20th Anniversary

APMEC 2023

ASIA PACIFIC MEDICAL EDUCATION CONFERENCE

Celebrating Excellence in Scholarship of Teaching and Learning

TRENDS • ISSUES • PRIORITIES • STRATEGIES

22nd (Mon) – 28th (Sun) May 2023 | Singapore

CONFERENCE HANDBOOK

Organised by:

NUS National University of Singapore | Centre for Medical Education, Yong Loo Lin School of Medicine

NUSMedCenMED

Participating Partners:

amee, Western Pacific Association for Medical Education, Intealth, IAMSE, GAME, APBSEA, Asia Pacific Medical Education Network – Promoting Scholarship and Excellence in Medical Education

For enquiries, please email Lee Su Mei at medlsm@nus.edu.sg
All information is correct at time of publication.

WEDNESDAY, 24 MAY 2023

Dear Colleagues,

Warmest Greetings to you.

I am delighted to share that 2023 marks the 20th anniversary of the Asia Pacific Medical Education Conference (APMEC).

Anniversaries are not only an opportunity to reflect on and celebrate the past, but, to take stock, chart ambitious strategies, and take action for the future of medical and healthcare professional education. This anniversary is an even more important one as we celebrate two decades of academic collaborations. It's also important in other ways as part of a collective and international identity that has shaped us and improved our work. Also, importantly, it has given us friendships and we share collective rewarding memories.

On behalf of the Organising Committee of the 20th Anniversary APMEC 2023 and the Centre for Medical Education (CenMED), Yong Loo Lin School of Medicine, National University of Singapore, National University Health System, it gives me great pleasure to welcome you to the first hybrid Asia Pacific Medical Education Conference (APMEC) from Monday 22nd to Sunday 28th May 2023.

To commemorate this auspicious year, we have carefully chosen our theme, "Celebrating Excellence in Scholarship of Teaching and Learning - Trends ● Issues ● Priorities ● Strategies (TIPS)".

As with previous APMECs, we have invited distinguished medical and healthcare professional educators to share their experiences, expertise and wisdom.

The past two decades have seen the conference grow and evolve from 190 participants to over 1,500 participants from nearly 40 countries. We thank you for your continued contributions and tireless efforts to support APMEC throughout the years. As a result, we have had a tremendous impact on our communities and have played a part in shaping their health futures.

I look forward to your active participation and to once again welcoming you to our 20th Anniversary APMEC in May 2023.

With best wishes,
Dujeepa D Samarasekera
Chairman, Organising Committee 20th Anniversary APMEC 2023
Senior Director, Centre for Medical Education (CenMED)
Yong Loo Lin School of Medicine
National University of Singapore
National University Health System

WEDNESDAY 24TH MAY 2023
NUSS KENT RIDGE GUILD HOUSE, 9 KENT RIDGE DRIVE, SINGAPORE 119241

Full Day: 8.00am – 5.00pm
ESME (Essential Skills in Medical Education) Course (Session 1) Ronald M. Harden, Dujeepa D Samarasekera, Koh Dow Rhoon, Tan Chay Hoon, Goh Poh Sun, Lee Shuh Shing and Jillian Yeo Venue: Left Chamber
AM (8.00am – 12noon)
W1A1: Educating for Collaboration Beyond IPE: Concepts, Claims, Culture and System Change Kevin Tan, Nigel Tan, Jai Rao, Raymond Goy, Gormit Kaur, Catherine Poey and Sabrina Koh Venue: Cluny & Dalvey
W1A2: Cultural Intelligence and Its Applications to Selection, Remediation, and Wellness in Post-Graduate Medical Education Steven Green, Amira Siyam, Elia Del Rosario and Michele Kigozi Venue: Evans
W1A3: Design Thinking in Curriculum/Course Design for Medical Educators Carmen Wong, Samuel Wong, Paul Lai and Eddie Ng Venue: Right Chamber
W1A4: Introduction to Data Science for Education Analytics Kenneth Ban Venue: Virtual Platform
W1A5: Best Practices for Implementing Team-Based Learning (“TBL”) in an Online Modality Brian O’Dwyer Venue: Virtual Platform
W1A6: Evaluation of the Medical Sciences Bridging Programme - A Peer Teaching Initiative by Students for Students Jonathan Liang, Lincoln Lim, Clarissa Wong, Gayathri Basker, Thaarun Thirumeninathan and Lye Yan Nerng Venue: Virtual Platform

PM (1.00pm - 5.00pm)
W1P1: Power, Trauma and Disruptive Behaviour in Healthcare Inthrani Raja Indran, Marion Aw, Benjamin Goh and Tan Chay Hoon Venue: Right Chamber
W1P2: APBSEA Professional Development Course: Transitioning into Medical Sciences Education in Health Professions Ardi Findyartini, Chen Zhi Xiong and Vishna Devi Nadarajah Venue: Evans
W1P3: Strategies to Support Well-Being for Our Learners, Our Peers and Ourselves Jo Bishop, Aviad Haramati, Diann Eley and Stuart Slavin Venue: Cluny & Dalvey
W1P4: Remediation: The Art of Facilitating a 'Course Correction' for Learners Mairi Scott and Susie Schofield Venue: Virtual Platform
W1P5: Foundations of Assessment Metrics: An Overview Gominda Ponnamperuma Venue: Virtual Platform
W1P6: Blended (Hybrid) Learning: A New Portentous Modality of Teaching in Medical Education in the Era of Post Pandemic Manasik Hassan, Magda Yousef, Eman Al Maslamani and Hatim Abdelrahman Venue: Virtual Platform
5:45pm - 7:00pm
APME-Net 16th Niigata Meeting Venue: Virtual Platform

THURSDAY 25TH MAY 2023
NUSS KENT RIDGE GUILD HOUSE, 9 KENT RIDGE DRIVE, SINGAPORE 119241

Full Day: 8.00am – 5.00pm
ESME CT Essential Skills in Medical Education - Clinical Teaching Course (Session 1) Subha Ramani, James Kwan, Faith Chia, Ng Wee Khoon, Tracy Tan and Phua Dong Haur Venue: Left Chamber
AM (8.00am – 12noon)
W2A1: Using Social Media to Disseminate Your Scholarly Work Julie Hewett and Peter GM de Jong Venue: Cluny & Dalvey
W2A2: Mind-Body Approaches to Enhancing Student and Staff Wellbeing in Higher Education Marcus Henning, Craig Webster, Yan Chen and Chris Krageloh Venue: Right Chamber
W2A3: Ownership Cycle: A Structured Approach in Grooming Struggling Learners for High Stakes Assessments Ashokka Balakrishnan, Soh Jian Yi and K Anbarasi Venue: Evans
W2A4: Strategies for Developing Open Education Resources (OER) in Medical Education Tao Le, Teresa Chan and Goh Poh Sun Venue: Virtual Platform
W2A5: Down But Not Out: Identifying and Supporting Learners in Difficulty in Health Professions Education Faith Chia, Law Hwa Lin, Heidi Tan, Jamie Lim, Phua Dong Haur, James Kwan, Tracy Tan and Xanthe Chua Venue: Virtual Platform
W2A6: Young Biomedical Science Educators' Forum (By Invitation Only) Neil Osheroff, Aviad Haramati, Er Hui Meng, Hooi Shing Chuan and Amanda Wong Venue: Virtual Platform

PM (1.00pm - 5.00pm)
W2P1: Tips and Tricks for Successfully Publishing Scholarly Work in an International Journal on Medical Education Peter GM de Jong and Julie Hewett Venue: Cluny & Dalvey
W2P2: Portfolios; Too Much or Not Enough? Creating the Balance Through Tutor-Led Small Group Sessions Mairi Scott and Susie Schofield Venue: Evans
W2P3: Workplace-Based Assessment: Designing A Basic Faculty Development Workshop John Norcini Venue: Right Chamber
W2P4: Are You Still Using Powerpoint? Simple Ways Revitalise Your Presentations and Reignite Student Interest in the Classroom Michael Herr Venue: Virtual Platform
W2P5: Who Defines 'Quality'? Deconstructing Hegemonic Ideas of Quality in Medical Education Mohammed Ahmed Rashid Venue: Virtual Platform
W2P6: Open Book Examinations: The Five Ws and How Er Hui Meng, Wong Pei Se and Vishna Devi Nadarajah Venue: Virtual Platform
W2P7: How Can I Make the Most of My Qualitative Research Data? Qualitative Data Collection and Analysis Lee Shuh Shing and Diantha Soemantri Venue: Virtual Platform

VENUE:
UNIVERSITY CULTURAL CENTRE (UCC), NATIONAL UNIVERSITY OF SINGAPORE, 50 KENT RIDGE CRESCENT, SINGAPORE 119279

UCC Level 1	VIP Lounge, UCC Level 2	Foyer, UCC Level 2	Celadon Room
Registration & Help Desk	Speakers' Slide Upload	Trade Exhibition	Discussion Room for Business Meetings (by invitation only)
Trade Exhibition	Speakers' MoM e-Notification	Lunch & Teabreaks	
Lunch & Teabreaks			

Day 1: Friday 26 May 2023

Keynote and Plenary
Symposium
Panel Discussion
Free Communications
Business Meetings (by invitation only)
Soap Box
Social Programmes
Breaks / Other Events

Time	Ho Bee Auditorium	Theatre	Atrium	Celadon Room
9:00am - 9:30am	**Opening Ceremony**			
	Welcome Address Dr Dujeepa D Samarasekera Chairman, Organising Committee 20th APMEC 2023			
	Dean's Address Professor Chong Yap Seng Dean, Yong Loo Lin School of Medicine National University of Singapore, Singapore			
	Address by Guest of Honour Professor Tan Eng Chye President, National University of Singapore, Singapore			
9:30am - 9:45am	**Award Presentation**			
9:45am - 10:15am	**Opening Keynote Address** **Creating Holistic Health Professions Educators: Lessons from Curricular Revision** Professor Neil Osheroff Professor of Biochemistry and Medicine John G. Coniglio Chair in Biochemistry Vanderbilt University School of Medicine, USA			
	Chairperson: Dujeepa D Samarasekera, Singapore			

Time	Ho Bee Auditorium	Theatre	Atrium	Celadon Room
10:15am - 10:45am	**Opening Ceremony Reception - UCC Foyer, L1 and L2**			
10:45am - 11:45am	**Symposium 1** **Innovations in Medical Education: Getting Beyond the Hype to What Really Works**	**Panel Discussion 1** **Fostering Well-Being in the Learning Environment: International Perspectives**	**Symposium 2** **Scholarship to Prepare Professionals for Their Future Role in Education**	
	Understanding Successful Innovations Ronald M Harden, United Kingdom **New Directions in Education Technology** Goh Poh Sun, Singapore **Design Thinking and Other Methods of Innovation** Tao Le, USA **Sustaining Education Innovation in Low Resource Settings** Hoang Minh Nguyen, Vietnam	**Perspectives from the USA on Fostering Well-Being in the Learning Environment** Aviad Haramati, USA **Perspectives from Australia on Fostering Well-Being in the Learning Environment** Jo Bishop, Australia **Perspectives from Singapore on Fostering Well-Being in the Learning Environment** Marion Aw, Singapore **The Impact of Culture and Context in Nurturing Student Well-Being** Muhamad Saiful Bahri Yusoff, Malaysia	**The Importance of Scholarship for Educator Career Development** Diann Eley, Australia **The Use of Educational Theories** Karen Scott, Australia **Qualitative and Mixed Methods Research** Bonny Dickinson, USA **Ways to Publish Scholarly Results in MedEd Journals** Peter GM de Jong, The Netherlands	
	Chairperson: Tao Le, USA	Moderator: Chen Zhi Xiong, Singapore	Chairperson: Peter GM de Jong, The Netherlands	
11:45am - 12noon	**Break**			
12noon - 12:30pm	**Plenary 1** **What Technological Innovations Mean for Our Assessment Programs** Lambert Schuwirth, Australia	**Plenary 2** **Professional Identity Formation from the Socio-cultural Lens: Entangling Students' and Teachers' Professional Development in the Current World** Ardi Findyartini, Indonesia	**Plenary 3** **Preparing the Next Generation of Healthcare Practitioners: Role of Scholarship of Teaching and Learning** Amanda Kenny, Australia	
	Chairperson: Derrick Lian, Singapore	Chairperson: Lee Shuh Shing, Singapore	Chairperson: Rosalind Siah, Singapore	

Time	Ho Bee Auditorium	Theatre	Atrium	Celadon Room
12:30pm - 2:00pm	**Lunch - UCC Foyer, L1 and L2**			
	Social Programme			
	Yoga (Online, 12.30pm - 1.00pm) **Managing Stress with Mindfulness** (Function Room 1, 1.00pm - 2.00pm)			
12.45pm - 1.30pm	**Soapbox**			
12.45pm - 1.00pm	**Pearson VUE**			
1.00pm - 1.15pm	**IDEAL Consortium**	**Australian Government**	**risr/**	
1.15pm - 1.30pm	**CognaLearn Pte Ltd**	**ScholarRx**	**Elsevier**	
2.00pm - 3.00pm	**Panel Discussion 2** **International Perspectives on Professional Identity Formation of the Medical Science Educator**	**Panel Discussion 3** **Global Faculty Development to Advance Health Professions Education**	**Free Communication Finale 1**	
	The 3 Stages of Professional Identity Transformation Chen Zhi Xiong, Singapore **From Arts to Science and Back Again…A Kiwi's Tale** Kelby Smith-Han, Australia **We are Scholars: Leveraging Strengths as Research Scientists for Education** Kim Dahlman, USA	**FAIMER Global Faculty Development: Sustainable Partnership Model** Rashmi Vyas, USA **Outcomes of FAIMER Global Faculty Development** Yuan Shiyao, USA **Online Community Building** Page Morahan, USA	**Please refer to conference website for list of finalists**	
	Moderator: Neil Osheroff, USA	Moderator: Henal Shah, India		

Time	Ho Bee Auditorium	Theatre	Atrium	Celadon Room
3:00pm - 3:30pm	Afternoon Tea Break - UCC Foyer, L1 and L2			
3:30pm - 4:30pm	**Symposium 3** **Aspiring To Excellence – Best Practices in Health Professions Education**	**Symposium 4** **Re-Adapting from Online to Face-To-Face Teaching/ Learning**	**Free Communication Finale 2**	
	Importance and Recognition of Best Practices in Health Professions Education Kulsoom Ghias, Pakistan **Best Practices and Key Successes in Student Engagement: Lessons from Thailand** Danai Wangsaturaka, Thailand **Change Agents: The Core Concept of Student Engagement** Pongtong Puranitee, Thailand **Starting a Medical College Simulation Program and Achieving International Excellence** Abdulaziz Boker, Saudi Arabia **Successes and Near Misses in Achieving Excellence** Viktor Riklefs, Kazakhstan	**Learning During and After Pandemic: Expectations vs Reality: Can Students Cherrypick?** Thilanka Seneviratne, Sri Lanka **Teaching Renal Physiology in the Post-COVID Future: Going Back or Moving Forward?** Aviad Haramati, USA **Adaptations in Teaching and Learning Medical Education and the Allied Health Sciences: Snapshots from the Philippines** Chiara Dimla and Vinna Marie T. Quiñones, Philippines **Developing a Course on Pandemic Medicine…During a Pandemic: Adaptive Expertise in Medical Education** Kim Dahlman, USA	**Please refer to conference website for list of finalists**	
	Chairperson: Manjari Lahiri, Singapore	Chairperson: Kenneth Ban, Singapore		

Time	Ho Bee Auditorium	Theatre	Atrium	Celadon Room
4:30pm - 4:45pm	**Break**			
4:45pm - 5:45pm	**Panel Discussion 4** **Medical Science Leadership in Health Professions Education- The Next 20 Years**	**Symposium 5** **Harnessing Predictive Brains to Improve Clinical Thinking**	**Symposium 6** **Sharing Challenges and Opportunities in Clinical Clerkship to Promote Supported Participation Among Students**	**Judges' Meeting (By Invitation Only)**
	Leading Educational Associations in Times of Crisis Neil Osheroff, USA **Leadership and Followership: Critical Roles in Medical Education** Aviad Haramati, USA **Leadership that Addresses Local Healthcare Needs with a Global Influence** Solomon Sathishkumar, India	**Basic Principles of Naturalistic, Intuitive, Bayesian Active Inference** Lim Tow Keang, Singapore **How to Cope Better with Uncertainties in Diagnosis** Benson Ang, Singapore **How to Cope Better with Uncertainties in Management Thresholds** Xu Hong Yun, Singapore	**Can We Promote More Student Participation in Clinical Clerkship?** Harumi Gomi, Japan **Experiences of the Enablers, Barriers, and Adaptations of Clerkship Training in Taiwan** Henry Yang, Taiwan **To Promote Supported Participation Among Students in Clinical Clerkship in Vietnam: Experience from CBME Curriculum Reforming at Hue University of Medicine and Pharmacy** Nguyen Thi Anh Phuong, Vietnam	
	Moderator: Chen Zhi Xiong, Singapore	Chairperson: K Anbarasi, India	Chairperson: Harumi Gomi, Japan	
5:45pm	**End of Day**			
6.30pm - 9.30pm	**Conference Dinner @ NUSS Kent Ridge Guild House**			

Day 2: Saturday 27 May 2023

Time	Ho Bee Auditorium	Theatre	Atrium	Celadon Room
8.00am - 9.00am				**TAPS Editorial Board Meeting (By Invitation Only)**
9.00am - 10.00am	**Symposium 7** **Accreditation and Certification of Programmes: Strengths, Limitations and Ways Forward**	**Symposium 8** **Virtual Clinical Simulation, Education and Gamification: Enhancing the Process of Learning and Outcomes**	**Symposium 9** **Nurturing the Human Side of Carers: What Would Teaching and Learning Health Ethics, Law, and Professionalism Look Like Today?**	
	Health Profession Accreditation: A View from Down Under Wayne Hodgson, Australia **The Development and Way Forward of Medical Education Accreditation in China** Wang Weimin, People's Republic of China **Towards Setting Up an Accreditation Agency Recognised by WFME in Vietnam** Tran Diep Tuan, Vietnam	**Clarifying What is Virtual and The Authenticity of Learning Environment** Ashokka Balakrishnan, Singapore **Virtual Clinical Education: Should We Focus More on High-Fidelity Simulation, Student Wellbeing or Achieving Learning Outcomes?** Viktor Riklefs, Kazakhstan **Virtual Interprofessional Simulation: Overview and Practical Points** Liaw Sok Ying, Singapore **Gamification in Virtual Simulation for Undergraduate Education** Alfred Kow, Singapore	**Medical Professionalism in a Covidised World: What Can Medical Education Learn and Contribute?** Pacifico Eric Calderon, Philippines **Engaging Senior Medical Students in Medical Ethics Teaching: Documentary Video Depicting Real Patients vs Landmark Legal Cases** Wong Wai-Tat, Hong Kong S.A.R. **Teaching and Learning Medical Professionalism and Ethics Today: Sharing the St. Luke's Medical Center College of Medicine Curriculum as a Model** Susan Pelea Nagtalon, Philippines	
	Chairperson: Yong Rafidah Abdul Rahman, Malaysia	Chairperson: Ashokka Balakrishnan, Singapore	Chairperson: T Thirumoorthy, Singapore	
10.00am - 10.30am	**Morning Coffee Break - UCC Foyer, L1 and L2**			

Time	Ho Bee Auditorium	Theatre	Atrium	Celadon Room
10.30am - 11.30am	**Symposium 10** **Development in Artificial Intelligence and Technology in Medical and Nursing Education**	**Symposium 11** **Sustainability and Resilience in Healthcare: Role of Education**	**Panel Discussion 5** **Introducing the Innovative Teaching Model as a Formal Clinical Placement Curriculum: Enablers, Barriers and Academic Outcome Reflections from Students and Supervisors**	**APME-Net Meeting (By Invitation Only)**
	Diving into Metaverse: Moving from Virtual Integrated Patient, an Artificial Intelligence Chatbot into Emotion-enabled Avatars Judy Sng, Singapore **Development and Evaluation of a Virtual Counselling Application for Communication Skills Training in Nursing Education** Shefaly Shorey, Singapore **Artificial Intelligent-enabled Virtual Reality Simulation for Interprofessional Education** Liaw Sok Ying, Singapore **Holomedicine and Mixed Reality Enhanced Healthcare Education** Gao Yujia, Singapore	**Heat Health and Resilience in a Warming World - Implications for Educators** Jason Lee, Singapore **Role of the Medical Science Educator in Promoting Sustainable Healthcare** Peter GM de Jong, The Netherlands **Role of Medical Specialists Training in Promoting Sustainable Healthcare** Tan Hak Koon, Singapore **Role of an Academic Healthcare Institution in Nurturing Sustainable Healthcare** Amanda Zain, Singapore	**Introducing the Innovative Teaching Model "Students See the Patients in Consultants' Chair Under Closed Observation with Clinical Reasoning Discussion in Clinical Placements of General Practice Clinic (GPC) and Hospital Out-Patient Clinic (HOPC)" as a Formal Curriculum: The Enablers, The Barriers and The Academic Outcome Reflections from Both Students and Supervisors** Dan Xu, Australia **Closer Examination of The Learning Benefits of Three Common Teaching Methods in General Practice: What Does Educational Theory Say?** Carole Steketee, Australia **Introducing the Innovative Teaching Model as a Formal Clinical Placement Curriculum from Rural General Practice Perspectives: Enablers, Barriers and Academic Outcome Reflections from Students and Supervisors** Karen Flegg, Australia	
	Chairperson: Koh Sei Keng, Singapore	Chairperson: Cornelius Nydam, Australia	Moderator: Yasuhiko Konishi, Japan	

<table>
<tr><th>Time</th><th>Ho Bee Auditorium</th><th>Theatre</th><th>Atrium</th><th>Celadon Room</th></tr>
<tr><td>11.30am - 11.45am</td><td colspan="3">Break</td><td></td></tr>
<tr><td rowspan="2">11.45am - 12.15pm</td><td>Plenary 4

The Role of Scholarship in Rethinking Health Professions Education: A 40 Year Perspective
Ronald M Harden, United Kingdom</td><td>Plenary 5

SOTL in Student and Faculty Well-being and Resilience - Do We Have Enough Evidence for a Transformational Change?
Muhamad Saiful Bahri Yusoff, Malaysia</td><td>Plenary 6

Ensuring Quality and Standards in UME and PGME – The Singaporean Experience
Mabel Yap, Singapore</td><td></td></tr>
<tr><td>Chairperson: Inthrani Raja Indran, Singapore</td><td>Chairperson: Marion Aw, Singapore</td><td>Chairperson: Sophia Archuleta, Singapore</td></tr>
<tr><td rowspan="3">12.15pm - 1.45pm</td><td colspan="3">Lunch - UCC Foyer, L1 and L2</td><td rowspan="5">12.45pm - 2.45pm

WPAME Meeting (By Invitation Only)</td></tr>
<tr><td colspan="3">Social Programme</td></tr>
<tr><td colspan="3">Tai Chi for Health Session – Meditation in Motion
(Function Room 1, 12.30pm - 1.00pm)
Yoga (Online, 12.30pm - 1.00pm</td></tr>
<tr><td>12.30pm - 1.15pm</td><td colspan="3">Soapbox</td></tr>
<tr><td>12.30pm - 12.45pm</td><td>Lecturio</td><td></td><td></td></tr>
<tr><td>12.45pm - 1.00pm</td><td>von Hagens Plastination</td><td></td><td></td></tr>
<tr><td>1.00pm - 1.15pm</td><td>ACGME/ACGME-I</td><td>ANZAHPE</td><td></td></tr>
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Time	Ho Bee Auditorium	Theatre	Atrium	Celadon Room
1.45pm - 2.45pm	**Symposium 12** **Medical AI Education in Undergraduate Medical School: How to Align Humans and Machines in Education and Practice**	**Symposium 13** **Coaching as a High Impact Intervention in Health Professions Education**	**Symposium 14** **Preparing Today's Learners to Become Tomorrow's Educator: Meaningful Student Engagement in Medical Education**	**12.45pm - 2.45pm** **WPAME Meeting (By Invitation Only)**
	Medical AI Development and Application in Korea Kim Hwiyoung, Republic of Korea **Current Medical AI Development and Application of Medical AI Education in Singapore** Alfred Kow, Singapore **An Effort to Develop Medical AI Competency and a Curricula Model in Korea** Lee Young-Mee and Kim Suyoun, Republic of Korea **Opportunities and Challenges in Implementing AI in Settings with Limited Resources** Indika Karunathilake, Sri Lanka	**Overview, Background Theory and Literature Review** Goh Poh Sun, Singapore **Coaching Conversations with Medical Students – How, What and Why** Elizabeth Teh, Singapore **Elevating the Medical School Experience Through Coaching: Common Themes and Approaches to Overcoming Challenges Students Face** Nisha Kesavan, Singapore **Key Considerations in Developing and Implementing a Coaching Programme in Medical Education** Kesavan Esuvaranathan, Singapore	**Interprofessional Education: The Impact of Collaboration** Woon Shi Sien, Malaysia **Research in Medical Education** Turar Dildabek, Kazakhstan **A Holistic Approach to Involving Our Students in Medical Education – A NUS Medical Society Perspective** Quek Joo Wei Ethan, Singapore	
	Chairperson: James Arrighi, USA	Chairperson: Stuart Slavin, USA	Chairperson: Shirley Ooi, Singapore	
2:45pm - 3:15pm	**Afternoon Tea Break - UCC Foyer, L1 and L2**			

Time	Ho Bee Auditorium	Theatre	Atrium	Celadon Room
3.15pm - 4.15pm	**Panel Discussion 6** **Postgraduate Medical Education Beyond the Pandemic**	**Panel Discussion 7** **Continuous Professional Development: Views From Across the Professions and Around the Globe**	**Panel Discussion 8** **Globalisation of Health Profession Education**	
	The Context for Advancing Global Post-graduate Medical Education Beyond the COVID-19 Pandemic John Ogunkeye, USA **Achieving Desired Outcomes in Medical Education Across the Globe** Eric Holmboe, USA **Postgraduate Medical Education Beyond the Pandemic: Perspectives from Asia-Pacific Region** Dujeepa D Samarasekera, Singapore **Glocalisation of Medical Education: Perspectives from a US Health System in the International Context** Sawsan Abdel-Razig, United Arab Emirates	**Continuous Professional Development for Pharmacy – The Singapore Journey** Camilla Wong, Singapore **Driving Collaboration and Change through Interprofessional Continuous Professional Development** Kathy Chappell, USA **Designing and Implementing IPCE** Lawrence Sherman, USA	**Preparing Students for Future Global Challenges** Vishna Devi Nadarajah, Malaysia **Faculty Development with a Global Focus - Preparing the Workforce** Mok Shao Feng, Singapore **Perspectives of Globalisation from Resource-Limited Setting: Challenges Faced by Brain Drain and Loss of Resources** Vajira H. W. Dissanayake, Sri Lanka **Role of Global Medical Associations in Globalisation of Medical Health Professions** Subha Ramani, USA	
	Moderator: Timothy P. Brigham, USA	Moderator: Lawrence Sherman, USA	Moderator: Judith Gullifer, Australia	
4.15pm - 4.30pm	**Break**			
4.30pm - 5.00pm	**Closing Keynote Address** **Scholarship in Health Professions Education- Development from the Past to Future Possibilities** Professor John Norcini Research Professor SUNY Upstate Medical University, USA			
	Chairperson: Lau Tang Ching, Singapore			
5.00pm - 5.30pm	**Closing Ceremony**			
5.30pm	**End of Conference**			

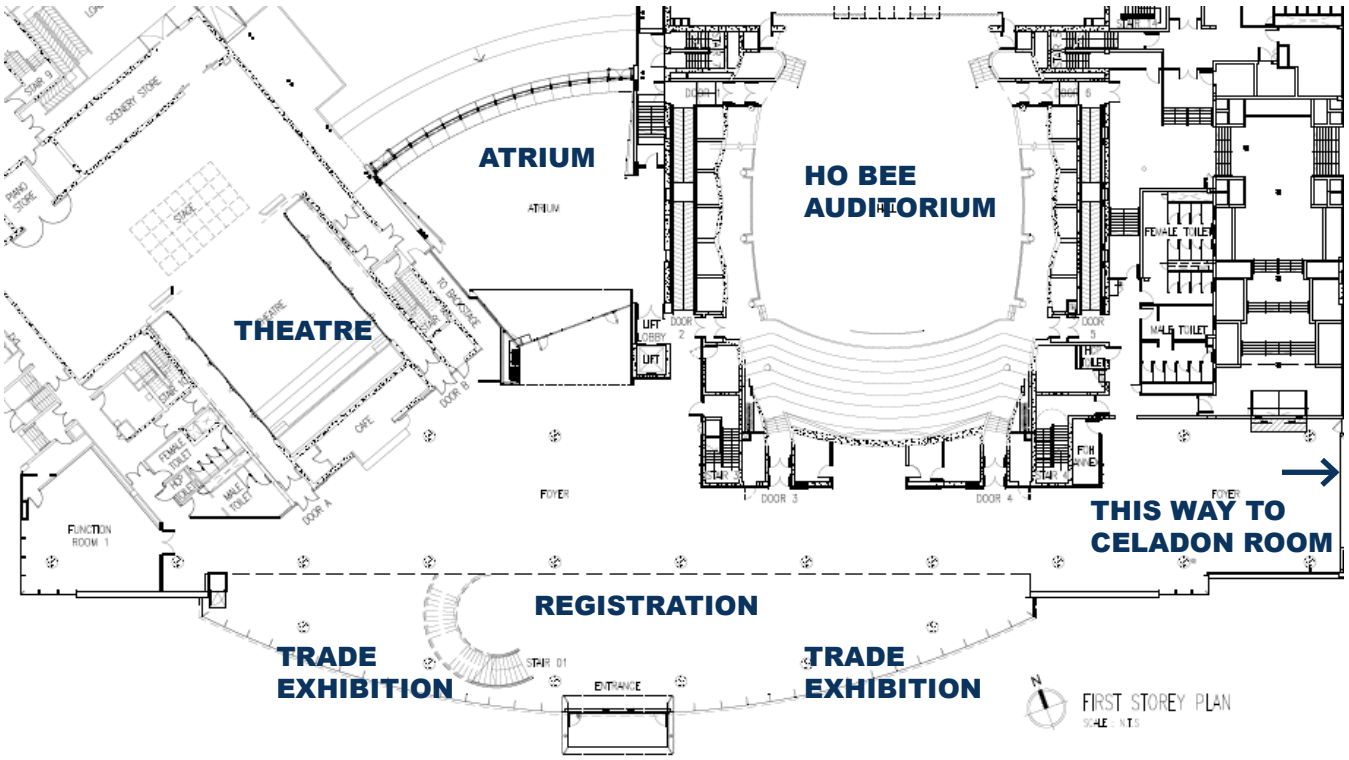
SUNDAY 28TH MAY 2023, 8.30 AM TO 12.30PM

MD1 - TAHIR FOUNDATION BUILDING, BLOCK MD1, NUS YONG LOO LIN SCHOOL OF MEDICINE, 12 SCIENCE DRIVE 2, SINGAPORE 117549

AM (8.30am – 12.30pm)
ESME ESSENTIAL SKILLS IN MEDICAL EDUCATION COURSE (SESSION 2) Ronald M. Harden, Dujeepa D Samarasekera, Koh Dow Rhoon, Tan Chay Hoon, Goh Poh Sun, Lee Shuh Shing and Jillian Yeo Venue: MD1, MPH 1
ESME CT ESSENTIAL SKILLS IN MEDICAL EDUCATION - CLINICAL TEACHING COURSE (SESSION 2) Subha Ramani, James Kwan, Faith Chia, Ng Wee Khoon, Tracy Tan and Phua Dong Haur Venue: MD1, MPH 2
W3A3: Critical Reflection of Your Curriculum: Developing a Graduate Profile Hong Wei-Han, Yang Faridah Adbul Aziz, Vinod Pallath and Jamunarani Vadivelu Venue: Virtual Platform
W3A4: Postgraduate Supervision and Mentoring in Health Professions Education (HPE) Veena Singaram, Vishna Devi Nadarajah and Diantha Soemantri Venue: Virtual Platform
W3A5: Enhancing Bioethics Teaching and Learning Through the Use of Local Resources Lau Weeming, Olivia Ngan, and Wong Wai-Tat Venue: Virtual Platform

