sup>Canterbury District Health Board, Christchurch, New Zealand, <sup>4</sup>Hutt Valley District Health Board, Hutt Valley, New Zealand

**Introduction/background:** Health professional curricula often intersect with our own life experiences. During the course of their education, most students will encounter content which has personal significance. Therefore, the delivery of this content can have personal and professional implications. As medical students and educators, we have observed that teaching which does not consider students' own experiences may contribute to an exclusionary or unsafe learning environment where students do not see their life experiences recognised as valid or valuable within the learning environment. Conversely, teaching approaches and curriculum design can support students to integrate lived knowledge and disciplinary knowledge, and allow students to use their lived experience to contribute to learning.

**Purpose/objectives:** To reflect on ways that personal experience has intersected with your learning as a student or educator.

To explore and share ideas for creating inclusive learning environments that recognise that many students will have personal experience of aspects of health professional curricula.

**Issues/ questions for exploration or ideas for discussion:** How has your identity, or personal/family health experiences impacted your own study?

Consider ways in which your teaching or programme might simplify, stereotype or exclude content that may relate to students' own experiences.

How does your teaching or programme recognise students' first-hand experience of aspects of the curriculum? What is working well? What could be improved?

## How can we support medical students to navigate uncertainty in their learning environments?

Dr Ciara Lee<sup>1</sup>, Dr Katherine Hall, Dr Megan Anakin, A/Prof Ralph Pinnock

<sup>1</sup>*Dunedin School of Medicine, University of Otago, , New Zealand*

Background: Clinical uncertainty can be defined as ‘the dynamic subjective perception of not knowing what to think, feel, or do’.<sup>1</sup> How medical students respond to uncertainty can influence their wellbeing, attitudes towards patients, and career choices. Our research has shown that medical students’ uncertainties are linked to doubts about capabilities, lack of role clarity, and difficulties navigating learning environments. We found that students’ confidence to respond to uncertainty did not improve as they progressed through medical school, suggesting a missed opportunity to help students’ learn to manage clinical uncertainty. To address these findings, we utilised Social Cognitive Theory to develop a teaching tool to support medical students to respond to uncertainty. The tool consists of a series of four prompts which doctors can use to reveal their own uncertainties, model a constructive response to uncertainty, and then invite medical students to share their uncertainties. This tool allows students to see uncertainty as a normal part of clinical practice and develop constructive responses in a supportive environment. A feasibility study is being conducted with surgeons and general practitioners who teach fourth year medical students.

Objectives: Participants will be familiarised with our teaching tool to support medical students navigate uncertainty. Participants will discuss how this tool might be used in their context, possible challenges that might be encountered when implementing this approach, and possible outcomes.

Questions for exploration and discussion:

- What approaches have you used to teach health care professional students about uncertainty?
- What challenges have you faced implementing educational interventions in clinical environments?
- How might we sustain and improve educational innovations at times of uncertainty and intense pressure for clinical educators?

Reference:

1. Lee, C, Hall, K, Anakin, M, Pinnock, R. Towards a new understanding of uncertainty in medical education. *J Eval Clin Pract.* 2020; 1–11. <https://doi.org/10.1111/jep.13503>

# Workshops Thursday 8 July 2021

Workshop 2: Panel Discussion

Workshop 3

## Workshop 2: Panel Session

### Opportunity from ambiguity - Panel Discussion

Moderator: Aviad Haramati

Panel members: Neil Osheroff, Chinthaka Balasooriya, Diann Eley, Jo Bishop

The symposium will bring together a panel of leaders in health professional education from the International Association for Medical Science Educators (IAMSE) and the Australian and New Zealand Association for Health Professional Educators (ANZAHPE). The panel will explore how educational institutions and national HPE organisations have responded to the changing landscape induced by COVID. Participants will explore the range of global responses with an emphasis on Australia, New Zealand, and the USA. Examples of innovations introduced over the last 18 months will be shared, with reflections on what worked and what did not. The impact of these changes on teaching faculty will be explored in detail. The importance of recognising and responding to the additional stressors faced by teaching faculty will be discussed, noting the critical need to tend to both our students and our academics.

Following short presentations from panel members, an open discussion with all participants will be facilitated by Professor Aviad Haramati. This discussion aims to capture participants' views and concerns for the future of academia, and discuss opportunities from the ambiguity which is likely to remain a significant part of health professional education in the future.

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## Workshop 3

### Why should I apply for Associate Fellowship or Fellowship of ANZAHPE and how do I do it?

Presenters: Julie Ash, Chair ANZAHPE Fellowship Scheme and Fellowship Committee members

Workshop outcomes:

- Understand the role of the Fellowship Scheme in supporting career development in health professions education HPE and supporting ANZAHPE as the national professional organisation for HPE
- Understand eligibility for recognition at either of the two levels of the ANZAHPE Fellowship Scheme
- Know whether to apply for AFANZAHPE or FANZAHPE
  
- Know how to work towards a successful application.



## **Assessment Thursday 8 July 2021**

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## Assessment 3A

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### Multisource Feedback: A comparison of performance in differing GP training programs.

Dr Rebecca Stewart<sup>1,2</sup>, Dr Caitlyn Vayro<sup>2,9</sup>, Dr Ben Mitchell<sup>2,3</sup>, Associate Professor Michael Greco<sup>4</sup>, Professor Ajit Narayanan<sup>5</sup>, Dr Kirsten Fitzgerald<sup>6</sup>, Dr Michael Bentley<sup>6</sup>, Dr Pat Giddings<sup>7</sup>, Professor Neil Spike<sup>8</sup>, Dr Jan Hanson<sup>2</sup>, Dr Dale Hanson<sup>2</sup>

<sup>1</sup>Medical Education Experts, Townsville, Australia, <sup>2</sup>General Practice Training Queensland, Brisbane, Australia, <sup>3</sup>University of Queensland, Brisbane, Australia, <sup>4</sup>Client Focused Evaluation Programs, Brisbane, Australia, <sup>5</sup>Auckland University of Technology, Auckland, New Zealand, <sup>6</sup>General Practice Training Tasmania, Hobart, Australia, <sup>7</sup>Remote Vocational Training Scheme, Albury, Australia, <sup>8</sup>Eastern Victoria GP Training, Melbourne, Australia, <sup>9</sup>Queensland Centre for Mental Health Research, Brisbane, Australia

**Background:** Multisource Feedback (MSF) is an evidence-based, validated tool used internationally to provide clinicians feedback on professional and interpersonal skills. MSF is utilised variably in two General Practice (GP) training pathways, the Practice Experience Program (PEP) and the Australian General Practice Training (AGPT) program. The cohort composition differs between the programs with respect to demographics and education background. MSF performance benchmarking across these cohorts could inform focused education strategies to address differences.

**Aim:** To compare patient, colleague and self-appraisal scores in participants enrolled in the PEP and AGPT programs.

**Method:** Data comprised MSF results of PEP and AGPT trainees, between January 2018 and April 2020, for statistical comparison.

**Results:** PEP doctors demonstrated significantly lower scores on the patient feedback items 'ability to listen', 'explanations', 'express concerns', 'respect shown' and 'time for visit'. Colleagues scored PEP trainees lower than AGPT trainees for the item 'communication with patients', but higher for the item 'ability to say no'. Both PEP and AGPT trainees self-evaluated at lower ratings than their colleagues, being more pronounced for the AGPT group.

**Discussion:** Both patients and colleagues rated PEP GP trainees lower with regards to communication skills. Interestingly PEP doctors were rated higher in their 'ability to say no' which may be related to most of the cohort having a greater time since graduation before undertaking their vocational pathway. It is likely that both groups self-evaluated lower than colleagues given that they are trainees and yet to be fully credentialed as GPs.

**Conclusion:** Based on the demonstrated differences, GP trainees in both programs might benefit from the addition of tailored education interventions to target the less developed skills.

## Multi-Source Feedback - An Opportunity for Improving Learning and Performance Culture

Carol Pizzuti<sup>1</sup>, Ms M Daly<sup>1,2</sup>, Mr M Pooley<sup>1</sup>

<sup>1</sup>The Royal Australasian College of Physicians, Sydney, Australia, <sup>2</sup>The University of Sydney, Sydney, Australia

**Background:** In Australasia, medical regulatory bodies are recommending greater use of Continuing Professional Development (CPD) activities that focus on reviewing performance. Multi-Source Feedback (MSF) - a practice-based activity that includes reflective elements and encourages constructive feedback leading to the identification of learning goals - could be employed for such purpose.

**Aim:** The aim of this study was to evaluate an MSF trial that included a telephone/videoconference debrief, rather than face-to-face, to identify enablers and barriers for future MSF implementation.

**Method:** Thirty-seven Australasian physicians completed an MSF, including a debrief of their MSF report with a trained facilitator. Concurrently, a sequential mixed-methods evaluation of the MSF trial was undertaken.

**Results:** Feasibility, effectiveness, and sustainability were identified as key themes for successful MSF implementation. Feasibility was impacted by the level of administrative support available and the debrief logistics. The quality of feedback and the debrief session were the main factors impacting effectiveness. Finally, the formative nature of the MSF and the participants' concerns about transparency and confidentiality impacted on perceptions of sustainability.

**Discussion:** After medical training is complete, there is often little opportunity for feedback. Encouraging critical reflection and goal setting, MSF can contribute to a productive learning and feedback culture aimed at improving performance.

**Conclusions:** MSF can offer Australasian physicians opportunities for learning and performance improvement. Notably, debriefing the MSF report with a trained facilitator assisted most participants to better frame feedback and act on it. Moreover, telephone/videoconference was perceived as a suitable and more sustainable format for the debrief.



## Assessment 3B

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### Implementation of smartphone based app system for formative miniCEXs (year3) and EPAs (year 5) and summative clinical term assessments at Western Sydney School of Medicine.

Stephen Tobin<sup>1</sup>, Dr J McDonald<sup>1</sup>, Dr C Joyce<sup>1</sup>, Professor N Merrett<sup>1</sup>, Dr S McKenzie<sup>1</sup>

<sup>1</sup>Western Sydney University Medicine, Penrith, Sydney, Australia

WSU School of Medicine introduced entrustable professional activities (EPAs) in 2020 to support formative assessment of final year medical students, the majority of whom worked as Assistants-in-Medicine. Evaluation is described by a separate submitted abstract. Extensive experience was gained with the concepts and the Myprogress (York, England) app system.

In 2021, to further increase formative feedback opportunities and progressive assessment across immersive clinical years, frequent miniCEXs have been introduced to year 3 and the EPAs (adjusted slightly) are being used across all of the final (5th) year. 2-3 of the clinical assessments are requested for each week of clinical attachment.

Along with professionalism, attendance, learning in the medical specialty, miniCEXs, and EPAs, respectively, are being used to inform term (clinical attachment) reports, which count towards overall summative assessment.

Implementation is ongoing and will be discussed.

From the medical student perspective, the concepts around workplace feedback have been illustrated and discussed. This includes asking for observation, 'self-assessment' and feedback as a dialogue, towards the next similar task.

Involving JMOs through trainees/registrar to consultants has been crucial. This requires owning one's own learning and developing evaluative concepts around doing tasks well and improving with suitable supervision.

From the faculty perspective, there have been many opinions (!) mostly supportive. Meetings with discipline groups, grand rounds, webinars and written information have assisted.

The non-standardised aspect of dealing with many 'raters' has concerned some, but on balance, the frequent and rich information has countered this. Aspects of programmatic assessment are developing well, supporting (by design) less reliance on single event examinations. Professional staff support has been invaluable.

The bespoke system has proven almost completely reliable, with all workplace assessments entering the student's portfolio as well as being viewed centrally. Where required, remediation has been assisted by system. The work is ongoing.

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## Psychologically safe for what? The influence of psychological safety on feedback conversations

**Christy Noble**, Rola Ajjawi<sup>1</sup>, Prof M Bearman<sup>1</sup>, Dr K Brumpton<sup>3</sup>, Assoc Prof M-L Dick<sup>4,2</sup>, Dr M French<sup>4</sup>, Dr M O'Shannessy<sup>3</sup>, Dr M Sheldrake<sup>4</sup>

<sup>1</sup>Deakin University, Melbourne, Australia, <sup>2</sup>University of Queensland, Brisbane, Australia, <sup>3</sup>Rural Medical Education Australia, Toowoomba, Australia, <sup>4</sup>General Practice Training Queensland, Melbourne, Australia

Feedback conversations require taking risk. How much risk one is willing to take in 'exposing' their limitations during a feedback conversation will depend on their sense of psychological safety. (1) Psychological safety has been defined as "people's perceptions of the consequences of taking interpersonal risks in a particular context such as a workplace." (2) If we are able to create conditions where trainees feel psychologically safe, we might be able to leverage feedback to better effect.

We asked: what are the conditions that enable psychological safety in the context of feedback conversations. We conducted a qualitative study using interviews and longitudinal audio-diaries with 12 general practice trainees. The data were analysed thematically and as individual participant case studies.

Findings identify the influence of individual (e.g., confidence, comfort with uncertainty), relational (e.g., trust, relationship) and sociocultural factors (e.g., living and working in a rural community) that constituted psychological safety in the context of feedback conversations. The relationship with feedback was murky though. Participants felt psychologically safe to engage their educators in sanctioned forms of conversation related to the immediate care of the patient and yet unsafe to engage in less patient related performance conversations.

Our findings highlight how psychological safety is not a binary concept but something that unfolds moment-by-moment, dependent on the trainee, their relationship with the supervisor and the characteristics of the practice. In this way, one trainee might experience a placement or particular feedback dialogue as psychologically safe, due to their high levels of confidence, another might not. A trainee might feel safe to discuss some aspects of performance but not others. This extends typically binary conceptualisation of psychological safety cast as safe or unsafe.

(1) Johnson et al. (2020) Medical Education. doi: 10.1111/medu.14154

(2) Edmondson AC, Lei Z. (2014) 10.1146/annurev-orgpsych-031413-091305

## The impact of psychological safety on dialogue during feedback in clinical practice

[A/professor Christina Johnson<sup>1,2</sup>](#), Professor Jennifer Keating<sup>3</sup>, Professor Elizabeth Molloy<sup>2</sup>

<sup>1</sup>Monash Health, Melbourne, Australia, <sup>2</sup>University of Melbourne, Melbourne, Australia, <sup>3</sup>Monash University, Melbourne, Australia

**Introduction/background:** In quality and safety research, psychological safety has been shown to influence health professionals' contributions to dialogue, which affects learning and healthcare outcomes. When psychological safety is low, health professionals are less likely to share information, reveal problems, ask questions or suggest ideas. These behaviours are important contributors to learning, developing a shared understanding and joint problem solving. Little is known about the influence of psychological safety on dialogue during feedback and how this may impact learning and co-construction of outcomes.

**Aim/objectives:** We aimed to explore how psychological safety influenced dialogue during feedback involving health professionals, and the consequences.

**Methods:** Self-recorded videos of face-to-face formal feedback sessions in clinical practice, involving health professional educator-learner pairs, were collected. These feedback videos were analysed using thematic analysis to explore the effect of psychological safety on dialogue. Psychological safety was inferred when learners were seen to contribute candidly to dialogue.

**Results:** Thirty six feedback videos involving diverse health professionals were analysed. We found that during feedback episodes indicating psychological safety, key learner and educator behaviours promoted communication by sharing information and responding to each other. These interactive discussions resulted in learning opportunities and collaborative development of tailored strategies to enable learners to improve.

**Discussion:** In this observational study, we identified important effects and sequelae of psychological safety in feedback, which confirms findings from research in other areas. Hence professional development involving practical strategies to promote psychological safety may lead to better feedback outcomes.

**Conclusions:** Psychological safety plays an important role in optimising learning and collaboration during feedback in health professionals education.

### Exploring feedback practices in allied health clinical placements

Associate Professor Merrolee Penman<sup>1</sup>, **Joanna Tai**<sup>2</sup>, Ms Tanya Thompson<sup>3</sup>, Dr Kate Thomson<sup>1</sup>

<sup>1</sup>Department of Work-Integrated Learning, Faculty of Medicine and Health, University of Sydney, Sydney, Australia, <sup>2</sup>Centre for Research in Assessment and Digital Learning, Deakin University, Melbourne, Australia, <sup>3</sup>Physiotherapy, South Western Sydney Local Health District, Sydney, Australia

Feedback practices can be influenced by the disciplinary or professional context in which they occur. There has been little work exploring the nature of feedback interactions on allied health clinical placements. The way that students participate in feedback may help to identify the key features of effective feedback practices.

This paper draws on the concept of signature pedagogies, and the Theory of Practice Architectures (TPA) to explore disciplinary feedback practices within allied health clinical placements, specifically in the context of a near-peer mentoring program across physiotherapy and occupational therapy students. TPA aids understanding and analysis of the ways in which what people say and do, and how they interact with each other, can be shaped by particular configurations, or architectures.

Data on senior students' feedback practices with junior students was collected as part of a larger project investigating a near-peer mentoring innovation. This included interviews, focus groups, and reflections on particular feedback interactions, from the perspective of clinical educators, senior students and junior students. An initial TPA framework was used to examine feedback-related doings, sayings, relating; the architectures which shaped those practices were then analysed.

Senior students described participating in two main feedback practices with the junior students they were mentoring: Creating a comfortable learning environment through feedback; and Achieving feedback for learning. Arrangements which enabled this included the reduced power differential between students, whilst time, space, and prior feedback capabilities constrained opportunities. Developing students' capabilities in feedback may help to improve their own feedback experiences, and when they themselves become educators, the feedback experiences of future students.

## A Retrospective ePortfolio Capstone project

Dr Jillian Clarke<sup>1</sup>, Yobelli Jimenez<sup>1</sup>

<sup>1</sup>*Discipline of Medical Imaging Sciences, Faculty of Medicine and Health, e University Of Sydney, Sydney, Australia*

Portfolios have been shown to enhance students' ability to articulate achievements and successes, providing evidence beyond that which a University transcript can offer. ePortfolios are electronic or online resources that act as a record of learning and reflection. Diagnostic Radiography (DR) students at the University of Sydney completed an ePortfolio as a capstone project. The aim of this presentation is to describe the ePortfolio task, requiring DR students to integrate evidence of: (1) Professional Capabilities (self-evidence of), (2) University Graduate Qualities, and (3) specific Learning to Learn Skills.

Design elements incorporated into the ePortfolio assessment task build on contemporary learning theories, to positively influence students' reflection on their whole course learning, to help students create narratives around employability and 'graduateness', and to build their capacity to make good judgements about their own performance by creating digitally curated evidence for selected audiences. Students participated in guided activities within 3 x 2hour interactive lectures and 2 x 2 hour tutorials. Student groups retrospectively brainstormed experiences and achievements that could be used to evidence professional attainment. These activities served as a prompt for each student to subsequently collect their personal evidence to reflect on, curate and create an employment-focussed personal ePortfolio.

Reflection is an important skill for DR students to develop and retain in their professional roles. Completing an ePortfolio may facilitate students' self-efficacy and assist in students' transition to professional practice.

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### Reliability of an existing tool of professionalism assessment for pre-clinical medical students.

Adelle Mcardle<sup>1</sup>, Dr Md Nazmul Karim<sup>1</sup>, Dr Marianne Tare<sup>1</sup>, Dr David Reser<sup>1</sup>, Dr Margaret Simmons<sup>1</sup>, Meagan Presley<sup>1</sup>, Assoc. Prof Dragan Ilic<sup>1</sup>, Assoc. Prof Shane Bullock<sup>1</sup>

<sup>1</sup>Monash University, Clayton, Australia

**Background:** Medical professionalism is a core competency for medical graduates, and significantly correlates with other key competencies associated with medical practice (Kirk, 2007; Larkin, 2003). Professionalism development begins in the pre-clinical training years, allowing the student time to start to form their professional identity in line with course expectations. Behaviours used as proxies for professionalism assessment at the pre-clinical level include attendance, punctuality, communication, respect, accountability and engagement. Objective measurement of these behaviours is challenging, and a reliable and valid assessment of professionalism is needed.

**Aim:** Evaluation of internal consistency of professionalism assessment data from pre-clinical medical students.

**Methods:** Retrospective assessment of data collected from 105 pre-clinical graduate-entry medical students. Data was collected by 18 evaluators during problem-based learning sessions (PBLs) and clinical placement (CP). Exploratory factor analysis (EFA) (Extraction Method: Principal Component extraction and Oblimin rotation with Kaiser Normalization) and sensitivity analyses were conducted on this data.

**Results:** EFA identifies PBL and CP, as distinct components. Overall Cronbach alpha ( $\alpha$ ) of the assessment tool was 0.584. Individually, PBL recorded an  $\alpha$  of 0.759 and CP recorded an  $\alpha$  of 0.584. Sensitivity analysis revealed that removal of 'accountability' from the CP domain resulted in the greatest increase in overall alpha (0.720). Removal of CP domain items 'punctuality' and 'communication' also significantly improved  $\alpha$ , suggesting that the CP domain; 'accountability'; 'punctuality'; and 'communication' require further development.

**Conclusion:** PBL and CP are distinct domains of professionalism assessment in pre-clinical medicine. Modification of 'accountability' 'punctuality', and 'communication' are likely to increase assessment reliability. One caveat is that nearly all students received a very high score, limiting differentiation. Further research is recommended, with a larger data set. Discriminatory validity is also required to confirm psychometric properties of the tool.

## Does professionalism assessment conducted during clinical placements agree with that conducted within problem-based learning groups?

**Adelle Mcardle**<sup>1</sup>, Dr Md Nazmul Karim<sup>1</sup>, Dr Marianne Tare<sup>1</sup>, Dr David Reser<sup>1</sup>, Dr Margaret Simmone<sup>1</sup>, Meagan Presley<sup>1</sup>, Assoc. Prof Dragan Ilic<sup>1</sup>, Assoc. Prof Shane Bullock<sup>1</sup>

<sup>1</sup>Monash University, Clayton, Australia

**Background:** Development of professional behaviours begins early in medical school. The professionalism assessment tools used during the pre-clinical years of medical require robust evaluation of validity and reliability to ensure standardisation across assessors and assessment settings. This evaluation of the pre-clinical assessment tools is important to ensure students receive accurate and reliable feedback on their developing professional behaviours, over the various different learning contexts. Here, retrospective analysis of professionalism assessment data among medical students was conducted in two different learning situations, one was a problem-based learning group (PBL) the other was during student clinical placement (CP).

**Aim:** The aim of this research is to explore the agreement of the professionalism assessment in the different learning situations.

**Methods:** Data was collected by 7 different tutors from 7 PBL groups and by 11 nurse-educators on CP for 105 graduate-entry medical students during their pre-clinical year of a graduate entry medical degree. Agreement between two PBL and CP assessment scores, and 95% limits of agreement for each comparison was evaluated with Bland-Altman analysis. Difference between the assessment scores was then regressed on the average of the two scores.

**Results:** There was a high level of agreement between scores in PBL and CP [Mean 0.4301; 95% limit 0.241 - 0.619]. The agreement was minimum among the scores of low performing student's. Among the five domains of professionalism assessment tools 'accountability' exhibited the least agreement. [Mean 0.05; 95% limit 0.022 - 0.079].

**Conclusion:** The high level of agreement between professionalism assessment scores in CAPs and CP supports the use of professional assessment in both situations within the pre-clinical year. However, among the assessment items 'accountability' items needs reviewing to improve overall accuracy and reliability of professionalism assessment tool.



## Academic Integrity for Remote Exams

**Anna Ryan**<sup>1</sup>, Simone Elliott<sup>1</sup>, Kimberley Hokin<sup>1</sup>, Terry Judd<sup>1</sup>

<sup>1</sup>*Department of Medical Education, University Of Melbourne, Melbourne, Australia*

Universities take academic integrity seriously employing various approaches to guarantee compliance and maintain faith in their assessments and standards. Popular methods include close invigilation of in-person exams and routine application of anti-plagiarism software for scanning students' written work. However, expectations around academic integrity can sometimes be taken for granted and may not always be clearly articulated to students, or staff.

Academic Integrity guidance to students is typically provided via centrally developed resources containing somewhat general information designed to apply across a wide range of contexts, disciplines and assessment formats. During 2020, our rapid, unanticipated and enforced transition to a new and unusual mode of assessment delivery – remote exams with record and review invigilation – highlighted the difficulties faced by students when trying to apply such general information to an unfamiliar and highly specific new context.

This presentation will describe our strategy for supporting student academic integrity for remotely administered and invigilated assessments. We developed targeted learning resources, including video orientation to assessment processes and acceptable exam behaviour, as well as compulsory Academic Integrity quizzes combined with detailed within-quiz feedback and individual follow-up where necessary. Many of the quiz items were based on real-life examples of academic integrity breaches (including by our students), and students' responses to items provided valuable insights into academic integrity related issues and scenarios that were either ambiguous or unclear to students.

The delivery of these resources formed a key part of our comprehensive framework of processes and guidelines for maintaining academic integrity; the intention being that students were clear on what was expected of them, what sort of behaviour (both intended and inadvertent) could trigger an academic integrity review, as well as how such review were fairly and sensitively handled.

## Assessment 4B

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### How can cultural safety, as determined by Aboriginal and Torres Strait Islander peoples, be assessed in GP trainees?

Kay Brumpton<sup>1,3,4</sup>, Dr Rebecca Evans<sup>1</sup>, Assoc Prof Raelene Ward<sup>2</sup>, Prof Tarun Sen Gupta<sup>1</sup>

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To improve health outcomes for Aboriginal and Torres Strait Islander people, health service provision needs to be responsive to cultural differences and the impacts of conscious and unconscious racism. Aboriginal and Torres Strait Islander people are more likely to access and will experience better outcomes from services that are respectful and provide culturally safe care.

Despite being a government priority, a shared understanding of cultural safety (CS) has been lacking and it is unclear who has determined the parameters of these concepts. Inconsistencies in definition of this concept has made it challenging to measure the impact of CS interventions.

How do I, as a GP, know if I am providing CS care for my patients? How do I, as an assessor of medical students and GP registrars, decide if they are providing CS care?

In Australia self-assessments of CS have been created. These have been validated predominantly in nursing students. We have no validated measures of assessment of CS for GPs that are aligned with the Ahpra definition of CS where safety is determined by Aboriginal and Torres Strait Islander individuals, families and communities.

In designing an approach to assessment of CS in general practice it is paramount that the parameters of the assessment method are determined by Aboriginal and Torres Strait Islander peoples.

This research project is co-constructed with Australian Aboriginal peoples with the aim of developing a CS assessment process for cultural safety.

We have two-sub questions relating to this question:

- What are the GP-related attributes, as identified by Australian Aboriginal patients, that contribute to a culturally safe GP consultation?
- and
- How can these identified attributes be assessed amongst GP registrar consultations (if at all)?

This presentation will describe the project. Data collection will have commenced by time of the ANZHPE Festival.

## Self-assessment narratives of first year medical students. How am I doing? Do I belong?

**Jenny McDonald<sup>1</sup>**, Samantha Ryan<sup>1</sup>, Professor Sylvia Heeneman<sup>2</sup>, Professor Wendy Hu<sup>1</sup>

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**Introduction:** Self-assessment is a complex skill required for self-regulated learning and safe medical practice. Entering medical school represents an important transition with adaptation of study techniques, adjustment to the medical educational culture and assimilation into a new social group. Informed by Situated Cognition and Dynamic Systems theories, we aimed to explore the changes in medical student self-assessment processes and influences during the first year of medical school.

**Methods:** In this longitudinal qualitative study, semi-structured interviews elicited narratives related to self-assessment in first year medical students. Seven students were interviewed on commencement and five of these students were re-interviewed at the end of their first year. Extracted narratives from interview transcripts were coded inductively. Themes were identified and iteratively reviewed and refined across the two time periods to form an explanatory framework for self-assessment processes and influences.

**Results and discussion:** Themes related to self-assessment were effort, peer comparison, fear of failure and belonging. The themes were interdependent and had positive and negative effects on self-assessment and identity development. Dynamic Systems Theory (DST) explains the relationship between self-assessment and identity development. Early uncertainty about belonging resolved through positive self-assessments associated with academic successes, peer friendships and motivating learning experiences. Negative self-assessment, as in the case of failures or unfavourable peer comparison, led to solution-seeking at the expense of commitment. The outcome was an emerging medical student identity. A new identity influenced self-assessment by changing the motivation to succeed and the goals for success.

**Conclusion:** Our study clarifies the changing processes and influences of medical student' self-assessment during their first year of study and demonstrates the interdependence of self-assessment, professional identity and curriculum.

## Analysing feedback and evaluating its value: The writing of CALD social work students

**Dr Catherine Flynn<sup>1</sup>**, Dr Amir Rouhshad<sup>1</sup>, Dr Catherine Flynn<sup>1</sup>, Dr Lena Turnbull<sup>1</sup>

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International student numbers have increased in Australia in recent years and now account for almost a third of all university enrolments in Australia (AGDESE 2020). This trend is also observed in health care professional courses (Harrison & Felton 2013; Norton, Cherastidtham & Mackey 2018) including social work (Battaglia, Flynn & Brown 2018).

Culturally and linguistically diverse (CALD) social work students face a range of challenges including language issues and a lack of knowledge of local systems, cultural contexts and writing conventions (Ross, Ta & Grieve 2019; Ross, Ta & Oliaro 2020). Research suggests that social work student writing has declined in recent decades (Alter & Adkins 2001, 2006; Horton & Diaz 2011) with anecdotal evidence suggesting that international students' writing skills may further be lacking in the areas of embedded social work knowledge, values and ethics (Ross & Flynn 2019).

Universities are frequently blamed by the media for international students' lack of development in their communication skills (Arkoudis & Kelly 2016). One factor that could highly influence their learning is feedback (Hattie & Timperley 2007), however research suggests that students are generally dissatisfied with the quality of the feedback they receive (Quality Indicators for Learning and Teaching 2017) and there has been scant research on the quality of feedback provided to CALD students in graduate degree programs and their view of feedback.

This study examines the nature of feedback, students' experiences of that feedback and their perception of writing development throughout their two-year degree program. Participants were 11 CALD social work students at a large Australian university. Data consists of written comments provided on four submitted assignments for core units and semi-structured individual interviews. This study concludes with a discussion of the theoretical, pedagogical and political implications of the findings for educators and policy makers.



## **PCW Thursday 8 July 2021**

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## How do we grow medical educators in the Pacific? – A qualitative case study

**Dr Sinead Kado**<sup>1</sup>, Ms I Lindemann<sup>2</sup>, Dr G Brand<sup>1,3</sup>

<sup>1</sup>University Of Western Australia, Perth, Australia, <sup>2</sup>Flinders University, Adelaide, Australia, <sup>3</sup>Monash University, Melbourne, Australia

**Background:** Five-day medical education workshops have been conducted in the Pacific since 2015 to support clinical teaching and supervision. We pondered: How do Pacific clinicians translate knowledge and skills gained to their educational practice and what support do they need in their remote low-resource settings? Current medical education faculty development literature recommends qualitative research on 'How' medical education workshops lead to changes in educational practice. Fiji provided a unique low-resource setting, where faculty development is emerging, to investigate this phenomenon.

**Aim:** A social constructivist based qualitative case study was conducted to explore how Fijian clinicians translate knowledge and skills gained in a medical education workshop to their educational practice.

**Methods:** Data were collected from nine clinicians through reflective journals, interviews, lesson plans and videos of teaching over four months. Interviews were transcribed verbatim and all data were thematically analysed utilising Braun and Clarke's framework.

**Results:** Six themes represented the clinicians' educational change journey: 1) Perception of the workshop; 2) Evolving teaching philosophy; 3) Changing practice; 4) Teachers' perception of responses from the students; 5) Inhibitors to change; and 6) Enablers of change.