PRE-CONFERENCE WORKSHOPS, 24TH & 25TH MAY 2023

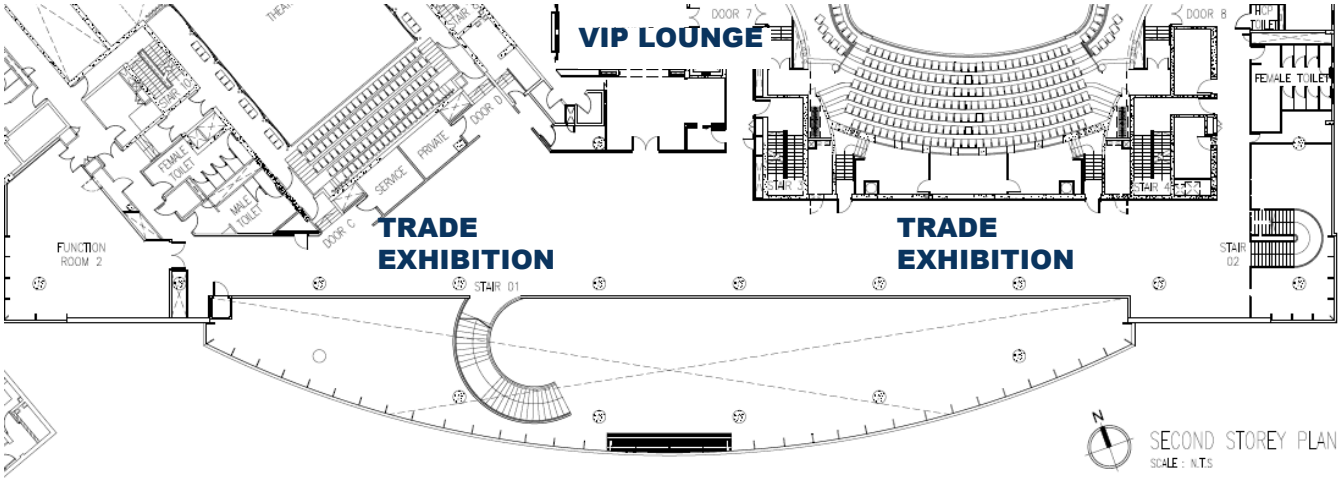
Level 1 Foyer
Registration
Level 1
Left Chamber: ESME, ESME CT Right Chamber: W1A3, W1P1, W2A2, W2P3
Level 2
Cluny & Dalvey: W1A1, W1P3, W2A1, W2P1 Evans: W1A2, W1P2, W2A3, W2P2
Virtual Platform
W1A4, W1P4, W2A4, W2P4 W1A5, W1P5, W2A5, W2P5 W1A6, W1P6, W2A6, W2P6, W2P7



MAIN CONFERENCE, 26TH & 27TH MAY 2023

UNIVERSITY CULTURAL CENTRE (UCC) LEVEL 1, NATIONAL UNIVERSITY OF SINGAPORE, 50 KENT RIDGE CRESCENT, SINGAPORE 119279

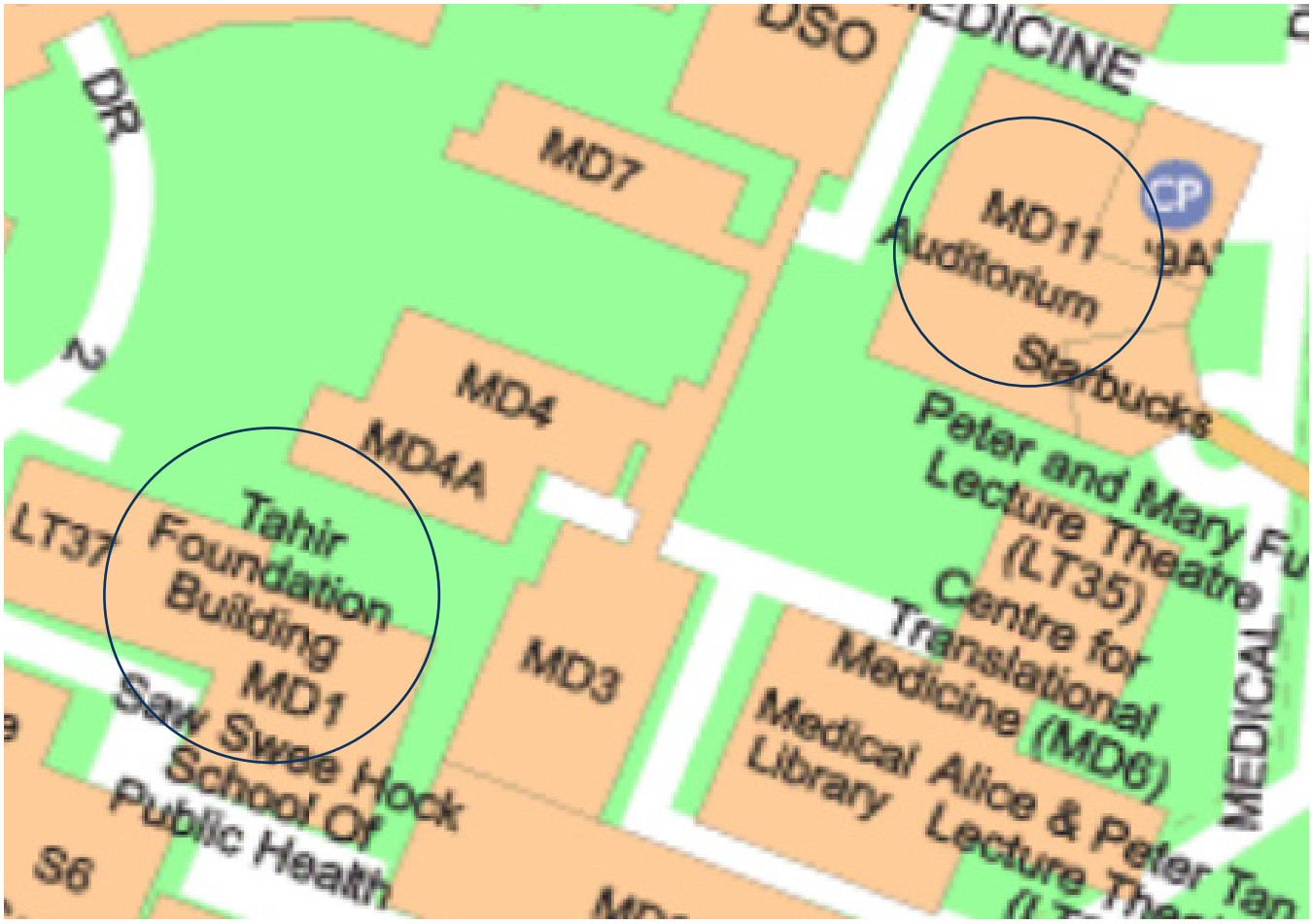
Ho Bee Auditorium
Opening Ceremony Opening and Closing Keynote Address Symposium 1, 3, 7, 10, 12 Plenary 1, 4 Panel Discussion 2, 4, 6
Theatre
Symposium 4, 5, 8, 11, 13 Plenary 2, 5 Panel Discussion 1, 3, 7
Atrium
Symposium 2, 6, 9, 14 Plenary 3, 6 Panel Discussion 5, 8 Free Communication Finale 1, 2
Celadon Room
By invitation only for the below: Judges' Meeting TAPS Editorial Board Meeting APME-Net Meeting WPAME Meeting



MAIN CONFERENCE, 26TH & 27TH MAY 2023

UNIVERSITY CULTURAL CENTRE (UCC) LEVEL 2, NATIONAL UNIVERSITY OF SINGAPORE, 50 KENT RIDGE CRESCENT, SINGAPORE 119279

VIP LOUNGE
Slides Upload Counter



POST-CONFERENCE WORKSHOPS, 28TH MAY 2023

TAHIR FOUNDATION BUILDING – MD1
12 SCIENCE DRIVE 2, YONG LOO LIN SCHOOL OF MEDICINE, SINGAPORE 117549, LEVEL 3

Tahir Foundation Building – MD1
MPH 1: ESME MPH 2: ESME CT
Virtual Platform
W3A3, W3A4, W3A5

INFORMATION ON VIRTUAL PLATFORM

Welcome to Airmeet, the virtual platform selected to host the Asia Pacific Medical Education Conference (APMEC) 2023.

Throughout the Conference, delegates will have the opportunity to attend live sessions, participate in engaging discussion and interact with the esteemed speakers and panelists.

Get ready to connect, learn and engage with Airmeet.

1. Logging in to the Virtual Platform

- Conference delegates should have received an email from apmec2023secretariat@iameetings.sg, the official virtual platform service provider for APMEC 2023.
- Please check your spam and trash folders if you cannot find the email in your Inbox.
- The email contains a unique link, which should not be shared with anyone.
- For comprehensive instructions on navigating the platform, please refer to the User Guide.

2. Pre- and Post-Conference Workshops

- To access the workshop(s) you have registered for, click on the title of the workshop to view its description.
- Within the workshop description, you will find a Zoom link. To join the workshop, please copy and paste the Zoom link into the URL address bar of your browser.
- Please keep in mind that you will only be permitted to participate in the workshop(s) for which you have registered and made payment.
- If you experience difficulties accessing the workshop(s), please visit the lobby of the e-conference portal and contact the Help Desk for assistance.

3. Main Conference Sessions

- To attend the main conference session(s), simply click on the Join Now button for session(s) that you wish to attend.
- If you experience difficulties accessing the session(s), please visit the lobby of the e-conference portal and contact the Help Desk for assistance.

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CENTRE FOR MEDICAL EDUCATION (CENMED)

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Email: apmec@nus.edu.sg

https://medicine.nus.edu.sg/cenmed/apmec2023

PARTICIPATING PARTNERS

AMEE – Association for Medical Education in Europe

ACGME – Accreditation Council for Graduate Medical Education

Asia-Pacific Biomedical Science Educators Association

Asia Pacific Medical Education Network

College of Clinician Educators, Academy of Medicine, Singapore

ECFMG – Educational Commission for Foreign Medical Graduates

FAIMER – Foundation for Advancement of International Medical Education and Research

GAME – Global Alliance for Medical Education

IAMSE – International Association of Medical Science Educators

WPAME – Western Pacific Association for Medical Education

KEYNOTE SPEAKER

John **Norcini**, USA
Neil **Osheroff**, USA

PLENARY SPEAKERS

Ardi **Findyartini**, Indonesia
Ronald M **Harden**, United Kingdom
Amanda **Kenny**, Australia
Lambert **Schuwirth**, Australia
Mabel **Yap**, Singapore
Muhamad Saiful Bahri **Yusoff**, Malaysia

INTERNATIONAL FACULTY

Hatim **Abdelrahman**, Qatar
Sawsan **Abdel-Razig**, United Arab Emirates
Yang Faridah **Abdul Aziz**, Malaysia
Eman **Al Maslamani**, Qatar
K **Anbarasi**, India
Jo **Bishop**, Australia
Abdulaziz **Boker**, Saudi Arabia
Timothy P. **Brigham**, USA
Pacifico Eric **Calderon**, Philippines
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Henry **Yang**, Taiwan
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Yuan Shiyao, USA

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Ashokka **Balakrishnan**
Kenneth **Ban**
Gayathri **Basker**
Chen Zhi Xiong
Faith **Chia**
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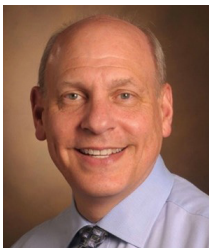
Amanda **Wong**
Camilla **Wong**
Clarissa **Wong**
Xu Hongyun
Jillian **Yeo**
Amanda **Zain**

KEYNOTE SPEAKERS

John Norcini
Research Professor, SUNY Upstate Medical University, United States of America

John Norcini, PhD is Research Professor in the Department of Psychiatry at Upstate Medical University and a Fellow of Presence (a Center at Stanford Medical School). Previously, he held positions at FAIMER and the American Board of Internal Medicine. He has more than 200 publications, lectured and taught in more than 45 countries, and is on the editorial boards of several peer-reviewed journals. He is an honorary Fellow of the Royal College of General Practitioners (UK) and the Academy of Medical Educators and has received numerous awards including the Karolinska Prize for Research in Medical Education and the Hubbard Award.



Neil Osheroff
Professor, Vanderbilt University School of Medicine, Departments of Biochemistry and Medicine, United States of America

Dr Neil Osheroff is Professor of Biochemistry and Medicine, Vanderbilt University School of Medicine, and holds the John G. Coniglio Chair in Biochemistry. In addition to running his research laboratory, he has been a medical school course director since 1990, co-leads the pre-clerkship phase, and is a Past-Director of the Academy for Excellence in Education. He is a Past-President of the Association of Biochemistry Educators, sits on the Steering Committee of the Asia-Pacific Biomedical Science Educators Association, and serves as the immediate Past-President of the International Association of Medical Science Educators. Dr Osheroff has received awards for mentoring, teaching, curricular design, educational leadership and service, and promoting diversity and inclusion. He is also a Fellow of the American Association for the Advancement of Science and the Association for Medical Education in Europe. He has published >270 papers and has presented ~400 scientific and educational talks in 37 different countries.

PLENARY SPEAKERS

Ardi Findyartini
Head of Medical Education Center, Indonesia Medical Education and Research Institute, Faculty of Medicine, Universitas Indonesia, University of Indonesia, Indonesia

Ardi Findyartini is a medical doctor graduated from Faculty of Medicine Universitas Indonesia. She completed the doctoral program in Melbourne Medical School Faculty of Medicine, Dentistry and Health Sciences, The University of Melbourne in 2012. She is currently the Head of Medical Education Unit and the Coordinator of Medical Education Cluster at Indonesia Medical Education and Research Institute at the Faculty of Medicine Universitas Indonesia. She has been mentoring research in medical education for undergraduate and postgraduate students and conduct faculty development programs in medical schools in Indonesia for the past 14 years. She authored and co-authored many international publications in peer reviewed journals, book chapters and conferences. She's also been involved as the reviewer of national and international medical education journals. Her research area of interest includes faculty development, professionalism, clinical reasoning and clinical teaching, interprofessional education, curriculum development, and socio-cultural factors underpinning approaches in medical and health professions education.

Ronald M Harden
General Secretary and Treasurer, Association for Medical Education in Europe (AMEE), United Kingdom

Professor Ronald Harden graduated from medical school in Glasgow, UK. He completed training and practised as an endocrinologist before moving full time to medical education. He is Professor of Medical Education (Emeritus) University of Dundee, Editor of Medical Teacher and General Secretary and Treasurer of the Association for Medical Education in Europe (AMEE). Professor Harden has pioneered ideas in medical education including the OSCE and has published two books and more than 400 papers in leading journals. His contributions to excellence in medical education have attracted numerous international awards and an OBE by Her Majesty the Queen.

Amanda Kenny
Professor Emerita and Visiting Professor, La Trobe University, School of Rural Health, Bendigo, Victoria, Australia and Visiting Chair of the College of Social Science, University of Lincoln, Lincoln, United Kingdom

Professor Amanda Kenny is a nurse and midwife. She is Editor in Chief of the world's most highly ranked nurse education journal, Nurse Education Today. Amanda is a highly experienced and innovative educator and has won awards for teaching excellence and led major national course development. In her career, Amanda has attracted almost AU$104 million dollars of grant funding, has published extensively, and is highly cited. She is a leader in qualitative and mixed methods research, knowledge translation, and impact beyond academia. She has led or contributed to highly cited policy documents, and as an expert witness, has given evidence to major government inquiries. She has strong international partnerships and is actively sought as a speaker, to lead writing for publication workshops, and mentors' staff and students from a multitude of universities.

Lambert Schuwirth

Chair Prideaux Health Professions Education, Flinders University, College of Medicine and Public Health, Adelaide, Australia; Professor of Medical Education, Chang Gung University, Taiwan; and Professor of Medicine (Education), Uniformed Services University for the Health Sciences, Bethesda, United States of America

Lambert Schuwirth obtained his MD from Maastricht University. In 1991, he joined the Department of Educational Development and Research there, taking up various roles in student assessment: Chairman of the Inter-university and the Local Progress Test Review Committee, the OSCE Review Committee and the Case-based Testing Committee. Since the early 2000s, he has been Chair of the overall Taskforce on Assessment. He has been advisor on assessment to medical colleges in the Netherlands and the UK. Since 2007, he has been a full professor for Innovative Assessment at Maastricht University until 2019. In 2011, he was made a Strategic Professor for Medical Education at Flinders University in Adelaide, Australia and is also the Chair of the Flinders University Prideaux Health Professions Education group. He is an advisor to multiple Royal Australian Colleges and the Australian Medical Council in matters of assessment.

Mabel Yap

Director of Professional Training and Assessment Standards (PTAS) Division, Ministry of Health (MOH), Singapore

A/Prof Mabel Yap is currently the Director of Professional Training and Assessment Standards (PTAS) Division at the Ministry of Health (MOH). She is responsible for overseeing the training and assessment standards for healthcare professionals, from undergraduate to postgraduate levels. Additionally, she holds the position of Adjunct Associate Professor at both Duke-NUS and NUHS. A/Prof Yap's specialty is in public health, and she holds a Bachelor of Medicine and Bachelor of Surgery (MBBS) and a Master of Science in Public Health from the National University of Singapore (NUS). She also holds a PhD in Human Nutrition from Wageningen University in the Netherlands. Aside from her medical and academic qualifications, A/Prof Yap is also a trained teacher in several Mindfulness-based interventions [Mindfulness-based Stress Reduction (MBSR), Mindful Self Compassion (MSC), Mindfulness-based Cognitive Therapy (MBCT-L)] and yoga. She has a keen interest in promoting wellness among healthcare professionals.

Muhamad Saiful Bahri Yusoff

Associate Professor, Universiti Sains Malaysia, School of Medical Sciences, Department of Medical Education, Malaysia

He is a medical doctor with Master and PhD in Medical Education and currently the Head of Medical Education Department, Universiti Sains Malaysia. He is the Editor in Chief of Education in Medicine Journal, President of Malaysian Association of Education in Medicine & Health Sciences, Secretary of Medical & Health Science Cluster Majlis Profesor Negara, Regional Director of East Asia of International Society for Emotional Intelligence, and Fellow of National Higher Education Research Institute. His areas of expertise are medical education, well-being, assessment, development & validation of questionnaire, and emotional intelligence. He is the recipient of many awards such as Reimagine Education Teaching Delivery Award, Best of the Best Award for International Innovative Practices in Higher Education, Excellent Educator Award, International Leadership Award, Ronald Harden Innovation in Medical Education Award, and Sanggar Sanjung Research Award. In 2022, he was listed in the Top 2% Researchers in World list by Stanford University.

INTERNATIONAL FACULTY

Hatim Abdelrahman
Senior Consultant Paediatric Gastroenterology, SIDRA MEDICINE, Qatar

Dr Hatim Abdulrahman is a Senior Paediatric Gastroenterologist, holding a master degree in medical education. In addition to his clinical commitments, he is interested in postgraduate medical education. He has a special interest in in the areas of research in medical education. Dr Hatim graduated from Khartoum University in Sudan, and is Arab Board certified in paediatrics, as well as has achieved MRCP and FRCPCH, UK and the JMHPE.

Sawsan Abdel-Razig
Chief Academic Officer and Chair of Medical Education, Cleveland Clinic Abu Dhabi, United Arab Emirates

Dr Abdel-Razig is a clinician educator with expertise in educational policy development, health systems regulations, and graduate medical education. As a practicing physician, former regulatory official, teacher and academician, Dr Abdel-Razig has a unique perspective in optimizing population health through the alignment of health systems needs with educational outcomes. Dr Abdel-Razig specializes in workforce development and healthcare capacity gaps, health professionals' education and program development. She currently serves as the Chief Academic officer and Chair of Medical Education at the Cleveland Clinic Abu Dhabi.

Dr Abdel-Razig received her B.A. degree in Biological Sciences from Barnard College, her M.D. from the University of Connecticut School of Medicine, and completed her internal medicine training from New York University Langone Medical Center. Dr Abdel-Razig holds a master's in education of health professionals from Johns Hopkins University and serves as a clinical Associate Professor of medicine at the Cleveland Clinic Lerner College of Medicine.

Yang Faridah Abdul Aziz
Professor, University of Malaya, Malaysia

Dr Yang Faridah Abdul Aziz is an academic professor and a consultant radiologist. As an academic, she is involved in developing, implementing, and ensuring quality improvement of the undergraduate and postgraduate programmes at the Universiti Malaya. As a previous Deputy Dean of Undergraduate programmes (2015-2021), she helmed and aided the shift to e-learning and the use of digital platforms during the Covid-19 pandemic. She had been entrusted with numerous roles and responsibilities including duties as programme coordinator, head of department, SETARA member (under the Malaysian Qualifying Agency) and as a member of the Malaysian Medical Council from 2017 to present. She is now the chair of the Medical Education Committee for the Malaysian Medical Council. She continues to dream passionately, embrace the art of seeking knowledge, remain curious, and create possibilities in her career and her life.

Eman Al Maslamani
Senior Consultant Pediatric Infectious Disease, SIDRA Medicine, Qatar

Dr Eman A. Rahman Senan Al Maslamani is a Paediatric Infectious Diseases Senior Attending Physician at SIDRA Medicine, Doha, State of Qatar. She is an Assistant Professor of Clinical Paediatrics at Weill Cornell Medical College-Qatar and the Program Director both for the Transitional Year Residency and Paediatric Infectious Diseases Fellowship Program. She has been appointed as an Assistant Program Director of Paediatric Residency Program and Chairs its Assessment Committee, represents Qatar and is an examiner of the Arab Board of Health Specialisations. In 1995, Dr Eman obtained her medical degree from Arabian Gulf University, Bahrain. She completed her Paediatric Residency Training in 2001 and Paediatric Infectious Diseases Fellowship Training at Hamad Medical Corporation. As a practitioner, Dr Eman enhances the health of infants, children, and adolescents by promoting excellence in the diagnosis, management, and prevention of infectious diseases through clinical care, education, research, and advocacy.

K. Anbarasi

Professor, Member Secretory - Dental Education Unit, Sri Ramachandra Institute of Higher Education and Research (SRIHER), Chennai, India

Anbarasi earned a PhD in competency-based dental education after completing her master's degree in oral medicine and radiology. In addition to teaching clinically, she is in charge of revising the curriculum, implementing innovative teaching-learning strategies, and 3600 assessment of undergraduate dental students at Sri Ramachandra Dental College and Hospital. She serves as a resource person for faculty development initiatives and -focused training sessions. She is a member of the national curriculum committee (Dental Council of India) for establishing an oral medicine and radiology curriculum that is competency-based. Her areas of interest in research include reflective practice, observational learning, gifted underachievers in dental education and collective competence. She received the "Teaching Excellence Award" in 2019 in honour of being an exceptional teacher.

Jo Bishop

Associate Dean, Bond University, Australia

Jo's research focus is specifically in the area of learner (and staff) well-being and its alignment within curricula using empirical evidence. Jo has coordinated the recent review of mental health and well-being within the University as the chair of the promoting well-being working group. The group contributes to the work of the Student Wellbeing and Safety Advisory Committee that reports directly to the VC. Jo contributed to the publication of the medical student wellbeing – a consensus statement from Australia and New Zealand in 2019 and led the writing of the Learner wellbeing chapter in the Understanding Medical Education; Evidence, Theory and Practice textbook.

Abdulaziz Boker

Professor and Chair, Anesthesia and Critical Care Department, King Abdulaziz University (KAU) & General Supervisor, Clinical Skills and Simulation Centre (CSSC), College of Medicine, Jeddah, Saudi Arabia

Professor Boker is the current President and Chairman of the Board Directors of the Saudi Society of Simulation in Healthcare. In 2016 and 2017, KAU CSSC achieved full accreditation status from the Royal College of Physicians and Surgeons of Canada (RCPSC) and the Society of Simulation in Healthcare (SSH) in all accreditation standards. Also, in August 2017, the KAU CSSC team received the ASPIRE award for Excellence in Simulation Education Category from AMEE. Professor Boker was the first recipient of the International Residency Educator of the Year (2014) Award from the RCPSC. In 2016, he was also the first recipient of the Regional Excellence in Simulation Award from the 3rd UAE simulation & 2nd Society of Simulation Applied to Healthcare in Europe (SESAM) MENA Regional conference. In 2019, Professor Boker received the Makkah Region Humanitarian Category Excellence Award for his exceptional achievements in the humanitarian field.

Timothy P. Brigham
Chief of Staff and Chief Education Officer, ACGME, United States of America

Timothy P. Brigham, MDiv, MS, PhD, is the Chief of Staff and Chief Education Officer, Department of Education at the ACGME. Dr Brigham's responsibilities, as head of the Department of Education, include the ACGME's Annual Educational Conference and the development of new educational programs for the ACGME. Prior to joining the ACGME in 2008, Dr Brigham served since 1989 in several capacities at Jefferson Medical College, including associate dean for graduate medical education and continuing medical education and, most recently, as senior associate dean for organizational development and chief of staff and associate professor of medicine. Dr Brigham has been involved in physician faculty development, resident education and chief resident and program director development. He is widely sought after as a teacher, speaker, group facilitator, and consultant in a variety of areas including resident stress and well-being; chief resident, program director and chairperson leadership development; medical student, resident and faculty teaching development; and group and team organizational development. Dr Brigham holds a PhD in psychological studies in education from Temple University, a master's degree in counseling and human relations from Villanova University, and a Master of Divinity from Palmer Theological Seminary.

Pacifico Eric Calderon
Associate Professor, St. Luke's Medical Center College of Medicine William H. Quasha Memorial, Philippines

Dr Pacifico Eric Eusebio Calderon is Associate Professor within St. Luke's Medical Center College of Medicine-William H. Quasha Memorial, Philippines, where he is Chair of the Department of Professionalism, Medical Ethics, and Humanities. He is also Head of Clinical Ethics Services at St. Luke's Medical Center. Dr Calderon has relevant backgrounds in medicine, bioethics, and medical education. He is interested in the moral aspects of doctors' health, particularly the ethics of self-care.

Teresa Chan
Associate Dean, Continuing Professional Development, McMaster University, Canada

Dr Teresa Chan is an associate professor at McMaster University. Currently, she is the Associate Dean, Continuing Professional Development. She previously was the Assistant Dean, Program for Faculty Development in the Faculty of Health Sciences at McMaster from 2019-2021. She is a nationally-recognized medical education researcher and has received numerous awards. Dr Chan completed her medical school at Western University, and then completed her residency in the RCPSC emergency medicine training at McMaster University. In 2016, she completed a Masters of Health Profession Education at the University of Illinois at Chicago. Dr Chan is very well known for her scholarship in faculty development and online education research. She is a Senior Advisor of the international Faculty Incubator program for the Academic Life in Emergency Medicine (ALiEM) group. For ALiEM, she has also served on their Editorial Board and was a lead of the Medical Education in Cases Series (www.aliem.com/medic).

Kathy Chappell
Senior Vice President, Accreditation, Certification, Measurement, Institute for Nursing Research and Quality Management, and Advanced Practice Initiatives, American Nurses Credentialing Center, United States of America

Dr Chappell is the Senior Vice President of Accreditation, Certification, Measurement, the Institute for Nursing Research and Quality Management, and Advanced Practice Initiatives at the American Nurses Credentialing Center. She is responsible for certification of individual registered nurses (RNs) and advanced practice registered nurses (APRNs); and development of board certification examinations. She is responsible for the accreditation of organizations that provide continuing nursing education and interprofessional continuing education; and for accreditation of residency and fellowship programs for RNs and APRNs. She directs the Institute for Nursing Research, analysing outcomes related to credentialing and other important nursing issues, and the quality management department. She also leads the Advanced Practice Initiatives department. She holds a baccalaureate in nursing with distinction from the University of Virginia, a Master of Science in advanced clinical nursing, and a doctorate in nursing from George Mason University. She is a Fellow in the American Academy of Nursing and a Distinguished Scholar & Fellow in the National Academies of Practice.

Yan Chen
Senior Lecturer, University of Auckland, New Zealand

Yan Chen is a senior lecturer at the Centre for Medical and Health Sciences Education, School of Medicine, University of Auckland, New Zealand. A main focus of her research is on culture and cognition, and she is particularly interested in developing strategies to promote wellbeing among individuals from ethnic minority and vulnerable groups. Her other key research area is in clinical education, and this includes curriculum development, assessment and evaluation, and professionalism.

Kim Dahlman
Associate Professor, Vanderbilt University School of Medicine, United States of America

Dr Kim Dahlman is Associate Professor of Medicine at Vanderbilt University Medical Centre in the United States of America. She received her PhD in Cancer Biology from Vanderbilt University and completed her postdoctoral training at Memorial Sloan-Kettering Cancer Centre. She currently directs a cancer research laboratory and oversees the Integrated Science Course program at Vanderbilt University School of Medicine. Recently she was awarded the Denis M. O'Day award for Team Implemented Curriculum from Vanderbilt University School of Medicine, the Early Career Award for Excellence in Teaching and Innovation from the International Association of Medical Science Educators, and the Stephen Abrahamson Award for Innovation from the University of Southern California Keck School of Medicine. She is also President-Elect of the Association of Biochemistry Educators. Dr Dahlman a passion for the intersection of foundational science and patient care and has demonstrated leadership in this area both at the bench and in the classroom.

Turar Dildabek
IFMSA SCOME Regional Assistant for Asia-Pacific 2022/2023, Asfendiyarov Kazakh National Medical University, Kazakhstan

Turar is a fifth-year medical student in Asfendiyarov Kazakh National Medical University in Almaty, Kazakhstan. He is currently serving as the Medical Education Regional Assistant for Asia-Pacific for the International Federation of Medical Students' Associations (IFMSA). He is also a constant member of the Accreditation Council and Accreditation experts for on-site visit in 'ECAQA', Kazakhstan's National Accreditation Agency. He strongly advocates for meaningful engagement of medical students in medical education as a full-pledged stakeholder. He is interested in accreditation and quality assurance, social accountability, and research education.

Peter GM de Jong
Editor-in-Chief, Leiden University Medical Centre, The Netherlands

Peter GM de Jong is a senior adviser/researcher in the field of Technology Enhanced Learning at Leiden University Medical Centre in the Netherlands. He received a Master degree in Medical Technology from Eindhoven University and did his PhD at the department of Biophysics/ Physiology at Maastricht University. At LUMC he leads a development team for online learning materials and he conducts research in the field of Online and Blended Learning. He authored several articles on the topic and presented numeral oral, poster and workshop presentations. Since 2007, Peter is involved in the International Association of Medical Science Educators (IAMSE). He has served the organisation as Board member and Vice President, and hosted the 2009 and 2016 IAMSE Annual Meetings in Leiden. Currently he holds the position of Editor-in-Chief of Medical Science Educator, the online journal of IAMSE published by Springer. For the period of 2022-2023 Peter serves as President-Elect of the organisation.

Elia Del Rosario
Consultant Anaesthesiologist, Cleveland Clinic Abu Dhabi, United Arab Emirates

Dr Del Rosario is a Consultant Anaesthesiologist at Cleveland Clinic Abu Dhabi (CCAD) and is core faculty for the Anaesthesiology Residency Program. She completed her undergraduate studies at Valenica University and her Anaesthesiology residency at Consorcio Hospital General Universitario Valencia, Spain. Prior to CCAD, Dr Del Rosario held consultant positions at Son Llatzer University Hospital (Spain) and the NHS Greater Glasgow and Clyde University Hospitals (United Kingdom). Working in multiple different countries and furthermore in different languages has given her a unique personal experience in multi-culturalism. Dr Del Rosario's academic interest is in medical education. She is passionate about yoga and as a certified instructor, facilitates yoga and meditation sessions for caregivers. She has led other wellbeing initiatives such as the commissioning and set up of a dedicated quiet space for CCAD caregivers. Dr Del Rosario is a member of the European Society of Narrative Medicine and the Functional Medicine Institute with whom she is completing certification.

Bonny Dickinson
Senior Associate Dean for Faculty Affairs and Faculty Development; Director of Medical Education Research; Professor, Department of Biomedical Sciences, Mercer University School of Medicine, United States of America

Dr Dickinson earned her PhD in Microbiology and Immunology from Tulane University in 1995 and completed post-doctoral fellowships at the National Institutes of Health and Children's Hospital and Harvard Medical School. She is a graduate of the Harvard Macy Institute Program for Educators in Health Professions (2017) and earned a master's degree in health professions education from the Massachusetts General Hospital Institute of Health Professions in 2019. Prior to her appointment at Mercer University School of Medicine, Dr Dickinson served as vice chair of the Department of Biomedical Science at the Western Michigan University Homer Stryker MD School of Medicine where she was an inaugural faculty member. Dr Dickinson is the current president of the International Association of Medical Science Educators (IAMSE). Dr Dickinson's scholarship focuses on how the biomedical sciences are taught in the undergraduate medical curriculum, the application of biomedical science knowledge to patient care, and professional identity formation.