**Discussion:** A model of educational change was developed which guided a series of recommendations for faculty development in low-resource settings. Background cultural organisational influences, the experiences of the clinical teacher and enablers and barriers to change need to be considered to foster changes in educational practice and ensure faculty development is relevant. Furthermore, clinical educators require support through mentoring, feedback and collaboration to facilitate sustainable educational change.

### Conclusions:

Faculty development for educational change is complex and requires consultation, support, reflection and feedback to meet the individual and contextual needs of the institution. Workshops begin the educational change journey, but a question remains: How can we better collaborate to support medical education development in remote low-resource settings?

## ANZCEN Incubator: Developing Australia and New Zealand Critical Care Clinician Educators by cultivating a virtual Community of Practice

**Dr Manisa Ghani<sup>1,2</sup>** A/Prof Chris Nickson<sup>1,3</sup>, Mr Paul Ross<sup>1,3</sup>, Ms Kylie Moon<sup>1,4</sup>, Dr Cameron Knott<sup>1,5</sup>, A/Prof Deb Massey<sup>1,6</sup>  
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**Background:** The Australian and New Zealand Clinician Educator Network (ANZCEN) is a network of inter-professional critical care educators to support critical care clinicians with an interest in clinical education. The group initiated a number of activities, one of which was a year- long faculty development programme called the ANZCEN Clinician Educator Incubator, aimed to develop members' scholarly teaching practice in addition to cultivating a virtual Community of Practice (vCoP).

**Summary of work:** The Incubator was inspired by a year-long digital development programme for Emergency Physician Educators called the ALiEM Faculty Incubator. This North American programme was adapted for the Australian and New Zealand context, to cater for interprofessional groups (medical, nursing, allied health) and multiple critical care disciplines (adult and paediatric Intensive Care, Emergency, Retrieval and others involved in the care of critically ill patients). The programme was designed to promote the development of Clinician Educators as distinct from a Clinical Educator and to cultivate vCoP. We are currently at the end of our first year, with the next iteration of the programme underway. We aim to undertake a formal evaluation of the program in April-May 2021 and disseminate the results of this evaluation.

**Discussion and Conclusions:** The discussion follows the '3-Ps' model: Presage, outlines the context of learning and the people involved; Process, describes the process and approach to learning through, and forming, a vCoP; and Product, discusses the intended outcomes of the process and learning interventions, and the challenges.

Three key areas of learning from our initial evaluation: 1) Creating, developing and implementing the incubator project required distributed leadership, commitment and generosity from everyone involved, 2) Paying attention to value creation, positive and negative, early and regularly allows us to reframe and rethink our assumptions, and 3) There is a need to be process oriented not outcome driven.

## A longitudinal faculty development program: supporting a culture of teaching

Associate Professor Annette Burgess<sup>1</sup>, Dr Elie Matar<sup>1</sup>, Dr Brendon Neuen<sup>1</sup>, Professor Greg Fox<sup>1</sup>

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**Aim/objectives:** The purpose of this study was to develop and evaluate a one-year Clinical Teaching Fellowship (CTF) program designed to equip early career medical practitioners and basic scientists with necessary skills to facilitate Team-based learning (TBL).

**Methods:** The CTF program provided formal training, a choice of informal professional development activities, and practical co-teaching opportunities in TBL. Of the 40 registrants, 31 (78%) completed the program. Data were collected via questionnaire and focus group. Quantitative data were analysed using descriptive statistics. Framework analysis, using the conceptual framework of experience-based-learning, was used to analyse qualitative data.

**Results:** Participants felt learning was enriched through the combination of training, practical teaching experience alongside senior clinical teachers, the multi-disciplinary context of training and co-teaching in TBLs; and the sense of community. Competing clinical responsibilities made it difficult for some to attend training and TBL teaching.

**Discussion:** Participants considered the CTF program as relevant to their needs and useful to their career. Most expressed a desire to continue teaching TBLs in future years, and an interest in remaining connected with the CTF program

**Conclusions:** The CTF program provided a longitudinal faculty development framework promoting preparation, practice and development of teaching skills. Securing institutional support to invest in the growth and development of early career teachers is essential to sustained innovation and excellence in teaching.



## Does micromanagement affect clinical supervision and professional entrustment for trainees?

**Becky Li**, Dr. JM Monica van de Ridder<sup>2</sup>, Dr. AM Mookerjee<sup>3</sup>, Dr. R Surapaneni<sup>4</sup>, Dr B Arora<sup>2</sup>, Vijay Rajput<sup>1</sup>

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**Background:** In the clinical learning environment, professional activities delegated to resident physicians, require a flexible level of supervision to match their competence. When attendings cannot adjust their supervision to residents' needs, it becomes untimely and excessive, and they are perceived as micromanagers. Micromanagement is defined as a supervisory style of "hovering" and directly commanding all details, rather than giving space to the trainee assigned to perform the task. They often negatively affect a team because of their detrimental effect on team culture and learning environment. Catalysts to micromanaging behaviors include attending physicians' personal insecurities, perceived responsibility, and fear of reduced patient safety and quality, and the organizational culture.

**Summary of work:** We reviewed the literature on micromanaging behaviors, causes, and consequences in medical education, business, nursing, sociology, and psychology. From identified articles, we used the 'snowball method' to identify more relevant literature. The LinkedIn Learning, MedEdPortal and MedEdPublish databases were used to identify educational materials on this topic.

**Summary of Results:** Micromanagement can affect learners' autonomy, competence, and supervisor-learner relationship.10 Micromanaging behaviors consist of a combination of traits which include excessively asking for updates, scrutinizing details, and taking pride in correcting other's mistakes. Causes of this micromanaging behavior could be secondary to organizational structure, insecurity, distrust, and fear of failure. As a result, micromanaging behaviors harms the supervisor-learner relationship, lowers team morale, and compromises the overall wellbeing of the trainee.

**Discussion/conclusion:** We examined micromanagement from various professional perspectives to develop the 'Micromanaging Model' for clinical supervision. Our model highlights twelve distinct behaviors differentiating micromanaging attendings from adaptive attendings who are able to tailor their supervision skills to fit the needs of the trainees. The adaptive attendings create a 'flexible zone of safety', which they can adjust based on their trust in the trainees' accountability and autonomy.

## A balancing act: The Supervisor of Training role in anaesthesia education

**Damian Castanelli**<sup>1,2,3</sup>, Prof Jennifer Weller<sup>4</sup>, Ms Anusha Chander<sup>3</sup>, Prof Elizabeth Molloy<sup>5</sup>, Prof Margaret Bearman<sup>1</sup>  
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**Introduction/background:** In this qualitative study, we report how Supervisors of Training, educational supervisors overseeing the learning of anaesthesia trainees, experience their role in practice.

**Aim/objectives:** We asked ‘what do you see as your role as a Supervisor of Training?’ and explored the response in detail.

**Methods:** Using purposive sampling, we interviewed Supervisors of Training from across Australia and New Zealand. Following the technique of thematic analysis, inductive analysis occurred as data were collected until we generated a thematic structure sufficient to address our research question after 19 interviews.

**Results:** In the first three of the four identified themes, Supervisors of Training perceived themselves as the fulcrum of the learning environment, ‘the something in-between’. These three themes were: guiding and assessing trainees; identifying, supporting, and adjudicating trainee underperformance; and mediating trainees’ relationship with the hospital. Participants perceived themselves as a broker between trainees, their colleagues, their hospital, the Australian and New Zealand College of Anaesthetists and the community to varying degrees at different times. Negotiating these competing responsibilities required Supervisors of Training to manage multiple different relationships and entailed significant emotional work. Our fourth theme, scarcity, described the imbalance between these demands and the time and resources available.

**Discussion:** The complexity of the Supervisor of Training role and the tensions between these competing demands is underappreciated.

**Conclusions:** Our findings support strategies to mitigate the administrative load and share the decision-making burden of the role and to enhance the capability of Supervisors of Training by requiring formal training for their role.

**Reference:** Castanelli DJ, Weller JM, Chander AR, Molloy EK, Bearman ML. A balancing act: The Supervisor of Training role in anaesthesia education. *Anaesth Intensive Care*. 2019 Jul;47(4):349-356. doi: 10.1177/0310057X19853593. Epub 2019 Jul 11. PMID: 31294632.

## Work readiness – understanding the needs and experiences of health graduates in the workplace

**Bethany Howard<sup>1</sup>**, Dr Daniel Czech<sup>2</sup>, Eli Janover<sup>1</sup>, Prof Dragan Ilic<sup>1</sup>, Dr Darshini Ayton<sup>1</sup>

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**Introduction:** Universities are increasingly focused on graduate employability and work readiness – the degree to which a graduate is employable. This has involved embedding graduate attributes into courses, developing work-integrated learning and career development units, and investing in career services. However, methods of evaluating the effectiveness of such programs are often limited to assessing student perceptions and graduate employment rates. These outcomes do not provide insight into whether the degree has equipped graduates for their careers. This study aimed to explore barriers and enablers of work readiness through understanding the needs and experiences of recent Monash health graduates.

**Methods:** Formative qualitative research consisting of semi-structured interviews with 15 recent (>6 months post-graduation) Monash Health Science, Public Health and Biomedical Science graduates. Interviews explored definitions, skills and attributes of work readiness, contribution and deficiencies of their courses to employability, and suggestions for improving the curriculum. Interviews were audio-recorded, transcribed and analysed thematically.

**Results:** Six major themes emerged: 1) making career choices; 2) the process of finding a job; 3) bridging the gap from university to employment; 4) required work capabilities; 5) attitudes for career success; and 6) adjusting to work life. Two minor themes also emerged: 1) perceptions of the degree; and 2) grades and employment.

**Education implications:** Results from this novel study can be used to inform the development, implementation and evaluation of work ready programs for the Bachelor of Health Science, Public Health and Biomedical Science, and other similar degrees.

## Paid employment of medical students in the hospital: feasibility, acceptability and experiences.

**Nadia Levkut<sup>1</sup>**, Leonie Griffiths<sup>1</sup>, Robyn Woodward- Kron<sup>1</sup>

<sup>1</sup>*The University Of Melbourne, Melbourne, Australia*

**Background:** Historically, medical students have sought paid employment in a hospital to finance their medical education and gain additional exposure to the healthcare system. Some examples are described; however, little is known about what students actually learn while undertaking paid work in this setting. Medical students undertake a range of activities in the hospital that can contribute to system efficiencies and patient care. These activities can foster learner engagement and professional identity development. While there are examples of medical students undertaking these activities in a paid capacity, the experience of medical students employed in Australian hospitals is largely unexplored. This project aims to investigate the experiences of medical students who undertake paid employment within the hospital. It also aims to explore hospital staff perspectives on the feasibility and acceptability of medical students undertaking paid employment within the hospital.

**Methods:** Semi-structured interviews were performed with medical students (n=15) from the University of Melbourne and senior hospital staff (n=10) from a large teaching hospital in Melbourne. Audio recordings were transcribed and analysed using a combination of content and thematic analysis.

**Results:** Students reported largely positive experiences of working in a hospital with benefits to their learning including increased familiarity of the hospital system and opportunistic learning experiences. Staff reported minimal knowledge of medical students working in the hospital however acknowledged potential benefits arising from the employment of medical students who they see as knowledgeable and competent, with a unique skillset. The barriers to employing medical students in the hospital include a rigid university schedule and financial limitations.

**Conclusions:** The findings of this pilot study suggest that there are implications for embedding clinical learning activities that contribute to patient care and may provide bidirectional benefits to both the hospital and the student.

## Modifying communication workshops and assessment to an online platform due to COVID-19; A success story

Dr Ryan Wood-bradley<sup>1</sup>, Ms L Ainge<sup>1</sup>, Ms A Chan<sup>1</sup>, Dr G Sampson<sup>1</sup>

<sup>1</sup>*Deakin University, Waurn Ponds, Australia*

**Introduction/background:** The COVID-19 pandemic moved the Deakin Optometry curriculum online and forced reconsideration of how to conduct authentic assessment. This posed particular challenges when teaching clinical communication skills, which are ideally suited to interactive face-to-face learning experiences. Furthermore, the pandemic precipitated a greater reliance on clinical telehealth consultations, which have unique communication requirements. Here we describe survey responses following adapted online workshops that allowed students to interact and to provide constructive peer feedback. Workshops targeted discrete consultation phases (Calgary Cambridge model) and further aimed to develop student's evaluative judgment skills, thereby benefiting future learning and professional practice.

**Aim/objectives:** To modify face-to-face communication workshops for an online format that aligns learning outcomes with recognised clinical competencies.

**Methods:** Undergraduate Optometry students (n=86) attended two online workshops focusing on core skills related to gathering information, building relationships and structuring a consultation. After each workshop, students were invited to complete an anonymous online survey containing open ended and 5-point Likert scale questions.

**Results and discussion:** 43% and 51% of students completed the survey for workshop 1 and 2 respectively. 86% of respondents agreed the skills covered in workshop 1 were transferable to a clinical setting and that the online format was conducive to practicing communication skills. Students identified both verbal and nonverbal skills as important and transferable to clinical practice. In workshop 2, 58% of respondents agreed that webcam use helped to develop nonverbal skills.

**Conclusions:** It is viable to conduct clinical communication training and assessment in an online setting. Skills covered in an online setting are potentially transferable to both a face-to-face and/or telehealth consultation. In future we will blend face-to-face and online workshops to maximise the benefit provided by both learning environments.

## Evaluating supervision training workshops for Victorian health and human services workers: Does an online delivery affect immediate outcomes?

**Dr Van Nguyen**<sup>1</sup>, Associate Professor Claire Palermo<sup>1</sup>, Ms Vicki Edouard<sup>1</sup>, Professor Charlotte Rees-Sihdu<sup>2</sup>

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**Introduction/background:** A state-wide government-funded supervision training program has been in place since 2017 to provide training for health and human services workers across Victoria, Australia. The training was delivered as half-day face-to-face workshops until early 2020, but from April 2020 the training was delivered as online workshops due to the COVID19 pandemic.

**Aim/objectives:** To evaluate and compare the immediate outcomes of face-to-face and online delivery, alongside the factors affecting these outcomes.

**Methods:** We applied a pre-post questionnaire design to measure participants' self-reported supervisory knowledge, skills and confidence. We analysed preliminary data using univariate, bivariate and regression approaches in SPSS version 25.0.

**Results:** From 10/2017-10/2020, 6327 Victorian health and human services supervisors registered for 193 workshops and completed a pre-workshop questionnaire. Of the 3469 attendees who completed a post-workshop questionnaire, 329 (9.5%) attended online workshops. Proportionately, more participants attending online workshops (72.0%, 68.7%, and 75.4%) than those attending face-to-face workshops (61.7%, 57.9%, and 59%) experienced improvements in supervisory knowledge, skills and confidence respectively ( $p < .001$ ). These findings were also confirmed in logistic regression models ( $p < .05$ ). Other self-reported factors affecting immediate outcomes of the workshops by health and human services workers include workshop delivery location, facilitator teaching experience, and supervisors' occupation.

**Discussion:** While the preliminary findings are limited by their self-report nature, the findings were based on a large sample size with multiple questionnaire time-points, highlighting the importance of workshop delivery approach in order to achieve positive learning outcomes.

**Conclusions:** Preliminary results show that participants' immediate learning outcomes were improved by online delivery, probably because we recreated the face-to-face format online with experienced facilitators. The findings offer insights into how quality can be maintained in the face of COVID19-related impacts on training programs. Further analysis is warranted to explore if the positive effects of online workshops can be sustained longer term.

## Learning and contribution: Medical students' participation in the COVID-19 pandemic workforce

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<sup>1</sup>University Of Melbourne, Parkville, Australia, <sup>2</sup>Deakin University, Burwood, Australia

**Introduction:** COVID-19 led to significant disruption in the healthcare workforce. Medical students were employed to counter workforce shortages and to undertake rapidly evolving new roles. Historically, learner as a contributor is well recognised across health care education; however, the bidirectional value of medical students in the healthcare environment is less visible. A greater understanding of workplace interactions and student engagement can inform curriculum design, potentiate effective learning, and enhance patient care.

**Methods:** Eighty-five medical students from two Victorian medical schools completed a survey. Nine of these students also completed an interview, designed to explore their experiences of learning and contribution to the healthcare system and community, as part of the COVID-19 workforce. Thematic analysis of qualitative data was undertaken through the socio-cultural lens of participatory practice. This recognises the interdependence between the engaged learner and the affordances of the workplace.

**Results:** Students worked in a range of roles including, clinical assistants (44%), health concierges (12%), in research (11%), or administrative roles (7%). They overwhelmingly reported that their COVID-19 workforce role was a positive learning experience (M = 8.3 out of 10) and agreed that it had increased their preparedness (78%) and confidence (75%) to be an intern. Students believed they had improved hospital efficiencies and workflow and impacted positively on patients' wellbeing and quality of care. The majority of students disagreed that the pandemic role caused them anxiety for their own health (58.4%); however, students identified balancing work and study as challenging.

**Discussion:** The research findings identified learning opportunities for students in diverse COVID-19 workforce roles, and insights into the affordances of the work setting, different models of supervision, and degrees of interdependence, as well as co-directional benefits, including professional identity development and positively influencing student engagement. These findings will help inform work-integrated learning practice pedagogy and new curriculum design.

## The effect of the COVID-19 pandemic on the career intentions of New Zealand medical graduates

**Antonia Verstappen**<sup>1</sup>, Dr Charlotte Connell<sup>2</sup>, Dr Alex Salkeld<sup>3</sup>, Professor Phillippa Poole<sup>2</sup>

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**Introduction/background:** Career choices of graduating medical students are a result of iterative decisions made by individuals, and influenced by education, the health system, and broader environmental contexts. Early findings from overseas studies show an impact of the COVID-19 pandemic on medical students career intentions, consistent with literature from other natural disasters. While the pandemic had some impact on NZ medical students education, most final-year students were able to stay on placements and graduate on time. COVID-19 has afforded a unique opportunity to understand the effect of a pandemic on medical student career choice.

**Aim/objectives:** To determine the impact of the COVID-19 pandemic on graduating medical student career choice, in terms of both specialty intention and intended career location.

**Methods:** Two questions were inserted into the 2020 Medical Schools Outcomes Database questionnaire for final year NZ medical students. These covered the influence of the COVID-19 pandemic on future medical specialty career decisions, and on geographic location of practice intentions. Qualitative data were analysed to elicit key themes to understand the impact of the pandemic on medical student career intentions.

**Results:** Early results from over 325 responses indicate that for over 80% of NZ medical students, the COVID-19 pandemic had no effect on their preferred area of medicine or their preferred geographic region of practice. For some medical students, their preferred area of medical practice had been strengthened or weakened, based on factors such changes to their clinical rotations and unexpected exposure to different specialties.

**Discussion:** Knowing more about the impact of the COVID-19 pandemic on medical student career choice will help health workforce planners and other stakeholders understand emerging changes in health workforce needs. Understanding this impact also provides insights regarding career decision making when faced by external threats.



## Evaluation in medical education during the COVID-19 pandemic: Opportunities and challenges

Kate Reid<sup>1</sup>

<sup>1</sup>*The University Of Melbourne, ,*

The COVID-19 pandemic profoundly affected the delivery of teaching, learning and assessment in medical education, particularly during the prolonged Victorian lockdown. Rapid responses to ensure the continuity of medical student learning created concomitant demands on quality assurance and evaluation to monitor student experience, inform adaptations to teaching, and assess possible effects on student learning. Some longstanding approaches to course evaluation were similarly disrupted, requiring new evaluation approaches. Such adaptations in evaluation necessarily occurred rapidly in the initial crisis of transitioning to an online environment, and necessitated both responding to the demands of the crisis and maintaining the business-as-usual evaluation program. In this context, enormous benefits accrued for the evaluation program. Curriculum developers' interest in planning evaluations and using results to guide continuous improvement of their programs and subjects developed further in response to the challenge. Such developments are of significant benefit in strengthening the ongoing program of evaluation. Students also engaged strongly in the process of providing feedback on their experiences during the pandemic. Evaluation data gathering moved away from delivery of anonymous evaluation forms (often face-to-face on paper) to an increased number of regular student focus groups to 'temperature check' student experience close to implemented teaching, learning and assessment experiences (more than 60 were undertaken across the year). Closer engagement with students during the pandemic, greater visibility of opportunities for student feedback, and increased reporting to students on the responses to their evaluation feedback (through incorporating coordinator responses in all final evaluation reports made available to all students) have increased student understanding of the role and importance of evaluation in the medical course. The purpose of this presentation is to describe the challenges and opportunities of maintaining a robust program of evaluation in the context of rapid, unplanned change in teaching, learning and assessment across an entire medical course.

## Becoming and being an Assistant in Medicine (AiM): Collaborative evaluation of medical student perceptions of the impact of key experiences on competences and confidence for moving into an internship role.

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**Introduction/background:** COVID-19 disrupted workplace based clinical education globally with mass suspensions of clinical placements for final year medical students. In NSW/Australia, the threat of a missing cohort of new doctors in 2021, and the anticipated demand for health workforce to meet anticipated COVID-19 cases, led to the creation of Assistant in Medicine(AiM) roles. They were paid positions for final year medical students to work and learn under supervision as part of a medical team, providing non-COVID patient care.

**Aim/objectives:** To explore student experiences in AiM roles and the impact on preparedness and confidence moving into an internship role.

**Methods:** The effects of this novel clinical training role on medical student learning was evaluated with a mixed methods approach, using surveys and focus groups across Western Sydney University and University of Sydney medical school cohorts. Data was collected and analysed by each university separately. Findings for common questions have been shared and compared across settings for alignment of student experiences and impact on preparedness for being an intern. Thematic analysis utilised a realist evaluation model.

**Results:** Data supported three themes describing the impact of being an AiM: 1) through a defined role, students reported greatly increased sense of being part of a team with more opportunities for developing related skills for workflow, communication and understanding coordination of different teams across the hospital; 2) with higher levels of involvement, repetition and responsibility, students developed confidence in their skills and efficacy in the hospital environment; 3) through this immersive clinical experience, students developed a strong sense of preparedness for internship.

**Conclusions:** Our exploratory study unpacks key learning experiences of the NSW AiMs program. We provide feedback for improving medical programs in the final years, supporting evidence for more Workplace-based assessments and future opportunities for AiM as an ongoing opportunity for final year students.

A graphic of a ribbon that is red on the top half and black on the bottom half, forming a loop. The text "Moving Forward" is written in white on the red part, and "in Ambiguity" is written in white on the black part.

*Moving Forward*

*in Ambiguity*

# Day **THREE**

Monday 12 July



## Day 3: Monday 12 July 2021

### IPL Monday 12 July 2021

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IPL 5 B

IPL 6 A

IPL 6 B

IPL 6 C

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## Nursing and Allied Health Graduate Outcomes Tracking (NAHGOT) study: Destinations of graduates from two Australian universities

**Associate Professor Tony Smith**<sup>1</sup>, Dr Keith Sutton<sup>2</sup>, Dr Julie Depczynski<sup>3</sup>, Dr Alison Beauchamp<sup>2</sup>, Dr Susan Waller<sup>2</sup>, Dr Luke Wakely<sup>4</sup>, Dr Eleanor Mitchell<sup>5</sup>, Dr Daniel Drumm<sup>6</sup>, Dr Tony Fallon<sup>7</sup>

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**Introduction:** Health workforce maldistribution contributes to poorer health outcomes for rural compared to metropolitan populations. Combined, nursing and allied health constitutes about 85% of the Australian health workforce, yet, by comparison with medicine, little is known about nursing and allied health graduate practice locations. Monash Rural Health and the University of Newcastle Department of Rural Health have collaborated on a data linkage cohort study to investigate the graduates' destinations.

**Methods:** The study included graduates who completed their degree in 2017 in nursing, occupational therapy, pharmacy, physiotherapy, or medical radiation disciplines (diagnostic radiography, nuclear medicine or radiation therapy). The key outcome variable was Australian Health Practitioner Regulation Agency (Ahpra) principal place of practice (PPP), dichotomised into 'Major City' (metropolitan) and 'Rural' (non-metropolitan). Explanatory variables included discipline, age, gender, location of origin ('Major City' versus 'Rural'), and number and duration of student rural placements.

**Results:** Of 1,130 participants, 51% were nurses, 81% females, 62% under 21 years at enrolment, 23% of rural origin, 62% had at least one rural student placement, and 23% had over 40 cumulative rural placement days. One year after first registering with Ahpra, 18% worked in a 'Rural PPP'. Compared to those from major cities, rural origin graduates had 4.45 times (95% CI=3.11–6.35) higher odds ratio (OR) of 'Rural PPP'. For participants who had 1-20 cumulative rural placement days, compared to zero, the OR of 'Rural PPP' was similar (OR=1.10; 95% CI=0.60–2.01). For those who had 21-40 rural placement days the OR was 1.93 (95% CI= 1.13–3.29) and for >40 rural placement days the OR was 4.54 (95% CI=2.79–7.40).

**Conclusions:** In this study, rural origin and more rural placement days are positively associated with graduate rural practice destinations. The outcome of increasing cumulative rural placements days may be comparable with immersive rural placements

## The characteristics and career aspirations of undergraduate population health students in Aotearoa New Zealand

**Antonia Verstappen**<sup>2</sup>, Dr Simone Rodda<sup>1</sup>, Associate Professor Bridget Kool<sup>3</sup>, Dr Vanessa Selak<sup>1</sup>

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**Introduction/background:** As demonstrated throughout the COVID-19 pandemic in 2020, the public health workforce plays a crucial role in the operation of a high functioning health system. Yet, this workforce is largely unstudied, and little is known about the characteristics and career aspirations of undergraduate students studying public health.

**Aim/objectives:** To understand the characteristics and career aspirations of undergraduate population health students in New Zealand.

**Methods:** Since 2006, the Health Career Pathways Project (HCPP) has tracked University of Auckland Faculty of Medical and Health Sciences students' career intentions over time. This longitudinal prospective cohort study uses Bachelor of Health Sciences (BHSc) student data from the HCPP for the 2006 - 2016 period to describe the characteristics of BHSc students, their career aspirations and explores changes over time that may exist in these aspirations

**Results:** The majority of BHSc students (>65%) were female, with an average age at entry to the degree of 20 years. Over two-thirds identified as Asian in ethnicity, 11% as Māori and 11% as Pacific. Half of the cohort were born in New Zealand. The dominant career aspirations for BHSc students at the beginning of their programmes are clinical careers, particularly medicine. By the end of the degree, interest in clinical careers has decreased in favour of postgraduate study and non-clinical roles within the wider health system including health management, health promotion and community outreach careers.

**Discussion:** Undergraduate population health degrees provide an important pathway into non-clinical health roles, and understanding the career aspirations of these students can aid in health workforce and health system planning.

## Readiness for practice of new graduate physiotherapists: a systematic review

**Ms Tanya Thompson<sup>1,2</sup>**, Felicity Blackstock<sup>2</sup>, Wendy Hu<sup>2</sup>

<sup>1</sup>Physiotherapy, South Western Sydney Local Health District, , Australia, <sup>2</sup>Western Sydney University, , Australia

**Background:** Adequately prepared health graduates ensure the provision of safe, effective patient care and positive workplace experiences. Despite achieving entry-level competence and deemed ready for practice, employing supervisors report gaps in graduate performance. Determining capabilities and understanding readiness for practice will guide training provided at university and in workplaces, to support positive transition into the healthcare system and career satisfaction.

**Aim:** To describe expectations and readiness of new graduate physiotherapists for clinical practice in healthcare settings.

**Methods:** A mixed methods systematic review was conducted according to PRISMA guidelines, searching seven online databases. Studies that reported expectations, experience, and measurement of readiness were included.

Methodological quality was assessed using Joanna Briggs Institute critical appraisal checklists. A meta-analysis was not conducted due to heterogeneity of articles and narrative analysis was completed looking at themes and grouping findings as able.

**Results:** 7453 articles were identified; 25 studies met the inclusion criteria, 12 quantitative, 12 qualitative and 1 mixed methods study. Heterogeneity was observed across all studies, with variability in practice setting, participants and outcomes measured. Graduates were described as having adequate practitioner, professionalism and communication capabilities. They were not as prepared for higher level tasks including prioritising, clinical reasoning, and workplace conflict. In general, academics and employers agreed on expectations for new graduate practice but this conflicted with responses from graduates and students. Emotional and psychological stress during transition to practice was highlighted by graduates across different practice settings.

**Conclusions:** Current evidence suggests that graduate physiotherapists are ready for fundamental aspects of practice. However, more complex cognitive processes of clinical reasoning and conflict resolution were under prepared. There was a lack in alignment of expected capabilities between graduates and employers. Further research is required to examine expectations and explore readiness for practice within different contexts, comparing perspectives of graduates, employers, and university educators.

## Successful professional entry across health students: a systematic review of predictors

**Robyn Johnson**<sup>1</sup>, Associate professor A Purcell, Associate professor E Power, Associate professor S Cumming  
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Understanding the factors contributing to successful professional entry is important to all stakeholders in health professional education to ensure early identification of students at risk of failure, yet the literature in the area is not conclusive. Moreover, it is not clear whether the same factors are significant across professions.

Using Astin's (1991) Input-Environment-Outcome model as a conceptual framework, this systematic review identifies patterns of pre-program (input) and during-program (environment) factors predicting successful professional entry across a range of health professional students (outcome). The authors searched six databases. Study quality was assessed using the AXIS checklist for cross-sectional studies (Downes et al., 2016). Quality was found to be mixed, with more recent studies generally of higher quality. Data were extracted and analysed using interpretive synthesis. The 35 included studies investigated seven health professions: nursing, medicine and allied health professions.

Students' academic skills, discipline understanding, and test-taking ability predicted their successful professional entry. This is the first systematic review to identify such a pattern of predictors across health professions and degree types. These findings may assist universities in identifying and providing learning support to those students at risk. There is scope for further research to confirm this pattern of predictors in health professional students, particularly within allied health professions.



## Behavioural Outcomes of Clinical Interprofessional Education Interventions in Health Professional Student Training: A Qualitative Systematic Review

**Miss Sonya Mattiazzi**<sup>1</sup>, Associate Professor N Cottrell<sup>1</sup>, Dr N Ng<sup>1</sup>, Dr E Beckman<sup>1</sup>

<sup>1</sup>*The University Of Queensland, Brisbane, Australia*

**Background:** Interprofessional education (IPE) facilitates collaborative practice, which promotes high quality patient care, and patient safety. Previous research has suggested that behavioural outcomes should be measured to support the benefits of IPE in student clinical placements.

**Aim:** To assess behavioural outcomes of IPE initiatives in health professional student clinical training through a systematic review and qualitative analysis.

**Methods:** PubMed, Embase, Scopus, Web of Science, Taylor & Francis Online, ERIC and PsycINFO were searched. Full text articles were independently screened by two reviewers and included if agreed. Outcomes were analysed using Kirkpatrick's model modified for IPE. Studies with behavioural change outcomes were analysed and synthesized using the presage-process-product (3P) model.

**Results:** Kirkpatrick's Level 3 (behavioural change) outcomes were present in 33 studies. Analysis using the 3P model identified key contextual issues including a wide diversity in intervention settings, structures and durations. Organizational support was seen to facilitate success of IPE. Key teaching and learning processes identified included use of educational theories (8 studies, 24%) and constructive alignment (30, 90%). There was limited analysis of behavioural change outcomes in relation to interprofessional collaborative practice competencies (4 studies, 12%). These studies were all based on self-reported data with no comparator. Of the 33 included studies, 22 studies (67%) used self-reported data, with 10 (30%) using observational and one unclear. Three studies (9%) used a comparator and 30 (90%) no comparator. The majority of outcomes were positive (28, 85%).