Chiara Dimla
Associate Professor, University of the East Ramon Magsaysay Memorial Medical Centre, Philippines

Chiara Marie M. Dimla, MD, MSPH, DPPS, is the Associate Professor of the Department of Preventive and Community Medicine, College of Medicine, UERMMMCI (University of the East Ramon Magsaysay Memorial Medical Centre, Inc.), Phillipine. She served many positions including, Director for Quality and Patient Services (Medical Director), UERM Hospital. Also, she is a General Paediatrics Consultant, Pasig Doctors Medical Centre (PDMC). She is an Associate Member, Philippine Society of Experimental and Clinical Pharmacology (PSECP). She served as a Clinical Data Analyst (Research Consultant), Health Services Outcomes Research, Total Quality Management, St. Luke's Medical Centre, Quezon City and Global City. She has presented award winning papers. A/Prof Dimla has special interest in medical education and she is a Member, of the Steering Committee of the Asia-Pacific Biomedical Science Educators Association (APBSEA)

Vajira H. W. Dissanayake
Dean, Faculty of Medicine, University of Colombo, Sri Lanka

Prof Vajira H. W. Dissanayake MBBS (Colombo), Ph.D.(Nottingham), Fellow of the National Academy of Sciences of Sri Lanka (FNASSL), and Fellow of the International Academy of Health Sciences Informatics (FIAHSI) is the Dean of the Faculty of Medicine and the Senior Professor (Chair) of the Department of Anatomy, Genetics and Biomedical Informatics of the University of Colombo, Sri Lanka. He was the President of the Sri Lanka Medical Association in 2012 and the President of the Commonwealth Medical Association from 2016 to 2019. He is the current Chairman of the Commonwealth Health Professions and Partners Alliance (CHPA), Chairman of the Board of the Global Genomic Medicine Collaborative (GGMC), and the Chairman of the Commonwealth Centre for Digital Health (CWCDH). He was awarded the National Titular Honor of Vidya Jyothi for scientific accomplishment by the President of Sri Lanka in 2019.

Diann Eley
PhD, University of Queensland, Australia

Professor Diann (Di) Eley is the Director of MD Student Research and the MD Director of Higher Degree Research Training in the Faculty of Medicine. She is also Chair of the University of Queensland (UQ) Human Research Ethics Committee. Di's research career began with a MSc degree in reproductive physiology at the University of Florida. She subsequently worked for nearly 20 years as a bench scientist in bio-medical laboratories in Kenya and the UK. In 2000, she began her academic career after receiving a PhD in health and exercise psychology at the University of Bristol. She moved to the School of Medicine at UQ in late 2003. Di is responsible for the development and implementation of the Clinician-Scientist Track in the UQ Medical School which encourages student interest and experience in research and facilitates medical students undertaking a PhD or MPhil alongside their medical degree.

Er Hui Meng
Dean, Teaching and Learning, International Medical University, Malaysia

Prof Er is the Dean of Teaching and Learning and Acting Director of the Centre for Education at the International Medical University, Malaysia. She obtained her PhD in Science from the University of Sydney, and Postgraduate Certificate in Medical Education from the University of Dundee. She has vast experience in curriculum design, development, and implementation of health professions programmes. She chairs the Teaching and Learning committee in the university and works closely with the academic programme teams in developing policies and guidelines for teaching, learning and assessments, overseeing their implementation and quality assurance. Besides undergraduate pharmacy and health science programmes, she is also teaching in postgraduate health professions education programmes as well as mentoring students in health professions education research. She contributes significantly to the faculty development activities at the university and regularly shares her knowledge and experience at health professions education conferences.

Karen Flegg
Associate Professor, Australian National University (ANU), Australia

Dr Karen Flegg is President-elect of the World Organization of Family Doctors (WONCA) and former Director of Remote Medical services at the Central Australian Health Service. She is a general practitioner, medical educator and health system manager. She is an Associate Professor at the Rural Clinical School, of the Australian National University. Karen has been actively involved as an educator in both undergraduate and postgraduate specialty training for general practice for over 20 years. Teaching and mentoring the next generation of specialised general practitioners is an ongoing passion. Clinically, Karen has a strong interest in Aboriginal Health, women's health, and has worked part-time for many years in breast clinics and also a sexual assault crisis service. Geriatrics is another favoured part of her clinical work as she enjoys interacting with the older generation and working with them for the best outcomes.

Kulsoom Ghias
Associate Professor and Chair, The Feerasta Family Endowed Chair, Aga Khan University, Medical College, Department of Biological and Biomedical Sciences, Pakistan

Dr Kulsoom Ghias completed her PhD and post-doctoral training at Northwestern University's Robert H. Lurie Comprehensive Cancer Centre in Chicago, IL, United States of America. She received her Advanced Diploma in Health Professions Education from AKU in 2015 and was recognized as a Senior Fellow of Advance HE (previously the Higher Education Academy of United Kingdom) in 2017. Dr Ghias has held several educational leadership positions in the AKU Medical College; she was the departmental Vice Chair for Undergraduate Medical Education (UGME) from 2011 – 2014, chaired the UGME Year 1 Sub-Committee from 2008 – 2011 and co-chaired the UGME Curriculum Committee from 2011 – 2018. She is a member of the inaugural AKU Haile T. Debas Teachers Academy and continues to be involved in curriculum planning and implementation and in teaching across programmatic levels, including undergraduate and graduate. Dr Ghias also chairs the AMEE ASPIRE Academy.

Harumi Gomi
Professor, Office of Medical Education, and Center for Infectious Diseases, School of Medicine, International University of Health and Welfare, Japan.

Dr Harumi Gomi has been working as a clinician educator in the field of infectious diseases. She has been extensively involved in medical education and its management both nationally and internationally. She graduated from Okayama University Medical School, Japan. She completed her residency in internal medicine at Mount Sinai Beth Israel, New York, and fellowship in infectious diseases at the University of Texas-Houston. She obtained her master's degree in public health from Johns Hopkins University, and master's degree in health professions education from Maastricht University. She currently serves as Secretary, the Continuing Professional Development Committee, Association for Medical Education in Europe, and Governor (as of 2023), American College of Physicians Japan Chapter. Nationally she has been a Board Member, Japan Society for Medical Education, a Member, the National Board Examination Committee, Ministry of Health, and a Member, the Revision Committee for the Model Core Curriculum for Medical Education, Ministry of Education at the governmental level.

Steven Green
Clinical Assistant Professor and Residency Program Director, Cleveland Clinic Abu Dhabi, United Arab Emirates

Dr Green is the program director for the Anaesthesia Residency Cleveland Clinic Abu Dhabi (CCAD) and a Clinical Assistant Professor at the Cleveland Clinic Lerner College of Medicine. He completed medical school and residency in Anaesthesia at the University of British Columbia in Vancouver, Canada. Afterwards, he completed a fellowship in Trauma Anaesthesia in Perth, Australia, returning to Vancouver as a Consultant Anaesthesiologist until his move to Cleveland Clinic Abu Dhabi in 2019, where his clinical practice is focused on Neuroanaesthesia. He took over as Program director for the new anaesthesia residency program at CCAD in 2021, leading the program through a successful initial accreditation with the ACGME-I. He was also nominated as chair of the Emirati National Institute of Health Specialties Anaesthesia Specialty committee, where he led a multinational team to create the new Anaesthesia Standards for Board Certification in the United Arab Emirates.

Aviad Haramati
PhD, Georgetown University, United States of America

Aviad "Adi" Haramati, PhD, is an award-winning physiologist and medical educator. He is Professor of Integrative Physiology and Medicine, and Founding Director of the Centre for Innovation and Leadership in Education (CENTILE), at Georgetown University Medical Centre, in Washington, DC. He received a PhD in Physiology and came to Georgetown in 1985, after 5 years at Mayo Clinic. His research interests addressed renal and electrolyte homeostasis, but now he focuses on health professions education. Dr Haramati served as the first president of IAMSE (International Association of Medical Science Educators), and has keen interests in medical education, integrative medicine, the learning environment and improving the well-being of faculty and learners. Dr Haramati is a member of the Board of Directors of the Association of American Medical Colleges and he has been a visiting professor at over 100 medical schools worldwide.

Manasik Hassan
Consultant General Pediatric and Assistant Professor of Clinical Pediatric, Hamad Medical Corporation, Qatar

Dr Manasik Hassan is an Academic General Pediatric Consultant at Hamad Medical Education, Clinical Lecturer of General Pediatric Medical College - Qatar University and Assistant Professor of Clinical Pediatrics Weill-Cornell Medical College Qatar. Dr Manasik received her medical training at Gezira University in Sudan. She has worked as a general pediatrician at Hamad Medical Corporation since 2015. Dr Manasik's areas of practice and interest include inpatient medicine, participating in designing and conducting clinical research, teaching, and supervising residents during their pediatric residency, putting great effort into clinical and academic research and quality improvement projects in pediatric programmes. She has a wide variety of accepted abstracts and has presented workshops at multiple national and international conferences. She is an instructor of different workshops including communication, simulation, quality and professionalism.

Marcus Henning
Associate Professor, University of Auckland, New Zealand

Marcus Henning is an associate professor and post-graduate academic advisor at the Centre for Medical and Health Sciences Education at the University of Auckland, New Zealand. The Centre provides a suite of post graduate clinical education courses. He has facilitated numerous workshops to clinical teachers in relation to developing pragmatic clinical teaching skills. He is actively engaged in research and his specific interests include: quality of life, the motivation to teach and learn, assessment, organizational behaviour, conflict management, and professional integrity. His background is in psychology, education and mathematics teaching. His PhD was in the area of educational psychology.

Michael Herr
PhD, University of Alabama at Birmingham, United States of America

Michael Herr received his Ph.D. in Cell Biology and Biochemistry from the University of Tennessee Health Science Centre (UTHSC) in Memphis, TN, United States of America. This pursuit took place with the end goal of teaching in an undergraduate institution. After a brief time as a juggling a career as staff scientist and adjunct assistant professor, Dr Herr landed a full-time position in the UTHSC College of Medicine teaching human gross anatomy. His efforts making the classroom an engaging and dynamic learning space has earned the recognition of eight golden apple awards as outstanding first-year lecturer and first-year medical school instructor. This is in addition to the highest honour of two student government association executive council excellence in teaching awards. Dr Herr is passionate about revitalizing the classroom experience for students in medical education and disseminating the skills and techniques that make the classroom a captivating environment for students.

Julie Hewett
Association Manager, International Association of Medical Science Educators, United States of America

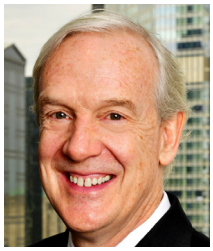
Julie Hewett, owner of JulNet Solutions, is a graduate of the Rochester Institute of Technology with a Bachelor's Degree in Entrepreneurial Management. She has over 25 years of office management experience working with small organizations in the services and manufacturing industries. This broad work experience allowed Julie to develop JulNet Solutions, offering management support services to small businesses, entrepreneurs, and eventually professional non-profit associations. Since 1998 Julie has been involved in the International Association of Medical Science Educators (IAMSE) for Association Management and Meeting Planning. In 2010 JulNet Solutions got involved in the production of IAMSE's online journal Medical Science Educator, and her office now offers Editorial Manager Support for the Editor-in-Chief.

Hoang Minh Nguyen
Monitoring, Evaluation and Research Lead, The Partnership for Health Advancement in Vietnam, Vietnam

Hoang works at HAIVN as Research, Monitoring & Evaluation Manager. He is in charge of managing and coordinating Monitoring, Evaluation and Research activities for the projects such as "Improving Access, Curriculum and Teaching in Medical Education and Emerging Diseases" (IMPACT-MED) and other satellite projects related to infection prevention & control, COVID-19 response at hospitals, Hepatitis care and treatment management at the primary healthcare facilities in Vietnam and other SEA countries. He also provides training courses on evidence-based decision-making and health research implementation for provincial hospitals in Vietnam. Before joining HAIVN, he was a lecturer and researcher at the Hanoi University of Public Health for over 10 years. He had experience conducting monitoring, evaluation, and research activities in healthcare service delivery and training programs funded by the Ministry of Health, the US Centers for Disease Control and Prevention, the Field Epidemiology Training Program, and the World Health Organization.*Deputy Dean (Education), Faculty of Medicine, Nursing & Health Sciences, Monash University, Australia.*

Wayne Hodgson
Deputy Dean (Education), Faculty of Medicine, Nursing & Health Sciences, Monash University, Australia.

Wayne is Deputy Dean (Education) in the Faculty of Medicine, Nursing & Health Sciences at Monash University. In this role he is responsible for the Education portfolio, overseeing all aspects of teaching and learning for the Faculty's suite of health professions courses in Australia and offshore campuses including medicine, nursing, midwifery, physiotherapy, occupational therapy, radiography, psychology, dietetics, social work and paramedicine. Wayne is also Chair of the Australian/New Zealand University Clinical Aptitude Test (UCAT) Consortium, a member of the VCAA (Victorian Curriculum and Assessment Authority) Board, and Vice President of the Western Pacific Association for Medical Education. Wayne is an internationally renowned toxinologist and heads the Monash Venom Group, responsible for pharmacologically characterising a wide range of spider, snake and marine venoms. He has published over 180 papers including manuscripts in Nature, PNAS and Molecular & Cellular Proteomics and is on the editorial board for the journals Toxicon and Toxins.



Eric Holmboe
Chief, Research, Milestones Development and Evaluation Officer, ACGME, United States of America

Dr Holmboe is Chief, Research, Milestones Development and Evaluation Officer at the Accreditation Council for Graduate Medical Education (ACGME). He is Adjunct Professor of Medicine at the Yale University School of Medicine and the Uniformed Services University of the Health Sciences. He is Adjunct Professor of Medical Education at the Feinberg School of Medicine at Northwestern University.He previously served as the Associate Program Director, Yale Primary Care Internal Medicine Residency Program, Director of Student Clinical Assessment, Yale School of Medicine, and Assistant Director of the Yale Robert Wood Johnson Clinical Scholars program. Before joining Yale in 2000, he served as Division Chief of General Internal Medicine at the National Naval Medical Center. Dr Holmboe retired from the US Naval Reserves in 2005. He served as the Chief Medical Officer at the American Board of Internal Medicine from 2009 until 2014. His research interests include interventions to improve quality of care and methods in the assessment of clinical competence. His professional memberships include the American College of Physicians, where he is a Master of the College, Society of General Internal Medicine, and Association of Medical Education in Europe. He is an honorary Fellow of the Royal College of Physicians in London, honorary Fellow of the Royal College of Physicians and Surgeons of Canada, and honorary fellow of the Academy of Medical Educators. Dr Holmboe is a graduate of Franklin and Marshall College and the University of Rochester School of Medicine. He completed his residency and chief residency at Yale-New Haven Hospital and was a Robert Wood Johnson Clinical Scholar at Yale University.

Hong Wei-Han
Senior Lecturer, University of Malaya, Malaysia

Wei-Han is a Senior Lecturer in the Medical Education and Research Development Unit (MERDU), Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia. Her first degree and Master degree was in Science Education. She holds a PhD in Medical Education from University of Malaya and has been attached to the Medical Education unit since 2013. She is currently entrusted with managing the Curriculum and Assessment team for the undergraduate medical program which also includes quality assurance and Faculty development initiatives at Faculty of Medicine, Universiti Malaya. She also has special interests in research pertaining to students' admission, curriculum development, metacognition and students' motivation.

Indika Karunathilake
Professor in Medical Education, University of Colombo; President of Sri Lanka Medical Association, Sri Lanka

Indika Mahesh Karunathilake is the first ever professor in Medical Education in the University of Colombo, Sri Lanka. He has conducted extensive research and authored over 100 publications in peer reviewed international journals and over 200 research presentations at international and national level. Prof Indika Karunathilake is the President of Sri Lanka Medical Association for year 2020, the Apex body for medical professionals in Sri Lanka. He has played a major role leading SLMA during the nations' battle of controlling the COVID 19 epidemic.

Michele Kigozi
Consultant Anaesthesiologist, Cleveland Clinic Abu Dhabi, United Arab Emirates

Michele Kigozi is a Consultant Anaesthethesiologist at the Cleveland Clinic Abu Dhabi (CCAD). She is core faculty for the CCAD Anaesthesiology Residency Program and leads provision of the Intensive Care portion of the curriculum. Dr Kigozi received her medical degree from the University of Nottingham in the United Kingdom. She has fellowship with the Royal College of physicians; the Royal College of Anaesthetists; and with the Faculty of Intensive Care Medicine. Her clinical areas of specialization include neuro-anaesthesia, extra-corporeal membrane oxygenation and critical care and she has a Master's degree in organ donation and transplantation. Her academic interests are in medical education and she serves on local and national committees for the same. Dr Kigozi has worked in a variety of centres, regions and educational institutions, and has used these experiences to develop her understanding of culture and how it impacts education.

Kim Hwiyoung
Research Assistant Professor, Department of Biomedical Systems Informatics, Yonsei University College of Medicine, Republic of Korea

He is a research Assistant Professor at the Department of Biomedical Systems Informatics of Yonsei University College of Medicine. He is also an Adjunct Professor at the Graduate School of Artificial Intelligence of Yonsei University. He is a member of IEC TC62 SNAIG AG and ISO/IEC JTC1/WG12 (project leader of ISO/IEC AWI 8801), leading global standardization of medical 3D printing modelling in Korea. He is a board member of Korean Society of Artificial Intelligence in Medicine as well. He earned his Ph.D. in medical physics from Seoul National University College of Medicine.

Kim Suyoun
Research Professor, Department of Medical Education, Korea University College of Medicine, Republic of Korea

She is an educator and obtain her Ph.D. in educational technology and instructional design from Korea University. She has worked for the Department of Medical Education at Korea University College of Medicine with her professional knowledge of education since 2022. She serves for regular and extra-curriculum development, learning environment construction, and continuous quality improvement in higher education. As an education expert, she worked at the Center for Teaching and Learning (CTL) in Korea University, Seoul National University of Science and Technology, and Chung-Ang University for several years. Her general research topics are; instructional design, educational technology, teaching and learning method, and learning environment. As a co-researcher, she is participating in the Korean Medical AI education and overseas expansion project granted by Ministry of Science and Technology of Korea.

Chris Krägeloh
Professor of Psychology, Auckland University of Technology, New Zealand

Chris Krägeloh, PhD, is a Professor of Psychology at the Department of Psychology and Neuroscience, Auckland University of Technology. His recent research interests are outcome measurement in health and mental health, mindfulness, and investigating psychosocial factors in robotics. He is a founding member of the New Zealand World Health Organisation Quality of Life Group and the Psychosocial Aspects in Robotics (PAIR) Lab. Chris is an author of more than 120 articles in international journals, lead author of a mindfulness research book (Mindfulness-Based Intervention Research: Characteristics, Approaches, and Developments), co-editor of two major reference works on assessment (Handbook of Assessment in Mindfulness Research and International Handbook of Behavioral Health Assessment), and co-editor and co-author of several other books on research methods and well-being. Chris is joint Editor-in-Chief of the journal Mindfulness, which is widely considered to be the flagship journal of mindfulness research.

Paul Lai
Professor, The Chinese University of Hong Kong, Hong Kong S.A.R.

Prof Paul Lai teaching portfolio spans across undergraduate anatomy, clinical surgery to teaching administration. He was the director of the Office of Medical Education from 2014 to 2020. He has taken various roles in post-graduate surgical training programs and examinations through his work at the College of Surgeons of Hong Kong and the Hong Kong Academy of Medicine. Prof Lai was conferred a Master in Medical Law (MML) by the University of Northumbria and he is also an accredited mediator in Hong Kong. He has received training in administrative medicine and was conferred the Fellowship of Royal Australian College of Medical Administrators and Fellowship of the Hong Kong College of Community Medicine. He teaches medical students and surgical trainees on medico-legal issues, quality and risk management, and patient safety using a number of different teaching pedagogies.

Lau Weeming
Senior Lecturer/Clinician, Monash University Malaysia, Malaysia

Wee-Ming Lau is a senior lecturer and deputy head of the medical education unit at Monash University Malaysia. She is clinically trained in Internal and Respiratory Medicine. She is the Early Years lead coordinator in Clinical Skills (teaching, learning and assessment) in addition to being a lecturer/facilitator in Bioethics in the Monash University BMedSc and MD programme. She is passionate about effective teaching, reflective learning/practice and scaffolding feedback in medical education. In the spirit of “Ancora imparo”, Wee-Ming loves to network and learn from others in improving these teaching, learning and assessment sessions. She is an active member of the Asia Pacific Bioethics Network (APBEN), an AMEE Associate Fellow, and also a member of the AMEE CPD Community of Practice Task Force. Her areas of research are feedback, clinical skills, professionalism, bioethics and faculty development.

Tao Le
Associate Clinical Professor, University of Louisville, United States of America

Dr Tao Le is an internationally recognized expert in digital learning and student engagement in medical education. Dr Le earned his medical degree at the University of California, San Francisco, trained in internal medicine at Yale-New Haven Hospital and completed an allergy and immunology fellowship and a master’s in health sciences at Johns Hopkins University. Dr Le has authored over 40 textbooks including the First Aid for the Boards series. He is currently chief of adult allergy and immunology at the University of Louisville and Chief Education Officer of ScholarRx, a global platform for shared medical curriculum.

Lee Young-Mee
Professor, Department of Medical Education, Korea University College of Medicine, Republic of Korea

She is a family physician and got the master degree in Health Professional Education (MSED) in the University of Southern California, U.S. Since 2000, she has worked for the Department of Medical Education, KUCM. She serves for a director of faculty development, SP (standardized patient) program, continuous quality improvement in medical education, international relations at the KUCM. She is a chair of Academic Committee of Korean Society of Medical Educators. She was an Editor-in-Chief of the Korean Journal of Medical Education (KJME), and currently is a senior editor of KJME, a board member of TAPS, BMC Medical Education, International Medical Education. Her major research fields are; professionalism, communication skills education, and program evaluation. As a PI, she got a government grant for development & spreading Medical AI curriculum and Support oversees expansion of Medical AI software, which is funded by Ministry of Science and Technology of Korea.

Page Morahan
Consultant, FAIMER, United States of America

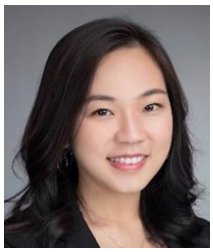
Founding Director, Executive Leadership in Academic Medicine; Program for Women (ELAM); and Professor Emerita, microbiology and immunology, Drexel University College of Medicine. Also Founding Co-Director and continuing consultation, International FAIMER Institute. She has directed numerous grants in both biomedical and social science and authored over 150 peer-reviewed publications. Positions include Chair and first woman President of the Association of Medical School Microbiology and Immunology Chairs, 1990; American Council on Education (ACE) Fellow, 1992-93; Associate Provost for Faculty Affairs. She received her B.S., Agnes Scott College magna cum laude; M.A., Hunter College; and Ph.D., Medical College of Wisconsin. National honours include the Association of American Medical Colleges Women in Medicine Leadership Development Award; ACE Office of Women in Higher Education, Network Annual Leadership Award; Fellow, American Women in Science; Fellow, American Academy of Microbiology; Distinguished Career Award, Agnes Scott College; Graduate Student Alumna of the Year Award, Medical College of Wisconsin.

Vishna Devi Nadarajah
Pro Vice-Chancellor, Education and Institutional Development, and Professor of Human Biology, International Medical University, Malaysia, International Medical University, Malaysia

Prof Vishna is an experienced medical educator and biochemist at the International Medical University in Kuala Lumpur. A graduate of 3 universities across 3 countries, she values diversity as a strength in any institution. She leads the educational strategies, new programme development and international partnerships at IMU as Pro Vice Chancellor for Education and Institutional Development. She is very fortunate to work with a collaborative, committed and talented multidisciplinary team at IMU and would like to emphasise that it's the values of its people that will carry forward an institution during this unprecedented time. She has published and presented research papers in both biomedical sciences and medical education, supervises research students and reviews for indexed and international journals. Her areas of research in health professions education are in Faculty Development, Assessment and Innovative Teaching Learning Methods.

Eddie Ng
Head Education and Academic Affairs, The Chinese University of Hong Kong, Hong Kong S.A.R.

Mr Eddie Ng is head of education and academic affairs and leads faculty curriculum planning. Mr Ng will give an insider perspective to the facilitators and constraints that curriculum designers need to be aware of and navigate.



Olivia Ngan
Research Assistant Professor, The University of Hong Kong, Hong Kong S.A.R.

Olivia Ngan has a multidisciplinary background in neuroscience (BS, University in Michigan – Ann Arbor), bioethics (MS, Columbia University), and public health (PhD, Chinese University of Hong Kong). Prior to joining the Centre in 2018, she was a post-doctoral fellow at the JC School of Public Health and Primary Care, CUHK. She is presently a lecturer at the CUHK Centre for Bioethics. Her primary work focuses on bioethics teaching and curriculum planning, developing courseware, supervising undergraduate and postgraduate student projects, and leading student-centered activities outside the classroom. Together with enthusiastic medical students and teachers, she co-founded student-centred bioethics newsletter (CUBE). She has also been awarded courseware and teaching development grants, in the capacity of PI and co-I, developing the learning interest and ethical sensitivity among medical students.

Nguyen Thi Anh Phuong
Dean of International Education Faculty & Deputy Head of Office of Science-Technology and International Relations, Vietnam

Nguyen Thi Anh Phuong is a university senior lecturer and clinical physician at Hue University of Medicine and Pharmacy and its Medical Center for nearly 20 years. Dr Nguyen received her MD and Master of Pediatrics from Hue UMP and completed her PhD on Medical researches and International Health at Ludwig Maximillian University of Munich, Germany. Currently, she is the Dean of International Education Faculty & Deputy Head of Office of Science-Technology and International relations. She is the nursing professor with the expertise on child care, nursing research and international health. Dr Nguyen also is the pioneer on advanced teaching methods (PBL, UBL) in Hue UMP and in Vietnam. She is editor and reviewer for several international journals (Frontier, Child health Nursing Research, Journal of Problem- based Learning, etc).

John Ogunkeye
Chief Financial and Administrative Officer, ACGME and Executive Vice President, ACGME Global Services, United States of America

Mr Ogunkeye serves as the ACGME's chief financial and administrative officer and as executive vice president of ACGME Global Services. Mr Ogunkeye previously held various management positions within academic medical centers for nearly three decades. He started his career in 1985 as a division administrator at the University of Texas Health Sciences in Houston. He subsequently held roles with expanding scope and responsibilities, including as the executive director and chief executive officer of Morehouse Medical Associates in Atlanta, Georgia; as the chief operating officer of Jefferson Medical College and as the executive director/vice president for Jefferson University Physicians, a multi-specialty physician group practice based in Philadelphia; and then at Johns Hopkins Medicine, where he served as vice president and chief administrative officer for the Office of Johns Hopkins Physicians. He also served as the associate dean and executive director for the Clinical Practice Association and Clinical Research Operations & Finance for the Johns Hopkins School of Medicine. Mr Ogunkeye also serves on the Board of Intealth, a US-based organization that brings together the expertise and resources that advance quality in health care education worldwide to improve health care for all. He has served on several non-profit boards, including for physician practices, a governmental authority, an international agency, and an insurance captive. He holds Master of Science degrees in biology and health care administration. He joined the ACGME in 2013.

Vinod Pallath
Associate Professor, University of Malaya, Malaysia

Dr Vinod Pallath is working in the capacity of Associate Professor at Medical Education Research and Development Unit (MERDU), Faculty of Medicine, Universiti Malaya (UM), Kuala Lumpur, Malaysia. His research focuses on faculty development, professionalism, leadership and management, technology enhanced learning and student support in medical education. As a trained Medical Microbiologist, he also teaches and does research in bacterial virulence and currently focuses his research on survival strategies of uropathogens. He is a FAIMER fellow, Co Faculty member for FAIMER Competency-based Medial Education (FACE) professional development programme and Project Advisor to fellows of International FAIMER institute, Philadelphia.

Susan Pelea Nagtalon
Dean and Chief Academic Officer, St. Luke's Medical Centre College of Medicine William H. Quasha Memorial, Philippines

Professor Susan Pelea Nagatalon is Dean and Chief Academic Officer of St. Luke's Medical Centre College of Medicine-William H. Quasha Memorial, Philippines. She practices OB-Gyn and maternal and foetal medicine within St. Luke's Medical Centre. She has significant experience in healthcare leadership and medical education and is interested in professionalism, healthcare quality, and patient safety.

Gominda Ponnamperuma
Professor and Head, Department of Medical Education, Faculty of Medicine, University of Colombo, Sri Lanka

Gominda Ponnamperuma has served as an invited speaker cum resource person in many international symposia and conferences. Author of several journal articles and books, he sits on the editorial boards of four international medical education journals. Gominda, who has served as an advisor, visiting professor, consultant and fellow in several academic institutes of repute, is a founding co-chair of the Asia Pacific Medical Education Network (APME-Net). He is a postgraduate tutor, examiner, and resource material developer for national and international medical education courses. His research interests are in assessment (including selection for training), and curriculum development and evaluation.

Pongtong Puranitee
Assistant Professor and Assistant Dean for Medical Education, Department of Pediatrics, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Thailand

Assistant Prof Puranitee received a diploma from the Board of Pediatrics and the Sub-board of Pediatric Allergy and Immunology. She graduated with her Master of Health Professions Education in 2016, and she is currently a PhD candidate in the School of Health Professions Education at Maastricht University, the Netherlands. In 2021, she achieved the status of Senior Fellow of Advance Higher Education (SFHEA), United Kingdom. In 2022, the Faculty of Medicine, Ramathibodi Hospital, Mahidol University received the ASPIRE to Excellent for Student Engagement Award from the AMEE ASPIRE Academy. Assist. Prof Puranitee is a member of the medical education scientific committee at the Consortium of Thai Medical Schools. She has contributed to the faculty development program regarding medical education and continues to be involved in curriculum development, assessment reform, and a newly developed mentoring program at her institution.

Subha Ramani
President, Association for Medical Education in Europe (AMEE); Associate Professor of Medicine, Harvard Medical School, United Kingdom

Subha Ramani is the current President of AMEE, a premier International Association for Health Professions Education. She is a general internist, Associate Professor of Medicine at Harvard Medical School; Adjunct Professor at Massachusetts General Hospital Institute for Health Professions Education; Honorary Professor of Medical Education at the University of Manchester; and External faculty at Maastricht University's School of Health Professions Education. She is a general internist who holds several educational leadership roles at Brigham and Women's Hospital, one of the founding teaching hospitals for Harvard Medical School. Subha has been actively engaged in AMEE for nearly 20 years serving on the Postgraduate education, Fellowship and Executive committees. She has a long track record of scholarship, areas of interest include: faculty development, application of theories to educational practice, mentoring, feedback, clinical teaching, cultural and global perspectives in education, and qualitative research.

Mohammed Ahmed Rashid
Professor of Medical Education and Vice Dean, UCL Medical School, University College London, United Kingdom

Mohammed Ahmed Rashid is a Professor of Medical Education at UCL Medical School, where he leads the UCL Centre for International Medical Education Collaborations. He is also Vice Dean (International) for the UCL Faculty of Medical Sciences. He has led medical education projects in various countries at both undergraduate and postgraduate levels and is Chief Examiner for the General Medical Council PLAB exam that is taken by international medical graduates applying to join the UK medical register. His training included a prestigious NIHR-funded academic clinical fellowship at the University of Cambridge, a clinical leadership fellowship at NHS England, and postgraduate degrees in Cardiology (Imperial College London) and Medical Education (UCL). He continues to practice as a physician in the UK National Health Service.

Viktor Riklefs
Vice-Rector, Karaganda Medical University, Kazakhstan

Viktor Riklefs holds the degree of International Master of Health Professions Education from Maastricht University in the Netherlands and a Ph.D. in Physiology from the Ministry of Education and Science of Kazakhstan. His research is focused on assessment, simulation, e-learning, virtual patients, active learning and curriculum development. He is also an active researcher in adaptation, stress, mind-body therapy, heart rate variability and nonlinear analysis of electrophysiological signals. For 10 years (2007-2017), he served as the Director of the Simulation Centre of Karaganda Medical University, which won the ASPIRE award for excellence in Simulation from the Association of Medical Education in Europe (AMEE). He is also a member of the Steering Committee of the Asia Pacific Biomedical Science Educators Association (APBSEA).

Solomon Sathishkumar
Principal, Christian Medical College, Vellore, Professor, Department of Physiology, India

Dr Solomon has vast experience in unravelling the miracle of Human Physiology to Medical, Nursing and Allied Health Sciences students. His interests include Integrated Learning, Self-Directed Learning and Early Clinical Exposure. He has several publications in the field of Medical Education. As the former Vice Principal, he was involved in the extensive curriculum renewal that took place to mark 100 years of Medical Education at Christian Medical College. The renewal ensured that the curriculum was contextual and relevant. His primary research interest is treatment of articular cartilage defects with cell-based therapy, as hyaline cartilage does not have an intrinsic capacity for self-repair. In collaboration with the department of orthopaedics, the potential of chondrocytes, mesenchymal stem cells and chondroprogenitor cells are being studied in order to find the most appropriate cell-type for cartilage repair. He has several publications in this field.

Susie Schofield
Reader, University of Dundee, United Kingdom

Dr Susie Schofield is a Reader in the Centre for Medical Education (CME), School of Medicine, University of Dundee. A significant part of her role is as Associate Dean for Academic Quality and Standards, Deputy Programme Director for the CME Masters in Medical Education and the University Online Distance Learning Lead. She specialises in intersecting professional identities, faculty development and curriculum design, particularly for distance learning, and has given many keynotes, workshops and consultancy locally and internationally. She is a member of the University Senate, a committee member of SHED (Scottish Higher Education Developers) and President of Graduate Women Scotland East. As an experienced PhD supervisor, she leads the Centre's PhD programme and was recently awarded Recognised Research Supervisor status by the UK Council for Graduate Education.