**Conclusions:** The outcomes of clinical IPE interventions were found to be positive. However these results are uncertain due to methodological limitations and diversity in intervention design and outcome measures. Conclusions about how collaborative practice competencies change as a result of clinical IPE interventions were unable to be drawn due to limited data and quality issues. Future research is needed to address these issues.

## An integrative review of the influence of interprofessional patient safety activities on health student attitudes towards patient safety.

**Mrs Elizabeth Cleary<sup>1</sup>**, Dr Carl Schneider<sup>1</sup>, Dr Astrid Frotjold<sup>1</sup>, Associate Professor Jacqueline Bloomfield<sup>1</sup>

<sup>1</sup>*The University of Sydney, Camperdown, Australia*

**Background:** The Multi- Professional Patient Safety Curriculum guide was developed by the World Health Organisation (WHO) to support the teaching of patient safety in universities globally. Interprofessional education (IPE) has been used as an approach for instilling a positive safety culture, yet determining the impact of IPE on patient safety is challenging.

**Objectives:** An integrative review was used to synthesize research related to the perceived attitudes of student health professionals towards patient safety.

**Methods:** Systematic database searches of CINAHL, MEDLINE, Scopus and Eric were undertaken to identify relevant studies. Title, abstract and full text screening was performed according to predetermined inclusion and exclusion criteria. The CASP tool was used to assess quality. A data extraction table was used to summarise key components of each study and thematic analysis was undertaken to identify dominant themes.

**Findings:** From 8,582 articles retrieved, 6 articles were eligible for inclusion, reporting on qualitative (n=3) and mixed methods (n=3) studies. All studies were pre-post or post evaluation designs. The studies were of mixed quality, small sample sizes and demonstrated limited reflexivity in reporting. Analysis revealed three main themes: 1. Changed attitudes and behaviours towards interprofessional collaboration and patient safety, 2. The importance of teamwork, communication, and collaborative practice, and 3. Increased knowledge of roles and responsibilities in the health care system.

**Discussion:** Findings highlight the value of IPE at promoting medication safety and harm prevention. While only association evidence was obtained, positive correlations between attitudes toward patient safety and behavioural intention were apparent.

**Conclusion:** Preparing graduates for clinical practice dominated by a culture of patient safety is a challenge for health educators. Further work is needed to evaluate the impact of IPE using experimental study designs, to identify changes in student attitudes and competence that impacts patient safety.

## Nutrition in medical education: a systematic review

**Jennifer Crowley**<sup>1</sup>, Assoc Professor Lauren Ball<sup>2</sup>, Professor Gerrit Hiddink<sup>3</sup>

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In many countries, doctors are recommended to assist patients' dietary behaviors for improved health outcomes.

This systematic review critically synthesized literature on nutrition education priorities in future medical training and research.

Between May 1 and July 1, 2018, literature was searched for articles on medical students' nutrition knowledge, skills, and confidence to counsel patients, Nov 2012, to Dec 2018. Search terms included "nutrition in medical education", "medical nutrition education", and "undergraduate medical nutrition education". Topic of interest search terms included "nutrition", "knowledge", "skills", "nutrition counseling", "confidence", "nutrition care", or "nutrition education". Included studies examined any aspect of recently graduated (i.e.,  $\leq 4$  years) or medical students' nutrition knowledge, attitudes, skills, or confidence in nutrition or nutrition counseling; evaluated students' nutrition curriculum initiatives; or assessed students' perceptions of nutrition education. Curriculum initiatives were evaluated and a Mixed Methods Appraisal Tool appraised study quality assessment.

Of 66 studies identified, 24 were eligible for full-text analysis. 16 quantitative studies, three qualitative studies, and five curriculum initiatives from the USA (n=11), Europe (n=4), the Middle East (n=1), Africa (n=1), and Australasia (n=7) met the inclusion criteria. Nutrition is insufficiently incorporated into medical education, regardless of country, setting, or year of medical education. Deficits in nutrition education affect students' knowledge, skills, and confidence to implement nutrition care in practice. Curriculum initiatives demonstrated modest positive effects.

Despite the centrality of nutrition to a healthy lifestyle, medical students are not supported to provide effective nutrition care.

Institutional commitment for compulsory medical nutrition education, the establishment of a benchmark for nutrition competencies in knowledge and skills required in curricula, supported by funding for innovative approaches are required to improve nutrition in medical training.

### Interprofessional communication practices in rehabilitation: an interview study

Julia Paxino<sup>1</sup>, Prof Robyn Woodward-Kron<sup>1</sup>, Dr Charlotte Denniston<sup>1</sup>, Prof Elizabeth Molloy<sup>1</sup>

<sup>1</sup>*The University Of Melbourne, Melbourne, Australia*

**Introduction/background:** Interprofessional communication (IPC), as a component of interprofessional practice, is critical for effective healthcare especially in complex settings such as rehabilitation.

Within the rehabilitation literature there is little focus on the quality and interactional patterns occurring within teams. There is a need to investigate such aspects and further understand barriers and facilitators for effective communication.

**Aim/objectives:** The aim of this study is to examine interprofessional (IP) discourse practices of healthcare professionals working in rehabilitation teams: that is, their perspectives and experiences of the patterns of interaction in IPC, the types of texts or genres in which they engage, the facilitators and barriers of effective IPC.

**Methods:** Participants from a range of healthcare professions were recruited using a convenience sampling approach. Qualitative semi-structured interviews, primarily via Zoom, were then conducted to explore participants' perspectives and experiences of IP discourse practices. Interviews were facilitated by a discourse map, informed by the literature on IPC in rehabilitation. This discourse map was used as a visual aid to prompt discussion during interviews and provided an anchor for data analysis using Activity Theory and Genre Theory.

**Results:** Twenty four interviews have been conducted with healthcare professionals from Australia and New Zealand (12 allied health, eight nursing and four medicine). Preliminary analysis using Activity Theory and Genre Theory suggests that healthcare professionals' approaches to communication are influenced by their professional role and experience, the ward culture, and organisational processes. Participants value formal and informal channels of communication and utilise a range of tools and modalities in the provision of patient care. Findings provide insight into current communication practices, suggesting that IP discourse influences how teams promote patient safety and engage in shared decision-making. Using a discourse map to facilitate data collection and analysis demonstrates an ability to extend qualitative methodologies beyond more traditional methods.

## Creative Futures: Living your life with Parkinson's - An overview of a 2020 interprofessional programme - Let's do this!

**Philippa Friary**<sup>1</sup>, Helen Gaeta, Janette Tolick, Jane Morgan, Reena Soniassy

<sup>1</sup>*The University Of Auckland, Auckland, New Zealand*

Evidence shows better health outcomes occur when health care is client-centred within an interprofessional framework. Health students who adopt this health care model are likely to be sought after in the health workforce as the future drivers of better health care practice.

This paper reports on a work-integrated learning program that offers health students the opportunity to learn experientially within this framework.

This program invites students from several health disciplines and people with Parkinson's to work collaboratively with clinical educators to co-design a program that empowers the clients attending, to live their life with Parkinson's. Previous iterations of the program have used a client-centred, interprofessional framework. The current iteration adds a co-design feature, which enhances practice of a client-centred philosophy. The co-design community is comprised of twelve students from four health disciplines, four staff members and six clients diagnosed with Parkinson's. This approach challenges students to apply their theoretical knowledge to tailor a whole person approach within a group setting.

In 2020 this programme responded to the COVID challenge and moved online. This paper will present an overview of the program and share how Creative Futures sustained.

## Allied health clinicians' perceptions of informal interprofessional interactions in the workplace

Nicole Shaw<sup>1,2</sup>, Dr Olivia King<sup>1,3</sup>

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Informal interprofessional interactions have gained interest in recent interprofessional education, care, health and social sciences research literature. Some of the established benefits associated with these interactions include enhanced communication, teamwork, research translation and safer care. Limited evidence exists for how informal interprofessional interactions are perceived by the allied health workforce.

A survey study conducted at a large Australian health service explored allied health clinicians' perceptions of the benefits and challenges to, and enablers of, informal interprofessional interactions and recommendations to improve opportunities for these. Sixty-four responses were analysed descriptively (close-ended questions) and using a framework analysis approach (open-ended questions).

Participants identified and described a range of perceived benefits associated with informal interprofessional interactions including better collaboration, more frequent and appropriate referrals contributing to more holistic and efficient care, team rapport, sharing of knowledge, increased work satisfaction, broadened individual clinician perspectives.

Challenges to, and enablers of, informal interprofessional interactions were identified according to five themes: socio-cultural or historical practices ('the way it's always been'), physical environmental (space for interactions), timing-related factors (time constraints or lunchtime scheduling), individual (like to sit with groups or eat alone) and organisational factors (leadership, organisational matrix). Participant recommendations to increase informal social interactions in the workplace reflected three of these themes: socio-cultural practices, physical environment and organisational factors.

The findings of the current research highlight the importance of addressing physical and socio-cultural influences on interprofessional collaboration and may aid in the development of educational strategies to support these types of workplace interactions and realise the benefits identified.

## Interprofessional Learnings Radiation Oncology Registrars

**Miss Jacinta Krstic**<sup>1</sup>, Mr Glenn Trainor<sup>1</sup>, Mr Jotham Bonnett<sup>1</sup>, Ms Eman Obeid<sup>1</sup>, Mr Bruce Ha<sup>1</sup>, Mr Kaj Bailey<sup>1</sup>, Ms Olivia Mayberry<sup>1</sup>

<sup>1</sup>*Peter MacCallum Cancer Centre, Melbourne, Australia*

Radiation Oncology Registrars (RORs) and Radiation Therapists (RTs) work collaboratively to optimize the radiation therapy treatment for our patients. RORs are enrolled in a 5-year training program accredited by RANZCR and coordinate ward and ambulatory care across Peter Mac's 12 cancer streams. It is imperative RORs have a structured interprofessional education framework to aid their clinical skill development and multi-disciplinary collaboration. Currently, formal education opportunities include a series of lectures and tutorials run weekly across all Victorian cancer hospitals, with content provided by a range of multi-disciplinary team members including RTs. This valuable source of educational information ensures that our future Radiation Oncologists (ROs) are trained to the highest standard to provide our patients with evidence-based care.

RORs identified the need for further interprofessional radiation therapy education in the lead up to their exams. Ongoing clinical duties, tumor stream rotations and departmental differences limited the ability of RORs to develop a wide range of experience in all areas of radiation therapy, this was further compounded by the stresses and restrictions of COVID-19.

To prepare RORs for their final exams, the Radiation Therapy Education and Development Team at Peter Mac have developed an exam preparation program, aiming to cultivate collaborative practice, provide radiation therapy education and facilitate peer discussion to increase their knowledge and skill set when making clinical decisions. Registrars are presented with a weekly simulated exam to answer complex technical questions and problem solve various clinical scenarios.

Video conferencing tools have provided the team with an efficient way of delivering content to without impacting clinical responsibilities. The framework for online support and clinical training offers greater flexibility in the delivery of clinical experiences and training, ensuring our future ROs have the necessary clinical and professional skills to provide optimal patient care.

### Escaping the clinical to build the interprofessional

**Alexandra Little**<sup>1</sup>, Jane Ferns<sup>2</sup>, N Hawkins<sup>2</sup>, Dr S Heaney<sup>3</sup>, L Carter<sup>1</sup>

<sup>1</sup>University Of Newcastle Department Of Rural Health, Tamworth, Australia, <sup>2</sup>University Of Newcastle Department Of Rural Health, Taree, Australia, <sup>3</sup>University of Newcastle Department of Rural Health, Port Macquarie, Australia

Designing interprofessional education (IPE) activities presents a range of challenges to educators in their effort to develop relevant, practical experiences that enable students to learn ‘with, from and about’ each other. Traditionally, our activities have centred around clinical topics to assist students to see the relevance and applicability of their learning to future practice. With students from allied health, nursing and medicine, challenges lie in creating activities with relevance for all disciplines, regardless of their year of training.

Recently, we have implemented innovative activities where no clinical skills or professional knowledge are required. Activities focus on developing interpersonal, problem solving, teamwork and leadership skills, subsequently removing pressure for students to ‘be’ or ‘know’ their own profession. These activities provide an opportunity for the development of interpersonal relationships and interprofessional rapport between students, functioning as a foundation upon which students can continue to build skills in interprofessional collaborative practice. Thoughtful and structured debriefing processes have facilitated students’ ability to translate experiences within non-clinical activities to collaborative practice in healthcare. Feedback has highlighted the ease with which students link teamwork within activities to healthcare settings, and how the activities remove many barriers present in traditional IPE. Students enjoyed being able to focus on team dynamics and communication rather than feeling pressure around perceived ‘high’ expectations of clinical knowledge.

The current pandemic has placed even greater importance on developing graduates who have strong interpersonal skills, flexibility and problem-solving capabilities for safe and effective practice in a rapidly changing healthcare environment. Activities that allow students to experience the value of developing interpersonal relationships as a foundation for future interprofessional relationships are now included in our IPE program as an adjunct to clinically based activities to prepare collaborative practice-ready graduates.



## Development of an asynchronous inter-professional educational program on medication management

**Associate Professor Kellie Charles**<sup>1</sup>, Professor N Buckley<sup>4</sup>, Prof S Hilmer<sup>4</sup>, Dr L Koulajian O'Donnell<sup>1</sup>, Dr R Moles<sup>1</sup>, Dr S Carter<sup>1</sup>, Dr A Frotjold<sup>3</sup>, Dr M Maw<sup>3</sup>, Dr C Schneider<sup>1</sup>

<sup>1</sup>*School of Pharmacy, The University Of Sydney, Sydney, Australia,* <sup>2</sup>*Medical Education Unit, Sydney Medical School,, The University Of Sydney, Sydney, Australia,* <sup>3</sup>*Sydney Nursing School, University of Sydney, Sydney, Australia,* <sup>4</sup>*Central + Northern Clinical Schools, Sydney Medical School, The University of Sydney, Sydney, Australia*

**Introduction/background:** Australia is a participant of the WHO 3rd global patient safety challenge. Medication management is taught traditionally in silos within health professional degree programs. Inter-professional education enables students from multiple professions to learn core clinical and teamwork skills within authentic clinical teams.

**Aim/objectives:** To develop an understanding of individual and shared professional roles and responsibilities to safely prescribe, dispense and administer medicines.

**Discussion:** A design thinking framework was used to develop an asynchronous education program of face-to-face and online teaching activities on the main aspects of medication management and safety in 3 student cohorts; Medicine, Pharmacy and Nursing (n=750 students in total). Data analytics were built into the Canvas to quantify the student engagement and via an electronic medication chart to assess completeness of the medication chart at each stage of the medication cycle. Finally, an interprofessional de-brief session was developed for all disciplines for reflection on the shared responsibility for medication safety.

**Issues/questions for exploration or ideas for discussion:** Methodological approaches to developing new inter-professional educational activities within structured professional degrees and timetables will be discussed.



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### Escaping the lecture theatre: A team effort

**Jane Ferns**<sup>1</sup>, Mrs N Hawkins<sup>1</sup>, Mrs A Little<sup>2</sup>, Mrs L Carter<sup>2</sup>

<sup>1</sup>University Of Newcastle Department Of Rural Health, Taree, Australia, <sup>2</sup>University Of Newcastle Department Of Rural Health, Tamworth, Australia

A novel addition to the interprofessional education space, escape rooms consist of a sequence of puzzles and clues to be solved in order for participants to 'escape' the room in a set time period. They are a contemporary, innovative way to foster the development of teamwork, problem solving, leadership and communication and are designed to put participants under pressure, similar to that which is encountered by multidisciplinary teams in healthcare settings.

Our interprofessional education team undertook the design, implementation and evaluation of escape rooms to complement our existing program of educational activities. Props and puzzles were purchased to develop three portable escape rooms for use across multiple sites. Small interprofessional groups of healthcare students participated in the escape rooms, followed by a structured debrief and peer feedback opportunity designed to link the experience to clinical practice.

The escape room activity was successfully implemented at three rural sites with over 100 students from the disciplines of nursing, physiotherapy, medicine, medical radiation science, speech pathology, occupational therapy and nutrition and dietetics. Feedback from students has been consistently positive, with 100% of students either agreeing or strongly agreeing that escape rooms were an effective method of teaching teamwork and communication skills.

Escape rooms are now a permanent fixture within our interprofessional education program, proving popular among students of all disciplines. They have proven to be an innovative way to engage a range of health professional students of varying year levels to develop and reflect upon teamwork, communication and leadership behaviours.

## Moulage in trauma education: a comparison study in undergraduate medical students

Jessica Stokes-parish<sup>1</sup>

<sup>1</sup>*Bond University, ,*

The use of moulage in medical education dates to 17th century Europe. The word moulage means “to mould”, describing the technical process of making a negative mould of a body part and then filling it with wax. The antique moulage now stored in musea around the world, today the word moulage encompasses the use of special effects makeup techniques and prosthetics to replicate illness and trauma. Despite its long history, there has been very little research to inform the theoretical and practical application of moulage. This abstract describes the methods utilised to explore how the authenticity of moulage influences medical student engagement in trauma simulations.

**Methods:** A randomised mixed-methods study was deployed to explore undergraduate medical students’ perceptions of engagement in simulation. Participants were randomised to one of three groups (Control, Experimental 1 and Experimental 2) to explore differences in engagement via measurement of the Immersion Scale Reporting Instrument (ISRI), self-reported engagement and eye tracking. Participants were interviewed using the Stimulated-Recall technique.

**Results:** 33 undergraduate medical students participated in the study. There were no statistically significant differences between groups in the ISRI score. Statistically significant results were observed between the groups in the self-reported measure and eye tracking. Participants identified four primary themes that contributed to better engagement in simulation, including (1) the rules of simulation, (2), believability, (3) consistency of presentation and (4) personal knowledge. Limitations to the study include the low participant numbers and the single rater for ISRI scores.

**Recommendations:** Overall, the inclusion of moulage contributed positively to the simulation experience. Participants identified the use of moulage contributed to better suspension of disbelief in a hypothetical scenario, and provided more realistic portrayals of clinical care. The study highlights a need for further work to explore how moulage contributes to learning in health professions education more broadly.

## Breaking Boundaries: Evaluating the effectiveness of Gamification and Student Co-Creation for Anatomy during remote learning

**Nicolene Lottering**<sup>1,2</sup>, Miss Taliah Swart<sup>2</sup>, Miss Abigail Wust<sup>2</sup>, Dr. Grainne Oates<sup>3</sup>

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Richard Arum challenges that “What we are selling is not connecting with students”. Educators are challenged with lack of learner engagement, low visibility of performance in real time and delayed data in content performance. Pre-unit data indicates that students find threshold learning concepts in Anatomy difficult, leading to anxiety, academic underperformance and high attrition. This presentation considers the unique preferences of Generation Z, to reimagine remote delivery of undergraduate anatomy units to increase learner engagement and knowledge consolidation, using gamification.

293 first year students enrolled in undergraduate Health Science disciplines at Swinburne University of Technology, were invited to download Quitch®. Eight final year students were recruited to co-create material in the app under a social constructivism paradigm for four units. 12 modules featuring quizzes and multimodal resources were designed for regional anatomy. Engagement was quantified using a new four-stage ordinal scale, based on access time from quiz release. The correlation between engagement and performance for virtual ‘spotter’ examinations was assessed, as an indication of knowledge retention.

Engagement with Quitch® averaged at 80% across the units, of which 65% of students completed the quizzes weekly. Students who completed quizzes within 14 days (ordinal score 1) of release achieved an average grade 22% higher than those who did not engage. The top 20 students on the leaderboard received an average grade of 78% compared to 46% for those who chose not to participate. Student retention increased from 88% to 97% in 2020; while 79% of students reported an ‘increased sense of belonging’.

This presentation features student, educator and developer voices in their feat to build a gamified solution to address student motivation. The flipping-with-technology and students-as-partners frameworks featured, provide a working model on how to increase social connection, attendance and learning connections beyond COVID-19, in the context of blended or online delivery.

## The impact of a week of simulation on graduate entry masters physiotherapy students' confidence, preparedness and performance on their first clinical placement.

**Mrs Julia Blackford**<sup>1</sup>, Dr G Nisbet<sup>1</sup>, Dr J Alison<sup>1</sup>, Dr L McAllister<sup>1</sup>, M Fairbrother<sup>1</sup>

<sup>1</sup>*University Of Sydney, Camperdown, Australia*

The transition from classroom to clinical setting can be challenging for physiotherapy students. The use of simulation has been increasingly utilised in preparing students for practice, however, there is limited research on its impact. This study investigated the impact of a preparatory week of simulation on the confidence, preparedness and performance of graduate entry master's physiotherapy students undertaking their first clinical placement.

This mixed methods study, using qualitative and quantitative methods, investigated the confidence of students to commence placement after a week of simulation via a pre- and post- simulation questionnaire. The perceived preparedness of the students from the clinical educators' perspective was explored through interview. The outcome of the students' placement was compared with the outcomes of the previous year cohort who did not undertake the simulation week. Students' level of confidence in their ability to apply their skills increased as a result of the simulation week. The clinical educators perceived these students to be somewhat better prepared than previous cohorts they had supervised but felt this level of preparedness varied between students. The final assessment showed the simulation group performed better in the areas of clinical skills than students from the previous year, however there was no difference in the performance of professional skills.

The use of simulation appears to positively impact the preparation of graduate entry masters students for clinical placement. Further research will assist in identifying design features to maximise the impact of preparatory simulation.

## A Novel COVID-19 ‘Pause and Discuss’ Simulation Program Conducted in a Tertiary Paediatric General Medicine Service: Methodology, Theoretical Foundations and Evaluation.

**Stephen Brancatisano**<sup>1</sup>, Dr Christine Lau<sup>2</sup>, Mr Caleb Lapointe<sup>2</sup>, Dr Amy Ka<sup>4</sup>, Associate Professor Karen Scott<sup>2,3</sup>

<sup>1</sup>Blacktown and Mt Druitt Hospitals, Sydney, Australia, <sup>2</sup>The Children's Hospital at Westmead, Sydney Children's Hospital Network, Sydney, Australia, <sup>3</sup>The University of Sydney, Sydney, Australia, <sup>4</sup>Liverpool Community Health Centre, Sydney, Australia

**Background:** Simulation is well established as a pedagogical and diagnostic tool during times of health system change, and has been a core part of the global response to the COVID-19 Pandemic. General Paediatric services in Australia have responded to large volumes of children with suspected or confirmed COVID-19. Responding to deteriorating patients within this cohort has posed unique clinical and systems challenges.

**Aims:** To describe the theoretical underpinnings, and evaluate the success of, a ‘Pause and Discuss’ Simulation Program conducted on the general wards of a tertiary paediatric general medicine service in response to the COVID-19 Pandemic.

**Methods:** We conducted ten ‘Pause and Discuss’ simulation scenarios involving over fifty nursing and medical staff on the general wards of a tertiary paediatric hospital during the COVID-19 Pandemic. Simulation design was theoretically informed by Brazil’s concept of Translational Simulation [Brazil 2017]), Schon’s concept of Reflective Practice [Schon 1983], and a commitment to growing a community of practice within our institution.

We conducted a mixed-methods evaluation of the simulation program utilising Likert-scale surveys and free text components. Simulation field notes were kept, and a ‘Lessons Learned’ interview was recorded and thematically analysed.

**Results:** Participants recorded uniformly positive survey responses to the simulation program conducted, with an average of 90% of participants reporting positive responses to survey questions assessing the utility of the simulation program. Thematic analysis identified unique challenges associated with PPE and physical distancing procedures in the management of deteriorating ward-based patients. Key Lessons Learned were the importance of Simulation Safety, Sound Leadership, Conscious Reflection, and Community Building.

**Conclusion:** The ‘Pause and Discuss’ simulation model was not only a useful translational tool for responding to the COVID-19 Pandemic, but was effective in contributing to the ongoing development of a simulation community of practice within our institution.

## Effectiveness of simulation training and learning in first-year Doctor of Dental Surgery students at the Melbourne Dental School

**Dr Anuradha Polster<sup>1</sup>**, Dr Kwang Meng Cham<sup>2</sup>

<sup>1</sup>Melbourne Dental School, The University Of Melbourne, Melbourne , Australia, <sup>2</sup>Department of Optometry & Vision Sciences, The University Of Melbourne, Melbourne, Australia

**Aim/objectives:** This project seeks to evaluate the efficacy of Simodont Dental Haptic Trainers (SDHT) for training of first-year Doctor of Dental Surgery (DDS) students at the University of Melbourne.

**Methods:** A total of 99 participants attended a lecture, were provided instructional notes and a video link prior to attending the study. They were divided into two groups: Group 1 (n = 50) trained with the SDHT, whereas Group 2 (n = 49) used standard dental blocks (DB). At the first visit, both groups undertook a 45-minute theoretical and manual dexterity assessment session to establish baseline competencies. Six 1-hour sessions were allocated over four weeks for students to practice in their assigned training environment. Assessments were conducted on both groups under both training conditions at 2-hour and 4-hour timepoints. Student-perceived proficiency and confidence were evaluated pre- and post-study via surveys and assessment outcomes.

**Results:** High internal consistency and reliability of the responses was indicated by a Cronbach's alpha of 0.89. Students in Group 1 (SDHT) reported a perceived 20-30% increase in confidence and proficiency with their clinical skills post-training. 100% of the students found that the feedback was useful and would change the way they perform the technique. 90% of the students felt that simulation would improve their visual and motor skills and should be incorporated into future training programs. The reported perceived confidence in Group 2 (DB) was similar, albeit lower (10% increment). 90% mentioned that simulation should also be incorporated into future training programs, even though they were only exposed to simulation during assessments.

**Conclusions:** Preliminary findings suggest that incorporating SDHT into the curriculum may enhance the preclinical training of dentistry students and may improve the delivery and structure of the curriculum.



## Activate the brain or smart Information-Communication-Technology device during formal active-learning? Implications for learning.

Gillian Kette<sup>1</sup>, Professor Lambert Schuwirth, Associate Professor Julie Ash

<sup>1</sup>*Flinders Health And Medical Research Institute: Prideaux, Adelaide, Australia*

**Introduction/Background:** Active-learning (AL) and Information-Communication-Technology (ICT) usage should be compatible, but are they? Universities control the AL curriculum but don't control how students use ICT for learning. Disallowing ICT-use in AL is not an option as it is here to stay. So, the question is how students learn effectively in the combination of university education and the ICT afforded environment.

**Aims:** To study students' ICT-seeking behaviours and understand how they stimulate or hamper learning in this AL/ICT environment.

**Methods:** Medical students, undertaking AL tutorials, were videoed. ICT-interaction events were identified, transcribed, and triangulated with video-stimulated-retrospective-think-aloud transcripts, ICT history-logs, and field notes. The analysis was undertaken through a theoretical framework lens in conjunction with ICT affordances and AL tenets.

**Results:** Various fundamental insights were gained. E.g., students were continually transitioning between different communities of formal university-controlled, informal student-controlled, and internet-uncontrolled collaboratives (communities). Each transition incurred a cognitive loss. Additionally, learning opportunities were lost when students preferred mainly ICT-afforded communities outside of the formal face-to-face knowledge co-construction of the tutorial. These situations resulted in an ICT affordance-effectivities mismatch that led to ineffective learning. Other results will be presented.

**Discussion:** Learning is only effective if formal-controlled and informal-controlled learning-affordances are in alignment and combined purposefully. Previous assumptions that "digital-natives" are better at ICT use are contestable. Therefore, informing, alerting, and equipping educators and students with ICT-aware strategies and adapting pedagogies is critical to maximising future learning environment quality.

## Comparing the Eyesi Binocular Indirect Ophthalmoscope simulator to peer-practice for learning and updating binocular indirect ophthalmoscopy skill

Dr Amanda Douglass<sup>1,2</sup>, Dr Kwang Cham<sup>3</sup>, Dr Alexandra Jaworski<sup>1,4</sup>, Ms Alissa Maillet<sup>1</sup>, A/Prof Anthea Cochrane<sup>3</sup>, Prof James Armitage<sup>1,2</sup>

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Optometric teachers are constantly looking for methods to improve clinical skills teaching. Binocular indirect ophthalmoscopy (BIO) is a skill optometry students struggle with, requiring a significant number of pre-clinical practice hours. For qualified optometrists, BIO skill must be maintained through continuing professional development. Traditionally these hours have been undertaken practising on peers. Simulators are reported to facilitate faster skill acquisition and represent a useful adjunct for skills training. With COVID19 limiting in-person training, the use of simulators as an alternative to in-person training of clinical skills needs to be investigated. This study sought to examine the efficacy of the Eyesi BIO simulator versus deliberate practice on a peer for optometry students and clinical optometrists.

13 optometrists and 30 students were assigned to either practise on the BIO simulator or practise on a peer. Skill performance was assessed for all participants on both a peer (traditional assessment) and on the simulator (Eyesi BIO simulator). A survey and quiz were undertaken before and after practice sessions to assess knowledge and confidence.

Significant improvements were seen in both traditional peer and simulator assessments after 8-hours of practice for students and after a half-hour of practice for optometrists. No significant difference was seen in performance between those practising on the simulator and those practising on a peer. The student group practising on the simulator reported lower confidence in their ability to perform the technique.

The Eyesi BIO simulator has similar efficacy as peer practice for the learning and maintenance of this clinical skill. The decreased student confidence highlights that this tool cannot completely replace peer practice, however it may be a useful adjunct clinical skills training to significantly reduce the number of face-to-face hours required. Further research is needed to examine long-term integration into the curriculum, including application of this tool's clinical cases.

### An internship program that empowers international students to grow professionally and find their voice in the nutrition field

Dr Tammie Choi<sup>1</sup>, Ms Gloria KW Leung<sup>1</sup>

<sup>1</sup>Monash University, Notting Hill, Australia

**Background:** After a year of online learning confined to their rooms in a foreign land, many of our nutrition and dietetics international students were unable to return to their home countries during their summer holiday due to border closures. A summer internship program was designed to bring them together physically in a COVID-safe environment and work on solving an international-students-specific nutrition problem.

**Methods:** A total of 25 international students across six year-levels and from diverse cultures participated in the five-week internship program. Our in-house dietitian presented participants with an authentic nutrition problem, i.e. unhealthy eating habits being prevalent amongst the international student population. Participants were facilitated to draw on their cultural knowledge, international student experience, cooking skills and evidence-based nutrition knowledge, in the development of a resource to be used in the nutrition clinic. Employability skills self-assessment was completed pre- and post-program for comparison. A facilitated reflection was conducted at the end of the program to capture learnings from the students' and program facilitators' perspectives.

**Results and discussion:** The student-participants developed a website with healthy eating information (tailored to international students) and 50 healthy, simple, multicultural recipes. The internship served as an opportunity for the students to work together with a shared purpose. They reported a strong sense of community which was longed for after a year of isolation. Students were observed sharing acculturative experience and knowledge with one another when socialising together. Upon reflection, students reported feeling challenged by the lack of structure and assessment guide for the task. However, they were able to develop confidence in their judgement and decision-making skills through this process. Many were empowered from this internship as their cultural differences and unique international-student-experience were valued and utilised in the resource development. This contributed to the development of professional skills and formation of professional identity.