Karen Scott
Associate Professor, University of Sydney, Australia

Associate Professor Karen Scott is Academic Lead, Evaluation of Sydney Medical Program. In health professional education, Karen conducts research in technology enhanced learning, the nature of student learning and teacher development, education research development and the culture of healthcare settings. She also explores education approaches to help adolescents and parents improve their digital health literacy so they can find trustworthy health information on the internet and social media. Karen is Editor of Focus on Health Professional Education (FoHPE), journal of the Australian & New Zealand Association of Health Professional Educators (ANZAHPE).

Mairi Scott
Professor of Medical Education and General Practice, University of Dundee, United Kingdom

Professor Mairi Scott is a Professor of General Practice and Medical Education at the University of Dundee and Director of the Centre for Medical Education which has an international reputation for excellence in medical education. Mairi has provided consultancy advice and regulatory reviews of medical education in the UK and internationally, Saudi Arabia, the United States of America and Georgia. Mairi is a member of the University Senate and University Court and a Founding Fellow of the Faculty of Medical Leadership and Management. She is a past-Chair of the Royal College of General Practitioners in Scotland and was appointed from 2008 to 2012 as a Council Member of the General Medical Council and continues to work as a GMC Associate Advisor.

Thilanka Seneviratne
Consultant Paediatrician, Senior Lecturer, University of Peradeniya, Sri Lanka

Dr Seneviratne is a Consultant Paediatrician and Senior Lecturer in the Department of Pharmacology, Faculty of Medicine, University of Peradeniya. She received Doctor of Medicine in Paediatrics from the University of Colombo and the membership of the Royal College of Paediatrics and Child Health of United Kingdom. Subspecialised in Allergy, Asthma and Immunology and has done award-winning research in the field. She has a special interest in simulation-based medical education and she is the vice president of the Sri Lanka Association of Simulation for Health care. Dr Seneviratne pioneered simulation-based teaching of therapeutics in Sri Lanka. Which she upgraded to virtual platforms during the pandemic. She is a member of the board of studies in Family medicine and the board of studies in Clinical pharmacology and therapeutics. Dr Seneviratne is a member of the Asia pacific biomedical science educators Association (APBSEA) since its inception.

Lawrence Sherman
President, Meducate Global, LLC; International Development, Association for Medical Education in Europe (AMEE), United States of America

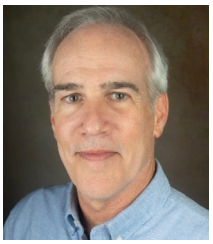
Lawrence Sherman FACEHP, FRSM, CHCP is Executive Vice President, Strategy and Performance, AXDEV Global, following the merger of Meducate Global, LLC. Lawrence is involved in the quality improvement/performance improvement in healthcare initiatives, educational needs assessments and gap analyses, assessments of global healthcare education systems, faculty development, and support of continuing professional development in healthcare worldwide. Lawrence has been involved in medical and interprofessional education for over 29 years, authoring numerous publications and delivering hundreds of presentations worldwide. He is a Fellow of the Alliance for Continuing Education in the Health Professions and a Fellow of the Royal Society of Medicine (UK). Lawrence has also been an Educator for the Emergency Medical Institute and Center for Learning and Innovation of the Northwell Health System in Long Island, New York, and has lectured in the Healthcare Communications program at the Center for Communicating Science at Stony Brook University, also in New York.

Veena Singaram
Academic Leader Research/Medical Education Strategic Team Lead, University of KwaZulu-Natal, South Africa

Dr Veena Singaram is a senior lecturer and Academic Leader of Research in the School of Clinical Medicine. She is a steering committee member in the Doctoral Academy and Team Lead of the Medical Education Strategic Team at UKZN. Her qualifications include a BMMedSc, MMedSc (UKZN), and PhD in Health Professions Education (Maastricht University, Netherlands). She is a fellow of the Foundation for Advancement in Medical Education and Research (FAIMER). Dr Singaram recently received the Southern African Association of Health Educationalists Distinguished Educator Award. She has published widely in HPE and has graduated several doctoral and masters students. Dr Singaram has actively contributed to capacity building and development of HPE and research that has to led novel innovations and significant contributions to the training of healthcare professionals. Her scholarly interests include doctoral research, mentoring, technology-enhanced learning, formative assessment feedback, and collaborative learning environments within a transformative learning paradigm.

Amira Siyam
Associate Residency Program Director, Cleveland Clinic Abu Dhabi, United Arab Emirates

Dr Siyam is the director of Anaesthesiology operations and the associate residency program director at the Cleveland Clinic Abu Dhabi (CCAD). She is a graduate of the University of Maryland medical school and a diplomate of the American Board of Anaesthesiology who completed her residency training at the Cleveland Clinic Foundation, in Ohio. Dr Siyam was a member of the founding body of physicians who initiated operations at the Cleveland Clinic Abu Dhabi. Her special interests include neuro-anaesthesia, major hepato-biliary surgery anaesthesia, medical education, peri-operative quality and safety, operational efficiency, physician recruitment. She serves on several multi-disciplinary and cross-organizational committees concerned with resident education, at both the local and national levels.



Stuart Slavin
Vice President for Well-Being, Accreditation Council for Graduate Medical Education (ACGME) Department of Education, United States of America

Stuart Slavin MD, MEd is Vice President for Well-being at the Accreditation Council for Graduate Medical Education (ACGME). A graduate of Saint Louis University School of Medicine, Dr Slavin completed his residency training in pediatrics at UCLA and then served as a faculty member there for seventeen years before returning to Saint Louis University as Associate Dean for Curriculum. While at Saint Louis University, Dr Slavin led efforts to improve the mental health of medical students that produced dramatic decreases in rates of depression and anxiety in pre-clerkship students. He joined the ACGME in 2018 and is helping to lead efforts to improve the mental health of residents and faculty across the US.

Kelby Smith-Han
Senior Lecturer, University of Western Australia, School of Allied Health, Health Professions Education, Australia

Dr Kelby Smith-Han is a Senior Lecturer in Health Professions Education at the University of Western Australia. Kelby currently teaches in the Humanities in Health and Medicine undergraduate major; the Health Humanities course in the first year of the University of Western Australia's medical degree; and the postgraduate Certificate, Diploma and Master courses in Health Professions Education. Kelby's research interests cover student learning development, student experience, and academic staff development in a health professional education context. His student learning development research specifically includes professional identity development, transformational learning, professionalism, health humanities, threshold concepts, metacognition, and clinical experience of health professional students. Kelby's research on student experience focuses on the health and wellbeing of health professional students. His academic staff development research currently centres on the professional development of educators in metacognition strategies to use in their teaching. He uses qualitative, quantitative, and mixed methods approaches in his research.

Diantha Soemantri
Vice Director of Medical Education, University of Indonesia, Indonesia

Dr Soemantri graduated as a medical doctor from Faculty of Medicine Universitas Indonesia in 2005, acquired MMedEd title from University of Dundee in 2007 and PhD in the same field from University of Melbourne in 2013. She is now the head of Master in Medical Education Program in Universitas Indonesia and also responsible for the multi- and interprofessional curriculum of Health Sciences Cluster. Since 2018, she is appointed as the vice director of medical education of the Indonesian Medical Education and Research Institute (IMERI). Her research interests are student assessment, reflection and feedback, interprofessional education and collaborative practice, and professionalism development.

Carole Steketee
Director Medical Education, Curtin Medical School, Curtin University, Australia

Carole is the Director of Medical Education for Medicine in the Curtin Medical School. Prior to this she was National Director Learning and Teaching at the University of Notre Dame Australia. She has also worked in Notre Dame's medical school as Associate Dean Learning and Teaching. In each of these positions, her focus has been to support educators in providing engaging and transformative learning experiences for students through curriculum design. Carole led the development of Prudentia, an award-winning online curriculum mapping software. She has been a partner in several nationally funded OLT projects, through which she has developed rich collaborations with clinical educators, academics and researchers to develop sustainable models of inter-professional health education. Carole has chaired peak academic governance boards and is a Principal Fellow of the Higher Education Academy (2018).

Tran Diep Tuan
Chairman, Board of Trustees of University of Medicine and Pharmacy at Ho Chi Minh City (UMP)

Prof Tran, Diep Tuan is the Chairman, Board of Trustees of University of Medicine and Pharmacy at Ho Chi Minh City (UMP). Under his tenure, the UMP has demonstrated its strong commitment for innovation and quality improvement. Prof Tran received his M.D. degree (1989), pediatric certificate (1993) at UMP and later in pediatric neurology. He got his Ph.D. at Tokyo University (1998-2003), post-doctoral training at Japan National Institutes for Physiological Sciences (2003) and University of Michigan (2003-2005). He was awardee of John J. Bonica Award (2002), Japan Society for the Promotion of Science (2003), International Brain Research Organization (2003), WHO/NINDS International Neurological Science Fellowship (2003). His research interest is pain imaging, pediatric neurology, and children quality of life. He has published more than 50 articles in international peer review journals. His main agenda is to make UMP a leading university in Vietnam and an internationally recognized institution in the region.

Jamunarani Vadivelu
Professor, University of Malaya, Malaysia

Professor Jamuna is the current Head of Medical Education and Research Development Unit (MERDU). She graduated with a PhD in Microbiology from the London School of Hygiene and Tropical Medicine, United Kingdom (UK) and worked as a postdoctoral research fellow in the University of Maryland, United States (US). Prof Jamuna is a Fellow of the Foundation of Advancement of International Medical Education and Research (FAIMER) under the auspices of ECFMG, United States of America. She also followed a two-year program to develop skills in leadership and implementation for undergraduate and postgraduate and medical education. She is currently entrusted with leading and managing the curriculum revision, implementation and quality assurance of the undergraduate and postgraduate curricula and Faculty development initiatives at Faculty of Medicine, Universiti Malaya.

Rashmi Vyas
Senior Associate, FAIMER, United States of America

Dr Vyas contributes her expertise in medicine, health professions education and understanding of international culture to FAIMER programs and its research and scholarship activities. She applies her extensive experience to oversee the FAIMER Global Programs, geared towards healthcare education and workforce development in collaboration with international partners. Prior to joining FAIMER, Dr Vyas was a professor at Christian Medical College (CMC), Vellore, India. She has led education innovations such as the distance learning postgraduate diploma in family medicine, integrated learning, and early clinical exposure. She was the convener for the National Medical Commission (NMC) regional and nodal centres for national faculty development in medical education. She served on the expert committee for the development and implementation of basic and advanced courses in medical education for NMC. Dr Vyas received her M.B.B.S. and M.D. degrees from India. She holds a master's in health professions education from UI Chicago, United States of America.

Wang Weimin
Vice President of Peking University Health Science Center, Executive Deputy Director of National Center for Health Professions Education Development, Head of Institute of Medical Education of Peking University, China.

He serves as the chairman of the Working Committee for the Accreditation of Medical Education (WCAME), the Secretary-General of the Expert Committee for Medical Education of the Ministry of Education, Executive Member of China Association of Higher Education and Executive Vice Chairman of its Medical Education Committee, Director of Chinese Society of Medical Education of Chinese Medical Association, and Chairman of Simulated Medical Education Committee of China Medical Association. Prof Wang is Editor-in-Chief of Chinese Journal of Medical Education, Chief Editor of Surgery and Deputy Director of Editorial Board of Chinese Journal of Medicine, Associated Director of Medicine Teaching Research in Universities (Electronic Edition), and the International Editorial Board Member of Medical Education.

Danai Wangsaturaka
Assistant Professor of Medical Education and Assistant Dean for Academic Affairs, Chulalongkorn University, Faculty of Medicine, Department of Pharmacology, Thailand.

After obtaining his MD degree, Dr Wangsaturaka furthered his Master's and doctoral study at the Centre for Medical Education, University of Dundee, Scotland. He has been a key person in curriculum development, student assessment and student engagement at his institution. His long-standing contribution to student engagement has resulted in the Faculty of Medicine, Chulalongkorn University achieving ASPIRE-to-Excellence Award in Student Engagement in 2015 and him being awarded the National Role Model Teacher in Student Engagement in 2017.Dr Wangsaturaka has provided educational consultancy and run faculty development workshops for not only schools of medicine, but also health professions schools and other disciplines in many universities. He is currently the Assistant Secretary General of the Consortium of Thai Medical Schools.

Craig Webster
Associate Lecturer, University of Auckland, New Zealand

Craig Webster is an Associate Professor with the Centre for Medical and Health Sciences Education and the Department of Anaesthesiology at the School of Medicine, University of Auckland, New Zealand. He has degrees in psychology and a Ph.D. in medical human factors, with research experience in clinical and human factors research projects, patient safety, compliance with safety initiatives, healthcare simulation and the applications of mindfulness in reducing stress and clinical errors. He teaches postgraduate courses in Clinical Education and healthcare system redesign, and has interests in the way people and technology interact in complex systems and the effects such interaction has on clinical safety.

Carmen Wong
Associate Prof in Family Medicine and Medical Education, The Chinese University of Hong Kong, Hong Kong S.A.R.

Dr Carmen Wong is an Associate Professor and Assistant Dean (Education) at The Chinese University of Hong Kong. Dr Carmen Wong is a medical doctor is a member of the Royal College of General Practitioners (UK). She is a fellow of the higher education academy and obtained a Master of Science of Clinical Education (Edinburgh, UK). She received the Faculty Teaching Award, University Education Award and the prestigious University Grants Council (UGC) Education award in 2020. Her numerous teaching grants include clinical communication and language skills, social responsibility and interdisciplinary curriculum design and implementation. Since 2021, Prof Wong has been leading design thinking workshops in education and has conducted interdisciplinary workshops across Hong Kong universities with CLEAR CUHK and for medical education for Hong Kong tripartite conference.

Wong Pei Se
Associate Dean, Teaching and Learning, International Medical University, Malaysia

Wong Pei Se is an Associate Professor at the School of Pharmacy and the Associate Dean of Teaching and Learning at International Medical University. Her research interests include interprofessional education and skills training. In her current role as Associate Dean of Teaching and Learning, she has been involved in faculty development as well as the development of university guidelines for teaching and learning.

Samuel Wong
Professor, School of Public Health and Primary Care, The Chinese University of Hong Kong, Hong Kong S.A.R.

Professor Samuel Wong is a clinician with training in both Family Medicine and Public Health. He is the Director of the JC School of Public Health and Primary Care (JCSPHPC) and the Associate Dean (Education) of the Faculty of Medicine. He is also the Founding Director of the Thomas Jing Centre for Mindfulness Research and Training. Professor Wong's research interests include evaluating and developing mindfulness-based and mental health interventions in primary care, evaluating primary care services and developing primary care service models as well as multimorbidity. He has published more than 380 original papers in peer-reviewed scientific journals and has contributed 5 book chapters and co-edited the Oxford Textbook of Public Mental Health published by the Oxford University Press. He was awarded the Outstanding Fellowship of the Faculty of Medicine, at the Chinese University of Hong Kong in 2021. Prof Wong oversees the medical programme at CUHK and public health programmes at JCSPHPC.

Wong Wai-Tat
Clinical Professional Consultant, The Chinese University of Hong Kong, Hong Kong S.A.R.

Dr Wai-Tat Wong is a specialist in internal medicine and critical care medicine. He is now working in the Department of Anaesthesia and Intensive Care and Centre for Bioethics at the Chinese University of Hong Kong (CUHK). He is providing clinical service as a consultant in the intensive care unit (ICU) of the Prince of Wales Hospital. Dr Wong is responsible for undergraduate teaching in acute medicine, anaesthesia, communication skills, professionalism, and medical ethics at CUHK. He has been working on research projects related to clinical ethics, end-of-life care in ICU, mechanical ventilation and infectious diseases.

Woon Shi Sien
IFMSA Regional Director for Asia-Pacific 2022/2023, Faculty of Medicine, University of Malaya, Malaysia

Shi Sien is a fourth-year medical student at the Faculty of Medicine, University of Malaya. He is currently serving as the Regional Director for Asia-Pacific of the International Federation for Medical Students' Associations (IFMSA), one of the world's oldest and largest student-led organizations representing 1.3 million medical students from around the globe. He was also the Chairperson of the Society of Malaysian Medical Association Medical Students (SMMAMS). He strongly believes in meaningful youth engagement and strives to amplify the voice of the youth to be effective changemakers.

Dan Xu
Academic Coordinator, Curtin University, Australia

Dan Xu is a medical educator, researcher and clinician, chairing medical education, general practice research and international collaboration at Curtin Medical School. Dan has been in charge of writing the initial draft, providing ongoing advices and review of the GP placement curriculum for General Practice Student Placement. Dan, being appointed as visiting professor at First Affiliated Hospital of Sun Yat-sen University, leads an international exchange program for undergraduate students between Curtin Medical School of Curtin University and Zhongshan School of Medicine of Sun Yat-sen University. Dan designed Program Curriculum for general practice, hospital outpatient and inpatient placements. Dan is a Senior Research Fellow and Principal Supervisor of Ph.D. students. Dan has over 70 publications in journals of medical education, cardiovascular health, neurosciences, musculoskeletal health and international health.

Yang Jen-Hung (Henry)
Chief Executive Director, Taiwan Medical Accreditation Council (TMAC), Taiwan

Professor Jen-Hung Yang graduated from National Yang-Ming University (NYU) School of Medicine (MD) in 1985 and Institute of Clinical Medicine (PhD) of NYU in 1994. He completed his dermatology residency training at Veterans General Hospital Taipei (1985-1991), and subsequently chaired Department of Dermatology at China Medical University and Hospital in Taichung from 1991 to 1995. Then he served as Director of Centre for Faculty Development (2006-2009), Vice-Director of School of Medicine (2006-2008), and Director of School of Medicine (2009-2010), and the Dean of College of Medicine of Chung Shan Medical University (CSMU), and the vice-Superintendent of CSMU Hospital (2010-2011). He was then invited as Dean of Tzu Chi University College of Medicine (2011-2019), and as the vice-Superintendent of Tzu Chi General Hospital at Hualien (2011-13), and Kaohsiung Medical University (KMU) Hospital in 2021. He is currently the Chair Professor of CSMU and the CEO of the Taiwan Medical Accreditation Council (TMAC), and a senile Member of Joint Commission of Taiwan (JCT). His research interests focused mainly on medical education in areas of curriculum, faculty development, and professionalism and humanities. He has published more than 100 peer-reviewed journal articles in the fields of dermatological science and medical education.

Magda Yousef
Senior General Paediatric Consultant, SIDRA Medicine, Qatar

Magda Ahmed Wagdy Yousef is a Senior Consultant Pediatrician SIDRA Medicine- Qatar Assistant Professor of Clinical Pediatrics Weill-Cornell Medical College Qatar Dr Magda received her medical training at Cairo University -Egypt; she has worked as a general pediatrician at Hamad Medical Corporation since 2006. Dr Magda's areas of practice include inpatient medicine, patient safety and detection of adverse events; and she was appointed to chair the pediatrics quality and patient safety Committee. Dr Magda has strong interest in medical education and supervises residents in clinical settings. She is an instructor and is in charge of different workshops including communication, APLS, quality, and professionalism.

Shiyao Yuan
Research and Data Scientist , Educational Commission for Foreign Medical Graduates(ECFMG) and the Foundation for Advancement of International Medical Education and Research(FAIMER), United States of America

Ms Yuan is responsible for conceptualizing, designing and implementing evaluation and applied research studies for a broad range of health professionals' education programs. She teaches project management and evaluation, quantitative methods and survey methods to international health professions educators. She leads complex statistical analysis, interpretation, and dissemination of results. She collaborates with and provides analytical support for the Senior Associates on FAIMER research studies. Shiyao also performs data visualization, develops dashboards, and delivers data in useful and appealing ways to internal and external users. Ms Yuan joined FAIMER in 2011 as a cross-cultural facilitator and has grown professionally since then. She holds a Master of Science in Education from the University of Pennsylvania and a Master of Science in Business Analytics from Drexel University. In addition, she holds a FAIMER-Keele Certificate in Health Professions Education: Accreditation and Assessment and is a SAS Certified Advanced Programmer for SAS 9.

LOCAL FACULTY

Benson Ang
Medical Officer, MOH Holdings, Singapore

Dr Benson Ang graduated from Yong Loo Lin School of Medicine in 2020. He is passionate about Medical Education. Dr Ang has been working to improve clinical thinking since his student days. His key interests include furthering our understanding of clinical diagnosis and practical ways to teach it. He has co-authored a systemic review on this topic recently in a high impact journal. He continues to apply advanced methods in teaching & practicing this domain.

Marion Aw
Associate Professor, National University Health System (NUHS), Singapore

Dr Aw is an Associate Professor in the Department of Paediatrics, Yong Loo Lin School of Medicine, National University of Singapore (NUS Medicine) and a Senior Consultant in the Department of Paediatrics, National University Hospital (NUH). Her area of clinical expertise is in paediatric gastrointestinal disease, hepatology and liver transplantation. Dr Aw is also passionate about medical education and people development. Her previous education portfolios include being the Program Director, Paediatric Residency Training at NUH and Assistant Dean (Education), NUS Medicine. She currently serves on the Graduate Medical Education Committee as Chair of the Physician Health and Resilience Subcommittee and is the Vice Dean (Students) for the Medical School.

Ashokka Balakrishnan
Director, Masters in Health Professions Education, Academy of Medicine Consultant Anaesthesiologist, Simulation Program Director (Anaesthesia), National University Hospital, Singapore

Dr Ashokka Balakrishnan is a Consultant Anaesthesiologist and Simulation Program Director (anaesthesia division) at the National University Hospital and a CenMED Associate at the Centre for Medical Education (CenMED), National University of Singapore. He is the director for Masters in Health Professions Education (MHPE) program for the Maastricht-Singapore Collaboration at the Academy of Medicine, Singapore.He has 17 years of experience in high-fidelity simulation-based undergraduate, postgraduate medical and allied health acute care teaching. He has a Fellowship from the Australia New Zealand College of Anaesthesiologists (FANZCA) and a Master's in Health Professions Education (MHPE) from Maastricht, Netherlands. He holds the office of the treasurer for the Asia Oceanic Society of Regional Anaesthesia and Pain Medicine (AOSRA-PM) and board member of the Pan Asia Society of Simulation (PASSH).His special interests are obstetric and regional anaesthesia, postgraduate exam support, simulation-based postgraduate and undergraduate education and Interprofessional education.

Kenneth Ban
Senior Lecturer, Yong Loo Lin School of Medicine, National University of Singapore, National University Health System (NUHS), Singapore

Kenneth obtained his BSc (Hons) in Biochemistry and MBBS degrees from the National University of Singapore (NUS) and a Ph.D. in Cancer Biology from Stanford University. He completed his postdoctoral training at the Institute of Molecular and Cell Biology (IMCB) Singapore before joining NUS Medicine. He currently serves as the Phase I Director, overseeing the implementation of the medical sciences curriculum for first-year medical students. He also serves as the Director of the NUS Medicine Bioinformatics Core Facility and the Program Director for Health/Biomedical Sciences at the National Supercomputing Centre Singapore (NSCC).

Gayathri Basker
Medical Student, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

Gayathri is a third-year medical student at the National University of Singapore. Being part of the minority of medical students who lack a pre-university background in Biology made her interested in how medical education could further develop to level the playing field among students. This interest spurred her to become involved in the Medical Sciences Bridging Programme in her school, where they sought to smoothen the transition between pre-university education and medical school for incoming students. Given the various changes brought about by the pandemic, she hopes to learn more about the future directions of medical education in the coming years.

Chen Zhi Xiong
Assistant Dean (Education), Yong Loo Lin School of Medicine, National University of Singapore, National University Health System (NUHS), Singapore

Zhi Xiong is Assistant Dean (Education) of NUS Medicine and a Centre for Medical Education (CenMED) Associate. Deeply interested in international professional development, he is the Chairperson of the Asia-Pacific Biomedical Science Educators Association (APBSEA) and a Board Member of the International Association of Medical Science Educators (IAMSE). In paediatric cancer research, Zhi Xiong is seeking new therapies and new ways of monitoring disease as Principal Investigator of the Neurodevelopment and Cancer Laboratory at N2CR, an Affiliate Member of the National University Cancer Institute, Singapore (NCIS) and a Joint Scientist of KK Women's and Children's Hospital (KKH). Involved in the education of medical, dental, pharmacy and life sciences students, Zhi Xiong is exploring ways to broaden health professions education and promote transdisciplinary learning with specific interests in the role of medical sciences in health professions practice, faculty development, student affairs and medical education technology.

Faith Chia
Senior Consultant, Tan Tock Seng Hospital, Singapore

Dr Faith Chia is a Senior Consultant in the Department of Rheumatology, Allergy and Immunology, Tan Tock Seng Hospital, Singapore. She is a fellow of the Royal College of Physicians and Surgeons (Glasgow) and a Fellow of the Academy of Medicine, Chapter of Rheumatologists. She serves on the council of the College of Physicians and College of Clinician Educators. She has received peer-reviewed research funding and continues to serve as deputy chair of the institutional research ethics board. Faith actively teaches undergraduates and post-graduates and has been recognized for numerous teaching awards, including the ACGME international award for Physician Leaders. She is an Adjunct Associate Professor with the Lee Kong Chian School of Medicine and a Senior Lecturer at the Yong Loo Lin School of Medicine. She was previously the Programme Director for the NHG Internal Medicine Residency Programme and is currently the Designated Institutional Official of NHG Residency.

Xanthe Chua
Assistant Director of Nursing/ Advanced Practice Nurse, Tan Tock Seng Hospital, APN Lead, Nursing Service, Singapore

Ms Xanthe Chua is a Rheumatology Advanced Practice Nurse (APN) at Tan Tock Seng Hospital (TTSH). She has 18 years' experience working with patients with Rheumatic diseases. In 2014, she played a pivotal role in setting up the Rheumatology Nurse-led Arthritis Clinic. She is currently the appointed hospital lead, overseeing the institution APN Internship Program. Her other administrative roles involve overseeing the APNs in TTSH. APN Chua completed her Bachelor's degree in Nursing (University of Sydney) Subsequently, she undertook the Advanced Rheumatology Course under the American College of Rheumatology and holds a Master's degree in Nursing (National University of Singapore).

Kesavan Esuvaranathan
Professor, National University Of Singapore (NUS), Singapore

Kesavan is Professor of Surgery at the National University of Singapore and has been engaged in medical education since 1986. He is a urologist, with a primary focus on uro-oncology. He is also a tumour immunologist, running a wet laboratory since 1994, to investigate immunotherapy in bladder cancer. He was a head of department and a vice-chairman in the National University Hospital and has also held other senior administrative posts, including serving as a consultant to the Ministry of Health. He is a past president of both the College of Surgeons Singapore and the Singapore Urological Association. He has served on the editorial boards of some of the most prestigious journals in his field. He is also a Principal Certified Coach with the International Coaching Federation and is board-certified in Health and Wellness Coaching.

Benjamin Goh
Assistant Professor, National University Hospital System (NUHS), Singapore

Dr Benjamin Goh enjoys a successful clinical practice as a fellowship-trained Urologist with a special interest in robotic kidney surgery and a Kidney Transplant Surgeon. In the realm of medical education, Benjamin is passionate about people and their growth in the journey of life. Benjamin is a PCC level credentialed coach with the International Coach Federation and an Organisational Design and Development practitioner. Blending in skillset, toolset and mindset from ontological coaching, organizational development with educational pedagogies, he strives towards a holistic medical education. In his role as Undergraduate Director for Surgical Education and Assistant Dean of Students for the Yong Loo Lin School of Medicine, NUS, Benjamin believes in embodied leadership of the teams towards optimal delivery of medical education. At the heart of all these endeavours is the desire to best prepare future generations of doctors in service of patients.

Gao Yujia
Associate Consultant, National University Hospital, Singapore

Dr Gao Yujia is currently an Associate Consultant in the Division of Hepatobiliary and Pancreatic Surgery, Department of Surgery at the National University Hospital. Dr Gao is deeply involved in undergraduate medical education at the Yong Loo Lin School of Medicine, Dr Gao spearheads various projects including the development of Holomedicine, Mixed Reality devices, and applications for medical education and clinical medicine.

Goh Poh Sun
Associate Professor and Senior Consultant, National University of Singapore (NUS), Singapore

Dr Goh Poh-Sun 吳 宝 山 MBBS(Melb), FRCR, FAMS, MHPE(Maastricht), FAMEE Associate Professor, Department of Diagnostic Radiology, Yong Loo Lin School of Medicine (YLLSOM), National University of Singapore (NUS) Senior Consultant, Department of Diagnostic Radiology, National University Hospital (NUH), National University Health System (NUHS) Associate Member, Centre for Medical Education, YLLSOM, NUS Member, AMEE TEL (Technology Enhanced Learning) Committee (since 2011) Poh Sun is a Clinical Radiologist at NUHS/YLLSOM@NUS and has worked at NUH since 1989. He is also a Medical Educator, with Masters in Health Professions Education (MHPE) from Maastricht University (2012); with deep passion for both eLearning/Technology enhanced Learning and Faculty Development - locally and internationally. Dr Goh is formally trained as, and is an in-house Coach at YLLSOM.

Raymond Goy
Senior Consultant Anaesthetist, KK Women's and Children's Hospital, Singapore

Raymond graduated from NUS Medical School in 1995 and obtained his postgraduate certification (Master of Medicine Anaesthesia, Singapore as well as Fellowship of the Australian and New Zealand College of Anaesthetists) in 2003. He specializes in Obstetric Anaesthesia and has completed subspecialty training at King Edward Memorial Hospital, Perth Western Australia. He completed the Master in Health Professions Education (Maastricht University) in 2017. He is currently the Campus Director for KK Women's and Children's Hospital, and the Associate Designated Institutional Official (ADIO KKH) for SingHealth Residency.

Hooi Shing Chuan
Professor, Department of Physiology, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

Professor Hooi Shing Chuan graduated with MBBS degrees from the National University of Singapore (NUS) in 1983 and obtained his PhD from Harvard University in 1992. He joined the Department of Physiology, National University of Singapore in 1985 and was Head of Department from 2000-2008. He was the Vice Dean (Education) in the Yong Loo Lin School of Medicine from 2010-2017. He was the inaugural Chair of the Medical Sciences Cluster, Yong Loo Lin School of Medicine, formed in 2018. He has been teaching Physiology to medical and allied health students over the past 30 years. He has received many teaching awards at Faculty and University levels, including the NUS Outstanding Educator Award in 2012.

Gormit Kaur
Deputy Director, Sengkang General Hospital, Singapore

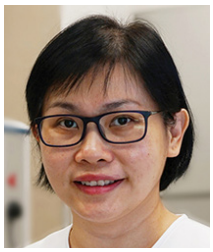
Gormit has more than 30 years of nursing experience and has worked in SGH, KKH and is currently posted to SKH. She is the Director of Interprofessional Education (IPE) at the College of Clinical Nursing, SingHealth Academy. She has worked closely with the other members of the different colleges under SingHealth Academy to champion IPE. As a member of the Interprofessional Collaboration Practice Taskforce, she has facilitated interprofessional education workshops and activities on asthma, sexual education and ward rounds in collaboration. She has also attended the Virtual Interprofessional Teaching and Learning (VITAL) Workshop in collaboration with the University of Toronto.

Nisha Kesavan
Doctor National University of Singapore (NUS), Singapore

Nisha is an Associate Certified Coach with the International Coaching Federation. Alongside her executive coaching practice, she is a part-time tutor at the NUS Yong Loo Lin School of Medicine where she coaches medical students. She is a general practitioner with experience in both public and private healthcare, as well as public health administration. Nisha previously worked in public hospitals in the United Kingdom and Singapore across a wide spectrum of departments and developed national health policies in the Public Health Group of the Ministry of Health Singapore. She is extremely passionate about developing effective and compassionate communication in medicine, including the transformative effect coaching can have on medical education and the profession at large.

Koh Dow Rhoon
Director of International Relations, Yong Loo Lin School of Medicine, National University of Singapore

Associate Professor Koh Dow Rhoon is an alumnus of the Yong Loo Lin School of Medicine and completed his undergraduate training in medicine in 1981. He then completed his postgraduate training in Internal Medicine, Rheumatology and Immunology. He has been active in medical education for more than two decades and was the Vice-Dean (Education) from 2001 to 2010, driving medical education reforms in the school. He also led the development of medical schools' standards for the three medical schools in Singapore and is currently putting in place an accreditation and quality improvement framework under the Professional Training, Assessment and Standards (PTAS) division in the Ministry of Health. He is currently the Director for International Relations and advisor for medical science education in the medical school. He is also an associate member of the Centre for Medical Education (CenMed) involved in faculty development and training. He is a trained coach and helps with student support and ontological coaching. His current interests include integrated medical science education, student coaching and medical education quality assurance.



Sabrina Koh
Campus Director, SingHealth Duke-NUS Institute of Medical Simulation (SIMS); Deputy Chair, College of Clinical Nursing, SingHealth Academy; Deputy Director, Nursing Education & Development, Sengkang General Hospital, Singapore

Sabrina is an educator with critical care and medical/surgical clinical experience. Experienced in both academic and clinical nursing education, Sabrina was involved in education related projects such as setting up 4 simulation facilities and established nursing education units in 2 local restructured hospitals. As an active simulationist, simulation-education related activities includes developing and training in clinical workflows, patient safety, teamwork and communication, and clinical escalation through multi-disciplinary simulation training. She also conducts simulation faculty development program for simulation users and educators in Asia focusing on scenario designs, facilitation and technical strategies. Faculty development in nursing education and simulation-based education are her main interests and passion. She is currently a member with the Society for Simulation in Healthcare (SSH); a sub-committee member for Quality and as a site reviewer with the SSH Accreditation Committee. Sabrina is also a member with CHSE blueprint review committee, SSH. She is a Certified Healthcare Simulation Educator - Advanced (CHSE-A) and a Fellow (FSSH) with the SSH Academy.

Alfred Kow Wei Chieh
Assistant Dean (Education), Yong Loo Lin School of Medicine, National University of Singapore, Singapore

Associate Professor Alfred Kow is the Head & Senior Consultant of the HPB Surgery Division at the National University Hospital Singapore. His main area of interest is liver transplantation and minimally invasive HPB surgery. He is also the Clinical Director of the Management & Innovation for Longevity in Elderly Surgical (MILES) patient program at NUH. He is the Assistant Dean (Education) at NUS Medicine and ACMB (Edu) at NUH. He has received many teaching awards for teaching excellence, including the Outstanding Educator Award in NUS. His main research areas of interest include development of surgical techniques in HPB surgery and outcome of surgical treatment for HPB malignancies, and liver transplantation. He is also the Chairperson of the Medical Education, Technology & Enterprise committee. He is one of the main drivers that helps to introduce advanced technology such as virtual reality and mixed reality technology in medical education and training. He also actively looks out for gamification technology that can be used in medical training.

James Kwan
Senior Consultant, Tan Tock Seng Hospital, Singapore

James is Senior Consultant in the Department of Emergency Medicine at Tan Tock Seng Hospital in Singapore. He holds academic appointments at the Lee Kong Chian School of Medicine and Yong Loo Lin School of Medicine. He is Chair of the Core Curriculum and Education Committee at the International Federation for Emergency Medicine. Prior to his moving to Singapore, James was the Academic Lead in Emergency Medicine and Assessment in the School of Medicine at Western Sydney University, Australia. James is passionate about medical education and has led curricular development in undergraduate medical and postgraduate training programmes at a national and international level.

Law Hwa Lin
Senior Principal Pharmacist, Tan Tock Seng Hospital, Singapore

Hwa Lin is a Senior Principal Pharmacist (Specialist) at Tan Tock Seng Hospital (TTSH) and Unit Head of the National Centre for Infectious Diseases (NCID) Pharmacy. Hwa Lin is actively involved in patient care, including the care of patients during pandemics. Besides outbreak management, she is also actively involved in the management of other infectious diseases particularly with HIV patients and travel medicine. Hwa Lin is also actively involved in undergraduate and post-graduate education and training. She is an adjunct lecturer at the Lee Kong Chian School of Medicine, a faculty member with National Healthcare Group (NHG) college, Residency Program Director for the National Residency Program R1 and Clinical Educator Lead (CEL) for Pre-Professional Education and Chief Preceptor for TTSH Pre-Registration Pharmacist Training Program. One of the notable workshops that Hwa Lin has been conducting is the portfolio building and assessment workshop for pharmacists embarking on Advanced Practice Framework in Singapore.

Jason Lee
Director, Heat Resilience and Performance Centre, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

Jason Lee obtained his first degree from Loughborough University, UK. Following the award of G V Sibley Memorial Prize, he stayed on to complete a PhD in Exercise Physiology under sponsorship from the UK Overseas Research Scholarship and Faculty Studentship. Jason is a Fellow of the American College of Sports Medicine. He serves in various national and international panels related to human performance and safety. He completed his 12-year tenure at the DSO National Laboratories in 2018 by directing the Human Performance Programme in his final appointment. He is currently an Associate Professor in Yong Loo Lin School of Medicine at the National University of Singapore, co-leading the Human Potential Translational Research Programme and directing the Heat Resilience and Performance Centre. He is a member of the WHO and WMO Report on Climate Change on Workers' Health and Productivity. Jason chairs the Scientific Committee on Thermal Factors at the International Commission on Occupational Health and is on the management committee at the Global Heat Health Information Network.

Lee Shuh Shing
Assistant Director and Medical Educationalist, National University of Singapore, Yong Loo Lin School of Medicine, Centre for Medical Education, Singapore

Dr Lee Shuh Shing is a Medical Educationalist in Centre for Medical Education (CenMED). Prior to joining NUS, she was a Medical Educationalist attached to the Medical Education Research and Development Unit (MERDU) at Universiti Malaya, Malaysia. After obtaining her PhD in Education, she has been actively involved in MBBS curriculum planning and faculty development. She leads the Research division in CenMED and provides support to educators in carrying out health professions education research. She is also involved in providing research support to students as well as conducting research workshops to faculty members, especially in Qualitative Research. Her main research interests are in teaching and learning approaches, technology in teaching and learning, student learning and qualitative research. She has been publishing articles in medical education and author of a few book chapters. She serves as the managing editor for The Asia Pacific Scholar (TAPS), as well as editorial board member for BMC Medical Education and Education in Medicine Journal.

Jonathan Zhen Liang
Medical Student, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

Jonathan Liang is a third-year medical student from Yong Loo Lin School of Medicine who is passionate about teaching and medical education. Having been actively involved in teaching first aid in Junior College and as an adult volunteer for St John Brigade Singapore, teaching and passing it on has always been something that he enjoys doing. Being part of NUS Medical Society's Academic Directorate, he is the lead coordinator for the pioneer planning committee of the Medical Sciences Bridging Programme which serves to bridge biology content for incoming medical students without a biology background, whilst also serving to aid in the transition of pre-medical students into medical school. He hopes to be able to make learning more accessible and less intimidating for new medical students and believes in paying it forward.

Liaw Sok Ying
Associate Professor, Director of Education (PET), Alice Lee centre for Nursing Studies (NUS Nursing),Yong Loo Lin School of Medicine, Singapore

Associate Professor Liaw is the Director of Education, PET at the Alice Lee Centre for Nursing Studies (NUS Nursing). She has been in the nursing profession for more than 20 years. As a pioneer academic staff at NUS Nursing, A/Prof Liaw has contributed to the development of the undergraduate nursing programme at the school since 2006, implementing teaching innovations such as simulation-based learning and assessment as well as interprofessional education. For her teaching contributions at the school, A/Prof Liaw has received the "Faculty Teaching Excellence Award" (2009, 2011, 2013) by the Yong Loo Lin School of Medicine and the "Annual Teaching Excellence Award" (2011) by the National University of Singapore.

Jamie Lim
Advanced Practice Nurse, Tan Tock Seng Hospital, Singapore

Jamie graduated from NUS-Masters of Nursing in 2006 and is currently an Advanced Practice Nurse with the Department of Cardiology. Apart from her clinical and administrative portfolio, she is happily engaged in educational activities for the past two decades. Jamie has also ventured beyond the shores of Singapore to teach in rural areas of Thailand and China of which she finds immerse joy and gratitude. As a film believer of life-long learning, she pursued her second Master's Degree in Health Professionals Education with Massachusetts General Hospital and graduated in 2016.

Lincoln Lim
Medical Student, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

Lincoln is a 3rd-year medical student with a keen interest in medical education. He has participated in various online courses and workshops on medical pedagogy and applied what he has learnt in both formal and informal teaching sessions, mostly on preclinical content.

Lim Tow Keang
Senior Consultant, National University Hospital System (NUHS), Singapore

Professor Lim was Head of Respiratory Critical Care Medicine, NUHS from 1999-2012 when he implemented the Severe Community Acquired Pneumonia and Non-Invasive Ventilation for life-threatening COPD Programmes for which he received National Medical Excellence awards in 2010 & 2014. He received the Master Clinician Award from the NUH in 2011. As director of the Singapore National Asthma Programme he won recognition from the World Health Organization's GINA (2015). He also chaired the Ministry of Health workgroups on COPD integrated care, Appropriate Care Guides (2018) and Clinical Practice Guidelines (2018). Prof Lim is a proponent of the "free energy principle" in clinical thinking.

Lye Yan Nerng
Medical Student, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

Yan Nerng is a third-year medical student studying at Yong Loo Lin School of Medicine. He is interested in Medical Education. He is a member of the Medical Science Bridging Programme and the Needs Assessment and Curriculum Review Committee to understand and improve Medical Education.

Mok Shao Feng
Programme Director, NUHS Internal Medicine Residency Programme
Senior Consultant, Division of Endocrinology, Department of Medicine, NUH, Singapore

Dr Mok Shao Feng is an avid educator who currently serves as the Programme Director of the NUHS Internal Medicine Residency Programme. He is particularly interested in developing clinical reasoning skills and improving assessments in medical education. He completed the Master in Healthcare Professional Education (MHPE) with Maastricht University in 2019. Outside of medical education, Dr Mok Shao Feng is an endocrinologist and is a firm believer of empowering and supporting patients in their journey of living with chronic diseases like diabetes mellitus. He takes a person centred approach in delivering both clinical care and education and believe they ultimately converge in benefitting the patients whom we all seek to serve.

Ng Wee Khoon
Senior Consultant, Tan Tock Seng Hospital, Singapore

Dr Ng is a Senior Consultant in Gastroenterology with a special interest in advanced endoscopy, working in Tan Tock Seng Hospital, Singapore. He was appointed as the National Healthcare Group Internal Medicine Programme Director in 2018, with a special interest in postgraduate and undergraduate medical education.

Brian O'Dwyer
Founder, CognaLearn and Embry-Riddle Aeronautical University, Singapore

Brian O'Dwyer founded CognaLearn to make team-based learning ("TBL") easier better and more accessible. CognaLearn uses technology (www.intedashboard.com) developed at Duke-NUS Medical School to support the TBL implementation at over 100 institutions on five continents. Brian has been an invited presenter and workshop facilitator on TBL and education technology at over 60 events in Asia, Australia, Europe, Latin America, and the United States. Brian taught aviation business at Aeronautical University's Asia campus in Singapore using TBL. Previously, Brian was the Chief Financial Officer of Skywest until the sale to Virgin, a Credit Suisse investment banker and A.T. Kearney management consultant. Brian is based in Singapore and holds a BS, in Industrial Engineering from Columbia University and an MBA, in Finance from Duke University. Brian is a licensed pilot.

Phua Dong Haur
Senior Consultant, Tan Tock Seng Hospital, Singapore

Dr Phua graduated from the School of Medicine at the National University of Singapore in 1999 and earned his Master's degree in Emergency Medicine in 2005. He qualified as a specialist emergency physician in 2006 and is currently a Senior Consultant emergency physician in Tan Tock Seng Hospital Emergency Department. He is also trained in Clinical Toxicology and currently provides toxicology services to his hospital. He is actively involved in medical education and obtained a Master's degree in Education Evaluation, Statistics and Assessment in 2016. He is currently the Program Director of the Emergency Medicine residency program of the National Healthcare Group. His research interests include acute poisoning and management and clinical decision-making.

Catherine Poey
Senior Nurse Educator, KK Women's And Children's Hospital, Singapore

An experienced Nurse Educator and trained midwife, Catherine commits herself to the education of healthcare professionals to be competent and confident practitioners with patients at the heart of all they do. She has collaborated with healthcare professionals from different disciplines to design and implement training programs to equip her colleagues with advanced knowledge and skills to provide quality and safe care to their patients. She also has a special interest in interprofessional education (IPE) and interprofessional collaborative practice (IPCP) and is a passionate member of the IPE faculty in KKH. She strongly believes that IPCP plays a part in enhancing patient safety as it encourages interprofessional communication and teamwork among healthcare providers, patients and their caregivers. She has facilitated in numerous interprofessional education workshops, such as the IPE Ward Rounds and the Virtual Interprofessional Teaching And Learning (VITAL) Workshop in collaboration with the University of Toronto.

Quek Joo Wei Ethan
Honorary General Secretary, NUS Medical Society, National University of Singapore, Singapore

Ethan is a third-year medical student at the Yong Loo Lin School of Medicine. As Honorary General Secretary of the 74th NUS Medical Society, his role revolves around holistic development and the mental well-being of medical students. He strongly believes in the importance of work-life balance.

Inthrani Raja Indran
Senior Lecturer, Yong Loo Lin School of Medicine, National University of Singapore (NUS), Singapore

Dr Inthrani Raja Indran is a Senior Lecturer and Education Director (Medicine) at the Department of Pharmacology, Yong Loo Lin School of Medicine, NUS. Inthrani has been leading a study focused on disruptive behaviour (DB) in our healthcare system, which study has now raised greater awareness at the national level on the need for effective measures to mitigate the causes and impact of DB and paved the way for constructive conversations in this challenging area. In her role as Assistant Dean, Office for Students, which experience she deeply values, Inthrani is committed to supporting students develop their self-awareness, self-mastery, and resilience to make their best walkthrough Medical School. Aside from her roles in education, as the Director for the Office of Postdoctoral Affairs, Inthrani spearheads efforts to enhance the personal and professional development of postdoctoral fellows at NUS Medicine.

Jai Rao
Senior Consultant Neurosurgeon, National Neuroscience Institute, Singapore

Jai is a Senior Consultant Neurosurgeon in the National Neuroscience Institute. He graduated with his MBBS degree from the University of New South Wales, Australia in 1999 and was awarded his FRCSEd (SN) in 2013. Jai has a strong educational belief and was awarded his Master of Science (Health professions education) from the MGH Institute of Health Professions in 2015. He is also extensively involved in the education of medical students and residents as the Program Director of the SingHealth Neurosurgery Residency Program and the Singapore Integrated Neurosurgery Program.

Dujeepa D Samarasekera
Senior Director, Centre for Medical Education (CenMED), Yong Loo Lin School of Medicine, National University of Singapore, National University Health System; and Senior Consultant (Health Professions Education), Ministry of Health, Singapore

Dujeepa Samarasekera trained in Health Professions Education at University of Maastricht in the Netherlands. Dujeepa is the Senior Director of Centre for Medical Education (CenMED) at School of Medicine, National University of Singapore. He also holds the portfolios as Senior Advisor to the Centre for Development of Teaching and Learning (CDTL) at National University of Singapore and is a Senior Consultant with the Ministry of Health Singapore. He leads the School of Medicine Continuous Quality Improvement team for education and is a member of the Joint Committee to Accredit Medical Schools in Singapore by the Ministry of Health and Singapore Medical Council. Dr Samarasekera also provides leadership and expertise in the following areas - development of training courses and assessment frameworks for Medical, Nursing, Pharmacy and Allied Health programs. He is the inaugural and immediate past President of College of Clinician Educators in Singapore, Executive Board member of the World Federation for Medial Education (WFME) and the President of the Western Pacific Association of Medical Education from 2018-2022. Dujeepa has won many accolades such as NUS School of Medicine Special Recognition Award as a Role Model in 2015, Residents Choice Award by NUHS Residency Program, Value in Action Award awarded for excellence in innovation by National University Health System (NUHS) in 2014, MILES Award given for Mentoring Innovation and Leadership in Educational Scholarship, NUS Virtues Award for excellence and dedication by oneself contributing to service under difficult circumstances due to COVID in 2021, and NUHS Mochtar Riady Pinnacle Award for Excellence in Education in 2022. Dr Samarasekera is the Editor-in-Chief of The Asia Pacific Scholar (TAPS) journal and serves on the editorial advisory boards of a number of other international education journals. He has published widely in peer-reviewed international journals as well as authored books in education and book chapters. He is an honorary Professor and Visiting Faculty at several international universities. He holds the fellowships of Academy of Medicine Singapore and Malaysia, Academy of Medical Educators UK, inaugural fellow of Association of Medical Education Europe and Royal College of Physicians Edinburgh.

Soh Jian Yi
Senior Consultant, National University Hospital, Department of Paediatrics, Singapore

Dr Soh Jian Yi is a clinician-educator who holds the portfolios of clinical reasoning and evidence-based medicine in his Department's residency program. In 2015, he founded the first clinical service in Singapore providing oral immunotherapy for food allergies in Singapore. In 2018, he created the Universal Clinical Reasoning method for teaching and applying reasoning to all healthcare.

Shefaly Shorey
Associate Professor, Alice Lee Centre for Nursing(NUS Nursing)Yong Loo Lin School of Medicine, National University of Singapore, Singapore

Assistant Professor Shorey's areas of teaching include communications in healthcare, maternal and child health nursing, physical health assessment, teaching and learning, applied research methods and evidence-based nursing. Dr Shorey is an experienced and award-winning educator who believes in life-long learning and a student-centered approach in facilitating evidence-based students learning. For her exceptional contributions to teaching, Dr Shorey was awarded the Yong Loo Lin School of Medicine's Teaching Excellence Award (AY2017/2018) and the prestigious NUS Annual Teaching Excellence Award (AY2017/2018). The latter recognises faculty members who have excelled in teaching and have shown a high level of performance, dedication and commitment to teaching and learning.

Judy Sng
Education Director of Nursing Curriculum and Digital Transformation, Department of Pharmacology, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

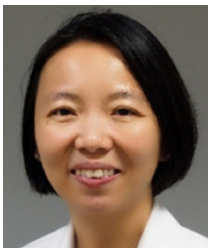
Dr Judy Sng is the Education Director of Nursing Curriculum and Digital Transformation in the Department of Pharmacology, Yong Loo Lin School of Medicine, National University of Singapore. She joined NUS in 2014 on the educator track. Judy developed the Virtual Integrated Patient or the VIP, that is an AI-enabled chatbot e-patient that allows the students to practice before they enter clinician practice. In this session, she will share the journey of developing the VIP and how it is used in medical and nursing curriculum.

Tan Chay Hoon
Honorary Fellow, Department of Pharmacology, National University of Singapore (NUS), Singapore

Dr Tan serves as a Senior Visiting Consultant Psychiatrist at the National University Hospital and an Honorary fellow at Pharmacology of the National University of Singapore. She is a member of Centre for Medical Education and is actively involved in faculty training in Curriculum Review, Problem-Based Learning and Feedback. She worked closely with other medical educators in Coaching and Mentoring Programmes. Dr Tan has received multiple University teaching awards from 2002 to 2017. She has been named the National University of Singapore Faculty Outstanding Educator in 2016.

Tan Hak Koon
Chairman and Senior Consultant, Division of Obstetrics and Gynaecology, KK Women's and Children's Hospital; Chairman, Obstetrics & Gynaecology Academic Clinical Programme, Duke-NUS; Designated Institutional Official, SingHealth Residency, Singapore

Professor Tan Hak Koon is the Chairman of the Division of Obstetrics and Gynaecology (O&G) at KK Women's and Children's Hospital (KKH), where he is also a Senior Consultant. He is Chairman of the SingHealth-Duke NUS Obstetrics and Gynaecology Academic Clinical Programme (OBGYN-ACP) and Designated Institutional Official (DIO) at SingHealth Residency concurrently. He is an Associate Dean, Office of Academic and Clinical Development, Duke-NUS Medical School. He was the President of College of Obstetrics and Gynaecology, Academy of Medicine, Singapore 2013 - 2015. He was the Head of Department, O&G at Singapore General Hospital 2010 - 2019.He is a Clinical Professor at Duke-NUS Medical School. He has been a teaching faculty and examiner for both undergraduate and postgraduate examinations since 1990s. He is a renowned Maternal Fetal Medicine specialist, and currently sits on many local and international committees and is actively contributing to clinical work, education and administration.



Heidi Tan
Education Assistant Director (Allied Health Division), Tan Tock Seng Hospital, Singapore

Like many Allied Health Professionals (AHPs), Heidi started her journey in health professional education as a student supervisor, three years after working as an Occupational Therapist at Tan Tock Seng Hospital. Now 20 years on, she is active in the management and leadership of the professional development of AHPs and AHP students in her roles as Education Assistant Director for the Allied Health Division and Clinical Educator Lead (Therapy) at the Pre-Professional Education Office at TTSH. In 2015, she took on a joint appointment faculty role in the undergraduate Occupational Therapy programme at the Singapore Institute of Technology. Through collaboration with various stakeholders, Heidi was instrumental in setting up the Clinical Educators' Appointment System and implementation of Entrustable Professional Activities in OT clinical practice education at SIT. Heidi recently completed her Master's in Health Professions Education to deepen her learning in the science and art of education.

Kevin Tan
Senior Consultant Neurologist, National Neuroscience Institute, Singapore

Kevin is a Senior Consultant Neurologist at the National Neuroscience Institute (NNI) and Associate Professor at Yong Loo Lin School of Medicine, National University of Singapore and Duke-NUS Medical School. He completed his Fellowship in Neuroinfectious Disease and Neuroimmunology at Johns Hopkins University (2008) and Master of Science in Health Professions Education at MGH Institute of Health Professions (2016). His clinical expertise is in neuroinflammatory diseases and neurological infections. He was formerly the Program Director, Neurology Senior Residency, NNI (2013-2018) and is currently the Education Director, NNI and Vice Chair of Education, Neuroscience Academic Clinical Program, Duke-NUS Medical School. His medical education interests are team-based learning, innovations in teaching and assessment, clinical reasoning and interprofessional education.

Nigel Tan
Senior Consultant Neurologist, National Neuroscience Institute, Singapore

Nigel is currently Group Director Education (Undergraduate) SingHealth. He graduated with a Masters of Health Professions Education in 2013 and is faculty for all 3 medical schools in Singapore and for Internal Medicine and Neurology residencies. His areas of interest in education are assessment, clinical reasoning, and interprofessional education and collaborative practice. Most people consider him terminally geeky, an assessment he does not disagree with.

Tracy Tan
Senior Consultant, Tan Tock Seng Hospital, Singapore

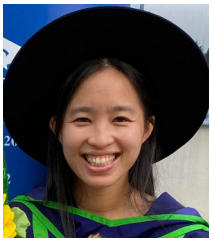
Dr Tan is a Senior Consultant in the Department of Renal Medicine at Tan Tock Seng Hospital and is the Program Director for the Renal Medicine Senior Residency Programme at the National Healthcare Group. She serves as an Adjunct Assistant Professor at the Lee Kong Chian School of Medicine and a Clinical Senior Lecturer at the Yong Loo Lin School of Medicine. She plays an active role in undergraduate and postgraduate teaching.

Elizabeth Teh
Senior Lecturer, Yong Loo Lin School of Medicine , National University of Singapore (NUS), Singapore

Faculty member in NUS-YLLSOM, since 2018. Director of Master of Science (Speech & Language Pathology) programme, since 2020. Formally trained and practicing in-house Coach at YLLSOM. Elizabeth is a Principal Speech and Language Therapist and serving Council member of the Allied Health Professions Council, Singapore. She enjoys teaching and constantly seeks to improve the learning experience for her students. Her main research interests are in social cognition and language processing in typical development and autism spectrum disorders.

Thaarun Thirumeninathan
Medical Student, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

Thaarun is a third-year medical student with an active interest in identifying and evaluating the role of feedback and effective methodologies of garnering feedback to identify the best pedagogical methods and improve established pedagogical methods.



Amanda Wong
Instructor , Department of Physiology, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

Dr Amanda Wong is an early-career educator with a background in biomedical research. She obtained her Bachelor of Science (First Class Honours) in Pharmacology from the University of Melbourne and her PhD from the National University of Singapore (NUS), where she specialized in prognostic and therapeutic biomarkers in lung cancer and asthma. During her post-doctoral research fellowship in lung diseases research, Amanda became more involved in teaching for the Department of Physiology and completed the CenMED Young Biomedical Science Educator Programme. Her current work focuses on medicine and health professions education for the Department of Physiology at NUS

Camilla Wong
Chief Pharmacist, Ministry of Health; Director, Allied Health, Sengkang General Hospital, Singapore

Adj A/Prof Camilla Wong has 29 years of experience in healthcare and is currently Director, Allied Health, Sengkang General Hospital (SKH) and Chief Pharmacist at the Ministry of Health (MOH). At SKH, Adj A/Prof Wong has been integral in the planning of the infrastructure, processes and services not only for Allied Health services but the hospital as a whole. She is a member of a number of SKH committees including the Medical Board and IT Steering Committee, and as part of the SKH Senior Management team, serves as a catalyst for collaborative partnerships between the various departments and SKH stakeholders. Adj A/Prof Wong has played an integral role in the development of career pathways and competency frameworks for the pharmacists and Allied Health professionals both cluster-wide and nationally. She has been a role model and mentor to pharmacists and other healthcare professionals, with many helming leadership and headship positions. Recognised as a leader in healthcare, she has been appointed to numerous committees spanning a variety of portfolios including, the SHS Allied Health Council, One Rehabilitation Workgroup, Institute of Patient Safety and Quality and Patient Experience Council, and the Singapore Pharmacy Council, MOH Pharmacist Specialist Accreditation Board and Drug Advisory Committee, and HSA Product Vigilance Advisory Committee. As Chief Pharmacist, MOH, Adj A/Prof Wong oversees the National Pharmacy Strategy which spans over 19 initiatives, encompassing pharmaceutical care excellence, developing a confident pharmacy workforce, re-designing the supply chain, and information and technology enablement. She has also initiated the PharmForce initiative that focuses on establishing a healthy, motivated and resilient pharmacy workforce to deliver value-added services that meet the population needs. She is a past president of the Pharmaceutical Society of Singapore (PSS) and has received a number of awards including the PSS's Professor Lucy Wan, Outstanding Pharmacist of the Year Award, Federation of Asian Pharmaceutical Associations Ishidate Award for Hospital Pharmacy, Group CEO SingHealth Excellence Award for Allied Health and the Singapore National Day Awards, Long Service and Commendation Medals, and The Public Administration Medal (Bronze) for the National Awards (COVID-19).

Clarissa Wong
Medical Student, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

Clarissa Wong is a Year 3 medical student from Yong Loo Lin School of Medicine. An inquisitive individual, she discovered her passion for teaching in junior college when she volunteered to run an English enrichment programme at a children's home as well as tutor primary-school children at a youth centre. The dynamic mentorship culture in medical school, upheld by inspiring professors, clinicians, and seniors alike, further ignited her interest in the field of medical education. This has led her to join the pioneering planning committee of the Medical Science Bridging Programme (MSBP) in 2020, an initiative under the Academic Directorate of the NUS Medical Society. She has served as the Head of Pedagogy and Head of External Relations for the project, where she learnt more about and implemented pedagogical methods suitable for engaging an online audience during the Covid-19 pandemic.

Xu Hongyun
Medical Officer, MOH Holdings, Singapore

Dr Xu Hongyun is currently serving his National Service as a Medical Officer in the Singapore Armed Forces. He has held a keen interest in the art and science of clinical reasoning ever since his medical student days. He recently published a systematic review exploring various methods to teach clinical reasoning in medical students. He is currently pursuing a Graduate Diploma in Family Medicine to further broaden his clinical skills. He is working on practical methods to teach complex decision making in clinical management.

Jillian Yeo
Medical Educationalist, Centre for Medical Education (CenMED), Yong Loo Lin School of Medicine, National University of Singapore, National University Health System, Singapore

Jillian Yeo is a medical educationalist with the Centre for Medical Education (CenMED), Yong Loo Lin School of Medicine. She graduated from the National University of Singapore with a BSc (Pharmacy) and is a registered clinical pharmacist in Singapore. Prior to joining the centre, she has also completed her MSc (Clinical Pharmacy, International Practice and Policy) with the University College London. She is currently a candidate for the Doctor of Education (EdD) program with Northeastern University. Her main area of interests is in the assessment psychometrics of health professions education.

Amanda Zain
Consultant, National University Hospital, Department of Paediatrics; Assistant Dean (Enterprise and Sustainability), National University of Singapore, Yong Loo Lin School of Medicine, Singapore

Dr Amanda Zain is a Consultant Paediatrician in the Children's Emergency, Khoo Teck Puat-National University Children's Medical Institute at the National University Hospital (NUH). She also serves as Assistant Dean of Sustainability and Enterprise at her alma mater, Yong Loo Lin School of Medicine, NUS. She is a mother to two young children, who, like many of her patients, are in the demographic that will experience up to 88% of the health burden of climate change. After receiving her MBBS as a recipient of the Public Service Commission Medicine scholarship, Amanda was conferred Master of Medicine (Paediatrics) by NUS and completed her paediatrics training at NUH. She began her journey in sustainability in 2017, where as a senior resident she led a twin quality improvement project across the paediatric ward and operating theatre to increase the recycling rate by threefold within 6 months. These days, Amanda is actively involved in cultivating a culture of sustainability in the medical school and among health professionals, as well as developing an academic centre in sustainable healthcare.

ABSTRACT REVIEWERS

Hamza Mohammad Abdulghani, Saudi Arabia

Sharifah Sulaiha Hj Syed Aznal, Malaysia

Muneer Babar, Malaysia

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Pete Ellis, New Zealand

Er Hui Meng, Malaysia

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Mikio Hayashi, Japan

Yera Hur, Republic of Korea

Ravindran Jegasothy, Malaysia

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Hirotaka Onishi, Japan

Vinod Pallath, Malaysia

Wojciech Pawlina, United States of America

Joachim Perera, Malaysia

Gominda Ponnamperuma, Sri Lanka

Lambert Schuwirth, Australia

Pathiyil Ravi Shankar, Malaysia

Lawrence Sherman, United States of America

Diantha Soemantri, Indonesia

Yvonne Steinert, Canada

Kevin Tan, Singapore

Nigel Tan, Singapore

Thirumoorthy Thamotharampi, Singapore

Ha Minh Thuy, Vietnam

Michael Wan, Australia

Danai Wangsaturaka, Thailand

Jen-Hung Yang, Taiwan

Mabel Yap, Singapore

OVERALL CHIEF JUDGE

A/Prof Koh Dow Rhoon, Singapore

JUDGES - FREE COMMUNICATIONS

Monday 22 May 2023

9.00am – 10.30am	
Free Communication Session 1 Wojciech Pawlina, United States of America* Vishna Devi Nadarajah, Malaysia Yee Cheun Chan, Singapore	**Free Communication Session 2** Sook Muay Tay, Singapore* Anna Karenina Causapin, Philippines Kevin Tan, Singapore
10.45am – 12.15pm	
Free Communication Session 3 Zhi Xiong Chen, Singapore* Pete Ellis, New Zealand Vinod Pallath, Malaysia	**Free Communication Session 4** Nigel Tan, Singapore* Anette Sundfor Jacobsen, Singapore Michael Van Haute, Philippines
1.30pm – 3.00pm	
Free Communication Session 5 Wayne Hodgson, Australia* MA Cristina Zulueta, Philippines Ashokka Balakrishnan, Singapore	**Free Communication Session 6** Maria Lilybeth Tanchoco, Philippines* Jamunarani Vadivelu, Malaysia Bettina Lieske, Singapore
3.15pm – 4.45pm	
Free Communication Session 7 Gominda Ponnamperuma, Sri Lanka* Chih-Wei Yang, Taiwan Kang Sim, Singapore	**Free Communication Session 8** Indika Karunathilake, Sri Lanka* Celestial Therese Suen Mei Yap, Singapore Avinash Pathengay, India
Free Communication Session 9 Maria Lilia Reyes, Philippines* Derrick Lian, Singapore Diantha Soemantri, Indonesia	

Tuesday 23 May 2023

9.00am – 10.30am	
Free Communication Session 10 Young-Mee Lee, Republic of Korea* Craig Webster, New Zealand Louisa Ng, Australia	
10.45am – 12.15pm	
Free Communication Session 11 Marcus Henning, New Zealand* Henry Yang, Taiwan Raymond Goy, Singapore	**Free Communication Session 12** Siu Hong Michael Wan, Australia* Shui Shan Isabel Hwang, Hong Kong S.A.R. Kong Bing Tan, Singapore

*Lead Judge for the respective sessions

JUDGES - SHORT COMMUNICATIONS

Monday 22 May 2023

9.00am – 10.30am	
Short Communication Session 1 Sei Keng Koh, Singapore	**Short Communication Session 2** Julian Tanner, Hong Kong S.A.R.
10.45am – 12.15pm	
Short Communication Session 3 Rosalind Chiew Jiat Siah, Singapore	**Short Communication Session 4** Kay Choong See, Singapore
1.30pm – 2.45pm	
Short Communication Session 5 Jeng-Cheng Wu, Taiwan	**Short Communication Session 6** Harumi Gomi, Japan
3.15pm – 4.45pm	
Short Communication Session 7 Wei-Han Hong, Malaysia	

Tuesday 23 May 2023

9.00am – 10.30am	
Short Communication Session 8 Michael Tiong-Hong Co, Hong Kong S.A.R.	**Short Communication Session 9** Shao Feng Mok, Singapore
Short Communication Session 10 Sophia Ang, Singapore	**Short Communication Session 13** Carole Steketee, Australia
10.45am – 12.15pm	
Short Communication Session 11 Zhi Xiong Chen, Singapore	**Short Communication Session 12** Lambert Schuwirth, Australia

ESSENTIAL SKILLS IN MEDICAL EDUCATION (ESME) COURSE

With the increasing professionalisation of medical education, the need for doctors and other healthcare professionals to have training in teaching is widely recognised. Whilst many institutions worldwide offer Diploma and Masters courses in medical education, there is a lack of high-quality, basic level courses. The ESME Programme has been designed to meet the need for an entry level teaching qualification and will be of particular interest to teachers who are engaging with medical education for the first time. It will also be valuable for more experienced teachers who have been given some new responsibilities or assignment relating to teaching or assessment, or who wish to have an introduction to the theory underpinning the practice of teaching. It has been designed to be relevant to anyone involved in health professions education, whether they work with undergraduates, postgraduates, peers, other healthcare workers or patients, and is certified by AMEE and approved by an international Advisory Board.