## Training the future workforce through a pandemic: The Monash University Experience

**Dr Tammie Choi**<sup>1</sup>, Ms Amanda Anderson<sup>1</sup>, Dr Lisa Baker<sup>1</sup>, Dr Jorja Collins<sup>1</sup>, Dr Suzanne Kleve<sup>1</sup>, Assoc Prof Claire Palermo<sup>1</sup>, Ms Evelyn Volders<sup>1</sup>

<sup>1</sup>*Department of Nutrition, Dietetics and Food, Monash University, Notting Hill, Australia*

**Background:** The covid-19 pandemic required novel and diverse approaches to support students' course progression, competency development and learning experience. Challenges were enhanced for our larger student cohort, and a significant lockdown period.

**Aim:** To describe: (1) the approaches taken to support Monash University Master of Dietetics students remotely during covid-19 and; (2) the outcomes of and reflections on these experiences from the perspectives of academics, students and placement providers.

**Methods:** Modifications and innovations in teaching and learning included: synchronous and asynchronous online lectures and workshops, home-based kitchen practicals, hybrid onsite-offsite foodservice and public health placements and telehealth clinical placements. In addition, overseas placements, mentoring and an internship program were created to engage international students in Australia and overseas. Data were gathered through surveys and reflections.

**Results:** Overall, these approaches enabled the majority of students to progress as planned. Satisfaction with the hybrid placement model, and employability skill development in the internship were reported. Enabling factors were: agility, flexibility and open mindedness among academics, placement providers, students and DA. Challenges for academics included: navigating organisation-specific and changing restrictions, meeting legal and accreditation requirements, instigating individualised 'catch-up' plans for students overseas, and the associated time burden and mental load.

**Conclusion:** Upheaval caused by covid-19 necessitated significant changes, and a variety of approaches and engagement from all parties impacted were critical for successful teaching and learning.

## “Some days you wanted to sit and sort of rock in your chair”: The occupational and personal impact of COVID-19 on Australian nursing and midwifery educators

Dr Karen Wynter<sup>1,2</sup>, Dr Sara Holton<sup>1,2</sup>, Ms Jessica Balson<sup>2</sup>, Professor Julie Considine<sup>1,3</sup>, Ms Val Dibella<sup>2</sup>, Ms Elisa McDonald<sup>2</sup>, Ms Sandy Schutte<sup>2</sup>, Ms Melody Trueman<sup>2</sup>, Professor Bodil Rasmussen<sup>1,2,4,5</sup>

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**Background and Aim/s:** COVID-19 has had a significant impact on nurses and midwives. As yet, there is little evidence about the occupational and personal impact of the pandemic on nursing and midwifery educators. The aim of this study was to describe the impact of COVID-19 on Australian nursing and midwifery educators.

**Methods:** All nursing and midwifery educators employed at two metropolitan health services in Melbourne, Australia, were invited to participate in an interview (July–August 2020). Participants were asked about their experiences and perspectives of the COVID-19 pandemic including changes to their work role, barriers and enablers to implementing and providing education programs including specific COVID-19 programs, positive aspects, and changes which may be sustained after the pandemic. Interviews were recorded and transcribed verbatim. Data were analysed thematically using NVivo v12.

**Results:** Twenty-seven nursing and midwifery educators participated; all reported that COVID-19 had increased their workload substantially. New COVID-19 education programs had to be developed rapidly and many delivered online. Lack of appropriate technology and technological skills, constant changes to COVID-19 guidelines, redeployment to clinical roles, and time spent managing overwhelmed and anxious staff members presented significant barriers to modifying existing programs and implementing new ones. Good communication and support from management and colleagues were reported to facilitate good provision of education. Participants also reported the negative impact of COVID-19 and related work changes on their mental health. The use of technology such as Zoom was seen as a “silver lining”, making education more accessible to nurses and midwives. Online education, virtual meetings and working at home were perceived as practices that would be continued post-pandemic.

**Conclusion:** The COVID-19 pandemic has had a considerable impact on nursing and midwifery educators. Educators would benefit from continued and further occupational and psychosocial support during the current pandemic and future adverse events.

# Zooming into Medicine: how James Cook University redesigned selection interview processes in 2020

Ms Deanne Cassidy<sup>1</sup>, **Ms D Cassidy<sup>1</sup>**, Mr A Gavan<sup>1</sup>, Mr M Russell<sup>1</sup>

<sup>1</sup>James Cook University, Townsville, Australia

The Bachelor of Medicine Bachelor of Surgery (MBBS) degree at James Cook University (JCU) focuses on rural, remote and underserved communities, tropical medicine and Aboriginal and Torres Strait Islander peoples, through the provision of socially accountable health professional education, community involvement, innovation and leadership.

Typically, the JCU MBBS selection process includes a 'live' panelled interview, using a behavioural, criterion-based matrix. The interview provides candidates with an opportunity to demonstrate suitability and desire to study medicine; whilst enabling interviewers the capacity to evaluate suitability, and predict, which candidates are best suited for this course.

In 2020, an early upwards trend in the number of applications to JCU was identified, within the frame of an everchanging COVID landscape. This triggered discussions between the selection team and technical staff to identify, source, design and execute an online plan that remained fair, confidential, transparent, reliable, and equitable. Unfortunately, no online platforms appeared capable of supporting the volume and nature of these paneled interviews, resulting in the decision to use existing JCU resources, and the utilization of Zoom.

In December the selection team carried out the single largest Zoom endeavour in JCU's history, accounting for approximately 10% of the total average Zoom usage in 2020. More notably, the team completed 904 Zoom interviews (over 346 000 zoom minutes). Each panel consisted of three interviewers and a 'Zoom Master', that supported the administrative and technological components of the online selection process. This incredible feat required over 200 medical professionals, 200 JCU staff members and 200 community members to fulfil the numerous role/s including interviewer, panel chairperson and or 'Zoom Master', with many performing in more than one role, at different times.

JCU's innovative online selection process, born out of necessity, has opened a pandora's box for the future, well beyond the impacts of COVID-19.

## Enhancing medical students' participatory learning during final year: Learnings from pre-internship during COVID

**Kate McCloskey<sup>1</sup>**, Dr Karen D'Souza

<sup>1</sup>*Deakin University, Geelong, Australia*

**Aim:** To report the benefit of an early pre-internship, moved through necessity in the COVID pandemic with unexpected positive consequences.

**Background:** Deakin pre-internship rotation has traditionally run as the last rotation of final year; after assessment and discipline-specific rotations were completed.

During the COVID pandemic, many medical students were removed from hospital clinical placements. Furthermore, there was uncertainty regarding the need to “graduate” the students early, or prepare for student workforce roles. In this context, the pre-internship rotation (PRINT) was moved forward to the middle of final year.

PRINT was redesigned to run over 5 weeks as a blended online and clinical placement program. Students experienced a different “virtual” intern workforce role each week.

Week 1: COVID

Week 2: Surgical

Week 3: Medical

Week 4: Emergency department

Week 5: Cardiac

Students were provided online resources related their virtual ward, with experiential small-group teaching in clinical reasoning tutorials, clinical skills tutorials and an end-of-week simulation as the intern managing ward patients. The tasks the students completed increased in complexity over the 5 weeks. All tutorials and simulations were conducted online using Zoom. The clinical placement program consisted of active involvement in performing intern tasks, under supervision.

Student feedback from the rotation was positive. Unexpectedly, students reported that having a pre-internship earlier in the year set them up well for future learning, by increasing their capacity to participate in junior doctor tasks in subsequent rotations.

The changes made to PRINT in 2020 were so successful, that in 2021 PRINT encompasses two rotations - One early in the year as part of the students usual discipline rotations, and the second in the traditional end of year spot. Early feedback continues to support early introduction of PRINT in final year.

**Conclusion:** There are multiple unexpected benefits of a PRINT program early in final year.

## Using disruption to facilitate uptake of high quality online learning

Associate Professor Femke Buisman-Pijlman<sup>1,2,3</sup>

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The lockdowns of 2020 moved innovation of online education into rapids. Many learners moved into fully distance learning at an uncomfortable pace, forcing educators to adopt teaching approaches in which they were not trained. Student expectations will be changed forever, but that is not to say that everyone loves online. The challenge is to pick what works for a certain audience and optimise the balance between face-to-face / online. Let's unpack this using evidence and experiences from health education.

First, the opportunity: many educators have dipped their toe in the water and have a better understanding of what works for their students and for them. Using more online components improves flexibility and removed hurdles to study. Online components can also facilitate self-paced learning and revision, interactions with global experts, and building networks with peers.

Risks of quick transition are abundant as well. Students have been thrust into online learning. Students and educators may think online study is not for them based on their experience of "ad hoc" online study. Being part of educational reform supported by learning designers to develop a program of study using blended or fully online approaches is a different journey though. Unfortunately, purposefully online content requires time to develop and investment. Students often also cannot determine the quality of the experience before enrolling.

Let's use the opportunity to improve educational offerings and the student experience by consciously choosing what components of a course can be best taught online and face-to-face. Importantly, online learning should not be isolating, but provide a rich and authentic learning environment where learners can connect with each other and with experts. Synchronous or not, a social connection is an enriching part of any course and key to student engagement. Let's use the disruption and guide the rapid effectively to support strong outcomes.



### Post Covid-19 lockdown participant disconnection with the return to concurrent delivery – Is equal engagement still possible when simultaneously interacting with Health Professionals in person and online?

Ms Sandy Baxter<sup>1</sup>

<sup>1</sup>*Curtin University, Perth, Australia*

**Introduction/Background:** Leading a concurrent session being simultaneously delivered in-person and online provides many benefits but is also challenging. Depending on the circumstances, one or both participant types may feel less connected or engaged by their experience. Conversely, when all participants undergo either all in-person or all online delivery this can equalize the relationship and sense of engagement. Despite this, the benefits and flexibility of concurrent delivery make it valuable including for use by health professionals.

**Aim/objectives:** The aim of this free scholarship oral presentation is to examine the post Covid-19 lock down existence and challenges for health professional participants during concurrent simultaneous in person and online delivery sessions.

**Discussion:** Regular Covid-19 lock down periods necessitated an increase to fully online delivery. During 2020, health professionals undertook more work, professional, and education related activities fully online. With all participants interacting fully online this provided the ability to still remain connected, but also a more equalised relationship that aided connectivity and collaboration. As lock down restrictions now become less frequent, concurrent sessions being simultaneously run in person and online have now resumed. In going back to concurrent delivery some health professionals may no longer feel as equal and connected. Although a necessary pandemic response, these changes in delivery experience may have made health professionals even more aware of the disconnect and imbalance.

**Issues/questions for exploration or ideas for discussion:** Does an obvious participant engagement imbalance exist when health professionals participate in concurrent simultaneous online and in person sessions? Has this participant engagement imbalance become more obvious as we come out of Covid-19 lock down? What lessons can we learn now we have this heightened awareness?

## Integrating high quality online learning resources with clinical education – preparing students for practice!

**Adrienne Torda**<sup>1</sup>

<sup>1</sup>*UNSW Sydney, Randwick, Australia*

**Background:** Even before the COVID-19 pandemic, there has been an increasingly rapid transition to online learning in healthcare education. The rapidity of this escalated during 2020 which saw healthcare students excluded from clinical environments. Gaps in clinical training emerged because of lack of personal protective equipment, hospital restrictions and clinical work overload for supervisors. It was in this environment that we developed and delivered an online 'Preparation for Practice' curriculum for senior medical students to prepare them for clinical practice in a complex and rapidly changing clinical environment.

**Methods:** To focus on the key aspects of a 'Preparation to Practice' curriculum we partnered with recent medical graduates and used previous surveys of skill readiness to identify major topics of need and utility for students. Content was delivered using 3 online approaches: a condensed e-workshop, an innovative interactive online learning platform and ongoing 'back to base' online learning sessions triggered by student-driven topics. We evaluated these using online surveys and platform-based analytics.

**Results:** Student engagement was high. Likert scale ratings averaged above 4.5/5 in relation to online activities being well organised, relevant, practical and identifying skills that they needed to learn. They particularly valued learning activities that focused on organisation, time management, physical and mental well-being and management of deteriorating patients.

In comparison to face to face learning, they found online learning to be more efficient, engaging and flexible. It also made high quality learning more accessible to rural students. Knowledge gains comparing this hybrid approach to learning were no different to historical cohorts (assessed by comparisons of summative assessments).

**Conclusion:** This approach, using high-quality, interactive online educational activities for skill development to complement clinical learning was highly successful and builds resilience into the medical program. This approach to learning is flexible, inclusive and uses latest educational pedagogy and design.



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## Entrustment Tasks to Build a Digitally Capable Health Workforce

Dr Julie Gustavs<sup>1</sup>, **Dr Caroline Clarke<sup>3</sup>**, Ms Theanne Walters<sup>1</sup>, Dr Shaun Hosein<sup>1</sup>, Dr Mohamed Khalifa<sup>2</sup>  
<sup>1</sup>AMC, Majura Park, Australia, <sup>2</sup>Australian Digital Health Agency, Sydney, Australia, <sup>3</sup>Royal Eye and Ear Hospital, Melbourne, Australia

The concept of Entrustable Professional Activities (EPAs), first proposed by the Dutch Medical Educationalist, Olle Ten Cate in 2005, is an innovation in competency-based medical education. As described by Ten Cate (2013):

- EPAs are not an alternative for competencies, but a means to translate competencies into clinical practice.
- Competencies are descriptors of healthcare practitioners, EPAs are descriptors of work.
- EPAs usually require multiple competencies in an integrative, holistic nature.

EPAs focus on the concept of trust. In high stakes environments such as health, where the competence of workers is paramount to the health and safety of patients and wellbeing of co-workers, trust and the degree to which workers can entrust more junior or less experienced members of the health team to perform tasks independently is central to the smooth operations of health settings and quality patient outcomes.

This session will share findings of a research project undertaken by the Australian Medical Council and Australian Digital Health Agency on building a digitally capable medical workforce. We will explore discussion questions related to digital health across the Australian and New Zealand Health Workforce:

- How can entrustable professional activities be used to frame digital capability development across the medical workforce? How relevant are these tasks to broader health professions across the health system?
- How can we develop tasks to build foundational capability in digital health across the continuum? What are the challenges and benefits?
- What teaching and learning support do we need to enable this learning?
- How do we assess these tasks?
- How do we measure impact of the innovation and achievement of changes in performance for individuals, systems and improved experiences and outcomes for patients?

Integral to shifts in practice is workforce development and engagement of education providers, accreditors and health systems.

## Mapping the boundaries and affordances of online OSCE-type assessments

[A/Prof Julie Ash<sup>1</sup>](#), Dr Katrina Morgan<sup>1</sup>, Ms Dayle Soong<sup>1</sup>, Dr Helena Ward<sup>1</sup>, Prof Lucie Walters<sup>1</sup>, Dr Adelaide Boylan<sup>1</sup>, Dr Andrea Dillon<sup>1</sup>, Dr Jennie Louise<sup>1</sup>, A/Prof Robert Bryce<sup>1</sup>

<sup>1</sup>*University of Adelaide, Adelaide, Australia*

Presentation: Restrictions imposed by the COVID19 pandemic restricted use of the traditional OSCE to assess Clinical Skills leading to a local, national and international flurry of creative means of assessing clinical skills online. This PeArLs will commence with a short presentation the range of 'OSCE alternatives' initiated at one medical school at both metropolitan and rural sites and lessons learned, to open up a discussion about the range of innovations, the revealed boundaries of utility and the affordances of online clinical skills assessment. These will be mapped to inform future practice. This session is relevant to clinical skills learning and assessment in the distributed health professional education context.

### Audience Discussion Questions:

Briefly share your online OSCE innovations or experiences

Did these achieve what you needed from a clinical skills assessment?

What were the limits or critical gaps of this assessment?

How did you push these limits?

What were the opportunities (e.g. for learning) that were afforded by this format?

What was the student experience?

What will you do differently in future?

Conclusions: Note: Depending on numbers and technology the discussion part of the session could be done in small groups leading to shared conclusions

## Becoming a GP – The lived experience of GP registrars and implications for Training Organisations

Duncan Howard<sup>1</sup>, Dr Christine Bottrell, Dr Jenni Parsons

<sup>1</sup>*MCCC GP Training, Parkville, Australia*

Introduction/background: Becoming a GP means becoming competent and confident in managing patients of any age presenting with undifferentiated illness, but it also involves the formation of an identity as a GP. This process is a complex one as learning and “becoming” involves not only individual factors, but social; cultural; relational and institutional. A research study conducted in 2018-19 followed the audio-diary reflections of a cohort of GP registrars through their first six-month term in general practice.

Exploring and more fully understanding the lived experience of this journey will enable improvement of the GP teaching program for subsequent GP registrars.

Purpose/objectives: Findings from the project will be presented under a number of headings including research methodology/reflective process; professional identity formation; transformative learning experiences; and the emotion of learning. The registrar reflections will inform the work of a number of small groups within the workshop. Using those reflections, small groups will discuss the findings and generate ideas around implications for general practice training and broader health professional training, then regroup to collate a vision for training.

Issues/ questions for exploration or ideas for discussion:

Can we use the reflections to better understand the “metamorphosis” of becoming a GP?

Is the emotional side of “becoming a GP” dealt with adequately in the training process?

How can the reflective process authentically communicate the early career experiences of registrars and be used to inform training programs for General Practice, and more broadly for health professionals?

## Decolonising a health professional curriculum

Ms Joy Rudland<sup>1</sup>, **Professor Suzanne Pitama**<sup>2</sup>

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Decolonisation of educational providers and curriculum have become more topical. Now is an opportunity to consider how a health professional curriculum can be decolonised. A reliance on and dominance of westernised perspectives has impacts on the relevance of a health professional curriculum. The concept of a colonised curriculum may be realised in a number of ways including a bias towards individuals entering medical school, poor representation of clinical educators in the curriculum and health care practice, an over emphasis on adopting health care practices commensurate with the well-being of the none indigenous population and perpetuating unhealthful indigenous stereotypical attributes. A Eurocentric neo-colonial narrative may unhelpfully homogenise and essentialise the indigenous population. A colonised society and curriculum reflective of westernised approaches results in health inequalities in the indigenous population. Within the health care educational sector it may not just be what is taught but how it is taught that reinforces colonised practices.

Decolonising a curriculum is challenging within a colonised society and or educational institution. Within the Aotearoa context strategies adopted include a strong admission policy reflecting a 'Mirror on Society', ensuring strong Māori leadership, adoption of the native language Te Reo and a Māori Indigenous Health Framework, the Meihana model, that adheres to cultural competence and attention to appropriate assessment practices to reduce inadvertent stereotyping.

This PeArLS offer an opportunity for the audience from any health professional to share their experiences of a colonised curriculum and to consider what needs to change to decolonise a curriculum.



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## Medicine and the Ambiguous Measurement of Uncertainty: A meta-analysis of healthcare uncertainty tolerance measures

**Dr Georgina Stephens<sup>1</sup>**, Md Nazmul Karim<sup>2</sup>, Mahbub Sarkar<sup>3</sup>, Adam Wilson<sup>4</sup>, Michelle Lazarus<sup>1,3</sup>

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**Introduction:** Uncertainty tolerance (UT), a construct describing individuals' responses to uncertainty, is considered highly relevant to healthcare practice. Unfortunately, the existing research focused on measuring UT is inconsistent between studies and across measures. To help unravel UT measurement ambiguities, this study asked 'What is the evidence for the reliability and validity of healthcare-specific UT measures?'

**Methods:** This study evaluated healthcare UT measures administered to medical professionals and/or students with provision of evidence for reliability and validity. Four research databases were searched for eligible studies. A rubric following published psychometrics principles was used to extract study features, reliability coefficients, and validity evidence. A meta-analysis of Cronbach's alphas was conducted. A meta-regression evaluated the influence of UT scales and population types on the summary outcome.

**Results:** Thirty-six studies met inclusion criteria. Four measures appeared in at least four included studies: Physicians' Reactions to Uncertainty 1990 (PRU1990) and 1995 (PRU1995), Tolerance for Ambiguity (TFA), and Tolerance of Ambiguity in Medical Students and Doctors (TAMSAD). The meta-analysis revealed an acceptable aggregated internal consistency across all measures (0.77). Per the meta-regression, aggregated alphas for each UT scale ranged from good (PRU1990 0.83) to poor (TAMSAD 0.69), and were higher for doctors (0.78) than for medical students (0.70). Validity evidence was most prevalent for concurrent and predictive validity, and weakest for response processes.

**Discussion:** No UT measure had a fully comprehensive validity argument. The lack of evidence for response processes suggests the way participants conceptualise the UT construct is unclear, and given population differences in reliability, may differ between students and experts.

**Conclusions:** Currently, the reliability and validity evidence for UT measures in medical student populations is inadequate. We caution against using these measures for high stakes applications pending further research (e.g. clarifying response processes using think-aloud protocols).

## Incorporating self-reflection and clinical decision making into complex clinical vignettes to uncover student cognitive bias(es)

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**Introduction/background:** Patients present with complex, potentially ambiguous, health concerns. Clinicians must develop a hypothesis of the underlying cause(s), implement investigations, analyse data, make accurate diagnoses and recommend effective treatment to ensure satisfactory patient outcomes. This process is influenced by cognitive biases (CBs); an unconscious tendency to respond to contextual cues in a particular way. CBs may reduce objectivity, lead to delayed or inaccurate diagnoses and suboptimal patient management plans. There is continued debate as to which CBs are most prevalent and contribute most to diagnostic error.

The challenge for educators is generating authentic clinical vignettes for assessment purposes. In an effort to maintain fairness there is a tendency to write unambiguous patient problems with 'textbook' answers; reducing authenticity and impeding development of skills to cope with diagnostic uncertainty.

**Aim/objectives:** To identify, in optometry students, which CBs influence decision making in complex clinical vignettes; associating diagnostic error, bias and academic performance.

**Methods:** A retrospective analysis of clinical reasoning assessments involving extended responses to clinical vignettes, including self-reflection on the reasoning process, was performed (n=285). A deductive thematic approach was used to identify the number and type of biases which was compared against performance.

**Results and discussion:** Over-attachment to diagnosis was responsible for 53% of biases. There was a significant ( $p < 0.0001$ ) inverse relationship between the total number of CBs and marks (Pearson  $\beta = -0.279$ ). Kruskal-Wallis H test showed there was a statistically significant difference in grades when cognitive bias was present,  $\chi^2(4) = 22.88$ ,  $p < 0.001$ . Passive over-attachment, context and projection drove this relationship. Self-reflections indicated that students appreciated the impact of these biases.

**Conclusions:** Optometry students are influenced by their CBs to the detriment of academic performance. Complex clinical vignettes provided an authentic assessment by which student CBs could be identified. Self-reflection may be effective in reducing bias and the likelihood of diagnostic error.

## “A whole lot of uncertainty”: A longitudinal qualitative study exploring clinical medical students’ experiences of uncertainty

**Dr Georgina Stephens<sup>1</sup>**, Mahbub Sarkar<sup>2</sup>, Michelle Lazarus<sup>1,2</sup>

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**Introduction:** Uncertainty Tolerance (UT), a construct describing individuals’ responses to uncertainty, is recognised as impacting healthcare outcomes, including medical students’/doctors’ psychological wellbeing. Presently, little is understood about how medical students experience uncertainty, nor factors that may impact this. Thus, our research question was “How do medical students, in their clinical years, experience and manage (i.e. “tolerate”) uncertainty?”

**Methods:** Through a social constructionist approach, we conducted a longitudinal qualitative study of medical students transitioning from preclinical years to clinical placements (n=23), and to practice (n=18). Data were collected across the 2020 academic year, with students completing reflective diary entries during semesters (n=230, totalling 178,308 words), and end of semester semi-structured interviews (n=40). Data were analysed by framework analysis, using an abductive approach based on the integrative UT model from Hillen et al. (Soc Sci Med 180:62–75, 2017).

**Results:** Participants described a variety of uncertainty stimuli: Some related to clinical medicine, others extended to professional and personal uncertainties. Multiple factors (“moderators”) appeared to impact students’ UT, including: People, past experience, sense of purpose, personal characteristics, guiding clinical information, educational structures and reflective learning. Responses to uncertainty ranged from negative (e.g. anxiety, avoidance) to positive (e.g. interest, action). Longitudinally, the dominant pattern across student data was for negative responses. By contrast, students’ responses to uncertainty upon reflection demonstrated a dominant positive pattern, including: Identifying learning opportunities, gratitude, and developing resilience.

**Discussion:** Our results improve the definition of the UT construct within a clinical learner population. Participants identified that reflective diary engagement served to moderate experiences of uncertainty, suggesting that repeated, formative reflective learning may assist students to develop UT.

**Conclusions:** UT in medical students is dynamic, complex and extends beyond clinical uncertainties previously described. Reassuringly, this research identifies multiple factors that may impact UT, with possible avenues for educational interventions.

## Moving beyond the conscious competency learning matrix. Contextualised reflective competence: a new learning model promoting reflective practice for clinical training.

A/Prof Stuart Lane<sup>1</sup>, Prof Christopher Roberts<sup>1</sup>

<sup>1</sup>Sydney Medical School, Camperdown, Australia, <sup>2</sup>Nepean Hospital, Penrith, Australia

**Background:** Reflection is a metacognitive process that allows self-regulation and the promotion of lifelong learning, and an essential requirement to develop therapeutic relationships and professional expertise. The medical literature is lacking on guidance for learners and educators to develop reflective abilities. We developed a framework called contextualised reflective competence (CRC), to assist students/trainees and educators in developing, maintaining, and ensuring reflective practice in the context of professional experiences.

**Method:** The CRC framework was based around our program of research into junior doctors delivering open disclosure communication after medical error. We used the conscious competency framework of learning as a conceptual framework to illuminate our research findings, as it resonated with the interns' rationalisation of the difficulties in their clinical practice and the clinical environment around them.

**Results:** The current understanding of the conscious competence learning framework needs to be reconceptualised, as it lacks vital concepts, the promotion of ongoing reflection practice, accurate assumptions of the learner's original mindset, variations in everyday performance, and erosion of skills.

In our framework, if the learner possesses appropriate reflective practice, CRC, they move through the upper loop, achieving unconscious competence. If the learner does not possess CRC, they move through the lower loop into generalised reflective incompetence (GRI), characterised by cognitive dissonance and rationalisation, leading to errors and non-learning. GRI is a temporary state with appropriate supervision.

Our research demonstrated that conceptually CRC was related to critical cognitive frameworks, such as intellectual humility, situational awareness, developing a 'growth mindset', and belongingness.

**Conclusions:** The Contextualised Reflective Competence framework promotes learners' understanding of their core competencies and provides opportunities for personal critical reflection. It provides educators and supervisors with a diagnostic pathway for those with reflective incompetence.

## Complementary Role of Short Message Service (Text message) for immediate feedback from students in pre-clerkship course evaluation

Jeremiah Ojha<sup>1</sup>, Mr. M Bourne<sup>1</sup>, Mr. L Santiesteban<sup>1</sup>, Dr. K Bauckman<sup>1</sup>, Dr A Eason<sup>1</sup>, Vijay Rajput<sup>1</sup>

<sup>1</sup>*Nova Southeastern University, Dr Kiran C.Patel College of allopathic Medicine, Fort Lauderdale, United states*

**Background :** End-of-course evaluation surveys have long been the benchmark for gauging student feedback. However, this method has limitations of low participation and poor recall. SMS as a complementary feedback assessment tool could help overcome challenges in current evaluation systems.

**Summary of work:** Thirty Four percent of the 2020 first year MD class (17 students) enrolled in an IRB approved Fall 2020 SMS survey trial. The website SimpleTexting.com was utilized to send anonymous text messages in an organized and uniform manner. Students received no more than three text messages per week for pre-selected teaching activities. At the end of each designated session, SMS messages were sent to students asking them to select between a thumbs up (1) or thumbs down (2) via SMS. They were also given the option to write additional feedback in less than 160 characters. All responses were collected and analyzed.

**Summary of Results:** Overall, 17/50 (34%) of students participated with total of 30 educational sessions were polled. The response rate was 21/30 (69.54%) with a high 29/30 (96.67%) and a low of 15/30 (50.00%) response rates. The average session approval rating was 1.18 with 12/30 (40%) and 2/30 (7%) receiving approval and disapproval, respectively. There was an average of 3.87 comments per session with 2 sessions receiving a high of 11 comments and 7 sessions receiving 1 comment each. The average rating/comments for session were as follows: PBL = 1.03/2.4; BSL = 1.15/3.35; TBL = 1.24/4.43; AL = 2/11.

**Discussion:** Our data supports the notion that consistent, immediate student feedback can provide insight to individual teaching sessions, opposed to a global critique of the course. A review of student succinct comments conveyed meaningful and constructive ideas. Immediate succinct feedback of the learning sessions through SMS has the potential to increase student participation for course evaluation.

## Designing hospitals: when language is ambiguous

Dr M Phelps

<sup>1</sup>*The University of Sydney, Camperdown, Australia*

My research focuses on better designing health facilities such as hospitals for learning. User groups and patient-centred design have become integral to most health facility projects in Australia. Learners have been largely neglected as stakeholders when considering planning for new and repurposed health facilities, even though they may be described as ‘teaching hospitals’ or affiliated with a university or training provider. Given the current building ‘boom’ in health facilities in Australia this may be a missed opportunity.

One of the challenges for switching to a learner-centred viewpoint is communication and language. In this presentation I will draw on literature from across disciplines that highlights this. The interdisciplinarity of building projects brings together designers, planners, builders and users who speak and understand the language and images or iconography of their discipline and not necessarily that of the others; a nurse practitioner may not speak ‘architect’, an engineer may not understand ‘radiographer’. I will use specific examples as illustrations, like ‘interstitial’; used in medicine, literature criticism, business, education, organisational psychology, ‘interstitial’ may have different meanings in each of these contexts.

Design thinking is another recent buzzword in health facility planning. Could design thinking assist project user group members to decrease ambiguity and increase communication efficacy?

I will invite comment from the audience regarding their experiences with ambiguity and communication during interdisciplinary design processes and codesign.

## Embracing clinical ambiguity through reasoning: Implementation of a novel clinical reasoning workshop for pre-clinical medical students

**Dr Nicola Wood**<sup>1,2</sup>, Dr J Inglis<sup>3,1</sup>, Dr K Chan<sup>2</sup>, Dr A Chrispal<sup>2,1</sup>

<sup>1</sup>College of Medicine and Public Health, Flinders University, Bedford Park, Australia, <sup>2</sup>Southern Adelaide Local Health Network, Bedford Park, Australia, <sup>3</sup>Central Adelaide Local Health Network, Adelaide, Australia

**Background:** Clinical reasoning involves integrating and applying different types of knowledge and reflecting upon the process used to arrive at a diagnosis. Clinical reasoning is a key competency of graduating medical professionals (1) making it a focus of contemporary medical education endeavours. We aimed to develop a novel workshop to improve understanding of the key concepts of clinical reasoning and to further develop clinical reasoning skills.

**Methods:** A novel 120-minute clinical reasoning workshop was delivered to 154 second-year pre-clinical Doctor of Medicine students at Flinders University by a consultant general physician in conjunction with trainee medical officers. The workshop began with a short didactic introduction, followed by a clinician role modelling clinical reasoning by thinking out loud and ending with students working through clinical cases in small groups with clinician facilitators. Students were asked to complete a pre- and post-session self-evaluation of competence in clinical reasoning on a 4-point Likert scale.

**Results:** The self-evaluation was completed by 136 students (88% response rate). A statistically significant improvement in self-assessed competence was demonstrated for all evaluation questions; explaining how a clinician reasons through a case, comparing System 1 and System 2 thinking, describing how diseases are stored as illness scripts, generating a problem representation, using a diagnostic schema to generate differential diagnoses, ranking the likelihood of different diagnoses and using feedback to improve clinical reasoning ( $p < 0.0001$  for all measures).