Our introductory 'Essential Skills in Medical Education' course is designed around a set of competencies that all practising teachers should possess. These include: Effective Teaching, Skilled Educational Planning and Informed Assessment and Evaluation. A wide range of resources including an e-copy of the course text Essential Skills for a Medical Teacher by Harden & Laidlaw, will be provided.

ESME COURSE SCHEDULE

Wednesday 24th May: 8.00AM to 5.00PM - ESME Pre-conference Session:

- The Skilled Educational Planner: specifying and using learning outcomes and how the learning can be organised in a curriculum;
- The Effective Teacher: including some helpful basic principles relating to large and small group teaching; independent learning; the new learning technologies;

Friday 26th May: Attend APMEC Conference

Saturday 27th May: Attend APMEC Conference

Sunday 28th May 8.00AM to 12.30PM - ESME Post-conference Session:

- The Informed Assessor/Evaluator: the key assessment principles and the tools available to the teacher;
- The Scholarly Educator, including Professionalism in medical education; Roles of the teacher; Best Evidence Medical Education (BEME);
- A look at the requirements for completion of the ESME Certificate in Medical Education.

ESME COURSE FACULTY

Course Director:

Professor Ronald M Harden, formerly Director of the Centre for Medical Education, University of Dundee, UK, and General Secretary/Treasurer of AMEE and currently Editor of Medical Teacher

Faculty members:

- **Dr Dujeepa D Samarasekera**, Senior Director, Centre for Medical Education, NUS Yong Loo Lin School of Medicine, National University Health System
- **Associate Professor Koh Dow Rhoon**, Director, International Relations Office, Associate Professor, Department of Physiology, Member, Centre for Medical Education, Yong Loo Lin School of Medicine, National University of Singapore & Consultant Rheumatologist, National University Hospital, National University Health System

- **Associate Professor Tan Chay Hoon**, Honorary Fellow, Department of Pharmacology, Member, Centre for Medical Education, Yong Loo Lin School of Medicine, National University of Singapore & Consultant Psychiatrist, National University Hospital, National University Health System
- **Associate Professor Goh Poh Sun**, Member, Centre for Medical Education, Associate Professor, Diagnostic Radiology, Yong Loo Lin School of Medicine, National University of Singapore, National University Health System
- **Dr Lee Shuh Shing**, Assistant Director, Centre for Medical Education, NUS Yong Loo Lin School of Medicine, National University Health System
- **Ms Jillian Yeo**, Assistant Manager, Centre for Medical Education, NUS Yong Loo Lin School of Medicine, National University Health System

ESME COURSE FEE: SG$ 825 + 8% GST

Included in the course fee is:

- One full-day pre-conference session
- One half-day post-conference session
- Printed course programme
- Set of resource materials online
- Certificate of participation
- Optional submission and assessment of a post-course report, details of which will be given during the Course
- Award of ESME Certificate in Medical Education if the post-course report is assessed as meeting the requirements of the Certificate.

Please note: In addition to the ESME course fee, participants are required to register and pay the registration fee for APMEC 2023.

W1A1

WEDNESDAY 24TH MAY 2023, 8.00AM – 12NOON
CLUNY & DALVEY, LEVEL 2
NUSS KENT RIDGE GUILD HOUSE, 9 KENT RIDGE DRIVE, SINGAPORE 119241

EDUCATING FOR COLLABORATION BEYOND IPE: CONCEPTS, CLAIMS, CULTURE AND SYSTEM CHANGE

Kevin Tan, Nigel Tan, Jai Rao, Raymond Goy, Gormit Kaur, Catherine Poey and Sabrina Koh
Singapore

Workshop Description

Interprofessional education (IPE) is an increasingly popular education model that aims to educate healthcare professionals to be better collaborators by enabling them to learn with, from and about each other, in order to deliver improved team-based collaborative patient care. However, historical "waves" of IPE have fallen short of meeting this goal. IPE alone is a necessary but insufficient solution for system change. We must look "beyond the lamppost" (Paradis and Whitehead 2018) and embrace an education for collaboration model that is more rigorously supported by evidence that addresses workplace system and structures. The most efficacious models will combine undergraduate and uniprofessional education for collaboration with practice-based interventions.

The 4-hour interactive workshop will be facilitated by experienced interprofessional clinician educators. Through short lectures, participants will first learn cutting-edge thinking about education for collaboration and the history of IPE. They will then be invited to reconsider the key concepts that underpin most IPE through interactive sessions. Finally, with support from the facilitators, they will workshop a research proposal on their area of specialty, and clearly define the core concepts – teams, teamwork, and educational intervention – that frame their proposal.

The aim of the workshop is to engage learners in critical thinking about what they mean when they talk about teams, teamwork, and education for collaboration, so that they can: (1) more accurately select the concepts that reflect the reality they are trying to study; (2) more diligently select evidence that supports the claims they are making; (3) more rigorously interpret what their research tells them about clinicians, the organization of their work, and how they can learn to work effectively together.

Workshop Objective

By attending the workshop, attendees will be able to

- Summarise the history and context of interprofessional education, in global perspective
- Explain the key conceptual frameworks and misunderstood assumptions used when discussing interprofessionality and education for collaboration
- Explain why interprofessional education may not automatically lead to interprofessional collaborative practice
- Identify how implementation of interprofessional collaborative practice may be influenced by factors such as power, hierarchy, trust, systems and structures
- Apply conceptual frameworks in the design of a research study for interprofessional education and collaborative practice

Who Should Attend

Health professionals and health professions educators who are interested in either designing interprofessional educational activities or developing and implementing interprofessional clinical programmes whose members practice collaboratively. Those who are sceptical about how most IPE is conducted at present are particularly welcome.

W1A2

WEDNESDAY 24TH MAY 2023, 8.00AM – 12NOON
EVANS, LEVEL 2
NUSS KENT RIDGE GUILD HOUSE, 9 KENT RIDGE DRIVE, SINGAPORE 119241

CULTURAL INTELLIGENCE AND ITS APPLICATIONS TO SELECTION, REMEDIATION, AND WELLNESS IN POST-GRADUATE MEDICAL EDUCATION

Steven Green, Amira Siyam, Elia Del Rosario and Michele Kigozi
United Arab Emirates

Workshop Description

This workshop is led by a multicultural team from Cleveland Clinic Abu Dhabi (CCAD). The United Arab Emirates has a 90% expatriate population hailing from over 200 countries, as evidenced by the diversity of patients, colleagues and trainees at CCAD. Cultural differences have wide-ranging impacts across all elements of post-graduate medical education, with cultural intelligence now being recognized as a core competency for healthcare organizations and medical educators. Thankfully, cultural intelligence is a skill that can be learned. Through a mix of theory bursts, small group collaboration and large group discussions, participants will explore a basic framework of Cultural Intelligence and how it can be applied to different aspects of post-graduate medical education in a multicultural environment. The workshop will consist of 4 x 45-minute sessions with a 30-minute break between sessions 2 and 3.

Cultural Intelligence overview:

- Cultural factors in Trainee Selection
- Cultural factors in Trainee Remediation
- Culture and Wellness

Each session will follow this framework:

1. 15-minute theory burst
2. 15-minute small group case-based discussions
3. 15-minute large-group wrap up

Participants will leave this workshop with a foundational understanding of cultural intelligence and its applications to their own contexts.

Workshop Objective

By the end of the workshop a participant should be able to:

- Identify the following components of a cultural intelligence framework:
  - High and Low Power Distance
  - Task vs. Relationship focus
  - High and Low Context
  - Uncertainty Avoidance
  - Individualism vs. Collectivism

- Identify how to address the impact of these factors on:
  - Trainee Selection
  - Trainee Remediation
  - Trainee Wellness

Who Should Attend

Program directors, faculty, residents, program coordinators, and anyone else working in medical education in a multicultural environment.

W1A3

WEDNESDAY 24TH MAY 2023, 8.00AM – 12NOON
RIGHT CHAMBER, LEVEL 1
NUSS KENT RIDGE GUILD HOUSE, 9 KENT RIDGE DRIVE, SINGAPORE 119241

DESIGN THINKING IN CURRICULUM/COURSE DESIGN FOR MEDICAL EDUCATORS

Carmen Wong, Samuel Wong, Paul Lai and Eddie Ng
Hong Kong S.A.R.

Workshop Description

Design thinking in instructional and curriculum design can enhance creativity in teaching and learning in assessments by taking an empathetic student-centric approach, whilst balancing the teaching and learning possibilities with constraints of the department, faculty and institutions. The model of empathy (define, ideate, prototype and testing) (1) will be used in group design activities and discussions occurring in-person along with the usage of Padlet. Groups collaborate on group members' 'real' educational problems. The design thinking mind set encompasses curiosity, empathy to needs and contexts of individuals and users, collaborative working in valuing diversity, acceptance of uncertainty and progress (2) and can be used to innovate, problem solve and enhance existing curricula (3).

The workshop will be structured as follows: (Participants will be placed in groups -lecture, group interaction & Padlet)

- Welcome & Group Introductions (10 mins)
- Concepts of Design Thinking Model (15 Mins)
- Group Design Thinking - Simple Task (20 mins)
- Problem Sharing and Selection (30 mins)

BREAK

- Design Thinking Approach to Selected Problem - Empathy, Define, Ideate (80 mins)

BREAK

- Design Prototype (20 mins)
- Implementation of Design and Problem Solving (20 mins)
- Case Studies (20 mins)
- Q&A (10 mins)

Total Duration: 4 hours

Workshop Objective

At the end of the workshop, participants will be able to:

1. Describe design thinking approaches in education
2. Enhance techniques to empathise with students and key stakeholders
3. Define educational design problems
4. Ideate individually and collaboratively
5. Apply design thinking to prototype curriculum design
6. Adopt an interdisciplinary design thinking approach to problem solving
7. Strategise design implementation from funding to change management

Examples of workshop are seen here: https://www.linkedin.com/in/designthinkcuhk/

Who Should Attend

People either involved with curriculum design or interested in the uses of design thinking in medical education. For example: medical faculties and allied health professionals including supporting staff in education (e.g. Professors, Associate Professors, Lecturers and supporting staff) are welcome to join.

W1A4

WEDNESDAY 24TH MAY 2023, 8.00AM – 12NOON
VIRTUAL PLATFORM

INTRODUCTION TO DATA SCIENCE FOR EDUCATION ANALYTICS

Kenneth Ban
Singapore

Workshop Description

With the increasing digitalisation of education, data that is being generated and collected has the potential to provide insights in guiding student learning through analysis of data from various sources, including admissions, student class engagement and assessments. In this workshop, participants will have the opportunity to learn about fundamental concepts in data science that can be applied in analysing education data. Using an open-source data mining and machine learning tool, participants will have the opportunity to work on synthetic education datasets through a series of case-based scenarios. Through hands-on exercises, participants will learn the basics of data cleaning/visualisation and two broad approaches in machine learning:

- Unsupervised learning for uncovering patterns
- Supervised learning for prediction

Workshop Objective

At the end of the workshop, participants will be able to:

- Describe the types of questions that could be addressed by analytics.
- Perform basic data cleaning and visualisation of datasets.
- Perform basic analysis for uncovering patterns and predicting outcomes.

Who Should Attend

The workshop welcomes stakeholders in medical education who are interested in learning how data science can be used to analyse education data.

W1A5

WEDNESDAY 24TH MAY 2023, 8.00AM – 12NOON
VIRTUAL PLATFORM

BEST PRACTICES FOR IMPLEMENTING TEAM-BASED LEARNING ("TBL") IN AN ONLINE MODALITY

Brian O'Dwyer
Singapore

Workshop Description

Effective distance education could have several benefits:

- Provision of access to high quality conferences for educators that lack the resources to attend in person
- Extended educational reach to rural communities
- Helps to continue education even during natural disasters or epidemics
- Student wellness – students can prepare before they reach campus

However, most traditional distance education is limited to passive content transmission, such as webinars, as opposed to more active learning methods. Can some of the active learning strategies used to transform classrooms from didactic lectures into engaging learning experiences be employed online? Team-based learning ("TBL") is an active collaborative learning methodology that is becoming more common in medical education. Some institutions are starting to implement TBL in an online modality. In 2017, the Team-Based Learning Collaborative ("TBLC") formed an online community of practice in response to the growth in use of TBL in both synchronous and asynchronous online modalities. In 2018, the TBLC Online Community of Practice released its first whitepaper describing the best practices for online TBL, which was co-authored by 17 faculty members from ten institutions. The whitepaper focused on TBL in learning environments where the learners and faculty were not physically co-located and were connected by technology either synchronously or asynchronously. The co-authors divided into teams and developed principles for online TBL across four dimensions: Preparation, Readiness assurance, Applications and Peer evaluation. Teams then used a variety of methods including literature searches, appreciative inquiry, faculty surveys and reviews of existing online teaching frameworks such as Quality MattersTM in addition to drawing on the experience of the co-authors. This session will describe some best practices for implementing TBL online.

Workshop Objective

At the end of this participants should be able to:

- Define online team-based learning ("TBL")
- Experience TBL as a student in a simulated or actual online synchronous modality
- Describe how to implement TBL in an online modality

Who Should Attend

This session will benefit existing TBL educators interested in the online adoption of TBL, and educators new to TBL.

W1A6

WEDNESDAY 24TH MAY 2023, 8.00AM – 12NOON
VIRTUAL PLATFORM

EVALUATION OF THE MEDICAL SCIENCES BRIDGING PROGRAMME - A PEER TEACHING INITIATIVE BY STUDENTS FOR STUDENTS

Jonathan Liang, Lincoln Lim, Clarissa Wong, Gayathri Basker, Thaarun Thirumeninathan and Lye Yan Nerng
Singapore

Workshop Description

The faculty and student facilitators will introduce the need for co-creating a joint curriculum to serve as a bridge for incoming medical students without a formal biology education background. Challenges to the execution process, take up rate amongst students, academic outcome, and the following problems will be discussed during the workshop:

1. Coming up with what content medical students should teach/bridge to incoming students: resolved by looking through both the A level and IB syllabus outlines and comparing it with the M1 syllabus, to pick out relevant topics to teach, and how to integrate into the existing program.
2. Dealing with the “how to teach aspect”: referenced “Curriculum development for medical education: A six-step approach” by Patricia A. Thomas et al. to develop a curriculum structure and identify pedagogical methods that could be of use to student facilitators.
3. Testing for knowledge: sending pre-lecture and post-lecture quizzes and comparing scores of participants to identify difficult topics, and if the peer teaching was beneficial.

Workshop Objective

The objective of the workshop is to briefly review the current literature on such andeavour worldwide.

- For the student facilitators to showcase their teaching materials, the experience and outcome from the programme at the Yong Loo Lin School of Medicine.
- Participations from the teachers, and medical students, will be encouraged so that the process can be further enhanced, and more students will benefit from the program.
- To identify more potential faculty and student facilitators to be involved in the programme

Who Should Attend

All educators (both teachers and students), fellow learners, administrative staff, and anyone who is interested in peer teaching.

W1P1

WEDNESDAY 24TH MAY 2023, 1.00PM – 5.00PM
RIGHT CHAMBER, LEVEL 1
NUSS KENT RIDGE GUILD HOUSE, 9 KENT RIDGE DRIVE, SINGAPORE 119241

POWER, TRAUMA AND DISRUPTIVE BEHAVIOUR IN HEALTHCARE

Inthrani Raja Indran, Marion Aw, Benjamin Goh and Tan Chay Hoon
Singapore

Workshop Description

Healthcare occurs in a fast-paced, high stakes environment. We have inherited a legacy from being an Asian healthcare system. Hierarchy and power in the system allow for specific conversations and behaviours while disavowing others. This may facilitate the culmination of high-tension encounters and disruptive behaviours in healthcare. The inability to seek recourse and support can be experienced as trauma and negative self-assessment by individuals. In this workshop, we will explore

- Why efforts to address these issues have not gained sufficient traction worldwide despite the vast amount of information and research highlighting their significance
- The potential of the healthcare system to move towards awareness and kindness with a trauma-informed lens
- How can we empower our students to better handle these situations

As individuals in the healthcare system, we bring our values and beliefs, childhood and life experiences, our way of seeing the world, and our aspirations for the future to work. How can we carry ourselves to work while taking better care of ourselves and others? Join us for a workshop in exploration and learning.

Workshop Objective

At the end of the workshop, participants should be able to

1. Appreciate the levels of systems in organisations
2. Recognise power in systems via an experiential learning model
3. Recognise high-tension situations, disruptive behaviours and their impacts in healthcare system settings
4. Demonstrate greater intra-personal awareness in daily encounters in healthcare
5. Discuss and explore strategies individuals can adopt to tackle disruptive behaviour at an individual and organisational level

Who Should Attend

- Individuals who would like to learn about power in systems
- Individuals who are working with students and looking to expand their awareness and possible interventions in this topic
- Individuals who have witnessed and/or experienced these high-tension encounters/disruptive behaviours and would like to explore how they could better address such behaviours at an individual and organisational level

W1P2

WEDNESDAY 24TH MAY 2023, 1.00PM – 5.00PM
EVANS, LEVEL 2
NUSS KENT RIDGE GUILD HOUSE, 9 KENT RIDGE DRIVE, SINGAPORE 119241

APBSEA PROFESSIONAL DEVELOPMENT COURSE: TRANSITIONING INTO MEDICAL SCIENCES EDUCATION IN HEALTH PROFESSIONS

[1]**Ardi Findyartini,** [2]**Vishna Devi Nadarajah, and** [3]**Chen Zhi Xiong**
[1]Indonesia, [2]Malaysia and [3]Singapore

Workshop Description

Medical science educators have been facing changing of roles in health professions education. There are demands on the relevance of medical science with clinical practice and increased roles of medical science educators in the current health professions education curricula. Becoming medical science educators in health professions education is indeed a journey involving internal and external factors. The journey or transition may be varied from one person to another. Therefore, it is important to address the transition to further support medical science educators in exploring their motivation, developing their competence and professional identity, and in tackling multiple responsibilities in health professions education.

The course targets early-career biomedical scientists and clinicians seeking to transition into medical sciences education in health professions. It aims to clarify concerns and instil confidence with regards to the transition by providing the 'how', and inspiring participants to look into the future. Last but not least, it seeks to invite senior education leaders and administrators to partner aspiring medical sciences educators to co-create this transition journey.

Workshop Objective

In the course, participants will learn how to:

- Develop personal attributes that will facilitate the transition
- Create a supportive environment and plan for the transition
- Lead self and others in health professions education

Who Should Attend

Educators working in the CPD/CE/CME space, wishing to improve their ability to develop, distribute and assess educational content for life-long learners in healthcare.

W1P3

WEDNESDAY 24TH MAY 2023, 1.00PM – 5.00PM
CLUNY & DALVEY, LEVEL 2
NUSS KENT RIDGE GUILD HOUSE, 9 KENT RIDGE DRIVE, SINGAPORE 119241

STRATEGIES TO SUPPORT WELL-BEING FOR OUR LEARNERS, OUR PEERS AND OURSELVES

[1]**Jo Bishop,** [2]**Aviad Haramati,** [2]**Diann Eley and** [2]**Stuart Slavin**
[1]Australia , [2]United States of America

Workshop Description

The facilitators will introduce the need for supporting well-being for all and why it must be a focus. Challenges to well-being include personal, professional and environmental factors. These domains explore the learner journey and transitions, length and challenges of programmers respectively.The role of the education providers in promoting well-being will be explored along with an evidence-based support framework that can be utilised in the learning environment such as

- General support that is easily accessible, transparent, and timely,
- Preventative support such as activities that help with resilience and personal and professional support sessions and,
- Extra support for the specific needs of the individual, personalised and offered early

The facilitators will particularly focus on the roles of faculty and peers in learner support; the evidence-based staff development framework will explore 'difficult' yet necessary conversations and provide sufficient tools for delegates to feel confident in the strategies discussed. The likely concerns that are presented will be reviewed with activities and role-play including study, relationships, financial, physical illness, mental health. Case-based scenarios will explore how delegates have responded previously and how best to triage with local guidelines and policies in mind. Whilst supporting staff who support learner, we can explore: why staff need training and support, who should be recruited and selected for these roles, how they should be suitable inducted, the role clarification and expectations, ongoing professional development and how to deal with emergency situations.

The session will conclude with how the delegates are currently focusing on their own well-being, with increases stressors and demands of the academic and work environment. The imperative for self-care will be discussed, along with practical advice for the delegates so they will be armed with a sense of purpose, meaning and connection.

Workshop Objective

The objective of the workshop is to briefly review the current literature and share strategies on supporting the well-being of our learners, peers and selves. Our intent is to provide frameworks and practical approaches for those who educate and may be confronted with and required to respond to distressed learners and peers whilst maintain their own wellbeing.

Who Should Attend

Educators (teachers and clinicians), fellow learners, professional staff and those who manage others who are frontline for student support.

W1P4

WEDNESDAY 24TH MAY 2023, 1.00PM – 5.00PM
VIRTUAL PLATFORM

REMEDIATION: THE ART OF FACILITATING A 'COURSE CORRECTION' FOR LEARNERS

Mairi Scott and Susie Schofield
United Kingdom

Workshop Description

Remediation is traditionally thought of as a practice to remedy underperforming students demonstrating a failure of competence. However, the emphasis has more recently moved towards it being considered as a way to support all learners in achieving competence at any point in time. (Chou et al.,2019). This workshop will consider the contextual elements of remediation based on theoretical frameworks of organisational systems and empirical research and

will share approaches and techniques that can be used to support the acquisition of competencies. It will focus particularly on supporting participants in leadership roles in considering the components of developing their own remediation programme (programmatic elements, faculty development, accountability and outcomes) using a framework that will help shift the organisational culture away from offering quick fixes for student failure to one that de-stigmatises underperformance by normalising seeking help. Through the use of case studies and active role play, the workshop will allow participants to try out a range of different approaches to support learners with common challenges, such as internalising the different study skills needed in modern day medical education, the challenge of teaching clinical reasoning in an incremental way, and health concerns that present as obstacles to performance.

Workshop Objective

By the end of the workshops, participants will be able to:

- Describe the contextual and individual issues that can lead to underperformance
- Critically evaluate the resources that can be used to enable remediation
- Identify approaches to support learners in achieving competence in their own context

Who Should Attend

Medical Educators (particularly but not exclusively from the clinical teaching environment) who are involved in teaching undergraduates, postgraduate specialty trainees, established professionals undertaking CPD activities, those who are involved in teaching/tutoring small groups of students, and those who may or may not also have a leadership role. The workshop will benefit both new and experienced small group tutors as the format of the workshop includes a self-rating scale that will allow individual participants to focus on the workshop activities and processes most relevant to their own current practice and their own future development.

W1P5

WEDNESDAY 24TH MAY 2023, 1.00PM – 5.00PM
VIRTUAL PLATFORM

FOUNDATIONS OF ASSESSMENT METRICS: AN OVERVIEW

Gominda Ponnamperuma
Sri Lanka

Workshop Description

In health professions education, like in any other formal education setting, we collect information on the ability of the learners on a regular basis. Such information is crucial to decide whether we are happy to graduate the learner, allow the learner to progress to the next level and/or provide the learner with quality feedback. When the said decisions are made, we need to ensure that they are accurate, precise and fair. Toward this end, we must evaluate whether the tools and methods used to find out the ability levels of learners (i.e., assessments that we administer to the students) are appropriate. Assessment metrics are one of the prime ways of finding out how well the assessments have helped us take those crucial decisions about the learners. This workshop focuses on the basic analytics of assessment performance data of the examinees and the performance of examiners.

Workshop Objective

At the end of the workshop, participants will be able to:

- Discuss different types of assessment metrics
- Apply assessment metrics to assessment results

- Decide on the quality of assessments using assessment metrics

Who Should Attend

Health professions teachers, administrators and health professions education postgraduate students who are involved in assessments, both developing and operationalising assessments.

W1P6

WEDNESDAY 24TH MAY 2023, 1.00PM – 5.00PM
VIRTUAL PLATFORM

BLENDED (HYBRID) LEARNING: A NEW PORTENTOUS MODALITY OF TEACHING IN MEDICAL EDUCATION IN THE ERA OF POST PANDEMIC

Manasik Hassan, Magda Yousef, Eman Al Maslamani and Hatim Abdelrahman
Qatar

Workshop Description

Teaching is the corner stone for the development of medical education with that requires different methods and wide variety of rang in education and delivering the information. New situations like the pandemic might limit or change the way of teaching and education to the medical trainees in which a new modality might take over an old one. However, post-pandemic education changed again to a new way of teaching and learning. Blended (hybrid) learning, defined as a combination of traditional face-to-face learning and asynchronous or synchronous e-learning, has been presented as a promising alternative approach for health education because it is characterised as synthesising the advantages of both traditional learning and virtual e-learning. Still blended learning is considered a new way of teaching in medical education especially in the busy clinical setting.

In this interactive workshop, participants will be engaged in several activities:

1. Interactive didactic introduction on the definition of blended (hybrid) learning and its importance as an alternative methods of education when it is needed
2. Engagement in discussions and reflections on video-clips of different approaches in how to implement the different types of blended (hybrid) learning.
3. In small groups, participants will identify barriers to implement blended (hybrid) learning especially in the busy clinical program
4. Sharing successful stories of implemented blended (hybrid) learning

Workshop Objective

1. Define the blended (hybrid) learning and highlight its importance in medical education
2. Describe different strategies to implement blended (hybrid) learning
3. Identify benefits and challenges to apply it in the busy clinical work

Who Should Attend

The workshop welcomes all stakeholders in medical education, physicians, training program leaders and other educators interested in the medical education and teaching.

ESME CT (ESSENTIAL SKILLS IN MEDICAL EDUCATION - CLINICAL TEACHING) COURSE

Teaching in the clinical environment is a demanding and complex task, a task many health professions educators assume without adequate preparation or orientation. The various settings (ward, ambulatory, urban or community) have their own distinct challenges. The ESME-CT is a 1.5-day face-to-face course with online pre and post course assignments and readings. The course aims to provide participants with a solid foundation of fundamental skills needed to teach effectively in clinical settings, informed by educational theories and available evidence. In acknowledgment of the complexity of clinical teaching, the educational strategies will employ a non-prescriptive and reflective approach for improving teaching. Participants will learn to select effective teaching strategies while considering many variables such as the content, the learners, and the context. The course also reflects the belief that teachers at all levels of experience and expertise can benefit from an organised review of their teaching. We will use several interactive exercises to enhance application of new strategies to own teaching. Finally, participants will be encouraged to be the agents of change in enhancing clinical teaching at their own institutions.

WHO SHOULD PARTICIPATE IN THIS COURSE:

The course will consist of an in person full-day masterclass session, half-day post-conference session with reflection and goal-setting, and pre and post online readings and assignments. The course language is English, but the pace will be suitable for participants whose first language is not English. The topic will feature short didactic presentations, review and debriefing of videotaped teaching scenarios, group brainstorming, individual reflections and skills practice.

MODE OF DELIVERY:

The course will consist of an in person full-day masterclass session, half-day post-conference session with reflection and goal-setting, and pre and post online readings and assignments. The course language is English, but the pace will be suitable for participants whose first language is not English. The topic will feature short didactic presentations, review and debriefing of videotaped teaching scenarios, group brainstorming, individual reflections and skills practice.

TOPICS COVERED:

The course aims to cover the following areas of clinical teaching:

- A framework for clinical teachers- ExBL
- Teaching when time is limited (the one-minute preceptor, SNAPPS)
- Teaching clinical reasoning
- Direct observation and performance-based feedback and coaching
- Bedside teaching
- Role-modelling as a deliberate teaching strategy
- Reflective practice of own teaching

COURSE STRUCTURE:

Thursday 25 May: 8.00AM to 5.00PM: ESME CT Course Pre-conference Session

Friday 26 May: Attend APMEC Conference

Saturday 27 May: Attend APMEC Conference

Sunday 28 May 8.30AM to 12.30PM: ESME- CT Course Post-conference Session

POST-COURSE REPORT

We encourage participants to submit, within six months of completion of the course, a short report describing the application of the concepts and principles covered in the ESME CT Course to their own teaching settings, leading to award of the AMEE-ESME CT Certificate in Clinical Teaching.

COURSE LEAD:

Dr Subha Ramani, MBBS, PhD, MMed, MPH, FAMEE
AMEE President, Member of AMEE Fellowship and Faculty Development Committees
Associate Professor of Medicine, Harvard Medical School; Adjunct Professor, Massachusetts General Hospital Institute for Health Professions Education; Boston, MA, United States of America.

COURSE FACULTY:

- **Dr James Kwan**, MBBS, BSc (Hons), MMed (ClinEpi), MHPE, MRCSEd, FACEM, FRCEM, FAMS
  Senior Consultant, Department of Emergency Medicine, Tan Tock Seng Hospital; Chair, Core Curriculum and Education Committee, International Federation for Emergency Medicine; Adjunct Asst. Professor, Emergency Medicine, Lee Kong Chian School of Medicine; Adjunct Assistant Professor, Yong Loo Lin School of Medicine, National University of Singapore, Singapore.
- **Dr Faith Chia**, MBBS (Singapore), MRCP (UK), FRCP (Glasgow)
  Senior Consultant, Department of Rheumatology, Allergy and Immunology, Tan Tock Seng Hospital.
  Designated Institutional Official, National Healthcare Group Residency, Assistant Dean (Curriculum), Adjunct Associate Professor, Lee Kong Chian School of Medicine, Nanyang Technological University.
- **Dr Ng Wee Khoon**, MBBS (Singapore), M.MED (Internal Medicine) (Singapore), MRCP (UK), FRCP (Edinburgh), FAMS
  Senior Consultant, Department of Gastroenterology and Hepatology, Tan Tock Seng Hospital.
  Programme Director, NHG Internal Medicine Residency Programme.
- **Dr Tracy Tan**, MBBS (London), MRCP (UK), M.Med (Internal Medicine) (S'pore)
  Adjunct Asst Professor Lee Kong Chian School of Medicine. Senior Consultant, Department of Renal Medicine, Tan Tock Seng Hospital.
  Programme Director, NHG Renal Medicine Residency Programme.
- **Dr Phua Dong Haur**, MBBS, MRCS (A/E), MMed (A/E), Master in Education (MESA)
  Senior Consultant, Department of Emergency Medicine, Tan Tock Seng Hospital. Programme Director, NHG Emergency Medicine Residency Programme.
  Assistant Dean (Assessment), Lee Kong Chian School of Medicine, Nanyang Technological University.
  Adjunct Asst. Professor, Emergency Medicine, Lee Kong Chian School of Medicine; Adjunct Assist. Professor, Yong Loo Lin School of Medicine, National University of Singapore, Singapore.

ESME CT COURSE FEE: SG$ 825 + GST

Included in the course fee is:

- One full-day pre-conference session
- One half-day post-conference session
- Printed course programme
- Set of resource materials online
- Certificate of participation
- Optional submission and assessment of a post-course report, details of which will be given during the Course
- Award of ESME Certificate in Medical Education if the post-course report is assessed as meeting the requirements of the Certificate.

Please note: In addition to the ESME course fee, participants are required to register for APMEC 2023 and pay the registration fee.

W2A1

THURSDAY 25TH MAY 2023, 8.00AM – 12NOON
CLUNY & DALVEY, LEVEL 2
NUSS KENT RIDGE GUILD HOUSE, 9 KENT RIDGE DRIVE, SINGAPORE 119241

USING SOCIAL MEDIA TO DISSEMINATE YOUR SCHOLARLY WORK

[1]**Julie Hewett and** [2]**Peter GM de Jong**
[1]United States of America and [2]The Netherlands

Workshop Description

When publishing scholarly work in a journal, one has to invest a lot of time and effort into writing and revising the manuscript until it is acceptable for publication. However, that milestone should not be the end of the endeavour, but should instead be just the beginning. From that moment on, most authors rely on passive dissemination of the article: researchers who perform a literature search might find the work through library systems. Yet, why should the author not actively promote the work as well? Social media offers a wealth of opportunities to actively increase the visibility of the article, indirectly leading to greater academic usage of the work. The goal of the workshop is to introduce the participants to the possibilities of social media for disseminating scholarly work, and to practice with several of these options to promote both their own article(s) and themselves as a researcher/author. Firstly, an overview of several social media platforms will be presented containing communication tools as well as social media research platforms. Different communication platforms such as Twitter and Facebook will be addressed in more detail. The participants will get hands-on practice and learn how to formulate effective social media messages for a specific sample article. Next, social media research platforms such as LinkedIn and ResearchGate will be introduced and the participants will review several examples of researcher profiles and discuss their quality. At the end of the workshops the participants will have learned how to actively promote both their own article(s) and themselves as a researcher/author.

Workshop Objective

Social media offers a range of opportunities to actively increase the visibility of journal articles and other scholarly products. This workshop will introduce the participants to the possibilities of social media for disseminating scholarly work and will offer practice with several options to promote both their own article(s) and themselves as a researcher/author.

Who Should Attend

The workshop is designed for faculty members with one or more articles or other scholarly products already published, and also those who expect to have an article published in the upcoming year.

W2A2

THURSDAY 25TH MAY 2023, 8.00AM – 12NOON
RIGHT CHAMBER, LEVEL 1
NUSS KENT RIDGE GUILD HOUSE, 9 KENT RIDGE DRIVE, SINGAPORE 119241

MIND-BODY APPROACHES TO ENHANCING STUDENT AND STAFF WELLBEING IN HIGHER EDUCATION

Marcus Henning, Craig Webster, Yan Chen and Chris Krageloh
New Zealand

Workshop Description

In medical and health science education, it is important to consider methods that could be used for enhancing wellbeing amongst students and staff. There has been a burgeoning interest in harnessing the use of mind-body approaches in enhancing wellbeing. Workshop activities and exemplars will allow the exploration and discussion of the following questions:

- Where do the ideas underlying the mind-body approaches to wellbeing come from? What are the indigenous approaches to the mind-body approach?
- How can we determine the efficacy of these approaches and how applicable are they for higher education students and staff?
- What are some cost-effective considerations that need to be determined?

We envisage the following activities:

- An introductory session focusing on discussing the historical and philosophical background to the mind-body discourse.
- Engagement in seated meditation (e.g., mindfulness practice) and movement-based interventions (e.g., Indigenous meditation practices, Taijiquan, and Yiquan). These will be trialled followed by reflections from the personal experiences of attendees. This will be followed by deliberations on the potential utility for higher education students and staff.
- An interactive discussion investigating the quality of evidence supporting the usage of these methods. In addition, methods of research that could be further used to determine the efficacy of these approaches will be assessed.
- Discussions around the use of technology (e.g., biofeedback, handheld devices, and artificial intelligence) are proposed.

Workshop Objective

We aim to structure the workshop so that it includes discussions on the conceptual basis of the mind-body approach, reflections on the science and evidence, and deliberations on applicability for higher education. We intend to include discussions on indigenous approaches to meditation and other mind-body therapeutic systems. We will further focus on the utility of artificial intelligence and consider future initiatives that aim to augment traditional approaches to promoting and enhancing wellbeing.

Who Should Attend

Anyone engaged or interested in medical or health science research, pastoral care, self-care and/or education would benefit from this workshop. The workshop aims to develop participants' understanding of the mind-body approaches that could be used to heighten wellbeing for staff and students in higher education settings.

W2A3

THURSDAY 25TH MAY 2023, 8.00AM – 12NOON
EVANS, LEVEL 2
NUSS KENT RIDGE GUILD HOUSE, 9 KENT RIDGE DRIVE, SINGAPORE 119241

OWNERSHIP CYCLE: A STRUCTURED APPROACH IN GROOMING STRUGGLING LEARNERS FOR HIGH STAKES ASSESSMENTS

[1]**Ashokka Balakrishnan,** [1]**Soh Jian Yi and** [2]**K Anbarasi**
[1]Singapore and [2]India

Workshop Description

The workshop is designed to be conducted in four parts.

The first part is the introduction to the characteristics or traits that are generally predictive of learners who struggle with assessments that are high stakes. Data will be shared from the study done in exploring the attributes that predict success in high stake encounters.

The next part is the core concept of "Ownership Cycle" described by its founder Dr Jian Yi Soh; explaining the concepts of three components namely the ownership of reality, communication and action. Further insights would be provided on the resilience factors for learners when they pursue this journey.

The third segment of the workshop focuses on the practical application of the concepts in guiding the learners through the path of self-discovery, realisation of present state and self-regulation towards the high-stake hurdle.

The last part of the workshop is designed to address practical difficulties when applying these concepts, common pitfalls when attempting to engage learners with poor insight, handling those with avoidance from academic support services offered. These will include sharing of practical experiences from various contexts of the facilitators from the Masters and PhD Programs of Maastricht, Netherlands and from postgraduate programs is medical and procedural specialities in Asia.

The workshop will conclude with further clarifications of the concepts with invited illustrations from contextual scenarios from the workshop participants.

Workshop Objective

1. Understanding the characteristics of struggling learners when facing high stakes assessments
2. Introduction to concept of Ownership cycle, components and approaches
3. Practical application of ownership cycle in helping learners to overcome difficulties
4. Sharing experiences from 3 different contexts of high stakes examinations and patterns of failures

Who Should Attend

1. Educators, mentors, academic support teams
2. Residency core faculty, coordinators, PHD program candidates and teachers
3. Clinical preceptors and exam support coaches
4. Residents and postgraduates
5. Phase coordinators, curriculum planners and academic executives

W2A4

THURSDAY 25TH MAY 2023, 8.00AM – 12NOON
VIRTUAL PLATFORM

STRATEGIES FOR DEVELOPING OPEN EDUCATION RESOURCES (OER) IN MEDICAL EDUCATION

[1]Tao Le, [2]Teresa Chan and [3]Goh Poh Sun
[1]United States of America , [2]Canada and [3]Singapore

Workshop Description

Historically, high-quality medical education has been expensive to develop and limited only to selected authors working with medical publishers. However, new digital platforms have accelerated the development of open education resources (OER) which has evolved to address critical cost and accessibility issues in education globally. The United Nations and UNESCO identified OER as a global priority and developed guidelines and policies supporting OER development at national and institutional levels. In medical education, OER are also known as Free Open Access Medical education (FOAM) and include learning and teaching materials that are freely and legally available to health professions educators to Reuse, Retain, Redistribute, Revise and Remix (the 5Rs of OERs). Students and trainees can also now access OER/FOAM and create peer-to-peer (P2P) learning experiences. Finally, novel shared curricular ecosystem platforms can standardise and facilitate the management of OER/FOAM to empower a global community of medical educators to share, collaborate and go further together. This hands-on, interactive workshop will provide participants with an introductory overview of OER and FOAM, including UNESCO guideline recommendations. Participants will be able to explore best practices for leveraging OER/FOAM in existing curricular development processes. The facilitators will then discuss and demonstrate a variety of free or low-cost tools for the development, management and sharing of OER/FOAM. In small group breakouts, participants will have an opportunity to experiment with selected tools to develop OER/FOAM and share them with each other. Potential pitfalls such as quality, critical appraisal and copyright issues will be addressed. Finally, the workshop will explore strategies for engaging learners in creating and leveraging OER/FOAM for P2P learning experiences.

Workshop Objective

Upon completing this workshop, participants will be able to:

- Explain the history, goals and impacts of OER and FOAM
- Discuss best practices for the development and implementation of OER/FOAM
- Identify and use free or low-cost tools to develop, manage and share OER/FOAM
- Discuss and implement appropriate policies and processes for quality assurance, critical appraisal, and copyright compliance
- Guide learners to develop OER/FOAM for P2P learning experiences

Who Should Attend

Health professions education leaders, educators, and learning designers in medical, nursing and allied health fields who are interested in sharing and collaborating with others, especially in low resource settings.

W2A5

THURSDAY 25TH MAY 2023, 8.00AM – 12NOON

VIRTUAL PLATFORM

DOWN BUT NOT OUT: IDENTIFYING AND SUPPORTING LEARNERS IN DIFFICULTY IN HEALTH PROFESSIONS EDUCATION

Faith Chia, Law Hwa Lin, Heidi Tan, Jamie Lim, Phua Dong Haur, James Kwan, Tracy Tan and Xanthe Chua
Singapore

Workshop Description

Most learners in health professions education complete their training without significant difficulties. However, a small proportion of learners struggle with some aspect of learning or clinical performance during training. They take up a disproportionate amount of faculty time and can be a source of frustration and distress for those working with them. These learners are often identified late during training and experience an increased risk of unsuccessful remediation and dismissal. Therefore, it is essential that faculty receive training and are well equipped in identifying, diagnosing and managing learners experiencing difficulty at an early stage to maximise their chances of successful remediation. We will use a combination of educational strategies to maximise the interaction and engagement of participants:

- Brainstorming
- Mini-didactic presentations
- Small group exercises
- Skills practice
- Role-play

Workshop Objective

- Analyse key challenges for identifying, diagnosing, and managing learners in difficulty
- Discuss best practices and institutional policies for managing learners in difficulty
- Apply frameworks for early identification of learners in difficulty and elucidating root causes, and practise using these frameworks in small group exercises using sample scenarios
- Develop action plans for supporting learners in difficulty

Who Should Attend

- Clinical teachers and educators responsible for supporting learners in difficulty
- Faculty leaders responsible for staff development

W2A6

THURSDAY 25TH MAY 2023, 8.00AM – 12NOON

VIRTUAL PLATFORM

YOUNG BIOMEDICAL SCIENCE EDUCATORS' FORUM (BY INVITATION ONLY)

[1]Neil Osheroff, [1]Aviad Haramati, [2]Er Hui Meng, [3]Hooi Shing Chuan and [3]Amanda Wong
[1]United States of America , [2]Malaysia and [3]Singapore

Background of the Young Biomedical Science Educators Programme:

CenMED has launched a Young Biomedical Science Educators Programme in 2021. This programme is open to all instructors, research Fellows, PhD Students who teach biomedical sciences in NUSMed, who have a strong interest to pursue future career in health professions education. The programme consists of foundational modules, selective modules, practicum and ends with capstone session at APMEC.

The purpose of the programme are as follow:

- Develop a pipeline of "home-grown" biomedical science educators
- Address the issue of succession planning
- Provide opportunities to foster collaboration amongst young educators across departments, and
- Link up local and international biomedical science educators with a view to provide local BMS educators with mentoring, in early stage of their career.

Programme Details:

8.00am to 8.10am	Welcome and Introduction by Dr Dujeepa D Samarasekera
8.10am to 8.30am	My Journey as a Medical Educator Professor Neil Osheroff
8.30am to 9.00am	Sharing by Dr Seah Bee Kee Serena and Dr Lee Seow Chong
9.00am to 9.20am	Personal Journey as an Educator to Leadership in Medical Education Professor Er Hui Meng
9.20am to 9.30am	Break
9.30am to 10.00am	Sharing by Dr Mohammed Zacky Ariffin and Dr Deng Shuo
10.00am to 10.20am	How Did a Physiology/Educator Become Passionate about Self-care? Professor Aviad Haramati
10.20am to 10.40am	An Accidental Educator – Lessons Learnt Along the Way Professor Hooi Shing Chuan
10.40am to 10.50am	Break
10.50am to 11.05am	Sharing by Dr Lim Lee Jin
11.05am to 11.20am	Sharing by Amanda Wong (1st batch of BMS): Perspectives as a Young Biomedical Sciences Educator.
11.20am to 11.40am	Project Presentation by Mentee (if any)
11.40am to 12noon	Wrap Up

W2P1

THURSDAY 25TH MAY 2023, 1.00PM – 5.00PM
CLUNY & DALVEY, LEVEL 2
NUSS KENT RIDGE GUILD HOUSE, 9 KENT RIDGE DRIVE, SINGAPORE 119241

TIPS AND TRICKS FOR SUCCESSFULLY PUBLISHING SCHOLARLY WORK IN AN INTERNATIONAL JOURNAL ON MEDICAL EDUCATION

[1]Peter GM de Jong and [2]Julie Hewett
[1]The Netherlands and [2]United States of America

Workshop Description

When publishing scholarly work in a scientific journal, both the author's writing skills and the right strategies in preparing and submitting the work are important. Due to the different nature of education in regard to biomedical sciences, some slight differences exist with other fields. In the workshop the moderators will present 7 steps to successful publishing. It starts with what exactly the content is, who the intended audience should be, and what journal might be the best fit. An overview of several journals in Medical Education will be presented and their differences will be discussed. Characteristics of several manuscript types available in these journals and the importance of the cover letter will be discussed, as well as some general advice on making the process of submission more successful. Before submitting a manuscript, it might also be useful to know how the Editorial Office and Editorial Board of a journal handle the manuscripts they receive. The presenters will therefore give the attendees more insight into the editorial processes and will showcase what is happening "behind the scenes" of a journal. During the session, participants will get a few small group assignments on topics like barriers to publishing, article formats and writing strategies. With the discussions, the several steps in submitting a manuscript will be clarified. Based on the brainstorming exercises and actual experiences from the audience, the presenters will provide tips and recommendations. At the end of the workshop the participants will have a better understanding of scientific publishing and how a manuscript should be submitted.

Workshop Objective

In publishing scholarly work, it is important to choose the right strategy in submitting the work to the most appropriate journal. The session will provide the attendees with several strategies to increase the chances of acceptance of their work and will give them some insight into the editorial processes of a journal.

Who Should Attend

The workshop is intended for those with little or no experience in submitting manuscripts to international journals specifically in the field of Medical Education, even if they already have experience with publishing in other fields.

W2P2

THURSDAY 25TH MAY 2023, 1.00PM – 5.00PM
EVANS, LEVEL 2
NUSS KENT RIDGE GUILD HOUSE, 9 KENT RIDGE DRIVE, SINGAPORE 119241

PORTFOLIOS; TOO MUCH OR NOT ENOUGH? CREATING THE BALANCE THROUGH TUTOR LED SMALL GROUP SESSIONS.

Mairi Scott and Susie Schofield
United Kingdom

Workshop Description

Portfolios are becoming increasingly accepted as a useful way for students to record their experiences and learning and are more recently also being used as a means of assessment. Yet, we are aware that the evidence of their effectiveness is inconsistent and that our students can find them to be time consuming and frustrating. Consequently, portfolios may end up achieving the opposite of what was intended when they were created in the first place. For portfolios to be worthwhile and valued by both tutors and students they must be seen to be an effective and robust way for students to demonstrate to themselves and their tutors the longitudinal development of both their clinical skills and professional attributes. Assessments must adopt a more qualitative approach with individual student feedback focusing on learning through enhancing reflective practice. Yet, individual feedback on student portfolios is very time consuming and may be impossible to manage in many medical schools. However, another approach is through small group tutor led sessions designed to ensure that students acquire the skills of critical self-reflection in a safe environment. Initially, these groups must be led by tutors trained in teaching reflective practice, though over time students can become less tutor dependent and even adopt a peer-led model in their senior years. This workshop will explore approaches to addressing these problems through enabling a constructive alignment of achievements through the setting of clear goals and criteria using templates and/or rubrics. It will examine ways to record these longitudinally so that students can see and act on evidence of their progression. Finally, it will provide a structure for enabling students to develop reflective practice through a range of techniques which can be used as part of the content and delivery of tutor led small group sessions throughout the medical program.

Workshop Objective

By the end of the workshop participants will be able to:

- Explore why educators promote portfolios and why students resist them.
- Review the benefits and limitations of most portfolios
- Identify the components necessary for a fully comprehensive portfolio based on the interaction between learner and tutor/mentor
- Engage with examples of reflective journaling to define the learning opportunities, intentions and outcomes

Who Should Attend

Medical Educators (particularly but not exclusively from the clinical teaching environment) who are involved in teaching undergraduates, postgraduate specialty trainees and established professionals undertaking CPD activities and those who are particularly involved in teaching/tutoring small groups of students. The workshop will benefit both new and experienced small group tutors as the format of the workshop includes a self-rating scale that will allow individual participants to focus on the workshop activities and processes most relevant to their own current practice and their own future development.

W2P3

THURSDAY 25TH MAY 2023, 1.00PM – 5.00PM
RIGHT CHAMBER, LEVEL 1
NUSS KENT RIDGE GUILD HOUSE, 9 KENT RIDGE DRIVE, SINGAPORE 119241

WORKPLACE-BASED ASSESSMENT: DESIGNING A BASIC FACULTY DEVELOPMENT WORKSHOP

John Norcini
United States of America

Workshop Description

The session will start with a description of the components of an evidence-based training workshop. It consists of the following:

1. Workplace-based assessment background. Participants are provided with a brief description of the common workplace methods of assessment and some of the pertinent research is reviewed.
2. Conducting an encounter. A description of some of the common pitfalls in conducting an encounter are described.
3. Frame-of-reference training. A video or live trainee-patient encounter is shown and assessed by the participants. They are broken into small groups to discuss their evaluations. At the end of their discussions, the small groups will report on their results.
4. Feedback exercise. Another video or live trainee-patient encounter is presented, and participants discuss/ demonstrate how feedback is given to the trainee.

Participants in this workshop will go through each of the components as faculty would, and after each, the group will reflect on what was effective and what was not.

Workshop Objective

The objective of this interactive session is to help participants create their own faculty development workshop for workplace-based assessment. The learner will become familiar with an evidence-based workshop model, go through it, and then reflect on what has been effective and what has not.

Who Should Attend

Healthcare professionals interested in learning the basics of workplace-based assessment and/or those interested in teaching new faculty about it.

W2P4

THURSDAY 25TH MAY 2023, 1.00PM – 5.00PM
VIRTUAL PLATFORM

ARE YOU STILL USING POWERPOINT? SIMPLE WAYS REVITALISE YOUR PRESENTATIONS AND REIGNITE STUDENT INTEREST IN THE CLASSROOM

Michael Herr
United States of America

Workshop Description

All medical science educators use PowerPoint. There are easy ways to make presentations more appealing to attendees which also aid in their understanding. This workshop goes beyond the addition of simple animations and intends to introduce medical educators to ways to easily organise their current presentations to make them more memorable and relatable for students. This four-hour workshop is designed to provide a hands-on experience for medical educators. Participants will learn how to re-organise current PowerPoint presentations and apply slide transitions, animations, videos, and other features that they can employ immediately after attending. The instructions provided in the workshop range from simple to involved changes and additions that will make presentations more dynamic and engaging. All methods involve hands-on instruction and the workshop is designed at an easily understood, introductory level of learning. Attendees will need their laptop computers or tablets equipped with Microsoft PowerPoint. The instructor will provide a PowerPoint template to work with for the first two hours. There will be a short (less than 30 minute) introduction. The introduction is used to demonstrate the drastic difference between a static and dynamic presentation, and also to introduce three panes of PowerPoint – the selection pane, format shape pane, and animation pane. Participants will then learn how these panes can be used to organise a presentation with slide transitions and animations. We will discuss the artful use of animation in presentations and understand the fine balance between static and dynamic presentations. Attendees are strongly encouraged to bring one of their own PowerPoint slide shows to work on for the remaining two hours with the help of their peers and the workshop facilitator.

Workshop Objective

The objective is to learn and understand how to effectively use PowerPoint to create dynamic, engaging presentations. This objective will be achieved by introducing and utilising the three panes of PowerPoint – the selection pane, format shape pane, animation pane – to create engaging presentations.

Who Should Attend

Any medical science educator that still uses PowerPoint. That is, everyone! Attendees will acquire the skills necessary to easily edit their current PowerPoint presentations into creative, dynamic presentations that will capture student interest and further their understanding and retention. Attendees will be able to walk away from the presentation with the skills needed to implement a change in their presentations. The workshop is entirely hands-on, utilising a template file at the beginning and then a presentation of their choosing towards the end.

W2P5

THURSDAY 25TH MAY 2023, 1.00PM – 5.00PM
VIRTUAL PLATFORM

WHO DEFINES 'QUALITY'? DECONSTRUCTING HEGEMONIC IDEAS OF QUALITY IN MEDICAL EDUCATION

Mohammed Ahmed Rashid
United Kingdom

Workshop Description

The workshop will start with a welcome from the facilitator and participants will be invited to introduce themselves and describe their current roles in medical education. An anonymous poll will then be used to enable participants to answer a series of questions about quality in medical education, including about principles that are currently dominant and the extent to which these apply in their own contexts. The facilitator will then present a historical examination of notions of quality in medical education and how certain ideas have come to dominate in recent decades, with a particular focus on globalisation and international approaches to quality management. Participants will then work in small groups to answer a series of questions that critically examine the 'status quo' in global approaches to medical education quality management, sharing their responses with the broader group. In the final part of the session, participants will work in small groups to reimagine the idea of quality in medical education by focusing on local contexts and cultures, and developing a different role for global players. The workshop will conclude with a summary of key messages and a discussion about future policies and practices that might help to realign approaches to quality that are contextually authentic.

Workshop Objective

To critically examine assumptions that underpin discourses of quality in medical education and consider the extent to which a global approach can be applied across the varied contexts of medical education around the world.

Who Should Attend

This workshop will be of interest to those who are seeking to define and operationalise ideas about quality in a medical education context, and to those who have an interest in globalisation as applied to medical education.

W2P6

THURSDAY 25TH MAY 2023, 1.00PM – 5.00PM
VIRTUAL PLATFORM

OPEN BOOK EXAMINATIONS: THE FIVE WS AND HOW

Er Hui Meng, Wong Pei Se and Vishna Devi Nadarajah
Malaysia

Workshop Description

In view of the exponential growth of knowledge, increasing efforts have been directed towards teaching and learning strategies that promote transformative learning. Similarly, innovative assessment methods are necessary to ensure that the students' competencies are appropriately assessed and the graduates are work ready. Open book examination (OBE) is one such tool that has been commonly used in health professions education since the COVID-19 pandemic started in 2020. Despite claims that it promotes deep learning, problem solving and analytical thinking among the students, there is insufficient literature evidences to support its exclusive use thus far. The

advancement of technology has enabled OBE to be conducted onsite or remotely. With the latter, issues around academic integrity and ethics need to be looked into in order to assure the stakeholders of the validity and reliability of OBE. Clearly, the implementation of OBE needs to be carefully planned in alignment with the learning outcomes and assessment blueprint of an academic programme. In this workshop, these practical considerations will be discussed in the context of health professional training.

Workshop Objective

1. Discuss the educational objectives of open book examinations.
2. Identify learning outcomes that can be appropriately assessed using open book examinations.
3. Explore the practical considerations for planning and conduct of open book examinations.

Who Should Attend

This workshop will be useful for academic administrators, programme and assessment coordinators, faculty and examination professional staff.

W2P7

THURSDAY 25TH MAY 2023, 1.00PM – 5.00PM
VIRTUAL PLATFORM

HOW CAN I MAKE THE MOST OF MY QUALITATIVE RESEARCH DATA? QUALITATIVE DATA COLLECTION AND ANALYSIS

[1]Lee Shuh Shing and [2]Diantha Soemantri
[1]Singapore and [2]Indonesia

Workshop Description

Qualitative research can shed light on new phenomena and offer rich details in any study area. Still, if qualitative researchers fail to convey their findings succinctly, clearly, and in an easy-to-understand manner, it is unlikely that this research will ever reach relevant audiences. Hence, collecting qualitative data and analysing qualitative research findings in a proper manner is crucial because this is how researchers can convince journal editors to publish their manuscripts and practitioners to pay attention to and apply their findings. However, most of the time we learn qualitative data collection and analysis in theory and hardly have opportunities to do hands-on practise until we apply qualitative research methodology in our own research.

In the present workshop, participants will be given the opportunities to critically appraise some interview guides and interview transcripts so that they are aware of the commonly make mistakes while developing an interview guide and how this can affect the data gathering process during the interview. In the second section of the workshop, participants will have the opportunities to analyse some data using a few methods. Participants who encounter challenges during data collection and data analysis phases are encouraged to share their experience and we will try to help/provide some advice for the participants on how to proceed.

Workshop Objective

At the end of the workshop, participants are able to:

1. Create a good interview guide
2. Carry out a proper interview session with the interviewees
3. Apply different types of qualitative analysis method in analysing the qualitative data

Who Should Attend

Faculty members, researchers and administrators who are involved in qualitative research.

FRIDAY 26TH MAY 2023, 9.45AM
HO BEE AUDITORIUM, UNIVERSITY CULTURAL CENTRE

OPENING KEYNOTE ADDRESS - CREATING HOLISTIC HEALTH PROFESSIONS EDUCATORS: LESSONS FROM CURRICULAR REVISION

Professor Neil Osheroff
Professor of Biochemistry and Medicine
John G. Coniglio Chair in Biochemistry
Vanderbilt University School of Medicine, United States of America

Over the past decade, medical schools worldwide have revised, or are in the process of revising, their undergraduate curricula. These curricular revisions are accompanied by a variety of pedagogical changes that emphasise active learning. However, one of the overriding themes from school to school is the incorporation of sessions that integrate foundational and medical sciences. In some instances, integration goes a step further to include competencies such as professionalism, communication skills, etc., into the same learning sessions.

This holistic and integrated approach to health professions education has been successful and is supported by cognitive psychology theory and experiments. Despite these successes in the learning environment, however, it is not clear that we are taking the same integrated approach to developing our health professions educators. Many of these individuals are provided little or no training, with the potential exception of how to give lectures. The modern educator has numerous roles beyond information provider, including facilitator, assessor, mentor, role model, curriculum/course/program designer, leader, and scholar. In order to be a successful, faculties need to have training that integrates all of these aspects in a holistic manner. Having a structural environment that supports this type of faculty development also supports professional identity formation.

This keynote talk will describe how curricular redesign has influenced the way we teach and engage our trainees and how it has changed the roles of the health professions educators. It will emphasise the integrated skill sets that these individuals need to possess to be successful and the importance of taking a scholarly approach to teaching and sharing best practices through scholarship and scholarly endeavours.

FRIDAY 26TH MAY 2023, 10.45AM
HO BEE AUDITORIUM, UNIVERSITY CULTURAL CENTRE

SYMPOSIUM 1 – INNOVATIONS IN MEDICAL EDUCATION: GETTING BEYOND THE HYPE TO WHAT REALLY WORKS

Understanding Successful Innovations
Ronald M Harden, United Kingdom

New Directions in Education Technology
Goh Poh Sun, Singapore

Design Thinking and Other Methods of Innovation
Tao Le, United States of America

Sustaining Education Innovation in Low Resource Settings
Hoang Minh Nguyen, Vietnam

INNOVATIONS IN MEDICAL EDUCATION: GETTING BEYOND THE HYPE TO WHAT REALLY WORKS

Medical education, like any other field, benefits from advances driven by innovations over time. However, the innovation process is often misunderstood and mythicized by leaders and the general public. Education and innovation share a unique relationship in that successful innovation involves accelerated learning and development of novel insights. Consequently, the evolution of how we learn and teach impacts how we innovate.

INNOVATIONS IN MEDICAL EDUCATION: GETTING BEYOND THE HYPE TO WHAT REALLY WORKS

Medical education, like any other field, benefits from advances driven by innovations over time. However, the innovation process is often misunderstood and mythicized by leaders and the general public. Education and innovation share a unique relationship in that successful innovation involves accelerated learning and development of novel insights. Consequently, the evolution of how we learn and teach impacts how we innovate.

In this symposium, we investigate the role of innovation in advancing the field of medical education to create new, sustainable value for healthcare, patients and society. We define what innovation is and address common misconceptions. Major innovations and their impacts to medical education will be reviewed. We will then explore the current state of education technology which has seen an acceleration in innovation over the past. There will be a focus on promising, emerging technologies. Next, we will describe major systematic approaches to innovation such as design thinking and lean methodology. Finally, we explore how education innovations can be sustained over time, even in low-resource settings.

Understanding Successful Innovations

Ronald M Harden
General Secretary and Treasurer, Association for Medical Education in Europe (AMEE), United Kingdom

Successful innovations relating to admission to medical studies, the curriculum and assessment of the product will be considered. The penetration and success of the innovations can be attributed to a number of underlying, common factors. A key characteristic, as argued by Simon Sinek (2009) in the book Start with Why, was that they each had a clear purpose. This was to contribute to the delivery of an authentic and relevant programme. Also common to the innovations were four characteristics which had been described by Jack Schneider (2014) as crucial to the adoption of an innovation: perceived significance, philosophical compatibility, occupational realism and inference portability.

New Directions in Education Technology

Goh Poh Sun
Associate Professor and Senior Consultant, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

The COVID-19 pandemic shone a bright light on the importance of education technology. We will discuss three new “directions” or paths - exemplified by Virtual/Augmented and Mixed Reality (VR/AR/MR); Artificial Intelligence (AI) including the latest debates on generative AI and ChatGPT; and the current and future promise of mobile technology/networks anchored on 5G and future 6G wireless technology. The discussion will be strongly anchored on addressing the “job to be done” to quote Clayton Christensen. We will frame the use of educational technology in the context of “human needs” by augmenting, expanding and extending our human capabilities and reach, and ultimately bringing us closer together.

Design Thinking and Other Methods of Innovation

Tao Le
Associate Clinical Professor, University of Louisville, United States of America

Contrary to popular belief, major inventions usually do not develop from spontaneous “Aha!” moments of sudden enlightenment. They are more likely to evolve from innovation systems characterized by structured processes implemented by determined teams over an extended period. Design thinking is a human-centered approach to creative problem solving. Focusing on the humans involved such as educators, students and patients is likely to lead better, more impactful products, services and internal processes. We will describe other innovation approaches such as systems thinking, agile methodology and lean startup and their applications.

Sustaining Education Innovation in Low-Resource Settings

Hoang Minh Nguyen
Research, Monitoring & Evaluation Manager, The Partnership for Health Advancement in Vietnam (HAIVN), Vietnam

Innovation programs in education can be limited in time and quantity of funding, budgeting, and other support mechanisms. Integrating and sharing the effort with established systems, private-public partnerships, the local community, and other stakeholders is essential to maintain innovation outcomes. We will share work examples from the Partnership for Health Advancement in Vietnam’s (HAIVN) that illustrate how adapting educational innovations can contribute to successful curricular reform at the country’s medical schools in low-resource settings.

FRIDAY 26TH MAY 2023, 10.45AM
THEATRE, UNIVERSITY CULTURAL CENTRE

PANEL DISCUSSION 1 – FOSTERING WELL-BEING IN THE LEARNING ENVIRONMENT: INTERNATIONAL PERSPECTIVES

Perspectives from the United States of America on Fostering Well-Being in the Learning Environment
Aviad Haramati, United States of America

Perspectives from Australia on Fostering Well-Being in the Learning Environment
Jo Bishop, Australia

Perspectives from Singapore on Fostering Well-Being in the Learning Environment
Marion Aw, Singapore

The Impact of Culture and Context in Nurturing Student Well-being
Muhamad Saiful Bahri Yusoff, Malaysia

FOSTERING WELL-BEING IN THE LEARNING ENVIRONMENT: INTERNATIONAL PERSPECTIVES

The Learning Environment in medical education is a complex entity involving a combination of personal, social, curricular/organisational, and physical/virtual factors. What is evident from recent reports is that elements of the learning environment can impact adversely on the well-being of learners. Moreover, the well-being of faculty and staff also affects the environment in they work and teach. Understanding and addressing those elements is key to creating innovative interventions that successfully provide a healthier workplace. Indeed, a number of curricular programs have been shown to effectively reduce stress and burnout and foster resilience, empathy, and well-being. This panel discussion will address the critically important issue of how to foster well-being in the learning environment. The three speakers: Prof Aviad Haramati (United States of America), Assoc Prof Jo Bishop (Australia) and Assoc Prof Marian Aw (Singapore) are experts from different countries, with responsibilities of overseeing or guiding student and faculty well-being at their institutions. They will provide important perspectives on the questions listed below. As we get closer to the Conference, the panellists will narrow the list to 2 questions in a format provided in the guideline for Panel Discussions. The moderator, Assoc Prof ZX Chen, will introduce the topic, ask each panellist to provide comments on the first question and then will summarise all points and then will move to the second question. We will also invite comments and reactions from the participants. The session will end with an overall summary by the moderator.

Below are the questions being considered:

- Which aspect of the learning environment do you believe is most critical in causing ill-health in learners and how would you improve it?
- Does the curriculum have a role in fostering well-being in the learning environment or is this an extra-curricular matter?
- How does faculty well-being impact learner well-being at your institution?

Perspectives from the United States of America on Fostering Well-Being in the Learning Environment

Aviad Haramati
Professor, Center for Innovation and Leadership in Education (CENTILE), Georgetown University, United States of America

Prof Haramati will provide his perspectives on two questions that the moderator will pose. Prof Haramati has had a long-standing interest in fostering student and faculty well-being and addressing issues of stress and burnout in academic medicine.He was invited to join the Josiah Macy Foundation Consensus Conference in 2018 to address and host the 2019 CENTILE Conference in Washington, DC, which was a 3-day gathering of 250 educators and leaders to focus on strategies to promote the well-being of health professionals in the learning and work environments and leaders to focus on strategies to promote the well-being of health professionals in the learning and work environments. He currently serves as co-chair of the Committee on Student Well-being at Georgetown University School of Medicine. He is also involved with fostering well-being in academic medicine on national and international levels, and is ideally suited to present his perspectives for this panel discussion.

Perspectives from Australia on Fostering Well-Being in the Learning Environment

Jo Bishop
Associate Professor, Bond University, Australia

In her capacity as Associate Dean of Student Affairs and Service Quality (SASQ) at Bond University in Australia, Assoc Prof Jo Bishop is very familiar with the elements in the learning environment that can impact adversely on student well-being. Her research focus is specifically in the area of student and staff well-being and its alignment within curricula. As chair of the Promoting Well-Being Group, she has coordinated the recent review of mental health and well-being within her University, and chairs the Student Well-Being and Safety Advisory Committee. She will provide valuable perspectives on panel with her experience in both Australia and the UK.