**Conclusion:** Students perceived that these novel workshops were an effective means to better understand and apply clinical reasoning concepts. A follow-up study will assess to what extent students have been able to apply these concepts to cases encountered whilst on clinical placements and within case-based classroom teaching.

### Reference

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## Creating effective patient educators in the health professions

Dr Roma Forbes<sup>1</sup>

<sup>1</sup>*The University Of Queensland, ,*

**Introduction/background:** Patient education is fundamental in effective patient management and a clinical competency required for practice. Current literature suggests that novice health professionals may not be prepared for this important area of practice and most health professional students do not undertake specific training in this area.

**Aim/objectives:** This presentation will outline the implications of a series of studies investigating patient education use, preparedness, self-efficacy and performance of physiotherapy students, new-graduates and professionals. In doing so, this presentation will provide health professional educators with an understanding of the importance of patient education training and how training can be embedded into health professional curricula using contemporary approaches including simulation.

**Discussion:** Patient education is a critical skill for health professionals. Research has indicated that without specific training, health professionals tend to rely on didactic and generalised patient education rather than using patient-centred approaches. This presentation will provide health professional educators with an understanding of how to structure patient education training of health professional students within their programs.

**Issues/questions for exploration or ideas for discussion:**

Why is patient education an important skill for health professional students?

What issues do novice health professionals face in practice?

How can patient education skills be taught in a patient-centred way?

How can I foster patient education self-efficacy and skills into my clinical teaching?



## Multi-level approach to supporting International Medical Graduates' (IMG) transition to the workplace

**Dr Kajal Patel**<sup>1</sup>, Dr Brooke Sheldon<sup>1</sup>

<sup>1</sup>*Launceston General Hospital, Launceston, Australia*

**Background:** It is estimated 32.2% of the Australian Medical workforce is comprised of IMGs. It is vital for IMGs to integrate into the Australian Health system effectively ensuring IMGs are orientated to the healthcare system and appropriately clinically trained.

Despite considerable evidence about the perceived need by IMGs as well as healthcare institutions regarding the importance of support structures, supervised practice and educational programs, the incorporation of IMG support and training in clinical practice currently remains limited.

The Launceston General Hospital (LGH) has developed multi-level support for new IMGs at the LGH, targeting organisational, training and individual contextual factors. The aim of this approach is to provide sustainable, engaging structures to aid the integration of IMGs into the Australian Healthcare environment. Discussion will involve the process of implementing such support, feedback and a summary of lessons learnt.

Issues/Questions for exploration or ideas for discussion:

Many organisations fail to implement programs engaging IMGs. We will present an innovative approach to IMG support that will be of interest to educators involved in orientating and supporting new IMGs to the Australian healthcare system.

## Service learning placements: Innovation for creating work ready graduates

**Charmaine Swanson**<sup>1</sup>, Mrs Rebecca-Kate Oates<sup>1</sup>, Miss Claire Slater<sup>1</sup>

<sup>1</sup>*Univeristy Of Melbourne, Shepperton, Australia*

**Introduction/background:** Service learning placements for health students is growing not only in numbers but also in value in Australia. On a service learning placement students develop work ready skills whilst providing a much needed service to the community. Students are consistently reporting on the benefits of having been on a service learning placement and universities have also begun to gain confidence in the outcomes of these placements.

**Purpose/objectives:** The success of a service learning placement is dependent on all stakeholders understanding what exactly a service learning placement is and how it is of value to all involved including the host site, the student, the university and the community. Health students on service learning placements play an active role in transforming community health outcomes and hence it is essential that these placements are well designed and managed to ensure their success. In this session the experience of the Going Rural Health team in supporting service learning placements in rural Victoria will allow for further exploration of service learning placements and in particular how adaptable this model is in a global pandemic to maintain and/or grow placement capacities.

**Information covered:** How to develop a successful service learning placement, why a service learning placement is necessary for all health students, how service learning transforms a student as a contributor to society, what benefits have students gained from the service learning model, what students do on a service learning placement, what impact have placements had on health outcomes and how the service learning model can pivot to accommodate effective online placements. Participants will have the opportunity to learn how placement opportunities can be created and gain confidence in the use of the service learning model as a tool for transformational learning and a means to ensure students develop work ready skills.

## Raising the ceiling on Allied Health Assistant career pathways with education opportunities

Mrs Lucy Whelan<sup>1</sup>

<sup>1</sup>Monash Health, Clayton, Australia

Introduction/background: Allied Health Assistants have reported over time, the ceiling effect felt when they reach the highest available grading, Grade 2 and 3 in Victoria. A recent workforce publication by Nancarrow for the Department of Health and Human Services (DHHS) Victoria reported that , 50% of Allied Health Assistants plan to leave their roles to complete further study in the next five years. The attrition of experience and training with this is less than desirable..

Monash Health currently employs 150 Allied Health Assistants and is a placement provider of choice for Allied Health Assistant students. With the growing demand on health care,, we need to find ways to grow our Allied Health Assistant workforce and keep them engaged. Allied Health Assistants identified in staff surveys that further up-skilling, education and training were considered ideal professional development opportunities to enhance their job roles.

Aim/objectives: The aim of this initiative was to broaden career pathways and provide a professional development opportunity for Monash Health Allied Health Assistants with an interest in education.

Discussion: In partnership with an Allied Health Assistant education provider, Monash Health offered the Certificate IV in Training and Assessment to a cohort of Monash Health Allied Health Assistants over a six month period.

As this cohort of Allied Health Assistants complete the Certificate IV in Training and Assessment in December 2019, a formal evaluation via focus group and survey is taking place. We look forward to reporting these outcomes at ANZAHPE 2021 and reviewing the outcomes long term.

## Why choose general practice?: An overview of outcomes from the medical specialty decision-making project

Professor Caroline Laurence<sup>2</sup>, **Taryn Elliott**<sup>1</sup>, Dr Scott Hansen-Easey<sup>2</sup>, Dr Cristina Valero<sup>1</sup>

<sup>1</sup>Gpex, Unley, Australia, <sup>2</sup>The University of Adelaide, Adelaide, Australia

We have experienced a decline in GP training applications nationally, with increasing numbers of unfilled positions particularly in the rural pathway. To address this challenge we need to begin by better understanding how and why doctors are choosing their specialty and location of future practice. A gap was identified for current research in this area. The aim of this project was to understand the perceptions of rural GP and GP and the factors that influence specialty decision-making for medical students, prevocational and vocational trainee medical officers.

The mixed methods study was conducted in two parts. Part one focused on the contextual factors impacting on GP and included: a literature review, an environmental scan and a stakeholder discussion. Part two focused on exploring the perceptions of rural GP and GP through focus groups (n=96) and a survey (n=57). Results were triangulated to generate key messages and identify opportunities.

Triangulation of results showed strong agreement across study parts. In order to attract and retain medical students and junior doctors to GP and rural GP we need to review the way in which we deliver education and support across the pipeline with a focus on:

- Positive, intentional exposure to and messaging about GP
- Quality experiences in GP across the pipeline
- Innovative models for GP placements
- Coordinated support for those interested in GP

An overview of the results supporting each theme will be presented. This information can be used to inform future education strategy to attract applicants to rural GP and GP. Findings may also have implications for attracting other primary health professionals to rural practice.

### Acknowledgement:

This study was supported by funding from the Rural Support Service, Department of Health and Wellbeing through the Rural Health Workforce Strategy (Government of South Australia).

## DoNTQUIT: Developing Novel Tools for QQuality Improvement Training - an international co-development initiative to improve QI training for health professional students.

A/prof Megan Wallace<sup>1</sup>, Ms. B Levkovich<sup>2</sup>, Mr. R Clay<sup>3</sup>, Dr. K-A Bowles<sup>1</sup>, Dr S Jenkins<sup>3</sup>, Prof. T Brock<sup>2</sup>, Dr. G Chouhan<sup>3</sup>, A/Prof. L Hammond<sup>3</sup>

<sup>1</sup>Monash University, Clayton, Australia, <sup>2</sup>Monash University, Parkville, Australia, <sup>3</sup>The University of Warwick, Coventry, United Kingdom

Quality improvement (QI) in healthcare is critical for improving patient outcomes, safety and experience and for reducing time and costs. However, learning relating to healthcare evaluation and improvement is currently lacking in many Universities.

We aimed to co-design a suite of digital educational resources on conducting and reporting QI activities that can be used flexibly across a range of healthcare programmes in the Faculties of Medicine, Nursing and Health Sciences, and Pharmacy and Pharmaceutical Sciences, at Monash University, and at Warwick Medical School, Warwick University (UK).

We used Gagne’s nine events of instruction and the ADDIE model of instructional design, to design seven sections for the resource within an interactive Moodle-based active learning environment.

We found that Microsoft Teams was instrumental in managing the project and to enable efficient and effective collaboration, communication and co-design between international team members. The initial two sections were released to students in August 2020, sections three and four were released in February 2021 and the remaining sections will be released by August 2021. Students helped to trial pilot sections providing informative feedback for development of subsequent sections about preferred interactive elements (e.g. H5P), quizzes and case studies. Following release of the full package, we will comprehensively evaluate reactions, learning, confidence and application of the tools during student projects.

The international and interdisciplinary nature of this work will enhance learners’ perspectives of the similarities and differences in the global healthcare environment that they will practice in as healthcare graduates. Graduates with improved QI skills and knowledge are likely to be highly valued by healthcare providers, and empowering large numbers of students in these skills, right from the beginning of their careers, has the potential to bring transformational improvements to the healthcare system overall.

## An innovative, online, trainee-led vertically integrated model of teaching and learning to prepare surgically-inclined junior medical staff for the Royal Australasian College of Surgeons (RACS) Generic Surgical Sciences Examination (GSSE).

Dr Michael Zhang<sup>1,2</sup>, Dr Benjamin Buckland<sup>1</sup>, Dr Edward Li<sup>1</sup>, Dr Daniel Chepurin<sup>1</sup>, Dr Timothy Cordingley<sup>1,2</sup>, Associate Professor Amanda Dawson<sup>1,2</sup>

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**Introduction:** For surgically-inclined prevocational doctors, the RACS GSSE is a pre-requisite examination designed to ensure Surgical Education and Training (SET) applicants meet a standard of knowledge in anatomy, pathology and physiology. As emphasised in RACS' core competencies: collaboration, teamwork, education and teaching, the ability to educate others, is one of many important roles fulfilled by surgeons. We sought to develop a mutually-beneficial program allowing senior residents/registrars to assist their junior colleagues with GSSE preparation, whilst further developing their own teaching skills and consolidating their knowledge of basic sciences.

**Aim/Objectives:** To create/explore the utility of a vertically-integrated, online model of teaching and learning in GSSE preparation.

**Methods:** A free fifteen-week program focussing on core components of anatomy, physiology and pathology was delivered weekly by surgical residents/registrars at a regional NSW hospital. These sessions were delivered via an online video conferencing platform. At the start of each session, questions relating to content from the previous week/s were posed to consolidate knowledge. Throughout, core concepts would be thoroughly explained, and candidates were quizzed to promote retention of information. Candidates and teachers were qualitatively surveyed at the completion of the fifteen-week course.

**Results/Discussion:** Candidates found the structure of our sessions (in particular the re-assessment at varying timepoints) engaging and beneficial for knowledge retention, and remarked the program was an invaluable means of preparation, noting that it fostered an increased collegiality between themselves and senior colleagues. Teachers appreciated the opportunity to further hone their teaching skills whilst solidifying their knowledges in basic sciences. The impact from our program was highlighted in the 80% pass rate, with all candidates coming within 1.1% of passing. This success resulted in candidates from rural, remote and interstate hospitals also joining in subsequent courses, laying a platform for the future provision of basic surgical education, irrespective of geographical distance.

## More pixels, clearer picture: Acceptability and preliminary psychometrics for measures of non-cognitive attributes and program/applicant alignment in post-graduate selection.

**Assoc. Prof Kelly Dore<sup>1,2</sup>**, Prof Harold Reiter<sup>1,2</sup>, Ms Heather Davidson<sup>1</sup>, Ms Jillian Derby<sup>1</sup>, Ms. Nimo Jama<sup>1</sup>

<sup>1</sup>Altus Assessments, Burlington, Canada, <sup>2</sup>McMaster University, Hamilton, Canada

**Background:** The RACP, RACGP, RACS, as well as others internationally highlight the need for physicians to possess qualities beyond only medical knowledge. Postgraduate selection processes, especially initial screening, are often weighted towards academic metrics, potentially limiting trainees' ability to present their whole-self. Thus Training Sites and applicants need for additional information to make informed decisions. This study sought to understand the incremental insights gained from a suite of tools focused outside medical knowledge: a SJT, a measurement of "fit" or alignment, and an asynchronous video response.

**Methods:** Eleven specialty programs and >5000 US applicants participated in the 2020 the pilot study which examined the use of an SJT (Casper), a standardized measure of alignment between training sites and applicants (Duet), and an asynchronous standardized video response tool (Snapshot). Casper was taken in one of 5 test slots. Both Duet and Snapshot were available on demand for applicants. Duet scores were calculated for each applicant's response as compared to a program aggregate score derived from faculty and residents.

**Summary of Results:** Average test reliability for Casper was  $\alpha = 0.92$  (ranging from 0.90-0.93); Applicant Acceptability for Casper and Duet was 7.2 and 6.9 out of 10 respectively. 93% of applicants believed Snapshot was "fair" or "good". Over 80% of programs reported incremental benefit with these additional tools. Specifically discovering applicants from previously unconsidered feeder schools and adjusting interview offers based on non-academic criteria.

### Discussion & Conclusions:

The suite of tools demonstrated preliminary psychometric rigour as well as acceptability by programs and applicants. The programs were able to use the insights to bring in unique applicants who would not have been selected based on board scores alone. Additional longitudinal outcomes are needed.

Preliminary results for the pilot demonstrate promise, with programs utilizing its results to better understand the whole applicant.



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### Unveiling the problem represented by accreditation of health professions education

Associate Professor Claire Palermo<sup>1</sup>, [Dr Sarah Meiklejohn](#)<sup>1</sup>, Associate Professor Julia Morphet<sup>1</sup>, Ms Kristal Lee<sup>1</sup>, Professor Marilyn Baird<sup>1</sup>, Professor Wayne Hodgson<sup>1</sup>, Dr Brian Coffey<sup>2</sup>

<sup>1</sup>Monash University, Mornington, Australia, <sup>2</sup>RMIT University, , Australia

There appears to be widespread agreement in the current literature that accreditation of health professional courses is important. The public, regulators and professions are said to be reassured graduates are safe and work ready. However what are the problems accreditation seeks to address, what assumptions currently underpin accreditation processes, and is it the gold standard we believe it to be? Guided by Bacchi's 'What's the problem represented to be?' approach to policy analysis this study critically examined the problems health professions accreditation systems purport to address.

The study was conducted across 19 registered (n=15) and self-regulated (n=4) health professions in Australia. Thirty-two relevant policy documents pertaining to the 19 health professions were included. Sixteen (n=16) in-depth interviews were conducted with 18 policy recipients from 12 of the health professions under examination, to ascertain policy enactment in practice. Framework analysis was employed for data analysis.

Accreditation policy was represented as a solution to ensuring minimum standards or quality of education to prepare graduates in addition to protecting professional standards and maintaining the reputation of health professions. Underpinning this representation was the assumption that accreditation policy and processes can identify poor quality programs. Policies assumed consumers need protecting, rather than the need for consumers to take responsibility for their own health. Individual accreditation systems within Australia assume professions have their own unique characteristics and functions, yet our analysis suggested substantial similarities. It is only through exploring and challenging the assumptions held within health professions accreditation systems that we may begin to truly understand the actual and potential impacts on graduate readiness and patient health outcomes in Australia.

## Medical Education's Adverse Impact on Minority Patients

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Avoidable disparities in health care continue to have an adverse impact on health outcomes. In recent years there has been increased awareness of the contribution of unequal care to poor health outcomes, especially for minority patients. And yet, effort to reduce these disparities in care varies widely between medical schools. This session summarizes the research evidence on racial disparities in health care and explains how medical schools contribute to perpetuating and reinforcing these disparities. Common initiatives that some medical schools have implemented to remedy racial disparities to contribute to meaningful improvements at scale are described. Finally, evidence-informed strategies for medical schools to improve the quality of care for minority patients are highlighted.

## Use of a problem based learning sessions in diversifying the medical school interview process

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<sup>1</sup>Nova Southeastern University Dr. Kiran C. Patel College Of Allopathic Medicine, Fort Lauderdale, United States

**Purpose:** Medical school interviews focus on the ability to engage in a one-on-one conversation. Even modern techniques, like the Multiple Mini Interviews (MMIs) are based on closed conversational environments. The use of a Problem Based Learning (PBL) activity may serve as an indicator of a candidate's success in PBL driven curriculum. This method helps an institution dynamically assess the ability of an interviewee to interact with their peers. This allows the admissions committee to observe the interpersonal and professional skills of each candidate. This method provides candidates with an opportunity to determine whether they will be satisfied in a PBL driven curriculum.

**Methods:** Candidates are invited to participate in the PBL session by the Dr. Kiran C. Patel College of Allopathic Medicine (NSUMD) admissions committee. Following the session, the candidates were emailed a link to an anonymous and voluntary survey. Candidates are gauged on interest and engagement in the PBL interview session and likeliness to attend a medical school with a PBL curriculum.

**Results:** As of this submission, a total of 83 candidates completed the voluntary survey. 58% of participants had never participated in a PBL session prior to the session, 97% of respondents felt interested and engaged during the session, 97% reported learning something new, 100% felt comfortable sharing knowledge with their peers, 80% reported preferring PBL over traditional interview format, 60% of participants felt the session provided them with an opportunity to demonstrate themselves to NSUMD admissions. 93% of participants preferred attending a medical school with the PBL format.

**Conclusions:** Preliminary results show candidates find use of the mini PBL interview session interesting, engaging and prefer attending a medical school with a PBL curriculum. Future investigations will survey matriculating students on their views of the PBL interview and survey admission committee faculty on the utility of this data.

### Medical student engagement with online creation and moderation of multiple choice questions (MCQ)

**Dr Pavla Simerska<sup>1</sup>**, A Kalirai<sup>1</sup>, Assoc Prof H Wozniak<sup>1</sup>, K Sweeney<sup>1</sup>, C Bailey<sup>1,2</sup>

<sup>1</sup>The University of Queensland, Herston, Australia, <sup>2</sup>Australian Catholic University, Brisbane, Australia

**Introduction:** Due to COVID-19, in-person near-peer teaching and student participation in clinical activities was limited and thus peer-assisted learning activities were introduced in several Doctor of Medicine Program courses at The University of Queensland. The Recommendations in Personalized Peer Learning Environments (RiPPLE) platform was introduced to engage students in online learning activities such as creating, moderating and answering multiple-choice questions, as well as creating written reflections.

**Aim:** The aim of this study was to evaluate the nature of student engagement in the creation and moderation of MCQs as well as their attitudes towards participation, to inform the design of future learning activities that promote peer learning.

**Methods:** Statistical data analysis was completed using de-identified student RiPPLE data from two courses to determine extent and nature of student engagement in the platform by identifying whether they met or exceeded the course requirements for RiPPLE learning tasks. Qualitative data were obtained from interviews to assess student attitudes towards and motivations for participation in the RiPPLE tasks.

**Results:** The majority of students (94% and 72%) completed more RiPPLE tasks than the minimum course requirement in the two courses analyzed. Students with compulsory tasks answered significantly more questions than students who participated entirely optionally (150.3 vs. 59.7,  $p < 0.001$ ). Interviews with two students found fulfilling course requirements, exam preparation and peer interaction as main motivations for RiPPLE participation.

**Conclusion:** Most students engaged to a greater extent than was required in both courses and this engagement was increased when tasks are compulsory course requirements. Overall, analysis and focus interviews suggest that peer-assisted learning activities on RiPPLE were an effective learning tool and may contribute to promotion of deeper learning; however, further research is needed to determine how the level of RiPPLE participation effects student performance.

## Modified Team Based Learning in Public Health: finding room for alternative assessment in a crowded medical curriculum

Dr Vanessa Vaughan<sup>1</sup>, Dr E Martin<sup>1</sup>, Dr S McCoombe<sup>1</sup>, Prof C Bell<sup>1</sup>

<sup>1</sup>*School of Medicine, Deakin University, Waurin Ponds, Australia*

**Introduction:** Team-Based Learning (TBL) is a teaching strategy fostering active learning of positive professional behaviours, including critical appraisal, problem solving, and communication. Useful for peer-to-peer learning, TBL has been shown to be effective when developed alongside discipline-specific competencies in numerous health degrees. In medical education, the acquisition and assessment of public health competencies, including determinants of health, epidemiology and management of chronic disease, continue to pose a challenge for medical educators. This is due to multi-factorial impacts of health risks and multi-morbidity which can be difficult for learners from biomedical backgrounds to comprehend. TBL provides opportunities to practice these difficult concepts in a 'little and often' learning style that has proved successful.

**Methods:** A series of modified TBLs were developed to facilitate learning for first year Doctor of Medicine students in the Public Health Medicine subject. Students undertake 10-minutes of individual and 20 minutes of team testing, and 30-minutes of discussion of an "application" problem. Applications are open-ended, posing a wicked problem present in their future community of practice. This provides opportunities to reflect on public health as it relates to students' future practice, and promotes integration of knowledge from other areas of the medical curricula. Students submit summaries of the applied solution for formative and summative assessment.

**Issues for Exploration:** The role of TBL in facilitating public health medicine learning has yet to be elucidated. The modified approach may provide a useful tool for assessing and refining student understanding of complex public health concepts, and providing individualised feedback in a timely and efficient manner.

# Workshop 4 Monday 12 July 2021

## Workshop 4

### Moving Forward with Clinical Assessment from 2020: What we did; What we learned; What we will keep for 2021

Karen D'Souza, Deakin University, Clare Heal, James Cook University, Bunmi Malau-Aduli, James Cook University

ACCLAiM is a collaboration of 14 Australian and New Zealand Medical schools, which has provided benchmarking and quality assurance in Objective Structured Clinical Examinations (OSCEs) since 2010. During the pandemic, this collaboration fostered rich, collaborative discussion and a community of practice regarding adapting clinical assessment methods. At the end of 2020, ACCLAiM collected data on modifications to clinical assessment through a survey and semi-structured interviews. The objective of this symposium is to present a summary of modifications made to clinical assessment on an Australian and New Zealand level based on the data collected, and showcase a selection of innovative clinical assessments in order to share techniques of 'future-proofing' the assessment of clinical competence relevant to all health disciplines that were used in 2020 during the pandemic.

A graphic of a ribbon that is red on the top half and black on the bottom half, looping around. The text "Moving Forward" is written in white on the red part, and "in Ambiguity" is written in white on the black part.

*Moving Forward*

*in Ambiguity*

# Day FOUR

Wednesday 14 July



## Day 4: Wednesday 14 July 2021

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## Emotionally challenging situations experienced by Diagnostic Radiography students

Dr Yobelli Jimenez<sup>1</sup>, Ms Amanda Punch<sup>1</sup>, Ms Rosepreet Girn<sup>1</sup>, Ms Mathura Jeyendrabalan<sup>1</sup>

<sup>1</sup>*Discipline of Medical Imaging Science, Faculty of Medicine and Health, The University Of Sydney, ,*

Health profession students experience challenges during clinical placements that affects their emotional well-being and capacity to learn. The aim of this study was to determine the extent to which Diagnostic Radiography (DR) students experience emotionally challenging situations on clinical placement and their contributing factors.

The first phase of the study employed an anonymous online survey to collect data from five DR cohorts from The University of Sydney. Study participants were asked to identify specific health practitioners, types of patients and areas of the clinical environment that contributed to emotional challenges. In the second phase of the study, qualitative data were collected using online focus groups. Students were asked to reflect on emotionally challenging experiences during clinical placements and to identify support mechanisms that existed or could be integrated in the future to support students' emotional well-being during clinical placements.

A total of 155 completed surveys were returned (33.6% response rate). Overall, 75.5% (n=116) of students experienced an emotionally challenging situation on clinical placement. Students reported emotional distress from clinical radiographers, clinical situations such as burns and forensics, and modalities such as theatre and emergency. Three focus groups were conducted with a total of 13 participants. Four themes were identified in the focus group data: (1) Adapting to the reality of the clinical environment, (2) witnessing unprofessional behaviour, (3) Forming relationships, and (4) expectations and responsibilities of patient care.

DR students identified a wide range of emotionally challenging situations experienced during clinical placements. Along with a growing confidence in practical skills over time, clinical radiographers and academic staff were reported to play a significant role in students' ability to navigate emotions in the clinical setting.

## When worlds collide: exploring vulnerability in patients, medical students and doctors

**Michaela Kelly**<sup>1</sup>, Dr Johanna Lynch<sup>1</sup>, Dr Alison Green<sup>1</sup>, Dr Penny Mainstone<sup>1</sup>, Dr Gillian Eastgate<sup>1</sup>, Associate Professor Nancy Sturman<sup>1</sup>

<sup>1</sup>*University Of Queensland, Brisbane, Australia*

**Introduction:** Understanding the person, and understanding oneself, is central to the therapeutic relationship. For the clinician, contemplating challenges, recognising vulnerability in the patient and those who care for them, as well as vulnerability in oneself is important in securing best patient outcomes and guarding against burnout. It involves the process of thoughtfully considering the impact of emotional responses, and personal, cultural and social assumptions on interactions. For students there is the additional challenge of trying to align the academic ideal of professionalism to the imperfect clinical workplace and understanding the inherent ambiguity within a medical career.

**Aim:** In 2018 a tutorial program was initiated to improve engagement in reflective-practice and understanding of the doctor-patient relationship. This six-week tutorial program focusses on the vulnerability of patients and doctors in a weekly tutorial interposed with clinical placements in geriatric medicine, rehabilitation medicine, palliative care, and refugee health. The tutorials use experiential, reflective and narrative learning techniques and are facilitated by generalist clinicians who model their own vulnerability, humanity, and reflective practice.

**Methods:** Students are placed in groups of 6-9 students and after an initial tutorial where the tutor models each of the tutorial tasks, students take turns facilitating brief mindfulness practice, ethical dilemma discussions and reflection on selected autobiographical literature of doctors' experiences of medical practice, and share their experiences of the clinical workplace. The tutor and each student lead an 'understanding the person discussion' prepared following an interview with a patient, where they endeavor to attend to the person, life-story, relationships and the meaning of illness, as well as their own response to that conversation. In the final week, the tutor and each student present a creative contribution reflecting on their own or their patient's experience of vulnerability.

**Discussion:** Concept, and student and tutor experiences of these tutorials will be presented.

## Pride in Safe Learning: Exploring factors influencing educational safety in sexual and gender minority health learning

**Christina Grove**<sup>1</sup>, Professor T Wilkinson<sup>2,3</sup>, Associate professor R Grainger<sup>1,4</sup>

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**Background:** The sexual and gender minority (SGM) population experiences inequitably poor health outcomes, partly resulting from negative health-care interactions. Medical education is one modifiable factor which may be harnessed to improve the experiences of SGM-identifying people in healthcare. Students are more likely to undergo transformative learning if they feel safe to wholeheartedly engage with content and take interpersonal risks, a phenomenon captured in the concept of 'educational safety'. This study aimed to gain insights into factors influencing educational safety for students learning about SGM health.

**Methods:** A social constructivist oriented case-study triangulated data from 88 online case reports and 11 semi-structured interviews of 4th-6th year medical students. Abductive thematic analysis identified factors influencing educational safety during learning.

**Results:** Factors identified as influencing educational safety were grouped into four sources; student, facilitator, peers, and cultural context. Factors had a cumulative impact and the relative impact of a single factor differed between students, pedagogical contexts, and was changeable for a single student over time.

Students had variable baseline safety dependant on their background, beliefs, and context. Some students felt unsafe due to the personal relevance of SGM content or concern around projection of an incompetent or intolerant image. Lack of educational safety could be mitigated by the facilitator's actions and by the student's trust in their peers. Educational safety was also influenced by the cultural context of the learning experience including the institutional culture and the culture of medicine.

**Discussion and Conclusion:** Our case study offers insights into students' experiences of educational safety in a potentially challenging area of learning. We have identified modifiable factors related to facilitator and peer actions that do not require significant curriculum change. Our pragmatic suggestions for practice improvements include utilising small-group tutorials, signposting expected competence, and bolstering facilitation skills outside content expertise.

## Using capability mapping to improve workplace relevance of mental health higher education

Dr Roderick McKay<sup>1</sup>, Dr Susan Grimes<sup>1</sup>

<sup>1</sup>HETI Higher Education, North Parramatta, Australia

**Objective:** To share an approach to using the National Mental Health Core Capabilities' to improve inter-professional postgraduate higher education.

**Method:** The presentation will provide a brief overview of key features of the National Mental Health Core Capabilities framework, followed by a description of how they have been used as an external point of reference to progressively improve the workplace applicability of the HETI Applied Mental Health Studies Masters program. This work has been completed as part of the redevelopment of the nested degree program and focuses learning experience design and sequencing on desired workplace outcomes in terms of capability development. The mapping at unit and course levels provides clarity for students around capability development and the types of experiences they will meet, and capabilities developed, during study.

**Conclusion:** Use of external capability frameworks is one tool available to balance academic freedom in designing and developing higher education learning experiences with ensuring workplace relevance of courses.

## Depth of Field: A research approach for co-designing education with mental health care consumers.

**Associate Professor Gabrielle Brand**<sup>1,2</sup>, Associate Professor Christopher Etherton-Beer<sup>3</sup>, Professor Rhonda Clifford<sup>3</sup>, Dr Liza Seubert<sup>3</sup>, Ms Kerry Whitelaw<sup>3</sup>, Mr Steve Wise<sup>4</sup>, Mrs Carli Sheers<sup>5</sup>

<sup>1</sup>Monash University, Frankston, Australia, <sup>2</sup>Monash Centre for Scholarship in Health Education, Clayton, Australia, <sup>3</sup>The University of Western Australia, Nedlands, Australia, <sup>4</sup>27Creative Photography & Design, Perth, Australia, <sup>5</sup>Consumer advocate facilitated by the Consumer and Community Involvement Program (CCIP), Perth, Australia

**Introduction/background:** Community and consumer involvement in health professions education (HPE) is of growing interest among researchers and educators, particularly in preparing health care graduates to effectively learn from, collaborate with, people with lived experience of health issues. Depth of Field is a growing body of health humanities research that draws on health care consumers as legitimate experts (by experience) to co-design resources to educate current and future health professionals.

**Aim/objectives:** The aim of this study was to translate research (experience of living and recovering with mental health issues) through co-design of a consumer driven health professions education resource.

**Methods:** This study used a participatory action research methodology in three phases. First, we collected richly layered mental health narratives, second we co-designed a series of “real life” strength-based vignettes (including a narrative portrait) embodied in innovative teaching methodologies (visual thinking strategies, verbatim theatre and reflective prompts) and finally, validated the vignettes with a group of health professions students (n=70) and mental health practitioners(n=10).

**Results:**

A snapshot of the themed vignettes will be presented, including Katherine in recovery from borderline personality disorder; Rosalie who explores Indigenous intergenerational trauma; Donna who hears and works with her voices; Shannon’s experiences with her eating disorder; Clinton who lives with seven mental illness diagnoses; and Pamela’s experience of caring for her son with schizophrenia.

**Discussion:** This Depth of Field: Exploring Minds, Hearts & Voice mental health resource created a safe space for learners to reflect and stimulated a multitude of learning opportunities that inspired questioning, empathy, in-depth discussions and surfaced unconscious bias/stigma through demonstrating that mental health recovery is possible.

**Conclusions:** Integrating co-designed resources into health professions education has the potential to challenge and transform hierarchical health care relationships and refocus our lens to holistic, recovery centred models of mental health care.

## Implementing routine mental health screening: exploring community-based occupational therapists' education needs

**Dr Olivia King**<sup>1,2,3</sup>, Ms Kate Ingwersen<sup>1,4</sup>, Ms Brooke Bufton<sup>1,4</sup>, Dr Danielle Hitch<sup>4,5</sup>, Ms Brodie Dupre<sup>6</sup>, Ms Melita Harding<sup>6</sup>, Ms Catherine Mayhew<sup>7</sup>, Ms Sarah van de Ven<sup>1</sup>

<sup>1</sup>University Hospital Geelong, Geelong, Australia, <sup>2</sup>South West Healthcare, Warrnambool, Australia, <sup>3</sup>Monash Centre for Scholarship in Health Education, Clayton, Australia, <sup>4</sup>Deakin University, Geelong, Australia, <sup>5</sup>Western Health, Sunshine, Australia, <sup>6</sup>IPC Health, Melbourne, Australia, <sup>7</sup>Gateway Health, Wangarrata, Australia

Community-based healthcare professionals such as occupational therapists (OTs) frequently work with adults experiencing one or more of the high prevalence mental illnesses: anxiety, depression and distress. Despite undergraduate training in mental health and recognition that screening tools facilitate brief, objective assessment for community-dwelling adults, these are rarely used in general community-based OT practice.

This qualitative study answers three research questions:

What are community-based OTs' experiences working with adult clients with high prevalence mental illnesses?

What are their perceived education and training needs, to prepare them to routinely screen adult clients for mental illnesses?

What are their perspectives on the implementation of routine mental health screening for their clients?

Six focus groups with 21 community-based OTs representing three health services located in rural, regional and metropolitan areas, have been conducted. Data were analysed using a team-based framework analysis.

Four themes have been identified: OTs' experiences working with people with symptoms of mental illness; identified education and system-level support needs; identified challenges to implementing routine mental health screening, and perceived enablers of routine screening.

OTs frequently work with clients showing signs and symptoms of mental illness and do not always feel confident in their knowledge, skills and ability to support mental as well as physical health needs. Experiential training is needed for OTs to develop knowledge and confidence in this area. OTs perceive that implementing routine mental health screening may offer opportunities to objectively assess for and promote early intervention for mental illness, but may also present challenges for OTs without access to clear pathways guiding referral for treatment for their clients.

Our preliminary findings provide insights into OTs' experiences working with people with symptoms of mental illness in the community and their perceived education and other support needs. Our study will inform education, policy and practice to support comprehensive client-centred care.

## Designing an Innovative Approach to Managing Violence in an Emergency Department

Dr Jennifer Davids<sup>1</sup>, M Brown<sup>2</sup>, Dr M Murphy<sup>1</sup>, N Moore<sup>1</sup>, Associate Professor T Wand<sup>2,3</sup>

<sup>1</sup>Western Sydney Local Health District, Sydney, Australia, <sup>2</sup>University of Sydney, Sydney, Australia, <sup>3</sup>Sydney Local Health District, Sydney, Australia

**Introduction/background:** Violence in healthcare settings is an increasing problem world-wide with a fifth of healthcare professionals experiencing violence perpetrated by patients or family members every year. A need to address this growing phenomenon on a global scale has been identified. The zero-tolerance policy in Australia, is largely seen as ineffective and staff continue to tolerate a high level of abuse, particularly in the Emergency Department (ED). Violence in healthcare settings remains an ongoing challenge.

An emergency Code Black (CB) response is triggered by physical or verbal abuse. ED staff need to increase competency in recognising an escalating situation, de-escalation skills, calling a CB and restraint management. This would reduce risk to staff and patients. A virtual reality (VR) training app may meet learner requirements.

**Aim/objectives:** In this mixed methods study 20 interviews were conducted across four hospitals in Western Sydney Local Health District, interspersed with six hours of ED observation. We analysed 45 code black cases. Once developed, the VR app will record metrics of the learner responses.

**Discussion:** We found that CB response efforts lacked a systematic approach to coordinating resources and personnel. There were no guidelines for: the risk assessment of an agitated patient, best practice de-escalation techniques, when exactly to call a CB and the pre-determined allocation of staff roles for patient restraint. New staff learn through a process of observation, training and ad-hoc mentoring. A standardised, consistent response to a CB, knowing when to call a CB and how to respond is urgently required.

**Issues/questions for exploration or ideas for discussion:**

It remains a matter of investigation as to how well immersive, virtual reality education products can prepare learners in dealing with high risk situations within a health setting.

## Is interprofessional identity the missing link in interprofessional education and collaborative practice? A scoping review.

**Angela Wood<sup>1,2</sup>**, A/Prof Anne Hill<sup>1</sup>, A/Prof Neil Cottrell<sup>1</sup>, A/Prof Jodie Copley<sup>1</sup>

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Contemporary healthcare requires various professionals to work collaboratively to provide optimal care for increasingly complex patients. The World Health Organisation (WHO) has recognised interprofessional education and collaborative practice (IPECP) as an important strategy to strengthen healthcare and optimise health outcomes. While generally supported in the literature, IPECP does not always occur in practice.

Identity is fundamental to health professionals given it encompasses who an individual perceives themselves to be, and who others perceive them to be, which drives attitudes, behaviours, values and beliefs. Healthcare identities are particularly complex given the centrality of professional identity, and negotiation of multiple, sometimes conflicting identities. While there has been extensive work on IPECP competency development over the past decade, less research has investigated interprofessional (IP) identity.

A scoping review was conducted to answer the research question 'what is known about the nature of IP identity in healthcare professionals'? Following a search of seven electronic databases and additional hand searching, 1746 articles were retrieved. Application of inclusion and exclusion criteria reduced articles for title and abstract screening to 338, and full text screening yielded 95 articles for data charting.

Results indicated the number of papers in the healthcare identity field has doubled in the past 5 years, though papers primarily addressed professional identity in an interprofessional context. Four papers focussed specifically on IP identity, and three of these reported development of IP identity measurement tools. Key themes included social identity theory and the influence of socialisation and context (setting, organisational culture, transitions) on IP identity. Given identity impacts behaviour, IP identity conversations are imperative in developing IPECP. IP identity may be the missing link for successful IPECP, and may be integral to achieve the health and education reform we need to support best patient outcomes. Further results and future research recommendations will be discussed.



## A Student Educative Clinic Model based on Bandura's Social Cognitive Theory

**Dr Jenni Suen**<sup>1</sup>, Professor Michelle Miller<sup>1</sup>, Associate Professor Christopher Delaney<sup>2</sup>, Associate Professor Stacie Attrill<sup>1</sup>

<sup>1</sup>Flinders University, Bedford Park, Australia, <sup>2</sup>Flinders Medical Centre, Bedford Park, Australia

Student Clinics are structured as sites focused on student education through model components that are implemented to facilitate student learning. This research argues that student clinics are sites where learning behaviour occurs amongst both student and patients. Bandura's Social Cognitive Theory was used to underpin the components for the student nutrition clinic model to facilitate students and patients learning. The model is evaluated through semi-structured interviews amongst dietetic students and focus groups amongst patients receiving student care. Students and patients described common environmental, cognitive, and behavioural facilitators. The perspectives of 23 students and 10 patients were gathered through transcripts uploaded to NVivo for deductive thematic analysis against Bandura's Social Cognitive Theory. An environment that provided individualised learning to facilitate goal setting, peer models of desired behaviour and ability to practice desired behaviour in a safe environment facilitated the development of skill and knowledge capabilities required to perceive competency development amongst students and dietary behaviour change amongst patients. Co-learning between students and patients was also described to provide a source of reciprocal motivation to further learning and conduct the desire behaviour. Initial outcomes suggest that co-learning and reciprocal motivation could be important facilitators to consider in clinics where students practice is aimed at facilitating behaviour change.

## Learning experiences within an interprofessional student led clinic: telehealth and face-to-face consultations.

**Ms Sian Hopkins**<sup>1</sup>, Associate Professor Rachel Bacon<sup>1</sup>, Dr Ekavi Georgousopoulou<sup>2</sup>, Ms Cate Hilly<sup>1</sup>, Dr Irmina Nahon<sup>1</sup>, Professor Nick Brown<sup>1</sup>, Ms Sarah Chapman<sup>3</sup>, Dr Jane Kellett<sup>1</sup>, Ms CaraJane Millar<sup>1</sup>, Ms Allyson Flynn<sup>1</sup>, Ms Melanie Moore<sup>1</sup>, Ms Jacqui Etherington<sup>1</sup>, Ms Karlee Johnston<sup>4</sup>

<sup>1</sup>University Of Canberra, Bruce, Australia, <sup>2</sup>ACT Health Directorate, ACT Government, Canberra, Australia, <sup>3</sup>Canberra Health Services, Canberra, Australia, <sup>4</sup>Australian National University, Canberra, Australia

**Introduction:** An onsite University Student-Led Clinic (SLC) provides placement opportunities for students from allied health disciplines by providing services to the community at a reduced cost. During the COVID-19 pandemic the clinic underwent a necessary and rapid shift towards telehealth to accommodate physical distancing restrictions. This transition enabled students to continue clinical placement opportunities while providing safe services to the community. This study explored allied health students' experiences with telehealth compared to face to face consultations during placements at a SLC.

**Methods:** Students from Occupational Therapy, Physiotherapy, Exercise Physiology, Nutrition and Dietetics, and Speech Pathology who completed their placements at a SLC between March and December 2020 were invited to participate in a telephone survey. Respondents were asked to rate ten statements on telehealth and face-to-face experiences using a Likert-scale rating. The data was analysed quantitatively using descriptive statistics and Pearson Chi-Squared test.

**Results:** Of the 151 eligible students contacted, 67 consented to participate (response rate 44.4%). Fifty of these students had completed both telehealth and face-to-face consultations and were included in data analysis. Most students agreed or strongly agreed with nine statements for both telehealth (>83.3% agree/strongly agree) and face-to-face (>91.7% agree/strongly agree). On the final statement "I had opportunities to work in a multidisciplinary team", students stated that they had significantly more opportunities when conducting face-to-face consultations (73.5% agree/strongly agree, 12.2% disagree/strongly disagree) compared to telehealth (26.5% agree/strongly agree, 49.0% disagree/strongly disagree;  $p=0.003$ ).

**Conclusions:** Education of students utilising telehealth consultations can be challenging, and implementation should be carefully considered. This presentation defines some additional strategies that the SLC implemented and evaluated when utilising telehealth to provide students with opportunities for preparation and skill development, as well as opportunities to work in multidisciplinary teams. These strategies may be transferable to other student-led clinics or WIL programs.

## Evaluating the Effectiveness of teaching in a University Clinic through the students and educator lens

A/Professor Anthea Cochrane<sup>1</sup>, Mr Brett Vaughan<sup>1</sup>, Dr Kwang Cham<sup>1</sup>

<sup>1</sup>*The University Of Melbourne, Parkville, Australia*

**Introduction/background:** By being explicit about what constitutes good clinical teaching and by providing opportunities for both students and educators to provide feedback we should improve the clinical education experience in teaching clinics.

**Aim/objectives:** This study evaluated the quality of clinical teaching at the University of Melbourne Optometry Clinic using a validated questionnaire. The questionnaire was used by students to evaluate clinical educators and by educators to self-evaluate themselves.

**Method:** In Semester 1 2019, third and fourth year optometry students were invited to complete the clinical teaching quality questionnaire for educators. Clinical educators also completed a self-evaluation version of the clinical teaching quality questionnaire.

**Results:** While overall both students and educators rated themselves well on the questionnaire areas of relative strengths and weakness were highlighted. Educators found it most difficult to ask questions to enhance learning and to emphasise a problems solving approach rather than solutions. Students felt that educators could be better at teaching to student needs and to have more concern for their wellbeing.

**Discussion:** Preliminary results suggest that introducing a questionnaire to evaluate clinical teaching had positive outcomes on the quality of clinical teaching in an Optometry teaching clinic by raising awareness of what constitutes good clinical teaching.

## Leadership behaviours in interprofessional student teamwork

Ms Christie van Diggele<sup>1</sup>, Professor Chris Roberts<sup>1</sup>

<sup>1</sup>*The University Of Sydney, Sydney, Australia*

**Introduction/background:** Leadership in interprofessional healthcare teams is important in the attainment of shared goals. Many tertiary interprofessional learning activities do not include the explicit teaching of leadership behaviours or skills however, leadership naturally occurs within team settings. Using functional leadership theory as a lens we analysed student data from a large-scale interprofessional activity involving students from 11 health disciplines in search of peer identified leadership behaviours.

**Aim/objectives:** This study sought to explore the peer identified leadership qualities within the Health Collaboration Challenge.

**Methods:** Students (n=1553) took part in a peer review activity on the completion of an interprofessional learning assessment. Students were required to rate themselves and their team members (5-6 students) online using a validated professional learning behaviours scale. Functional Leadership theory was used to code and categorise the qualitative data into themes.

**Results:** The analysis of student data (n=1553/1611) indicated team leadership behaviours as identified by student peers. Students were identified as leaders within four key categories: 1) Leading by modelling and inspiring; 2) Leading through innovating thinking; 3) Leading through collaboration and facilitation; and 4) Leading with a common vision.

**Discussion:** We found that peer identified leadership behaviours were evident within interprofessional assessment tasks. Those students identified as 'leaders' displayed one or more behaviours associated with functional leadership theory.

**Conclusions:** The peer identification of leadership behaviours within IPL activities demonstrates the importance of harnessing student qualities further by optimizing explicit interprofessional leadership opportunities.

## The Value of the Circle: Health Professionals Learning to Lead Together

Louise Nicholls<sup>1</sup>, Angela Wood<sup>1,2</sup>, Ms Karyn Paterson<sup>1</sup>

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Interprofessional collaboration and leadership supports optimal patient and organisational outcomes. At Princess Alexandra Hospital (PAH), an Interprofessional Leadership Program (IPL) was collaboratively designed, implemented and evaluated by the Nursing Practice Development Unit (NPDU) and Allied Health Workforce Development Team.

The IPL program targeted emerging clinical nurse, allied health and medical leaders (Nurse grade 7, HP4, residents). In addition to program goals related to developing leadership capabilities (leadership understanding, emotional intelligence, teamwork and communication, development of others and practice improvement), the program sought to provide opportunity for interprofessional collaborative practice through learning from, with and about each other in interprofessional teams. The Program was based around six interactive, face to face Learning Circles of 90 minutes. Participants committed to completing considerable structured pre and post Learning Circle activities, including readings, videos and podcasts. The focus of Learning Circles was facilitated discussion and interaction, rather than delivery of content.

Admission to the IPL program was via expression of interest and line manager support. In the inaugural program, 14 health professions were represented. Participants and their line managers were asked to complete an assessment using The Leadership Capability Instrument pre- and post- program. Scores demonstrated an increase in leadership capability overall, as well as in all 4 leadership domains of the Instrument. The positive change in leadership capability was convincing in the self-assessments (mean = 0.4), but even higher in the line manager assessment (mean = 0.7). COVID impacted the program, with some attrition during the peak of the pandemic, and 2 learning circles had to be cancelled.

Feedback from the inaugural IPL program has been integrated into the 2021 modules, and the interprofessional program is business as usual for 2021.

### Do students, clinical educators and simulated patients share perceptions of an online simulation-based learning experience in stuttering management?

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**Introduction/background:** Speech pathology students require the opportunity to demonstrate a high degree of knowledge and skill across a range of practice areas throughout their studies to ensure competency on graduation. Provision of these opportunities is becoming increasingly challenging in some areas such as stuttering as limited clinical placement opportunities are available. Simulation-based learning (SBL) activities have been used to foster students' clinical experience in stuttering management. The COVID-19 pandemic resulted in numerous changes to tertiary education and clinical placements for speech pathology students, mandating a shift to online learning. Consequently, in-person SBL activities were no longer a viable solution to supplement students' exposure to stuttering management. As such, a telepractice model of care was implemented to facilitate online delivery of SBL activities.

**Aim/objectives:** The aim of this study was to explore students', clinical educators' and standardised patients' perceptions of an online SBL experience targeting the development of students' skills in the area of adult stuttering management.

**Methods:** First-year graduate entry masters students (n=10), clinical educators (n=4) and standardised patients (n=4) who were involved in the online SBL activity agreed to participate in the study. The SBL experience was inclusive of two online SBL sessions and one online tutorial. Videoconferencing was utilised to enable participation from separate remote locations. Participants shared their perceptions and experiences in focus group interviews.

**Results:** Thematic network analysis was used to interpret the perspectives of students, clinical educators and simulated patients. A global theme was determined, revealing that online SBL enables students to develop client-centred, clinical and telepractice skills by providing a positive, comfortable and comparable experience.

**Conclusions:** The outcomes of this study determined that online SBL is an important aspect of speech pathology students' education when incorporated alongside in-person clinical placement opportunities.

## Pre-clinical optometry students' perceived acceptability and value of a virtual simulated experience

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**Introduction/background:** The acquisition of scientific-literacy and evidence-based- practice micro-skills underpins competent clinical practice. In order to enhance development of these skills a virtual platform for teaching and assessing in optometry was developed. The simulated environment used case-based approaches led by clinical experts who provided active learning opportunities and debriefing discussions that allowed students to reflect on their performance. End-user perceptions and attitudes to the learning methods that support the simulated environment are critical to assessing effectivity. Here we report students' perception of a project that embedded virtual simulation learning activities.

**Aim/objectives:** To investigate pre-clinical optometry students' acceptance of virtual simulation and their perceived impact on core competency skills.

**Methods:** A total of 51 students from 79 students enrolled in the 1st year cohort of the Bachelor of Vision Science/Master of Optometry completed an anonymous survey, post-simulation. Qualitative and quantitative questions examined participants' perceptions of realism, authenticity, cognitivism-based learning of complex metacognitive skills and the value of simulation-based training in optometry education.

**Results:** Students reported learning in a virtual optometry setting was realistic (83%), relevant to their learning (93%), and motivated them to learn (86%) and research (76%) beyond didactic material. They reported participating in a learning activity and virtual environment gave them a good understanding of how they will behave as an optometrist (82%) and that they will feel more confident the next time they encounter a real or simulated patient (85%). Overall, the virtual environment and simulated activity increased their ambition to become an optometrist (93%).

**Conclusion:** Preliminary findings suggest that provision of an innovative, flexible and realistic virtual simulation may enhance acquisition of clinically relevant micro-skills in pre-clinical optometry students. This may improve the delivery and structure of the curriculum through scaffolding using a simulated virtual environment.



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## Technology enhanced learning through the use of a video assessment – lessons learned

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<sup>1</sup>*School of Public Health and Preventive Medicine, Monash University, Melbourne, Australia*

**Introduction/background:** Technology enhanced learning (TEL) refers to the development of digital strategies that utilise appropriate technological tools to enhance student learning. Ubiquitous smartphone ownership, built in laptop cameras and freely accessible video editing software has prompted an increase in video TEL content. Many educators have also introduced video assessments. But the transition is not always smooth.

**Aim/objectives:** To report on the use of a video assessment in a capstone unit from a graduate entry medical program.

**Discussion:** Overall the students reported a positive learning experience. Qualitative data indicated that ‘having a project to show off’, being creative and working as a team were key benefits of the assessment. However, the assessment instructions and marking criteria were identified as requiring improvement. The time taken for the students to make a video was substantially longer than for an oral presentation. Some students described the use of video assessment as unfair as video editing was not taught in their degree. The marking criteria needed to be open enough so that students could express their creativity but not too ambiguous that they didn’t know was expected of them.

**Issues/questions for exploration or ideas for discussion:** Video provides an exciting platform for assessment overcoming the limitations of traditional oral presentations being scalable and sharable and necessitating the application of creativity, communication and teamwork skills. However, the requisite skills, marking of the final product and the assessment context all need to be considered in the adoption and design of video assessments.

## Using active learning tools and technology-enhanced strategies to maximise learning of a postgraduate epidemiology course during the Covid-19 pandemic

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**Introduction:** The Covid-19 pandemic has completely changed learning and teaching practice in higher education and significantly impacted student learning. As the pandemic remains, effective learning approaches and technological tools are crucial to enable greater flexibility of course delivery and support student learning. This study aimed to evaluate the use of a multi-strategy active learning (AL) approach and technical-enhanced learning (TEL) strategies to maximise student learning of a postgraduate epidemiology course during the first wave of Covid-19 outbreak in Australia.

**Methods:** This longitudinal study involved postgraduate students enrolled in the epidemiology course in Trimester 1 from 2018 to 2020. The course was offered in a blended mode (online and in-person) but fully online after the lockdown took place in Australia in 2020. Several AL&TEL strategies and tools were adopted to enhance student online engagement and mitigate the impact of Covid-19 on their learning in 2020. Students' assessment results, failing rates, their evaluation on the course (SEC surveys) were compared across different years. Hierarchical multivariate linear modelling was performed to determine the effect of the AL&TEL intervention on student overall performance of the course.

**Results:** Continuous improvements in overall course performance (assessment outcomes) were observed over time, particularly in the online cohort. The results of multivariate modelling revealed that the AL&TEL intervention in 2020 was positively associated with student overall performance ( $B=6.70$ , 95%CI: 2.44, 10.97). Further analysis showed that lecture/tutorial attendance was significant ( $B=0.19$ , 95%CI: 0.06, 0.31) in predicting the overall performance in 2020. Quantitative and qualitative data from the SEC surveys also supported the positive effect of the AL&TEL approach on student learning.

**Conclusions:** The findings of this study based on multiple sources of data demonstrated the effectiveness of using AL&TEL strategies to enhance students' engagement and maximise learning outcomes of the epidemiology course during the pandemic.

## “Let’s videoconference them in”: Is learning via technology really as simple as it seems?

**Alexandra Little**<sup>1</sup>, Dr A Croker<sup>1</sup>, K Wakely<sup>1</sup>

<sup>1</sup>*University of Newcastle Department of Rural Health, Tamworth, Australia*

Despite the reliance on videoconferencing (or similar) as a technology medium for student learning in rural areas pre-pandemic and even more so now, there is little critical examination of this burgeoning practice. Missing in the literature is a conceptual overview to inform ongoing development of pedagogical underpinnings and supportive structures. For rural areas such an overview is important to ensure videoconferencing experiences do not inadvertently reinforce that rural is all about disadvantage, challenge and difference. These sentiments were experienced by rural educators as: “The session began with students being told ‘We will start by muting you’”; “We can have a disempowering relationship with technology can’t we?”; “We often start with an apology about IT [information technology] issues”; and “We had to cancel and continue by phone”.

Through our collaborative dialogical inquiry, supported by a University of Newcastle equity grant, fifteen educators and researchers from different professions explored the question: What are the pedagogical and equity implications of videoconferencing for healthcare students’ education?

The sense-making framework we developed introduces the terminology “joining-via-technology-from...” and four interrelated concepts: (i) CURRENCY as value for acquiring...; (ii) CURREN(T)CY as up-to-dateness for... (iii) CONNECTEDNESS between people and... (iv) CADENCE OF CONVERSATION in relation to...” These concepts provide a foundation for ongoing conversations that bring issues and implications related to IT into the foreground in order that they be discussed and then become less visible in pedagogical practices.

As learning via technology continues to cement its place in the educational landscape, evolving at a rapid rate, how we shape our use of technology rather than allowing it to shape us will be an exciting challenge for educators to embrace.

### Self-awareness of Spatial Awareness – a strategy for enhancing anatomical and clinical skills?

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**Background:** A primary goal of medical education is to teach students to perform efficient and effective clinical procedures. This requires excellent visuo-spatial ability and a comprehensive understanding of the 3-dimensional relationships of the body. Learning anatomy is integral to this process and has been shown to assist the development of visuo-spatial skills. Spatial ability/awareness is defined as the capacity for mentally generating, rotating and transforming visual images and is a skill that can be improved with training. We propose that in addition to participating in anatomical studies, providing students with a measure of their own spatial ability may encourage self-development of this skill.

**Aim/objectives:** Deakin Medical students have varied levels of prior anatomy training. This study will assess the spatial ability of commencing students and correlate this with their highest level of prior anatomy learning. It will provide students with individual results and advice for training this skill. Reassessment of spatial ability on conclusion of the anatomy program will correlate changes to individual results with reported visuospatial training.

**Methodology:** Commencing students complete an initial assessment task consisting of two activities – a standard mental rotation test (MRT) and a spatial anatomy task (SAT). Students receive individual results and training methods. Reassessment at the end of the anatomy program will use the same assessment tasks and include a measure for self-reporting of additional training.

**Results:** One hundred and twenty-seven commencing students have completed the initial spatial awareness assessment. Students have received feedback and training advice. These results are currently being analysed.

**Implications:** This study aims to determine the influence of prior anatomy learning on spatial awareness. Future results will indicate the effect of students electing to undertake additional skills training. This may indicate value in incorporating spatial awareness training within educational programs with the overall aim of enhancing clinical skills.

## Development of multi-perspective, interactive short-videos for undergraduate teaching of fetal development: A pilot study

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<sup>1</sup>*Department of Obstetrics and Gynaecology, Monash University and The Ritchie Centre, Hudson Institute of Medical Research, Melbourne, Australia*

**Introduction:** The anatomical and physiological concepts related to the placenta and fetus are very different from adult physiology and anatomy and often challenging for undergraduate science students, unless they can participate in hands-on dissections. However, animal and human cadaver dissections are limited by ethical constraints and expensive. Pre-recorded videos in higher education are often used, but usually use single-perspective approaches and provide few opportunities for active learning.

**Aim:** To develop a series of multi-perspective, interactive short-videos for undergraduate biomedical students learning about fetal anatomy and physiology.

**Methods:** We adapted our hands-on dissection practical of a pregnant sheep uterus and fetus, to a fully online module. We developed a story-board script and used two Go-Pro™ Hero7 and two smartphone cameras to record the dissections. Moodle and H5P (<https://h5p.org/>, an open-source content collaboration framework) were used to create the interactions within the videos.

**Results/Discussion:** We created 20 short (2-8 minute) videos of a dissection using the simultaneous video recordings and an accompanying handout with diagrams. Most videos were interspersed with MCQs and/or other interactive elements to create an active-learning environment. Students were formally assessed by a short-answer style practical report. We received numerous unsolicited comments from students about how much they enjoyed the multi-perspective, interactive videos and how it reinforced and enhance their understanding of the concepts.

**Conclusions:** This pilot study provides an opportunity to fine-tune the usability of short, interactive and multi-perspective videos in higher education to teach fetal development, reduce animal experimentation, maintain student engagement and facilitate their understanding of complex physiological and anatomical concepts.

## Using mobile enhanced devices to support integrity of WBA during Covid

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<sup>1</sup>*Bond University, Gold Coast, Australia*

In 2018, Bond Medical Program introduced an e-portfolio platform across the 5 years of the Medical Program that supported compliance, attendance, and work-based assessments, including in-training assessments, mini-CEX, procedural skills, clerked cases and prescribing modules. Supervising clinicians in the healthcare setting complete WBA using a cloud-based mobile enhanced application, giving them, the student and Bond Medical Program immediate personalised feedback on student competency achievement. Clinicians complete student assessments using their mobile phone or other mobile devices. Clinician survey feedback on use of the platform is overwhelmingly positive, reporting it as very 'easy' to use.

During the 2020 Covid-19 pandemic, this mobile platform was able to be quickly adapted in response to the rapidly changing clinical environment. The ePortfolio became instrumental in our program being able to evidence the depth and breadth of student clinical activity whilst on placement, and to identify gaps in student competency as a result of Covid-19 related change in access to wards, clinical supervisors, and patients.

The specific initiatives implemented within the ePortfolio were as follows:

1. Learning Coaches for each student with personalised one-on-one review of clinical experience
2. Replacement remote clinical placement "Covid e-lective" was created for students 'unable to return' or deemed medically at risk in the clinical setting
3. Replacement Placement for International electives and Capstones - MD Planetary Health Post-graduate Subject 10 credit points
4. Introduction of patient logs – to evidence depth and breadth of patient activity
5. Adjustments to planned mandatory WBA e.g. from two clerked cases to one to support reduced supervisor capacity

The technology enhanced assessment platform showed it could be readily adapted to the changing clinical environment and student assessment requirements. It met our faculty requirements to support integrity of our workplace-based assessments and to evidence student competency for accreditation.

## Practising cardiac auscultation skills using a chatbot

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**Background:** Chatbots are computer programs designed to communicate with a user through auditory or a text-based medium. Chatbots are used in many fields including health care and education. We designed a chatbot and report the results of a study exploring student experiences with chatbot-mediated learning.

**Methods:** Using the Facebook messenger platform, we designed a chatbot modelled on deliberate practice. “Cardiac auscultation” was chosen so that an audio component of the chatbot could be explored. The chatbot programmed to send text-based cases with illustrative heart sounds to participants’ mobile devices at least daily. Following the case presentation, participants could interact with the chatbot via prompts. Preclinical and clinical medical students were invited to participate, completing a questionnaire at commencement (T0) and two weeks later (T1) covering demographic characteristics, the Online Learning Value and Self-Efficacy Scale (OLVSES), and open-ended questions about experiences with the chatbot. Follow-up semi-structured qualitative interviews underwent framework analysis.

**Results:** Paired responses were obtained from seven medical students, and five agreed to being interviewed. Participants had high OLVSES scores, without significant differences between T0 and T1. There were five interview themes: 1) chatbot-specific feedback, 2) content-specific feedback, 3) learner experiences, 4) optimal audiences and 5) suggested improvements. Participants reported the prompts improved motivation to learn auscultatory skills.

**Conclusion:** Our findings suggest that by being accessible and easily scalable, chatbots could meet learning needs where access to clinical learning is limited or inequitable. Using deliberate practice design principles, chatbots provide clear learning goals, focused practice, and immediate feedback. Our chatbot and findings should be tested with a larger learner sample from different contexts, and to ascertain whether chatbot practice translates to the accurate diagnosis of patients.

## Employing the HoloLens Mixed Reality device for medical education: a focus on brain physiology.

**Dr Christian Moro**<sup>1</sup>, Ms Vineesha Veer<sup>1</sup>, Ms Charlotte Phelps<sup>1</sup>

<sup>1</sup>*Bond University, ROBINA, Australia*

There are increasing demands towards the volume of information that requires covering early-on in a medical and health science program, prior to the students' progression into the clinical years. As such, medical students may find benefit from the introduction of tools that can effectively enhance learning and levels of engagement. One of the key aspects of medical education is removing any ambiguity surrounding new terms and naming conventions, as well as the clinical applications of this content, which can present a challenge in pre-clinical years. A new disruptive technology, the HoloLens, has been introduced as a device which can render the human body in full 3D. The aim of this study was to compare participant learning and perceptions after completing an identical lesson on brain physiology using either the HoloLens or a tablet-based augmented reality (AR) platform. Thirty-eight participants were randomly allocated to the HoloLens or AR groups, with assessments of student learning, experiences and perceptions performed through a pre-post test and Likert Scale questionnaire. Initially, there was consistent performance between the two groups. The average post-test scores was 74% for the AR group 79% for the HoloLens ( $p=NSD$ ). Both AR and holograms reported similar comfort levels with no adverse health effects observed during the lesson, other than the holograms group experiencing a significant increase in dizziness. The holograms group rated a higher overall enjoyment with their learning tool and reported a significantly higher rating regarding the clarity of instructions and labels. Finding ways to improve and optimize learning in today's medical education courses can be challenging, although these new devices do offer a range of options for educators wishing to adopt technology-enhanced learning within their curricula. This study provided evidence that the HoloLens is as effective as AR-based lessons for learning and engagement within physiology education.



## Changes in New Zealand medical students self-perceived nutrition competence during training

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Medical nutrition education aims to equip doctors with nutrition knowledge, skills, attitudes and confidence to counsel patients to improve their diet. This prospective longitudinal observational study described changes in medical students' self-perceived nutrition competence at three time points during medical training at the University of Auckland, School of Medicine.

Year 2 medical students (phase 1, preclinical) were surveyed in May 2016. Participants repeated the survey in February 2018 as Year 4 students and July 2019 (phase 2, clinical) as Year 5 students using the validated NUTrition COMPetence tool (NUTCOMP) tool.

In 2016, 102 of 279 eligible Year 2 medical students completed the survey (response rate (RR 36.7%). In 2018, 89 Year 4 students repeated the survey (RR 87.3%) and 30 students as Year 5 students in 2019 (RR 29.4%). There was a significant increase in total NUTCOMP scores (knowledge, skills, confidence to counsel and attitude towards nutrition) between Year 2 and Year 4 ( $p=0.012$ ). There was a significant increase in the confidence to counsel construct (mean difference 7.615, 95% CI 2.291 to 12.939,  $p=0.003$ ) between Year 2 and Year 4. Constructs with lowest scores at all time points were nutrition knowledge and nutrition skills. There was a clear desire for more nutrition education from all students: Year 2 (mean=3.8 out of 5 (1.1), Year 4 (mean=3.9 out of 5 (0.9), Year 5 (mean=3.8 out of 5 (0.8).

Medical students' self-perceived nutrition competence in providing nutrition care increased modestly at three points throughout medical training. Opportunity remains to further support medical students to increase their nutrition care competence, which could be achieved through mandatory and greater medical nutrition education.

## Improving paediatric trainees' knowledge of rare metabolic disorders: A needs analysis.

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**Background:** There is a known lack of education and resourcing of Australian health professionals around rare metabolic diseases. This contributes to diagnostic delays and lack of access to early therapeutic interventions, adversely impacting children and adults with these conditions. Published literature indicates 50% of Australian paediatricians have gaps in their knowledge of rare diseases during postgraduate medical education.

**Aim:** This pilot study explored educational needs of paediatric trainees regarding rare metabolic disorders to facilitate improved education during physician training.

**Methods:** Six focus groups and two semi-structured interviews were conducted with separate samples of paediatric trainees, paediatric emergency physicians and trainees, senior paediatricians and metabolic experts at Sydney Children's Hospitals Network (September-December 2020). Recordings were transcribed and data analysed using thematic framework analysis, based on Bloom's Taxonomy of human cognition levels.

**Results:** Three themes were identified following focus groups/interviews with 32 participants. Firstly, there are different learning needs at various stages of training, ranging from trainees who vocalised "we don't know what we don't know" to senior and metabolic doctors, who identified the importance of understanding basic physiology (first two levels of Bloom's Taxonomy). Secondly, educational drivers included: passing post-graduate physician examinations, anxiety around missing rare disease diagnoses and the intellectual challenge of making correct diagnoses. Finally, there were difficulties in learning about rare conditions compared with common conditions due to inconsistent clinical exposure, lack of repetition and difficulty establishing pattern recognition.

**Conclusions:** We suggest approaching teaching of rare metabolic disorders at three stages of post-graduate learning: pre-training physicians should understand and remember basic physiology; basic and advanced trainees should apply their knowledge in case-based learning; and senior physicians should creatively evaluate and recognise disease patterns. Through gradual development and integration of these concepts in a structured teaching framework, higher learning needs can be achieved, filling gaps in health professional education.

## Moderators of Healthcare Professionals' Uncertainty Tolerance: A systematic review of qualitative literature

**Ana Yap<sup>1</sup>**, Dr Georgina C. Stephens<sup>1</sup>, Dr Melanie K. Farlie<sup>1</sup>, Dr Chantal Hoppe<sup>1</sup>, Associate Professor Michelle D. Lazarus<sup>1</sup>  
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Uncertainty in healthcare is prevalent and a regular feature for healthcare professionals in clinical settings. Research suggests that lower uncertainty tolerance (UT) has healthcare system ramifications, such as negative patient-care outcomes and excessive diagnostic testing of patients. In the current integrative model of UT (Hillen et al., 2017), the authors suggest the existence of moderators, and factors which appear to influence and/or modulate UT. This systematic review sought to identify and further characterize and refine moderators of healthcare professionals' UT through exploration of healthcare professional descriptions of experiences of uncertainty. After screening 4,224 articles, 16 qualitative primary research articles were included for quality appraisal and abductive thematic analysis using a framework approach. Three domains of moderators were characterized that relate to 1) healthcare professional's personal attributes, 2) patient-derived uncertainty and 3) the healthcare system. These three moderator domains were further organized into themes and subthemes. This review has characterized moderators of UT identified through analysis of healthcare professional descriptions of their experiences of uncertainty. These findings provide further insight into the complex nature of the UT construct, the groundwork for future research exploring moderators of UT within the healthcare setting and may contribute to the further development of conceptual models in this field.

## AMEE Consensus Statement: Planetary Health and Education for Sustainable Healthcare

**Professor, Medical Education Michelle McLean<sup>1</sup>**, Dr Georgia Behrens<sup>2</sup>, Professor Diana Lynne Madden<sup>2</sup>, Dr Kristen MacKenzie-Shalders<sup>1</sup>, Dr Judith Singleton<sup>3</sup>

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**Background:** Human activities have contributed to deforestation, biodiversity loss, ocean acidification, air, water and soil pollution, and climate change. Recent global and local events, including COVID-19, have heightened our awareness of our vulnerability in the face of these environmental changes. During the 2019-2020 Black Summer bushfires in Australia, there were 33 deaths, with an additional 417 excess deaths due to air pollution. Over three billion animals died and much of their habitat destroyed. Humans thus face an existential threat unless urgent collaborative action is taken including educating health professionals.

**Aims:** To describe the development and content of an international Consensus Statement (CS) for the inclusion of Planetary Health and Sustainable Healthcare in health professions' education, under the auspices of the Association for Medical Education in Europe (AMEE), published in 2021.

**Discussion:** The need for a CS was identified while developing the 2020 AMEE Conference Sustainable Healthcare Education theme and editing a Medical Teacher Special Issue on this topic. A team of three (Emily Shaw, Sarah Walpole, Michelle McLean) drafted a framework and recruited an international, multidisciplinary group of health professions' educators and students from all geographic regions. After agreement on the framework, teams worked on various CS sections, recruiting additional contributors from their respective networks. Several versions were circulated for comment and agreement to reach consensus. Three experts reviewed the CS over the ten months of development. The early online version listing contributors and reviewers can be found at:

<https://www.tandfonline.com/eprint/A8A9I4EPVENP9RUDUES3/full?target=10.1080/0142159X.2020.1860207>

The CS provides guidance in terms of learning outcomes, activities and formative and summative assessment. Supplementary material includes a glossary and a timeline for action to net zero by 2050. The CS is intended to support health professions educators in Australia and New Zealand integrate planetary health and sustainable healthcare education into their various curricula, which should include interprofessional learning.

## Australian medical students' perceptions of the importance of education in Sports medicine and confidence managing common sports-related orthopaedic injuries

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**Purpose:** Sports-related orthopaedic injuries are frequently encountered in emergency department and community practise settings. The aim of this study was to assess the perceptions of Australian medical students regarding Sports medicine education in medical school.

**Methodology:** A prospective, cross-sectional survey was administered to clinical medical students at the University of Adelaide. The survey explored students' perceptions of the relevance of Sports medicine, and confidence in managing common sports-related orthopaedic injuries. Comparison was made to other commonly encountered non-orthopaedic medical conditions, such as hypertension and asthma.

**Results:** The survey was completed by 112 students (66.1% females). Eighty-three (74.1%) students felt that education in Sports medicine held relevance to their future career. Students were less confident in examining the musculoskeletal system (shoulder, knee, ankle or spine) compared to non-musculoskeletal systems (e.g., cardiovascular and respiratory), with an average of 21.9% of students indicating no confidence at all in performing the musculoskeletal physicals (compared to 0% for the other systems). Similarly, students were less confident in managing common musculoskeletal injuries (e.g., anterior cruciate ligament injury, concussion, Achilles tendonitis) compared to conditions such as hypertension and asthma.

**Conclusion:** There is clear recognition of importance and career relevance of Sports medicine education among medical students, but a lack of confidence in examining and managing common sports-related orthopaedic injuries. This was a pilot survey, with plans of administration to additional groups of medical students at other Australian medical schools.

## Faculty evaluation of barriers and enablers of student research projects in a post-graduate medical degree.

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**Background:** Medical degree programs use scholarly activities to develop basic research skills, critical evaluation of medical information and promote medical research. The University of Sydney MD includes a compulsory research project. Student views on research experiences are well studied, but less so the perspective of the academic supervisors.

**Aims:** To investigate supervisors' observations of the barriers to and enablers of success, and sources of support for their supervision of research projects. A further aim was to assess the effect of prior research supervision experience on the responses to identify areas for professional development and further support.

**Methods:** Academic research supervisors (n=130) completed an anonymous, online survey at the completion of the research project. Descriptive statistics and simple content analysis were used. Further investigation was by cross-tabulation by prior research supervision experience.

**Results:** Research supervisors reported that students needed generic skills and research-based skills to successfully complete the project. The major barrier to success was the structure of the program, with no protected time for research activities. The assessment schedule enabled project progress and skill development. Further support was requested for statistics, scientific writing and funding for projects was lacking. Prior research supervision experience affected the responses. Experienced supervisors were significantly more likely to want a dedicated time for the project ( $P=0.004$ ,  $\chi^2=10.4$ ), those with some prior supervision experience were significantly more likely to want orientation sessions ( $P=0.01$ ,  $\chi^2=8.5$ ). None of the novice supervisors thought that co-supervision would be ideal, whereas experienced supervisors were open to this option.

**Conclusions:** Both generic and research-related skills were important for research project success. Protected research time, financial and academic support would improve the program. Responses differed by prior research supervision experience and this should be further investigated to inform future support provisions.



## PeArLs Wednesday 14 July 2021

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### Programmatic Assessment – the vision and the reality for a large Australian cohort

**Deborah O'mara**<sup>1</sup>, Associate Professor Kellie Charles<sup>1</sup>, Dr Nidhi Garg<sup>1</sup>, Professor Jane Bleasel<sup>1</sup>

<sup>1</sup>University Of Sydney Medical School, Sydney, Australia

Introduction: Programmatic Assessment (PA) is a system of assessment that is increasingly used in medical education. Key features include assessment for learning with relatively frequent lower stakes assessments. Progression decisions are made holistically through synthesis of information from multiple sources, including academic, clinical and professionalism assessments.

Most of the literature on PA is theoretical, describing the ideal components of this system of assessment. Examples of implementation include small cohorts and/or are based in the Dutch medical system which has a staggered intake and graduation.

A number of medical schools have implemented components of PA, in some cases due to managing a policy change implementation gradually. The University of Sydney Medical School have introduced a pragmatic version of PA based on what can be viably conducted with a large cohort that need to be graduated simultaneously.

Purpose: The purpose of this PeArLs session is to discuss the juxtaposition between the vision and the reality of PA in the context of Australasian medical education. We will briefly outline our experiences using a policy evaluation model: the intended and unintended consequences and the anticipated and unanticipated outcomes which inherently includes ambiguous elements.

Issues for exploration or ideas for discussion: The following issues and questions will be explored and discussed. We will assume that participants have an understanding PA as described in the medical education literature.

- How much of the vision of PA is required to still call it PA?
- What are the essential components of PA?
- Is the Learning advisor/mentor/assessor model required and which is best?
- Do you need an eportfolio to make programmatic assessment work?
- How do you make a holistic decision for the whole cohort for each year e.g. 1200 students?
- How do you deal with the ambiguity in the judgement of professionalism issues?



### The Impact of the pandemic on student learning and assessment performance

Peta Eggins<sup>1</sup>, Deborah O'Mara<sup>1</sup>

<sup>1</sup>University Of Sydney Medical School, , Australia

Introduction/background: The COVID-19 pandemic had a major impact on medical education, with face-to-face teaching and practical exposure in clinical settings substantially reduced for the majority of medical students across Australia. This also necessitated the need for online delivery of assessments which was almost universally implemented by Australian medical schools, with subsequent changes to the types and methods of assessment that were available to broadly evaluate student's competencies. Interestingly, anecdotal evidence shared between the medical school assessment leads indicated that these changes did not significantly affect the average performance on assessments compared to previous years.

The University of Sydney Medical School adopted an online delivery of assessments for Year 1 and 2 of the Program through the learning management system with an artificial intelligence method of invigilation. Consistent with the findings from other medical schools, there was no significant difference in the average score, passing standard or item statistics for the 2020 cohorts relative to previous years. However, qualitatively, across various high-stake assessments conducted in 2020, there was a notable negative skew in the distribution of student's performance which was greater than in previous years, suggesting that weaker ability students were more negatively impacted by the changes introduced by the pandemic.

Purpose: The purpose of this PeArLs session is to share similar data and observations from other medical schools (we invite you to bring one slide along) and to discuss why the impact from the pandemic on learning and/or assessment performance seems to have only affected weaker students.

Issues/ questions for exploration or ideas for discussion:

The following issues and questions will be explored:

- What impact did you observe with your students?
- Why has the affect been greater for weaker students?
- What changes should we introduce to support these students better during a (potential) third wave?

### Mentor, coach, personal tutor, advisor? You Decide!

Dr Jo Bishop<sup>1</sup>, Dr Tracy Nielson<sup>1</sup>, Dr Belinda Craig<sup>1</sup>

<sup>1</sup>*Bond University, Robina, Australia*

The Bond University Learning Coaches initiative resulted from the COVID-19 crisis when clinical student placements were disrupted. The goal was to help ensure that, despite disruptions, each student gained the required clinical exposure during the final two years of practical training to meet the professional outcomes and expectations required to be successful in the workplace as an intern in Australia and New Zealand.

Learning Coaches were university-affiliated clinicians who supported a small group of students, individually reviewing their clinical exposure longitudinally across the final year of the medical program. Learning coaches had the significant role of alerting faculty to any student at risk of not progressing clinically so that personalised support processes and remediation could be put in place in a timely manner.

Learning Coaches supplemented clinical supervision of learning activities on placement. Medical students logged their clinical learning activity in the digital e-Portfolio and reflected on their learning achievements and goals through submission of a learning plan. The assigned Learning Coach reviewed the plan and met (virtually) with the student once a fortnight to discuss their progress against the requirements of the program, taking steps to ensure students were on track to achieve the expected competencies.

Evaluation has been undertaken with a view to retaining this COVID-19 innovation for 2021 and beyond. Going forward we want to capitalise on the strengths of the Learning Coaches initiative to tailor our student support across the medical program. We will share our evaluation and utilise the PeARL format to hear from other colleagues across all disciplines as to how they support students. Do they use a mentorship, coaching or personal tutoring program or a combination? Are they mandatory, opt in or utilised for support/remediation only? Do they commence from day one of the program or only in the clinical years?

### Building flexibility in allied health education: Exploring students' and educators' experiences and outcomes during a telehealth clinic

**Dr Catherine Easton**<sup>1</sup>, Assoc Prof N Patton<sup>1</sup>, Dr J Cox<sup>2</sup>, Dr L Wilson<sup>1</sup>, Dr L Brown<sup>1</sup>

<sup>1</sup>Charles Sturt University, Albury, Australia, <sup>2</sup>Three Rivers University Department of Rural Health, Orange, Australia

**Purpose/Aim:** Telehealth is recognised as a socially just health-care modality that addresses issues of access to health care. In response to COVID-19, telehealth has rapidly emerged as a standard mode of care and education across health disciplines. Despite strong interest in telehealth, and development of telehealth infrastructure, research around health work force training remains limited.

Within allied health, education has focused on telehealth knowledge, technical and communication skill development, and medico-legal requirements. In contrast the use of telehealth as a mode for clinical education is little understood. Further, there is growing evidence of the need to support educators' transition into technology mediated clinical education environments.

This presentation draws on research findings regarding student and educator experiences during an innovative telehealth simulated clinic run as part of a re-imagined blended online Master of Speech Pathology course. It represents innovation from 'those on the ground' and provides ongoing opportunity for strategic innovation.

**Findings/Discussion:** A mixed methods approach was used to explore student (n=35) and clinical educator (n=6) experiences during a telehealth clinic. Pre- and post-clinic online surveys conducted with students revealed increased feelings of confidence and competence, and increased positivity regarding the use of telehealth as a mode for clinical education. These findings provided the basis for discussion in follow-up student focus groups and clinical educator interviews.

**Questions/Activities:** Feedback and recommendations from the research findings will be used to prompt reflection and discussion within the workshop. Through participation in this workshop, attendees will:

- Engage with project findings regarding educators and student perspectives on telehealth clinics.
- Discuss their own experiences of providing telehealth clinical education
- Discuss and reflect on their own perceptions of student experiences and outcomes

The workshop will incorporate online interactive tools to replicate the reflection process undertaken by students and educators in the research project.



## **PCW Wednesday 14 July 2021**

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## The development of medical students' motivation and self-regulated learning capabilities: the Learning Coaches' perspective

Associate Professor Anna Vnuk<sup>1,2</sup>, Dr J Jordaan<sup>2</sup>, Dr M Moore<sup>2</sup>, Dr S King<sup>2</sup>, Dr K Starr-Marshall<sup>2</sup>

<sup>1</sup>James Cook University, Cairns, Australia, <sup>2</sup>Prideaux Centre, Flinders University, Adelaide, Australia

**Background:** Self-regulated learning (SRL) is critical to functioning successfully and competently as a doctor. SRL is "an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behaviour, guided and constrained by their goals and the contextual features in the environment" (Pintrich, 2004). Individualised coaching can support medical students to develop SRL capabilities yet understanding how medical students develop SRL capabilities remains unclear.

**Method:** This exploratory qualitative study, conducted at Flinders University, sought to understand the development of medical students' SRL capabilities from the perspectives of students and their learning coaches. Data from focus group and individual semi-structured interviews were audio-recorded, transcribed and de-identified, and analysed using Pintrich's (2004) SRL framework and Self-Determination Theory (Ryan&Deci, 2000). This presentation reports on the findings from data collected from learning coaches, specifically related to motivation and the development of SRL capabilities.

**Results:** Initially, coaches perceived that students' motivation was based on external regulation and introjection, focusing on passing assessments. As students became immersed in the clinical environment, however, coaches noted a shift towards internalisation, with students becoming more focused on learning to become a better doctor, while simultaneously demonstrating increased SRL capabilities. Coaches also reflected on their own behaviours (questioning, challenging and encouraging) in assisting with the evolution of students' motivation, and development of SRL capabilities.

**Discussion:** Medical students' motivation to learn, and the growth of their learning capabilities, was considered a developmental process which was found to be supported by the transition to learning in the clinical setting and coaches' autonomy supportive behaviours (Williams&Deci, 1998).

**Conclusion:** Motivation plays a key role in supporting medical students to develop their SRL capabilities, which is influenced by the learning environment and autonomy supportive educational partnerships, such as those seen between coaches and students.

## Understanding the perceived challenges, support needs and training requirements to meet documentation standards during clinical placements

**Miss Laura Howse<sup>1</sup>**, Dr Roma Forbes<sup>2</sup>, Dr Elise Gane<sup>2,3</sup>

<sup>1</sup>*Caboolture Hospital, Caboolture, Australia*, <sup>2</sup>*The University of Queensland, Brisbane, Australia*, <sup>3</sup>*The Princess Alexandra Hospital, Brisbane, Australia*

Clinical documentation that complies with relevant professional and legal obligations is a requirement for all health professionals. Quality clinical documentation facilitates effective and timely communication and coordination between members of the clinical team both internal and external to the organization and supports safe and efficient patient care. Clear and accurate documentation is also integral for ethical practice and patient safety and is underpinned by strict medicolegal requirements. Previous research has highlighted that physiotherapists would benefit from further training in clinical documentation, however there has been no research that has investigated the perspective of physiotherapy students and their educators for meeting clinical documentation requirements.

This presentation will outline a multi-site qualitative study that aims to explore the experiences and training needs to meet clinical documentation requirements from the perspective of physiotherapy students and clinical educators during clinical placements. It will also provide insight into how clinical educators and students understand and interpret performance requirements for meeting documentation standards. In doing so, this presentation will provide health professional educators with an understanding of the importance of clinical documentation and implications for health professional curricula to improve feedback, safety and performance assessment of written communication and clinical documentation for health professional students.

Issues/questions for exploration or ideas for discussion:

Why is patient documentation an important skill for health professional students?

What are the challenges and experiences of physiotherapy students and clinical educators when undertaking documentation requirements during clinical placements?

How can patient documentation be taught more effectively in pre-professional training and whilst on clinical placement?

## Building ethical professionalism with acting skills: the theoretical framework for Grace Under Pressure workshops

Dr Claire Hooker<sup>1</sup>, A/Prof Paul Macneill, A/Prof Karen Scott, A/Prof Louise Nash, Dr Paul Dwyer

<sup>1</sup>*Sydney Health Ethics, University Of Sydney, Sydney, Australia*

**Introduction/background:** Extensive evidence in several countries has established that many clinicians experience mistreatment and poor workplace behaviour from colleagues. We developed a creative response to this issue, the use of designed acting skills workshops. These used non didactic and embodied practices to strengthen participants' ethical professionalism. The workshops have been very positively evaluated by participants.

**Aim/objectives:** In this presentation we aim to set out the multidisciplinary theoretical framework that informed the design of the workshops.

**Discussion:** 'Enacting professionalism' is a theoretical framework that integrates four propositions:

1. That workplace communication and interaction can be understood as micro systems, allowing for any change in input to affect the dynamics of the system
2. That the development of ethical professionalism requires complex moral growth, well captured in the psychological construct of 'differentiation of self'
3. That embodied learning was a key tool for reflexivity and hence, differentiation
4. That 'acting the role' of doctor could be pursued authentically and as an embodied practice.

We theorized that professionalism would develop as an emergence from the embodied and interactive practices used by each individual to authentically perform being a doctor. Drawing from techniques used by professional actors to authentically develop a stage role, we hypothesized that enacting professionalism would improve reflexivity, increase capacity to communicate effectively, and support differentiation in professional development. In workshops we applied this framework through the use Boalian theatre-for-change techniques.

**Issues/questions for exploration or ideas for discussion:** How can this theoretical framework be usefully applied in additional learning contexts? How can the Grace Under Pressure workshops be situated more explicitly in culture change processes and activities?

## How do you teach reflective practice? Exploring inter-professional differences.

**Ms Lisa Urquhart**<sup>1</sup>, Natasha Olley<sup>1</sup>, Georgina Boyle<sup>1</sup>, Rachel Urquhart<sup>1</sup>, Nicole Killey<sup>1</sup>

<sup>1</sup>*University Of Newcastle Department Of Rural Health, Coffs Harbour, Australia*

The University of Newcastle Department of Rural Health allied health academic team (nutrition and dietetic, occupational therapy, physiotherapy, diagnostic radiotherapy and speech pathology) works with students, during their fieldwork placements, to support the development of professional competence. Reflective practice is acknowledged as a key component in the development of professional competence, clinical reasoning and resilience, however as a team, we recognised variations in the depth in which we were teaching reflective practice to students across various allied health professions.

Through group dialogue, we challenged our understandings of reflective practice. We identified that we had varying professional interpretations of reflective practice which were influenced by our undergraduate study and clinical experience. The group acknowledged different professional requirements for reflective practice and these, along with our personal and specific discipline experiences, translated into our individual teaching practices.

Through activities including mentoring, shadowing tutorials, co-developing teaching content and discussions with external colleagues, we have built confidence and skills to support students to embrace reflective practice. As a group we have progressed from teaching only 'technical skill' based reflection to include transformative experiences where students explore personal and professional assumptions, and the impacts of these on their clinical practice.

This process has led us to shift our pedagogical views and attitudes towards reflective practice by exploring inter-professional differences and changing our teaching. By teaching reflective practice in a meaningful way, we aim to influence our students experience by providing them with the tools, skills and knowledge to engage in independent reflection.



## Attributes of cultural safety in Australian health professional learners in the workplace: a scoping literature review.

**Dr Kay Brumpton<sup>1,3,4</sup>**, Dr Rebecca Evans<sup>1</sup>, Assoc Prof Raelene Ward<sup>2</sup>, Prof Tarun Sen Gupta<sup>1</sup>

<sup>1</sup>James Cook University, Townsville, Australia, <sup>2</sup>University of Southern Queensland, Toowoomba, Australia, <sup>3</sup>Griffith University, Gold Coast, Australia, <sup>4</sup>Rural Medical Education Australia, RMEA, Australia

The Royal Australian College of General Practice (RACGP) announcement in May 2020 that the objective structured clinical examination (OSCE) is now obsolete has refuelled discussions on best practice to assess if a registrar is ready for unsupervised practice. In considering this, the importance of developing both a culturally safe assessment process and, an examination that prioritises CS consultations cannot be understated.

There is limited evidence to guide replacement of the RACGP summative OSCE assessment as an approach to determining GP registrar cultural safety. As no practical tools for objectively assessing the cultural safety of a consultation could be found, the literature was searched to identify key characteristics of Aboriginal and Torres Strait Islander cultural safety demonstrated by healthcare learners in the Australian workplace environment that could be incorporated into an assessment process. The review was seeking research that demonstrated best practice in Aboriginal and Torres Strait Islander research by privileging Aboriginal and Torres Strait Islander voices and researchers; and recognised and attempted to diminish racism/bias.

Key attributes of cultural competency gleaned from the articles were coded to the components of cultural safety as detailed in the AHPRA definition of cultural safety. Skills were further divided into general communication skills and general consultation skills. Extracted data were also mapped to key concepts of patient-centred care as defined by Australian Commission on Safety and Quality in Health Care.

The review found that general consultation and communications skills were key components of a culturally competent interaction. The ability to demonstrate active listening; establish respect and trust; and self-reflect were additional key themes. Nonetheless, the voice of Australian Aboriginal and Torres Strait Islander patients was not found to be well privileged or prioritised in current research.

## Professionalism and professional identity of our future doctors: a summary of current practice in Australian and New Zealand medical schools

Dr Charlotte Denniston<sup>1</sup>, Professionalism Working Group<sup>2</sup>

<sup>1</sup>The University Of Melbourne, Melbourne, Australia, <sup>2</sup>Medical Deans of Australia and New Zealand, Sydney, Australia

**Introduction:** Doctors are expected to demonstrate professionalism throughout their careers, but defining, teaching and assessing professionalism, and effectively remediating unprofessional behaviours in medical students can be challenging.

**Methods:** The Medical Education Collaborative Committee (MECC) of Medical Deans Australia and New Zealand (Medical Deans) established a 'Professionalism Working Group' in June 2020. Membership comprised academic representatives from 20 member schools and a Medical Deans' Senior Policy Officer. This group was tasked with identifying current activities relating to professionalism across medical schools and developing a report that would provide practical advice on embedding a culture of professionalism among students to support professional identity formation as a medical practitioner. An online survey sought perspectives and practice experiences about defining, teaching, assessing, and remediating professionalism from medical schools across Australia and New Zealand (response: 22/23 schools). Sub groups analysed responses in these domains and the whole group collaborated to develop the final report.

**Results:** This report provides an overview of current approaches in the domains of defining, teaching, assessing, and remediating professionalism across Australian and New Zealand medical schools. There are considerable variations across these domains. For example, while 68% of Schools have a definition of professionalism, only 29% have a definition of professional identity formation. Having a definition was seen as being central to success in all further academic approaches (i.e. teaching, assessing and remediation). Common challenges and systemic issues are also reported, as well as recommendations for practice and potential areas for collaboration and research.

**Discussion:** The findings of this report are intended to aid medical schools in reflecting on how professionalism is defined, taught, assessed, reinforced and remediated within various contexts. This presentation will discuss directions for implementing the proposed recommendations in medical schools and highlight the translation of these findings in the context of health professions education programs more broadly.

## Undergraduate paramedic student experience with violence and aggression whilst on clinical placement - what are their educational needs?

**Brad Mitchell**<sup>1</sup>

<sup>1</sup>*Flinders University, Bedford Park, Australia*

**Introduction:** Studies worldwide show that paramedics frequently face violence and aggression directed toward them. However, a paucity of evidence exists regarding the lived experience of paramedic students with workplace violence (WPV) and how they perceive their own safety and preparedness for clinical placements.

**Aims:** The objective of this research was to investigate the prevalence, and lived experience, of undergraduate paramedic students' exposure to WPV whilst on clinical placement and identify their training needs to inform the design of a contextualised Operational Safety Training (OST) program.

**Methods:** A mixed-methods study of a survey and in-depth interviews of undergraduate paramedic students was undertaken to examine their lived experience with WPV, and evaluate the current safety training they receive as part of their education. Results were analysed through the lens of constructivist grounded theory.

**Results:** The survey was completed by 85 students, and 7 interviews were conducted. The research confirms that paramedic students are exposed to WPV with 35.1% (n=27) having experienced verbal abuse, and 9.5% (n=7) physical abuse. Despite these statistics, students generally feel prepared and safe while on clinical placement. However, they believe they need more education around communication and de-escalation, more time dedicated to disengagement/breakaway techniques, and more frequent training.

**Recommendations/Implications for Education:** These have a significant impact on the future of undergraduate paramedic education by providing useful background to inform the design of a contextualised OST program. This includes greater content around situational awareness and de-escalation skills, and the promotion of reporting any WPV incident so that accurate data can be collected. This should be supported by a repository of information and resources pertinent to OST for students to access and review as they need. This allows for students to be better prepared for WPV as part of their university curriculum providing a more holistic and realistic education.

## An experiential workshop to developing effective communication and collaboration skills for social and cultural change

**Dr Rosa Howard<sup>1</sup>**, A/Prof Stuart Lane<sup>1</sup>, A/Prof Annette Burgess<sup>1</sup>, A/Prof Kellie Charles<sup>1</sup>

<sup>1</sup>*University Of Sydney, Sydney, Australia*

Effective communication and collaboration skills are vital requirements for transforming the student learning experience, to engage optimally in group learning, and an essential trait for an integral physician training to cultivate ethical and personal identity, critical thinking, influence, and ultimately patient safety. Research has highlighted that goals for healthcare education curricula should foster self-awareness, personal growth, explore attitudes and beliefs, and developing them should be part of student education and not a midcareer epiphany. Experiential workshops were developed and delivered to year 1 MD students with the aim to prepare students to be able to engage optimally in group learning by recognition and exploration of their personal learning styles, biases and prejudices, and preparing them for optimal group interactions.

Self-awareness is abstract and students can miss its value or have an aversion to introspection. The experiential workshops, however, allow participants to apply a collaboration model that encompasses care for other, acknowledges uniqueness, whilst at the same time invites participants to explore how they orient and interact in different situations, fostering self-development and awareness in a real and tangible way.

Students were subsequently required to write individual and team reflections to keep alive their learnings and link between workshops. The individual reflection tasks conveyed many students clearly applied their learnings in both personal and professional situations. Some students were yet to develop insight or may have had an aversion to sharing self-reflections. As an intervention with the aim to improve student groupwork, there was an overall improvement in group communication and peer feedback compared to before this intervention.

Effective communication and collaboration workshops address the need for foundational skills and core communication skills as the substratum for effective social and cultural change and can support mental health and wellbeing of graduates through meaningful and skilful engagement

## Exploring interprofessional identity development in healthcare graduates and its impact on practice.

Ruyi Tong<sup>1</sup>, Associate Professor M Brewer<sup>2</sup>, Dr H Flavell<sup>2</sup>, Associate Professor L Roberts<sup>1</sup>

<sup>1</sup>*School of Population Health, Curtin University, Perth, Australia,* <sup>2</sup>*School of Allied Health, Curtin University, Perth, Australia*

Interprofessional identity development is an emerging area of research. Whilst there is a growing body of studies exploring interprofessional identity development and interprofessional education, little is known about interprofessional identity development in healthcare professionals and the impact of interprofessional identity on practice. This study aimed to explore interprofessional identity development in graduates during their first year of practice and the influence of their interprofessional identity on practice. All graduates had prior interprofessional education experiences (coursework and dedicated interprofessional placement) as students. A total of 14 individual semi-structured interviews from eight graduates from four health professions (speech pathology, physiotherapy, occupational therapy, and pharmacy) were obtained. Interviews were conducted at three time points (four weeks, six months, and twelve months) during their first year of practice. Themes identified showed that movement towards becoming interprofessional practitioners involves a process of developing an increasingly sophisticated understanding of the influence of and intersection between context, interprofessional practice and an interprofessional mindset. Confidence identifying as qualified professionals precedes professional identity development, a pre-requisite for interprofessional identity development. Context influences identity development; identity salience dependent on individuals' understanding of identity. A model of interprofessional identity development underpinned by Kegan's (1982) Constructive Developmental Theory of Self is proposed. Our findings support the inclusion of interprofessional education curricula in health professionals' training and may inform future interprofessional identity research in professionals beyond their first year of practice.

## The Clinical Observership Program (CObP) – Where are we now?

[Dr Kajal Patel](#)<sup>1</sup>, Dr Brooke Sheldon<sup>1</sup>

<sup>1</sup>*Launceston General Hospital, Launceston, Australia*

**Aims:** To describe the evolution of the CObP including insights from faculty involved in the development and feedback from IMGs

**Discussion:** CObPs have become increasingly commonplace in both public and private practice in Australia. This is likely due to the high demand from IMGs, as it is thought to improve job prospects as well as the potential income source for institutions. Despite the popularity of the CObP there is relatively little guidance, structure or regulation, thus resulting in a varied experience for the IMGs. The content and delivery of the CObP has changed according to the needs of the IMGs and the LGH, including the development of a CObP curriculum, a dedicated website for IMGs, teaching program and dedicated assistant for the CObP.

**Issues/Questions for exploration or ideas for discussion:** Whilst many organisations implement CObP engaging IMGs, concerns have been raised given the lack of standardisation of the CObP around Australia. In order to improve transparency to both stakeholders at the LGH and the IMGs involved, should these programs be subject to accreditation?

This talk will be of interest of educators involved in developing and delivering the CObP within their own institutions.

## Clinical Training (CTT) program: how successful is 'online only' delivery?

**Associate Professor Annette Burgess**<sup>1</sup>, Dr Akhil Bansal<sup>1</sup>, Dr Antonia Clarke<sup>1</sup>, Dr Tom Ayton<sup>1</sup>, Ms Christie van Diggele<sup>1</sup>, Mr Tyler Clark<sup>1</sup>, Dr Elie Matar<sup>1</sup>

<sup>1</sup>*The University Of Sydney, Faculty Of Medicine and Health, Sydney Medical School, Sydney, Australia*

**Introduction/background:** The Clinical Teacher Training (CTT) program was developed in 2017 as an interprofessional, 10 module blended learning program, to support health professionals working across health services. With the disruption of COVID-19 in 2020, we rapidly moved to 'online only' delivery.

**Aims/objectives:** This study sought to explore participants' perceptions of the structure, processes and outcomes of the 'online only' CTT program and draw comparisons with previously published 'blended learning' outcomes.

**Methods:** The program was facilitated online across six weeks with asynchronous and synchronous assessable activities including: active participation in small groups to teach healthcare topic; preparation of a teaching plan and a skills teaching videos; journal club presentation; and discussion boards. Peer or facilitator feedback was provided for each activity. Quantitative and qualitative data were collected by post-course questionnaire and analysed using descriptive statistics and thematic analysis.

**Results:** 59 participants completed the program from medicine (83%), nursing (8%), physiotherapy (5%), dentistry (2%), and basic science (2%); from across five metropolitan and rural health districts. 34% responded to the questionnaire. Learning outcomes were positive, and similar to 'blended learning' format. Participants valued the program structure, topics, small group activities, formative assessment and feedback. They appreciated the flexibility of the 'online only' format. However, some (40%) indicated they would appreciate the option of a 'face-to-face' session.

**Discussion:** The 'online only' CTT program provided an excellent framework to ensure continued provision of an up-to date, relevant, and accessible training resource for clinicians working across metropolitan and regional/rural areas, allowing development of a range of teaching skills. However, the need for additional opportunities for 'real time' interaction is indicated.

**Conclusions:** Key to 'online only' success is a well-structured course with clear outcomes, succinct literature, multiple short video examples to assist preparation of activities, formative assessment, provision of feedback, and synchronous small group participation.

## The influence of students' perceived learning autonomy on approaches to learning

Dr Tehmina Gladman<sup>1</sup>, Dr Q Liu<sup>1</sup>, Dr D Kenwright<sup>1</sup>, Dr R Grainger<sup>1</sup>

<sup>1</sup>*University Of Otago Wellington, Wellington, New Zealand*

Students approach learning using three major strategies: surface, as exemplified by rote learning; deep, which includes reading widely and making connections to previous knowledge; and achieving, often focussed more on competition and being the best student. The deep learning approach is often promoted as the preferred approach for medical students due to its focus on connecting different threshold concepts and areas of knowledge and skills. Research has also found that students' learning is both influenced by and influences academic motivation. Academic motivation is made up of a constellation of factors, one of which is students' perceptions of learning autonomy – their feeling that they have choice in when and how they learn. Students' perceptions of autonomy can be supported through teacher interventions – termed autonomy support in the literature. The aim of this study is to explore the relationship between students' perception of autonomy and their choice of/preference for approaches to learning in the context of medical education.

We are using quasi experimental methodology following a single group repeated measures design to explore the relationship between autonomy support and learning approach in a sample of medical students in their clinical years in the Pathology module. The Pathology module is taught as a stand-alone subject with clear learning outcomes, but also has links to discipline/block modules. The Pathology module has also been developing, over several years, a curriculum that incorporates opportunities for students to experience choice in their learning. This created an ideal testing ground for exploring the relationship between these variables.

As this is ongoing work, we expect to be able to report on the results of the first two sets of data and some initial conclusions by the festival date.



## Violating values and beliefs explains why clinical teaching experiences can be demanding

**Dr Megan Anakin<sup>1</sup>**, A Ali<sup>2</sup>, C Lee<sup>1</sup>, T Wilkinson<sup>2</sup>, J Timmermans<sup>1</sup>

<sup>1</sup>University of Otago, Dunedin, New Zealand, <sup>2</sup>University of Otago, Christchurch, New Zealand

**Introduction/Background:** We define demanding teaching experiences as any unfavourable or unintended situations while teaching that are distressing, disturbing, or otherwise memorable. There is a paucity of relevant research in health professional education contexts. We build on our previous research into the nature of demanding teaching experiences of health professional educators. Our aim was to delve into the reasons why these experiences were perceived as demanding.

**Methods:** The interview protocol was constructed drawing on literature from the following domains: teacher identity formation, emotional processing, framing and appraisal of threatening and challenging stress. We used a reflexive thematic approach to analyse semi-structured one-on-one interviews with 16 health professional educators.

**Findings:** A relationship was identified between values or beliefs and a demanding teaching experience. A demanding teaching experience arose when there was a breakdown or a violation of one's beliefs or values. Examples included a conflict where the primacy of patient care was challenged by a student's lack of preparation, a mismatch between teacher expectations of reliability and a student arriving late, and tension when a colleague's disrespect for students violated the teacher's value of fostering a student-centred learning environment.

**Discussion and Implications:** A teaching experience is perceived as demanding when it violates a clinical educator's values or beliefs, or is in an area they care about. Our findings seem to be the first observations of such tensions in healthcare education, but those tensions unrelated to patient care have been described within broader education literature. Our findings can be used as part of professional development interventions to help health professional educators make sense of why some events can be demanding and provide insights into how these can be recovered from, or prevented, in the future.

## The impact of work while studying on medical students' education

**Lizzie Stevenson<sup>1</sup>**, K Smith-Han<sup>1</sup>, H Nicholson<sup>1</sup>

<sup>1</sup>*University of Otago, Christchurch, New Zealand*

**Introduction/Background:** Tuition fees, accrued debt and cost of living for medical students are large and increasing, amplifying the need to work part-time during the academic year to meet financial pressures. Current literature presents conflicting findings regarding the overall impact of part-time work on medical students.

**Aims:** To explore how Otago Medical School (OMS) students negotiate their medical degree while undertaking concurrent part-time work; the impact this work has on student interaction with curriculum and their wellbeing; and the overall impact of COVID-19 on students' work in 2020.

**Methods:** An online survey in 2020 gathered demographic, quantitative and qualitative information about OMS students and their work experiences while concurrently studying. Descriptive statistics were used to analyse quantitative data; qualitative data was analysed using qualitative content analysis.

**Results:** Results showed that 49% of OMS students undertook paid part-time work, and 24% reported that they would not be able to remain studying at medical school if they did not concurrently do part time work. A total of 64% of students answered that they work for many reasons, as well as to meet basic living costs. Just over 40% of students found that their work conflicted with scheduled medical school commitments, and 70% reported conflicts between work and individual study. Overall, impacts on medical curriculum interaction and student wellbeing were both positive and negative. COVID-19 disrupted around 60% of paid work and almost 70% of unpaid work for medical students.

**Discussion:** As health professional education institutions increase diversity in their cohorts, combined with rising living costs, increasing numbers of students may need to work in order to study. This research highlights the impacts of part-time work on a medical student population and may help encourage strategic educational leadership to adapt or implement measures to better support students who work part time while studying.

## Acting like a doctor: a qualitative evaluation of theatre skills workshops for medical students and junior doctors

Dr Claire Hooker, Dr Emily Dunn, A/Prof Karen Scott, A/Prof Louise Nash

<sup>1</sup>*Sydney Health Ethics, University Of Sydney, Sydney, Australia*

**Background and Rationale:** In many countries around the world, medical students and junior doctors describe workplace mistreatment ranging from teaching by humiliation to outright and sometimes extreme bullying and harassment. This negatively impacts learning and workforce retention as well as doctors' mental health and wellbeing. Theatre workshops, focused on embodiment, self-awareness and skill development rather than role play or simulation, have been posited as a creative way of building professionalism and improving communication skills generalisable to a variety of interpersonal situations.

**Methods:** Three hospital-based Grace under Pressure theatre skills workshops for medical students and junior doctors were evaluated using a qualitative approach of semi-structured audio-recorded phone interviews. 12 participants were interviewed in total. The data was then analysed using inductive thematic analysis, identifying key words, phrases and themes.

**Results:** Three themes emerged, each exploring how participants understood what it meant to 'act as a doctor' and the value of the workshops for professional development. Firstly, participants reflected that acting like a doctor primarily meant acting within a hierarchy. Secondly, workshop activities exploring status equipped participants with tools to recognise, and improve resilience to, workplace mistreatment. Lastly, participants found such activities generalisable to a range of scenarios and for improved relationships with colleagues.

**Conclusion:** Theatre skills workshops provide tools for enacting medical professionalism for students and junior doctors and have a role in combating workplace mistreatment.

## Mixed Method Evaluation and Cost Consequence Analysis of a Teaching and Learning Internship Program for Higher Degree Research Students

Professor Erica James<sup>1</sup>, Dr T Majeed<sup>1</sup>, Dr T Bagade<sup>1</sup>, Dr N Weaver<sup>1</sup>, Dr P Reeves<sup>2</sup>, Ms S Dsilva<sup>2</sup>, **Professor E James<sup>1</sup>**

<sup>1</sup>University Of Newcastle, Newcastle, Australia, <sup>2</sup>Health Economics Unit, Hunter Medical Research Unit, New Lambton Heights, Australia

Despite most PhD graduates being appointed in positions that involve teaching, Higher Degree Research (HDR) programs traditionally focus solely on research training. This results in many early career academics assuming teaching responsibilities with minimal preparation. This presentation describes the evaluation of a model pedagogy-preparation program in public health education run at the University of Newcastle, New South Wales, Australia.

We devised an innovative Teaching and Learning Internship designed to provide current HDR candidates with a structured apprenticeship. The internship comprises: 1. Mentoring from an experienced educator, 2. Structured program of education in pedagogy and curriculum design, 3. Opportunities for applied experience.

The evaluation involved a mixed methods approach that: 1. Assessed changes in knowledge, skills, and confidence of interns throughout the internship, 2. Evaluated the importance of various components of the intern experience, 3. Calculated a cost-consequence analysis.

Data collection included surveys and face-to-face interviews with interns and mentors. Changes in intern knowledge and skills were analysed by intern self-ratings pre- and post-internship on 11 performance descriptors. Ratings improved on all 11 aspects with the greatest improvements in skills in assessment and rubric preparation. Qualitative interviews indicated general satisfaction, however raised incompatibilities between the unforced nature of mentoring and precise intern expectations. The economic analysis calculated a cost-offset associated with intern delivered teaching activities of \$34,118 (AUD, 2019).

This Teaching and Learning Internship provides HDR candidates with the opportunity to develop teaching and learning competencies, enhancing work-readiness and employability.

## The impact of interventions to enhance medical student wellbeing: A systematic review and a meta-analysis

Dr Nilakshi Waidyatillake<sup>1</sup>, **Dr Narelle Bethune<sup>1</sup>**, Dr Kate Reid<sup>1</sup>, Dr Anita Horvath<sup>1</sup>

<sup>1</sup>*The University Of Melbourne, Parkville, Australia*

**Introduction:** Medical students can experience high levels of stress during medical training and are reported to have lower levels of psychological wellbeing than the general student population. Recent research reported a deterioration of Australian medical students wellbeing since the onset of the COVID-19 pandemic due to the loss of social connectedness, increased stress, and changes to their studies. There is a growing body of research on intervention programs to enhance medical students' wellbeing; however, systematic reviews of the literature tend to focus only on specific interventions such as mindfulness programs or include health professions other than medical students. This research aimed to conduct a systematic review and a meta-analysis of the literature on interventions employed to enhance or maintain medical student wellbeing.

**Methods:** Publications related to medical students and wellbeing interventions were identified from PubMed, EMBASE and PsychINFO electronic databases using predefined inclusion and exclusion criterion. We included studies that implemented any type of intervention focussing on medical student wellbeing, reported the pre- and post-intervention results quantitatively and included a no-intervention control group.

**Results:** 26 studies were selected for the review. The selected studies used a range of interventions to improve medical student wellbeing. A range of outcomes measures of wellbeing were reported, with the most common being measures of stress, anxiety and depression. Of the 26 studies, 17 showed a reduction in stress, anxiety, and/or depression after completing a wellbeing intervention and four studies showed improvements on other wellbeing measures. Five studies showed no improvement in psychological wellbeing.

**Conclusion:** These results suggest that wellbeing interventions tailored to medical students are effective in reducing anxiety, stress and depression. A continued focus should be placed on incorporating wellbeing measures in medical curricular to support students to manage unexpected events and other challenges throughout their studies.



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## Assessment 6A

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### What COVID-19 has taught us about online learning: the impact on student perspectives and academic performance

Jessie Zhou<sup>1</sup>, Associate Professor Jennifer Lindley<sup>1</sup>, Mr Colton Neves<sup>2</sup>, Dr Vishal Punwani<sup>2</sup>, Dr Emma Giles<sup>2</sup>, Associate Professor Adrienne Torda<sup>3</sup>, Professor Michelle Leech<sup>1</sup>

<sup>1</sup>Monash University, Clayton, Australia, <sup>2</sup>Sophya, Sage Learning Inc, Harvard Innovation Labs, Boston, United States, <sup>3</sup>Faculty of Medicine and Health, UNSW, Sydney, Australia

**Introduction/Background:** The unprecedented global pandemic has accelerated the shift towards online learning. Evidence on how online learning should be optimised to maintain student satisfaction, engagement and academic progression for clinical year medical students is limited.

**Aim/Objectives:** To obtain an in-depth understanding of medical student learning needs to develop an online medical curriculum for 500 medical students undertaking their first clinical year, as well as determine if a predominantly web-based program affects student academic performance.

**Methods:** Semi-structured interviews with medical students were performed until saturation. Three researchers independently conducted grounded theory analysis of interview transcripts, reaching consensus on five major themes: learner perspectives, teacher/delivery, technology (modes/format), content and structure to guide online resource development. Mean academic performance of the 2020 cohort (75% online program) was compared with the 2019 cohort (traditional program).

**Results:** While learning styles and preferences vary significantly amongst students, all participants agreed that online learning cannot replace clinical placements or social aspects of the university experience. However, combinations of asynchronous self-paced eLearning and live interactive virtual sessions may be more effective for learning theoretical concepts. Preferred methods for receiving and reinforcing learning material were videos with supplementary interactive activities and regular quizzes with feedback, respectively. Top three themes for optimal eLearning included: conciseness, standardised teaching; and emphasis on “what is important”. Top three limitations for eLearning included: cognitive overload, poor engagement and technology issues. Mean end of year examination results show a statistically significant increase in performance (5.3% higher in 2020 compared to 2019,  $p < 0.05$ ).

**Discussion:** Students have identified that optimal online teaching should be faculty-driven with a centralised, accessible core curriculum tailored to student learning objectives, delivered in an interactive multimodal approach.

**Conclusions:** Student-centric eLearning driven approaches are viable models for clinical education that do not compromise student academic progression.

## Adapting to remote health professional education during the COVID-19 pandemic: Student and academic perspectives

**Dr Mahbub Sarkar**<sup>1</sup>, Arunaz Kumar<sup>2</sup>, Dragan Ilic<sup>3</sup>, Julia Morphet<sup>4</sup>, Stephen Maloney<sup>5</sup>, Elizabeth Davis<sup>6</sup>, Claire Palermo<sup>1</sup>

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**Introduction/background:** During the COVID-19 pandemic, universities across the world transitioned to remote education. A rapid shift to remote education from traditional in-person delivery is likely to impact how students navigate their learning and how academics experience teaching online.

**Aim/objectives:** To explore: (a) how students and academics of health courses adapt to remote education; (b) what challenges they encounter adapting to remote education, and (c) how these challenges contribute to their educational experiences.

**Methods:** Drawing on pragmatism, a sequential mixed-methods design was adopted. An online survey followed by interviews with students and academics of five large health courses at an Australian research-intensive university were undertaken. Data included 476 surveys and seven focus group interviews with 22 students, and 95 surveys and 17 individual interviews with academics. Student and academic data were analysed separately and then compared.

**Results:** A validated measure of adaptability (Adaptability Scale) indicates academics adapted to remote education better compared to students. For both students and academics, factors of an interpersonal nature (e.g. lack of interactions and personal relationship, and impersonal nature of online education) and increased workload were the major challenges. The qualitative data highlighted that while poor mental health, lack of social learning and physical absence in the educational process are the key consequences of these challenges, student use of self-discipline strategies and academic support through compassionate pedagogy contributed to addressing them.

**Discussion:** Our results attest to the important role of adaptability and the significant challenges experienced by students and academics in learning and teaching due to the need to rapidly adjust to the changes and uncertainty caused by the pandemic.

**Conclusions:** Navigating the challenges associated with remote education provided students and academics with a unique opportunity to improve adaptability—an attribute more readily viewed in the face of future uncertainties.



## Impact of COVID on student performance and perception in a carousel based online postgraduate public health degree program

**Ms Nazmul Karim<sup>1</sup>**

<sup>1</sup>*Public Health and Preventive Medicine, Faculty of Medicine, Nursing & Health Sciences, Melbourne, Australia*

**Introduction/background:** The number of fully- online course offerings in the health professions has significantly increased over the past decade. Online learning is particularly appealing for learners who find the traditional classroom modality restrictive, inflexible, and impractical. The current pandemic has made online courses appealing to educators and learners alike; however, little evidence exists regarding its impact on student outcomes.

**Aim/objectives:** To compare the academic performance and perception of the students taught online before and during the COVID-19 pandemic in a postgraduate course.

**Methods:** Data of 2376 students enrolled in carousel-based graduate courses, during 2019 and 2020, were included analyzed. Student demographics, unit completion status, grades, and student evaluation scores (SETU) were compared. Marks and SETU were compared between the two years using an Independent t-test. A multivariable logistic regression model was fitted to assess change.

**Results:** Around 75.5% of the students were female. On average students scored 6.1%, more marks in 2020 compared to 2019. Adjusting for teaching period and gender, 36% increase in the discontinuation [OR-1.36;95%CI:1.14-1.6; p<0.001], and 2-times more distinction or higher grade [OR-2.12;95%CI: 1.7-2.6; p<0.001] is evident in 2020. SETU of units remained similar (4.3 vs 4.4).

**Discussion:** Although tech-based instruction has made it possible to offer classes through an online learning platform during the COVID-19 pandemic, the sector failed to show much immunity against the brunt of the pandemic impact. Possibly learner's characteristics like motivation and technological comfort level, are standing in between the educational outcomes and potential benefit. Interestingly, staggering inflation in student grades is apparent, possibly a phenomenon that may be coined as 'pandemic kindness' in the assessment during the difficult time. Further research with individual learner factors may provide further insight.

**Conclusions:** Despite the anticipated advantage, carousel-based online courses did not show enough immunity against the brunt of the COVID-19 pandemic.

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### Student Assessment in Telehealth Practice: Providing Guidance for Physiotherapy Clinical Educators

**Alison Francis-cracknell**<sup>1</sup>, Dr Irmina Nahon<sup>2</sup>, Ruth Dunwoodie<sup>4</sup>, Dr Rosemary Corrigan<sup>5</sup>, Lauren Jeffery<sup>4</sup>, Dr Casey Pieris<sup>3</sup>

<sup>1</sup>Monash University, Frankston, Australia, <sup>2</sup>Canberra University, Canberra, Australia, <sup>3</sup>LaTrobe University, Bundoora, Australia,

<sup>4</sup>University of Queensland, Brisbane, Australia, <sup>5</sup>Charles Sturt University, Frankston, Australia

Clinical educators experienced significant challenges in providing student education during the 2020 global COVID-19 pandemic. Many services needed to rapidly adapt to incorporate telehealth whilst concurrently conducting student placements. Representatives from the Clinical Education Managers of Australia and New Zealand (CEMANZ) committee identified an immediate need to support clinical educators to apply the Assessment of Physiotherapy Practice (APP) tool to student assessment in telehealth. A subgroup of the CEMANZ committee was formed to gather representative consensus across all Universities regarding student assessment using the Assessment of Physiotherapy Practice (APP) tool in a telehealth context. Suggested APP performance indicators and a guiding document were then developed to address specific concerns, clarify the application of the APP assessment tool in a telehealth context and provide practical examples to guide clinical educators.

Providing this timely resource to the educator community enabled many student clinical education experiences to proceed in a pandemic environment and has illuminated telehealth as an innovative context in which to students can be educated and assessed. This presentation showcases the response to this need, the process of establishing representative consensus and collection of suggested performance indicators for use in telehealth.

## Does post-graduate student retention and performance differ in on-campus offerings from the online offerings, as adjustment due to COVID-19?

**Ms Nazmul Karim<sup>1</sup>**, Professor D Ilic<sup>1</sup>

<sup>1</sup>*Public Health and Preventive Medicine, Faculty of Medicine, Nursing & Health Sciences, Melbourne, Australia*

**Introduction/background:** Due to the COVID-19 pandemic, educators in most institutions were forced to shift units traditionally delivered in a face-to-face mode to that of a remote, online version, whilst aspects of face-to-face teaching can be shifted online, the impact on learner outcomes is uncertain. A significant paucity exists regarding research on the impact and prospect of online learning as an alternative for postgraduate public health studies.

**Aim/objectives:** The aim of the study was to assess differences in discontinuation and academic performance of students enrolled in a postgraduate public health program pre and during-COVID situations.

**Methods:** Data of 3535 students enrolled in post-graduate public units, delivered both in 2019 and 2020, were analyzed. Multivariable logistic regression analysis, adjusting for student demography and period of enrolment, were employed to assess predictors of discontinuation and performance (a distinction or above grade).

**Results:** Around 70.8% of the students were female and 35.7% were international students. The proportion of discontinuation was slightly lower in 2020 (34.2% vs 32.9%). The odds of scoring a distinction or higher grade was higher in 2020 [OR 1.4 (95%CI; 1.2-1.6; p<0.001)] and among domestic students [OR2.5 (95%CI; 2.2-3.0; p<0.001)]. Only enrolment in semester-two [OR1.4 (95%CI; 1.2-1.6; p<0.001)] appeared to increase discontinuation.

**Discussion:** Monash University made series of adjustments in 2020 to facilitate teaching into tech-based online learning. Hence, comparison between 2019 and 2020 serves as a proxy for comparison between COVID and pre-COVID scenarios. Our results suggest, online mode of delivery as an adjustment for the COVID scenario does not seem to increase discontinuation, rather increase student's performance. Further research is required to understand the precise dynamics of this paradoxical effect.

**Conclusions:** Online teaching in postgraduate public health education as an adjustment for the COVID scenario does not seem to affect retention, rather likely to increase student's performance.

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### i-CAT - Moving from a paper-based clinical assessment tool to an online tool using PebblePad. The process of change, and the experience of teachers, students and clinical preceptors

Ms Catina Adams<sup>1</sup>, Dr Leanne Sheeran<sup>2</sup>, Ms Lael Ridgway<sup>1</sup>, Ms Katie Sykes<sup>1</sup>, Mr Mark Derbyshire<sup>2</sup>  
<sup>1</sup>La Trobe University, Bundoora, Australia, <sup>2</sup>RMIT University, Bundoora, Australia

Introduction/background: Child Family and Community nursing students in Victoria undertake over 300 hours of clinical practice in Maternal and Child Health centres, supported by clinical preceptors.

A common clinical tool was implemented in 2012, developed by La Trobe and RMIT Universities with co-design by clinical preceptors and students.

In 2020, we transitioned from the hard-copy clinical assessment tool (VicCAT) to an online version (i-CAT).

Aim/objectives: To describe the process of transitioning from hard-copy to an online assessment and clinical review tool, including review, design, consultation, testing and adoption of the new tool.

To describe the experience of students, preceptors and university staff in using the new tool, including communication and training strategies.

To enable thematic analysis of students' and preceptors' reflections, with a focus on the transition from novice to commencing practitioner (ethics approval applied for).

Discussion: Using an online version of the clinical tool enables a real-time review of students' work, whereas previously the VicCAT was reviewed at mid-year, and then at the end of the year.

The i-CAT can be accessed flexibly by both students and preceptors, using mobile phone, tablet or computer technology, at a time convenient to students and preceptors.

Real-time communication between students, preceptors and university staff is facilitated.

The i-CAT includes student and preceptor reflections, which will enable rich thematic analysis of reflections (with ethics approval).

## Interactive Lego films for Learning

[Dr Tanisha Jowsey<sup>1</sup>](#)

<sup>1</sup>*Centre For Medical And Health Sciences Education, University of Auckland, Auckland, New Zealand*

In lockdown with young children, I explored the reaches of an interactive software for supporting student engagement with online learning by combining it with fun short films involving Lego. As a film maker and clinical educator, I created short [1-4 minute] films about fictitious characters and medical and health sciences educational material using Lego. Scenes were set up and recorded on a mobile phone and later edited using both Microsoft PowerPoint and Adobe Premiere Pro software. Characters – including Batman – played out situations that I would usually film with real people in simulation and/or role play. Lego provided an important element of play into the learning material. Although many of our learners are highly skilled clinicians they are also people who share common experiences and meanings associated with Lego play. For many, Lego conjures up nostalgia of childhood play and associations with creativity, curiosity, as well as with iconic characters such as Cat Woman, Darth Vader, and Spaceman. I leveraged these commonly held experiences and meanings to engage learners. I didn't try to make something that looked slick in the animated sense, but instead for something that more closely resembled actual play with Lego. My hand can be seen moving characters in the films. This element of authentic play was important to student wellbeing and positive interactive learning in response to the backdrop of global stress and anxiety emergent from Covid-19.

As evidenced in the research on the effectiveness of question-embedded videos (Vural 2003), I used H5P software (an interactive engagement learning plug-in) (HTML5 Package, MIT, MA, USA) to add interactive components to films. In this presentation I'll show a film and share information about how to do it. I'll present on student responses to the interactive Lego films.

## Changes to exit OSCE assessment at Australian Medical Schools in response to covid-19

**Clare Heal**<sup>1</sup>, Dr Leanne Hall<sup>1</sup>, Dr Karen D'Souza<sup>2</sup>

<sup>1</sup>James Cook University, Mackay, Australia, <sup>2</sup>Deakin University, Melbourne, Australia

**Objective:** The objective of this study was to investigate changes to exit level Objective Structured Clinical Examinations (OSCE) in 2020 in Australian medical schools in response to limitations resulting from covid-19.

**Methods:** A 45-item semi-structured questionnaire was sent to all 12 Australian medical schools with graduating students which form part of the Australian Collaboration for Clinical Assessment in Medicine (ACCLAIM).

**Results:** A total of 11/12 of schools responded. In 2019 all schools had an exit level OSCE examination. In 2020, 2/11 schools did not deliver an OSCE as part of exit level assessment. Of the remaining nine schools, three delivered the same number of stations and total testing time as 2019, four schools reduced the number of stations and testing time, and two increased the number of stations. The minimum OSCE total testing time dropped from 80min in 2019 to 54 min in 2020. Other modifications to station delivery included completely online OSCE (two schools) hybrid delivery with simulated patients online (two schools) stations utilising videos of patient encounters (two schools) telephone calls (two schools) and stations involving completion of skills not involving a face to face patient encounter (two schools). The proportion of stations involving physical examination reduced from 33% to 13%. There was a reduction in the number of examiners required, and university staff formed a higher proportion of examiners compared with clinicians in 2020.

**Conclusions:** All schools changed their OSCE examination in 2020 in response to covid-19. Responses varied from reduced numbers of OSCE stations and modified methods of OSCE delivery to complete re-structuring of assessment. Several innovative methods of OSCE delivery were used in order to preserve OSCE validity and reliability whilst balancing feasibility in response to the pandemic.

# Workshop Wednesday 14 July 2021

## Workshop 5

### Educational scholarship: Advocating for recognition for healthcare professions educators

Presenters: Jennifer Cleland (LKCMedicine, Singapore), Tim Wilkinson (Otago), Trevor Gibbs (AMEE) and Chinthaka Balasooriya (UNSW).

This workshop will build on the recently published AMEE Guide number 142 “Redefining Scholarship for Health Professions Education”. Access can be obtained at: <https://doi.org/10.1080/0142159X.2021.1900555>, and participants should pre-read the Guide.

In this workshop, the following topics will be addressed:

- Reflection on the issues of being recognised as an educator,
- Consideration of the breadth of scholarship activities including scope of contribution and influence,
- Discussion of effective ways of engaging with scholarship.
- Discussion of what might be considered as evidence to be recognised as a HPE scholar

Consideration will be given to ANZAHPE’s acceptance of the recommendations of the Guide.