Perspectives from Singapore on Fostering Well-Being in the Learning Environment

Marion Aw
Associate Professor, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

Assoc Prof Marion Aw will provide important insights to the panel discussion. In her current role as Vice Dean (Students) for the NUS Medical School, as well as the Education Director at NUH, she oversees placements and training for medical, nursing, pharmacy and allied health students. She has expertise in understanding the elements of the learning environment that impact on medical student well-being. Her role as Chair of the Physician Well-being and Resilience Subcommittee, she is an excellent individual to provide expert perspectives on the experiences in Singapore.

The Impact of Culture and Context in Nurturing Student Well-being

Muhamad Saiful Bahri Yusoff, Malaysia
Associate Professor, Head of Medical Education Department, School of Medical Science, Universiti Sains Malaysia

The well-being of students is influenced by a variety of factors, including their cultural and contextual background. Cultural beliefs, values, and practices can shape a student's perception of well-being and affect their ability to cope with stressors. Additionally, the context in which a student is living and learning can impact their mental and emotional health. This includes factors such as the quality of relationships, social support networks, and access to resources for mental health care. Understanding and addressing the impact of culture and context on student well-being is critical for creating effective strategies to support the mental and emotional health of students in educational settings.

FRIDAY 26TH MAY 2023, 10.45AM
THEATRE, UNIVERSITY CULTURAL CENTRE

SYMPOSIUM 2 – SCHOLARSHIP TO PREPARE PROFESSIONALS FOR THEIR FUTURE ROLE IN EDUCATION

The Importance of Scholarship for Educator Career Development
Diann Eley, Australia

The Use of Educational Theories
Karen Scott, Australia

Qualitative and Mixed Methods Research
Bonny Dickinson, United States of America

Ways to Publish Scholarly Results in MedEd Journals
Peter GM de Jong, The Netherlands

SCHOLARSHIP TO PREPARE PROFESSIONALS FOR THEIR FUTURE ROLE IN EDUCATION

The field of health sciences education is evolving continuously. The medical educator of the future needs to be able to explore the impact of their educational practice and to improve their teaching based on educational theory and evidence. In this endeavour, educational scholarship plays an important role. Scholarship is defined as the systematic inquiry into a topic and the reporting of results and conclusions drawn from that inquiry. However, as education is a social science, research methodologies and frameworks are very different from bench research in biomedicine, in which many health science educators have been trained. In this session, the speakers will address the importance of scholarship, educational theories and frameworks, research methods and opportunities to disseminate scholarly outcome.

The Importance of Scholarship for Educator Career Development

Diann Eley
PhD, University of Queensland, Australia

Scholarship is the cornerstone of academia and an important element in promotion and tenure of faculty. Dr Eley will elaborate on what scholarship means in education, what it looks like and how it is evaluated. While scholarship will continue to be important in the future, expectations and opportunities for scholarship are changing. The scholarship landscape for academics and clinical educators presents new challenges. Universities continue to move toward a fiscally driven agenda that has trended toward a general reduction in funds to support educational scholarship in favor of buildings, infrastructure, and basic or biomedical research. These trends can result in fewer opportunities for recognition and reward for the creation of new knowledge and academic achievement by educators. Dr Eley will emphasize how scholarship distinguishes educators as scholars and describe options and strategies for career development. Suggestions for navigating these challenges and an emphasis on finding your own “scholarly soul” will be discussed.

The Use of Educational Theories

Karen Scott
PhD, University of Sydney, Australia

Educational research differs from biomedical research in the use of theories. Instead of using models, the educational researcher often uses different educational theories or 'lenses' to look at a phenomenon. Theories can help educators to understand the phenomenon, critique and improve it, represent the workings of complex phenomena and find solutions to problems. Different theories illuminate different aspects of a situation. Theory can inform teaching practice and be informed by it. There are different levels of theory, ranging from personal beliefs to broad overarching theories. After exploring how teachers form their educational beliefs, A/Prof Scott will introduce a few popular educational theories. She will then outline grounded theory, an approach used by researchers to develop theory based on their own research findings.

Qualitative and Mixed Methods Research

Bonny Dickinson
PhD, University of Sydney, United States of America

Another difference between biomedical and educational research is the use of very different research methods. While most faculty are trained in quantitative methods, in education research, qualitative and mixed methods are frequently used. While quantitative methods are used to test objective theories by examining the relationship among variables, qualitative methods are used to explore and understand the meaning that individuals or groups ascribe to a social or human problem and thus deepen an understanding of a phenomenon. Mixed methods research designs use both quantitative and qualitative methods to address research questions that are best answered with both approaches. Dr Dickinson will introduce the audience to these different approaches and their various strategies of inquiry, data collection methods, data analysis methods, and philosophical worldviews.

Ways to Publish Scholarly Results in MedEd Journals

Peter GM de Jong
PhD, Leiden University Medical Center, The Netherlands

Once a scholar has performed an evaluation or research study, the results need to be reviewed by peers and made public. There are different venues to publish the results of scholarly work, such as oral and poster presentations at conferences, and of course journal articles. Dr de Jong will give an overview of options to share scholarly results. He will discuss the fundamental differences between the education literature and the medical science literature that many of the medical educators are more familiar with. He will also address the differences between several medical education journals and provide the audience with some tips for optimal preparing a manuscript for submission.

FRIDAY 26TH MAY 2023, 12NOON
HO BEE AUDITORIUM, UNIVERSITY CULTURAL CENTRE

PLENARY 1 – WHAT TECHNOLOGICAL INNOVATIONS MEAN FOR OUR ASSESSMENT PROGRAMS

Lambert Schuwirth
Chair Prideaux Health Professions Education, Flinders University, College of Medicine and Public Health, Adelaide, Australia; Professor of Medical Education, Chang Gung University, Taiwan; and Professor of Medicine (Education), Uniformed Services University for the Health Sciences, Bethesda, United States of America

Technological changes are happening ever faster. As health professions education developers and researchers, we need to constantly ask ourselves what these technological changes mean for us. In doing so, it is tempting to look at the technology in itself. However, by just focusing on the technological aspects of these changes without considering the impact they have on society in general and our students in particular is risky. The greatest pitfall is probably that changes to assessment remain limited to changes to the process at the expense of looking at changes in the value proposition. A mantra in business states that businesses that focus on the value proposition are better able to adapt to changes than those that focus on their processes. If we look at the impact of technology on society and our students, probably the most important aspect is connectedness. Our students are connected with others from all over the world, with a unique diversity of perspectives, and with information, and this is time and location-independent. It leads for example to empowerment and a decrease of power asymmetry, both between doctor and patient and between student and teacher. So, now is the most opportune time to rethink the value proposition of our assessment programs. Currently, many are focused on selection, grading, and distinguishing between students. This is at odds with a value proposition of education, which is about uplifting and ensuring that every student becomes the best professional they can be. In this presentation I want to make the argument that the disruptions created by technology require us to rethink the purpose and value proposition of our assessment programs.

FRIDAY 26TH MAY 2023, 12NOON
THEATRE, UNIVERSITY CULTURAL CENTRE

PLENARY 2 – PROFESSIONAL IDENTITY FORMATION FROM THE SOCIO-CULTURAL LENS: ENTANGLING STUDENTS' AND TEACHERS' PROFESSIONAL DEVELOPMENT IN THE CURRENT WORLD

Ardi Findyartini
Professor in Medical Education, Department of Medical Education & Medical Education Center Indonesia Medical Education and Research Institute (IMERI) Faculty of Medicine Universitas Indonesia, Indonesia

In today's changing world, becoming adaptive professionals is a must as this means changing public expectations and expected roles, including for health professionals. While professional development is a core concept that has been widely taught and discussed in the curriculum and faculty development in health professions education, it is time to discuss further the transformative development to the next level. Personal and professional identity formation (PIF) of health professions students and teachers is recognised as an ongoing effort to internalise core professional values and roles as an inseparable part of one's development. For students, becoming doctors and health professionals is a transformational process starting from their early education and training. Likewise, teachers with basic science or clinical backgrounds develop their capacities to fulfil their roles as teachers in addition to their roles as clinicians or researchers. Their motivation, existing identities and roles, will be developed either implicitly or explicitly when they have interactions with students/teachers, patients, role models, etc and their environment. This socialisation is pertinent for PIF, hence early position as observer with limited roles and competence can then be transformed to more central and critical roles. The substantial development of not just enacting the roles but integrating them as one's identity is essential in PIF and it requires attempts which recognises individual characteristics and situation as well as personalised support and strategies. There is a high relevance of socio-cultural factors in developing PIF for both students and teachers at individual, interactional and environment levels. This plenary will explore the identity development, the importance of supporting PIF of health professions students and teachers as a whole in an institution, with emphasis of the socio-cultural factors. Case studies from hierarchical and collectivist culture will be used to elaborate the issues further. created by technology require us to rethink the purpose and value proposition of our assessment programs.

FRIDAY 26TH MAY 2023, 12NOON
ATRIUM, UNIVERSITY CULTURAL CENTRE

PLENARY 3 – PREPARING THE NEXT GENERATION OF HEALTHCARE PRACTITIONERS: ROLE OF SCHOLARSHIP OF TEACHING AND LEARNING (SOTL)

Amanda Kenny
Professor Emerita and Visiting Professor, La Trobe University, School of Rural Health, Bendigo, Victoria, Australia and Visiting Chair of the College of Social Science, University of Lincoln, Lincoln, United Kingdom

Experts in every major country paint a dire picture of future healthcare. Most people in hospitals shouldn't be there. They are there because of health system failings and because of the way we educate students.

We are stuck in a time warp where we fervently defend our brilliance at entertaining students in lecture theatres and skills laboratories showing how much we know. If we break down all health professional education, there are core competencies, yet we continue to duplicate and replicate core content and teach in disciplinary silos. Most health education programs have undergone tiny tinkering but are largely the same program that I was educated with over forty years ago.

We devalue educational research. The strong link between health sciences education and practice should drive how research is conducted. We should be focused on the impact of education on client outcomes, not on whether students in classrooms gain short term knowledge.

So, what is the role of Scholarship of Teaching and Learning, and what does it really mean? I would argue that most educators don't engage in evidence-based inquiry into teaching and learning and don't align their learning and teaching approaches with population need and the future of health systems.

In this presentation I will push you to move outside your comfort zone. I will challenge you with the question: Do you defend what you do by claiming expertise in the scholarship of teaching and learning or are you ready for a complete paradigmatic rethink?

FRIDAY 26TH MAY 2023, 2.00PM
HO BEE AUDITORIUM, UNIVERSITY CULTURAL CENTRE

PANEL DISCUSSION 2 – INTERNATIONAL PERSPECTIVES ON PROFESSIONAL IDENTITY FORMATION OF THE MEDICAL SCIENCE EDUCATOR

The 3 Stages of Professional Identity Transformation
Chen Zhi Xiong, Singapore

From Arts to Science and Back Again…A Kiwi's Tale
Kelby Smith-Han, Australia

We Are Scholars: Leveraging Strengths as Research Scientists for Education
Kim Dahlman, United States of America

INTERNATIONAL PERSPECTIVES ON PROFESSIONAL IDENTITY FORMATION OF THE MEDICAL SCIENCE EDUCATOR

Who is the medical science educator? Is he or she someone who teaches Biochemistry, Physiology etc? Is he or she someone who teaches any science related to medical practice? Does this 'someone' also have to do scientific research? How do we recruit the medical science educator – high FWCI, published in CNS (Cell, Nature, Science)? Is the medical science educator recruited or converted? Must the medical science educator do and publish educational research? How does one transform from a scientist or clinician to a medical science educator? What changes and what stays? The questions are endless, perspectives infinite. In this panel discussion, 4 medical science educators from 3 continents will share their personal journeys and draw from their individual experiences to shed light on what it means to be a medical science educator. Following this, a researcher will share a model of medical science educator professional identity formation based on a multi-institutional study. How can institutions help the individual faculty forge this identity and what must the individual faculty do to take on this identity? We hope this session will inspire aspiring medical science educators undergoing identity transformation and equip the academic leaders supporting them.

The 3 Stages of Professional Identity Transformation

Chen Zhi Xiong
Assistant Dean(Education), Yong Loo Lin School of Medicine, National University of Singapore, National University Health System (NUHS), Singapore

Most medical science educators are not trained as educators. They are usually scientists or clinicians in their previous lives. They then get trained on the job in education. In my presentation, I will share my journey from a true-blue research scientist to a health professions educator and an academic. Through a reflective process, I have come to realise there are 3 stages of professional identity transformation – apprehension and resistance, denial and impostor syndrome, joy and acceptance. I will touch on what we can do as individuals to get through each stage and what institutions need to do to support the transition. It will be an invitation for fellow colleagues to share their own stories, define these stages or reveal other stages that may shape their personal journeys

From Arts to Science and Back Again...A Kiwi's Tale

Kelby Smith-Han
Senior Lecturer, University of Western Australia, Australia

The journey to a medical science/clinical educator can begin from many places and can take many directions, turns and pathways. I will share my journey from being an Arts graduate to teaching undergraduate medical students, to staff development in health professional education. Alongside this journey I will highlight different aspects of professional identity formation (PIF) using theoretical concepts in PIF. Both successes and challenges during this journey that influenced my own professional identity formation, will be discussed.

We Are Scholars: Leveraging Strengths as Research Scientists for Education

Kim Dahlman
Associate Professor, Vanderbilt University School of Medicine, United States of America

The journey from research scientist to educator may include the adoption of a new identity; however, both identities should embrace "scholar" at their core. In addition to teacher, coach, and assessor, one role of the modern medical educator is that of a scholar. Biomedical scientists are trained scholars with strengths in conducting evidence-based research, critically reading the literature, writing grants, mentoring students, analysing data, and disseminating their work. These skills are incredibly important for the success of modern educators. I will briefly discuss my journey as a research scientist to becoming a medical educator and how I have leveraged my scientific training in education. Then I will invite other panellists to share their own experiences as scientists turned educators and how they have leveraged their scientific training for success in educational scholarship.

FRIDAY 26TH MAY 2023, 2.00PM
THEATRE, UNIVERSITY CULTURAL CENTRE

PANEL DISCUSSION 3 – GLOBAL FACULTY DEVELOPMENT TO ADVANCE HEALTH PROFESSIONS EDUCATION

FAIMER Global Faculty Development: Sustainable Partnership Model
Rashmi Vyas, United States of America

Outcomes of FAIMER Global Faculty Development
Shiyao Yuan, United States of America

Online Community Building
Page Morahan, United States of America

GLOBAL FACULTY DEVELOPMENT TO ADVANCE HEALTH PROFESSIONS EDUCATION

The Lancet Commission on education for health professionals of the 21st century recommended strengthening faculty development for transformational reform in education, to help improve the health of the communities. Faculty development programmes (FDP) have increased exponentially since then, both domestically and globally. Global FDPs include a variety of methods such as faculty exchanges, transnational collaboration, and replication of one country's program in another. Programme evaluation has shown an increase in participants' knowledge, skills, and creation of transnational communities. As Lewis and Steinert note, however, most programmes transfer Western educational programs to non-Western countries; instead, they recommend a partnership model in global longitudinal FDPs, with adaptation to regional context and promotion of bidirectional learning. The Foundation for Advancement of International Medical Education and Research (FAIMER), a member of Intealth has offered global longitudinal FDPs (LFDPs) in health professions education (HPE) and leadership for 22 years. Longitudinal FDPs are interventions lasting from 5 weeks to 4 years, with a median of 18 months and have the potential to foster changes beyond improved teaching performances, including transformations in organisational practices such as curricular modifications and network development and expansion. FAIMER strives for mutual and inclusive partnerships as recommended by Lewis and Steinert. The purpose of this panel is to describe the partnership model of FAIMER global LFDPs and building the global community of health professions educators. The model has been sustainable in advancing HPE with individual, institutional, and national impact. Our experience will be useful to us and other FDP experts as we continue to build global capacity in HPE.

FAIMER Global Faculty Development: Sustainable Partnership Model

Rashmi Vyas
Senior Associate, FAIMER, United States of America

The Foundation for Advancement of International Medical Education and Research (FAIMER®), a member of Intealth, offers longitudinal global faculty development programs (LFDPs) in health professions education (HPE) and leadership through its International FAIMER Institute (IFI) in the United States of America and its FAIMER Regional Institutes (FRIs) globally. FAIMER uses an adapted hub-and-spoke organisational design for FRI development through partnership with academic institutions globally, fostering mutual partnership and collaboration and delineating shared responsibilities. FRIs were modeled on IFI curriculum with adaptation to the local context. IFI was launched in 2001 in Philadelphia, Pennsylvania, as a 2-year part time hybrid LFDP. Since 2020, with the onset of the COVID-19 pandemic, IFI transitioned to a fully online program. Over the past 22 years, 11 FRIs were developed in Brazil, Chile, China, Egypt, India, Indonesia and South Africa, each modeled on the IFI curriculum with adaptation to local context. The programme is centred on Fellows' institutional projects to provide experiential learning. Over 1600 IFI and FRI graduates (Fellows) from over 55 countries form a global network of health professions educators. FAIMER developed a successful, sustaining model for advancing HPE. The model has created a vibrant network of health professions educators who have influenced policy and practice. This communication describes the partnership approach of FAIMER LFDPs as a sustainable model to advance HPE.

Outcomes of FAIMER Global Faculty Development

Shiyao Yuan
Technical Associate and Data Scientist, FAIMER, United States of America

Outcomes of FAIMER global faculty development programmes (FDP) have been measured on individual, institutional and national/regional levels. At the individual level, across all global locations of FAIMER programmes, Fellows have reported increased levels of knowledge, skills and competence in Health Professions Education and Assessment, Professional and Leadership Development, Research and Scholarship, as well as Project Management and Evaluation. Fellows' projects are central at a FAIMER fellowship and have also been "vehicles" for driving changes at the institutional level. Over the past two decades, about 50% of Fellows' projects have been incorporated into the institutional curriculum, policies, or procedure. Increased quality of education and facilitating changes in institutional/departmental policies were reported as top changes driven by Fellows' projects. India, with maximum number of FRIs in existence for the longest duration, provides an example of major national impact of FAIMER's FDP. For example, 18 FAIMER fellows are convenors or co-convenors at medical schools that are recognised centres by National Medical Commission (NMC) to offer basic or advanced faculty development courses in medical education. Beginning in 2019, Fellows have held designated leadership roles in implementing the new national competency-based medical education (CBME) curriculum, serving as both chairman and members in the NMC taskforce for implementing the CBME undergraduate curriculum. In addition, Fellows have played an instrumental role during the COVID-19 pandemic in leading educational changes in health professional education at their own institutions exemplified by innovation in online teaching/learning and assessment. They have also led over 50 faculty training webinars on online teaching/learning and assessment. As FAIMER's FDPs pivoted to an online format during the COVID-19 pandemic, evaluation has provided initial evidence that the pivot was successful at individual and program level. More evaluations will be done to continue measuring outcomes at institutional and national levels.

Online Community Building

Page Morahan
Consultant, FAIMER, United States of America

The community building aspect has been crucial for the sustainable success of the IFI and FRIs over two decades. The onsite immersion experience in the IFI and FRIs was central to building a community of FAIMER Fellows. We intentionally created an environment for the fellows to bond within and beyond the classroom. During the residential component, Fellows stayed in the same venue and had meals together. The community building continued beyond the Fellowship years with alumni-led discussions on the FAIMER listservs and alumni returning as faculty. In addition, alumni collaborated on projects, research, and publications. Over two decades a vibrant global network of health professions educators was formed. With the pandemic, the Institutes moved online, creating the challenging task of building a close, tight knit, trust-based community when the Fellows never or seldom met face to face and also experienced up to a twelve-hour time difference in locations. We addressed this intentionally throughout the curriculum by activities such as: "learning circles" sessions where peers come together in small groups without faculty and share their life stories, and small group activities and assignments during synchronous and asynchronous sessions. We designed specific activities for connecting Year 1 and Year 2 Fellows such as: Year 1 and Year 2 Fellows interviewing and introducing each other, and Year 1 Fellows participating in Year 2 project presentations and vice versa. The current challenge we are addressing is building a virtual global community of practice across ALL the programmes, maintaining human interactions. We are experimenting with several strategies to engage our global community, including: an annual FAIMER Global forum (launched in 2021), and a virtual platform FAIMER Connect (launched in 2022). We believe that our online strategies will continue to strengthen and expand our global community.

FRIDAY 26TH MAY 2023, 2.00PM
ATRIUM, UNIVERSITY CULTURAL CENTRE

FREE COMMUNICATIONS FINALE 1

Please refer to conference website for list of finalists.

FRIDAY 26TH MAY 2023, 3.30PM
HO BEE AUDITORIUM, UNIVERSITY CULTURAL CENTRE

SYMPOSIUM 3 – ASPIRING TO EXCELLENCE – BEST PRACTICES IN HEALTH PROFESSIONS EDUCATION

Importance and Recognition of Best Practices in Health Professions Education
Kulsoom Ghias, Pakistan

Best Practices and Key Successes in Student Engagement: Lessons from Thailand
Danai Wangsaturaka, Thailand

Change Agents: The Core Concept of Student Engagement
Pongtong Puranitee, Thailand

Starting a Medical College Simulation Program and Achieving International Excellence
Abdulaziz Boker, Saudi Arabia

Successes and Near Misses in Achieving Excellence
Viktor Riklefs, Kazakhstan

ASPIRING TO EXCELLENCE – BEST PRACTICES IN HEALTH PROFESSIONS EDUCATION

Health professions education has both universal challenges and opportunities, and those more contextual to a situation or available resources. Following best practices in the field can contribute to process and outcome improvement across various settings. The AMEE ASPIRE-to-Excellence programme recognises excellence in the areas of curriculum development, student assessment, student engagement, social accountability, faculty development, simulation, technology enhanced learning, international collaboration and inspirational approaches in health professions education. In the last decade since its inception, the programme has set international peer-based standards of excellence in the identified areas and recognised more than 50 institutions across the globe for world-class excellence in education. Of these, 14 institutions are from the Asia Pacific region. This symposium will showcase the globally recognised best practices from ASPIRE award-winning institutions.

Importance and Recognition of Best Practices in Health Professions Education

Kulsoom Ghias
PhD, SFHEA, Department of Biological and Biomedical Sciences, Associate Professor and Chair, The Feerasta Family Endowed Chair, Aga Khan University, Pakistan

Use of evidence-based approaches and technology contextualised to available circumstances and resources is important to assure effectiveness in health professions education. What is the advantage of establishing standards and recognising best practices? The presentation will focus on one mechanism that recognises best practices in health professions education - the AMEE ASPIRE Award - and highlight important lessons learnt at the Aga Khan University in Karachi, Pakistan, as a South Asian applicant to the award, specifically in the categories of Assessment, Student Engagement, Curriculum Development and Social Accountability.

Best Practices and Key Successes in Student Engagement: Lessons from Thailand

Danai Wangsaturaka
MD, PhD, Faculty of Medicine, Chulalongkorn University, Thailand. Assistant Secretary General of the Consortium of Thai Medical Schools.

Student engagement describes a wide range of collaborative and mutually beneficial activities where students are actively involved in school management, educational programme provision, academic community, and community service. Some of these activities might seem difficult to be implemented in Asian medical school contexts; however, it is not impossible. The Faculty of Medicine, Chulalongkorn University has been recognised for excellence in student engagement practices since 2015 but the evidence of our student engagement activities can be traced back to 1970. This presentation will highlight best practices and key successes in student engagement with a focus on Asian contexts.

Change Agents: The Core Concept of Student Engagement

Pongtong Puranitee
Assistant Professor and Assistant Dean for Medical Education, Department of Pediatrics, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Thailand

The Faculty of Medicine Ramathibodi Hospital, Mahidol University, was established in 1965 with a firm belief in the benefits of student engagement, has continuously planned, structured, organised and anchored the concept of student engagement through core strategies such as fostering students' critical inquiry with a culture of respect, engaging students in research communities, and community-based practice. With the construction of our new student-centered campus in 2010, Chakri Naruebodindra Medical Institute, we aim to make our medical students agents of change and expand student engagement from students as evaluators to students as partners driving change in educational strategy and processes. In 2022, our medical school received the honourable ASPIRE Excellence in Student Engagement Award. We look forward to supporting others who want to excel in student engagement.

Starting a Medical College Simulation Program and Achieving International Excellence

Abdulaziz Boker
MBBS, FRCPC, Anesthesia and Critical Care Department, Professor and Chair, King Abdulaziz University, Saudi Arabia

During this presentation, a 14-year experience at King Abdulaziz University Clinical Skills and Simulation Center will be presented highlighting opportunities, local challenges, troubleshooting, failures and success stories. Specifically, the critical success factors for effective integration of simulation into medical education will be identified, and practical and cost-effective approaches for programme design and faculty development initiatives for early, intermediate and advanced staff levels will be discussed. How to avoid common preventable waste of resources to maximise gains and foster further and wider implementation across the curriculum will be shared. International best practices related to various accreditation processes in simulation-based education will be defined.

Successes and Near Misses in Achieving Excellence

Viktor Riklefs
PhD, MHPE, Vice-Rector, Karaganda Medical University, Kazakhstan

Karaganda Medical University is constantly striving for excellence in its more than 72-year history. The institution's simulation program started in 2007 and 10 years later, it was recognised with the ASPIRE-to-excellence award in Simulation when the award was first introduced. However, being successful in one area does not guarantee success in others. The experience with simulation was unique in its scope since it was started from scratch and was initially done right using international experience and expertise. The other areas in which ASPIRE awards are given, such as Student Engagement, Curriculum Development, Assessment have been evolving in a completely different context for quite some time. For Kazakhstan, and maybe even the rest of Asia, excellence in these areas may appear different than internationally accepted standards. Case in point, KMU's next try for an award in Student Engagement failed, but our 'near miss' only made us stronger. The reasons for success and failures will be presented, and assumptions shared on what will help to strengthen Asian medical education positions in achieving recognition of international excellence.

FRIDAY 26TH MAY 2023, 3.30PM
THEATRE, UNIVERSITY CULTURAL CENTRE

SYMPOSIUM 4 – RE-ADAPTING FROM ONLINE TO FACE-TO-FACE TEACHING/ LEARNING

Learning During and After Pandemic: Expectations Vs Reality: Can Students Cherry-pick?
Thilanka Seneviratne, Sri Lanka

Teaching Renal Physiology in the Post-COVID Future: Going Back or Moving Forward?
Aviad Haramati, United States of America

Adaptations in Teaching and Learning Medical Education and the Allied Health Sciences: Snapshots from The Philippines
Chiara Dimla and Vinna Marie T. Quiñones, Philippines

Developing a Course on Pandemic Medicine…During a Pandemic: Adaptive Expertise in Medical Education
Kim Dahlman, United States of America

RE-ADAPTING FROM ONLINE TO FACE-TO-FACE TEACHING/LEARNING

In the post-Covid era medical education is rapidly shifting to normalcy with face-to-face teaching, taking prominence again. However, it is unsure how students will face this change after having online lessons for nearly two years. The same goes for teachers and how the change in teaching methods might affect them. Are these two years of online learning and teaching going to have permanent dents and frameshifts in the good old face-to-face learning, as we have know it thus far? Does this warrant permanent changes to the curriculum, with good lessons learnt from the two years of online learning and teaching? Will the students ask for curriculum revisions? Any reshaping of medical education is going to be based on careful weighting of pros and cons of these two methods of learning and teaching. In this symposium, we are planning to probe into these very pertinent questions and share the global experiences on this matter.

Learning During and After Pandemic: Expectations Vs Reality: Can Students Cherry-pick?

Thilanka Seneviratne
Consultant Paediatrician, Senior Lecturer, University of Peradeniya, Sri Lanka

With the arrival of the COVID-19 pandemic, medical education was continued via online platforms. This sudden abrupt change from face-to-face to online education could have been challenging for the undergraduates as well as the teachers. Especially since medical education is tuned around learning through apprenticeship, shifting to being entirely online was really difficult and challenging. Assessments after total online learning was again a dream. However, after going through this new normal for two years, what started off as difficult and strange began less so over time. Now students and the teachers tend to think of the benefits of online learning compared to its physical counterpart. After two years do we still have the problems we faced when the online leaning first started? Certain elements in online teaching were embraced by the students while others were not. Do we want a total shift back to what it was pre-pandemic? Or have we just experienced the medical education variant of Alexander Flemings' accidental discovery of Penicillin?

Teaching Renal Physiology in the Post-COVID Future: Going Back or Moving Forward?

Aviad Haramati
Professor, Georgetown University, United States of America

Close to three years ago, the global COVID-19 pandemic, caused by the novel virus SARS COV-2, led to unprecedented upheaval and disruptions world-wide, and affected virtually all aspects of instruction at medical schools. For students and faculty alike, there was increased anxiety and stress, as emergency solutions were put in place to insure continuity of instruction and assessment in a new, and largely unfamiliar, virtual environment. Over the next weeks and months, both faculty and students began to adapt to the new reality, and 'Zoom fatigue' became manifest. This led to innovative and creative approaches in how and what to teach, and to a new way of learning. This presentation will provide examples of how one pre-clinical module at Georgetown University School of Medicine in Washington, DC, United States of America, reconfigured the instruction to optimise learning for students in a virtual environment, and also sought to enhance faculty-student interaction. Despite the physical separation, the Zoom platform provided an opportunity for greater social connectedness. Many students sought out additional sessions with instructors to review material, ask questions, and engage with peers and instructors. Is this just a passing phenomenon or have we stumbled on a better way of teaching and learning? The presenter believes that there is no going back to the way it was. The future of foundational science education is here and we are moving forward armed with the lessons and insights we gained during the pandemic.

Adaptations in Teaching and Learning Medical Education and the Allied Health Sciences: Snapshots from the Philippines

[1]Chiara Dimla and **[2]Vinna Marie T. Quiñones**
[1]*Associate Professor, University of the East Ramon Magsaysay Memorial Medical Center, Philippines*
[2]*Associate Professor, University of the East Ramon Magsaysay Memorial Medical Center, Philippines*

The COVID-19 pandemic has catapulted all levels of Philippine education to an online learning modality. Referred to also as distance-learning, what was once only utilised for selected post-graduate courses has supplanted the face-to-face modality to avoid disruptions in the educational system that can impact the competence and availability of licensed healthcare workers: medical doctors and allied health professionals. In line with the APMEC 2023 theme: Celebrating Excellence in Scholarship of Teaching and Learning, our institution* through its membership in the APBSEA, would like to share the teaching and learning experiences from the perspective of teachers and school administrators as the medical centre community responded to the Philippine COVID-19 situation and the significant adaptations that will be continued transitioning to what is dubbed as the new normal. Primary data will be collected to allow us to present the challenges identified, resolutions applied as well as the drivers and process of policy formulation and curricular changes in the context of the ongoing pandemic as we move forward as a provider of quality education and healthcare service in the country.

Developing a Course on Pandemic Medicine...During a Pandemic: Adaptive Expertise in Medical Education

Kim Dahlman
Associate Professor, Vanderbilt University School of Medicine, United States of America

When the SARS COV-2 infection arrived in our communities, life was essentially "paused" to help decrease the number of hospitalisations and unnecessary deaths. With that said, patient care in hospitals, biomedical research, and medical education had to continue. As the pandemic unfolded, Vanderbilt University School of Medicine faculty harnessed this unique and challenging time to prepare students to work and learn during the COVID-19 pandemic and to prepare students with foundational skills to serve as leaders in future disasters, epidemics, or pandemics. This presentation will provide an example of how Vanderbilt University School of Medicine rapidly responded to immediate student and community needs in the midst of the COVID-19 pandemic. With only two weeks to plan, we rapidly engaged ~ 200 clerkship and pre-clerkship medical students in a four-week Pandemic Medicine Integrated Science Course. This was a completely virtual, contextual learning environment that still ensured progress toward graduation. This course was broadly applicable for students with diverse career goals. The primary themes of the course were acquiring medical knowledge related to the current pandemic, applying evidence in an evolving setting, and developing leadership skills to apply to this and future healthcare crises.

FRIDAY 26TH MAY 2023, 3.30PM
ATRIUM, UNIVERSITY CULTURAL CENTRE

FREE COMMUNICATIONS FINALE 2

Please refer to conference website for list of finalists.

FRIDAY 26TH MAY 2023, 4.45PM
HO BEE AUDITORIUM, UNIVERSITY CULTURAL CENTRE

PANEL DISCUSSION 4 – MEDICAL SCIENCE LEADERSHIP IN HEALTH PROFESSIONS EDUCATION-THE NEXT 20 YEARS

Leading Educational Associations in Times of Crisis
Neil Osheroff, United States of America

Leadership and Followership: Critical Roles in Medical Education
Aviad Haramati, United States of America

Leadership That Addresses Local Healthcare Needs with a Global Influence
Solomon Sathishkumar, India

MEDICAL SCIENCE LEADERSHIP IN HEALTH PROFESSIONS EDUCATION-THE NEXT 20 YEARS

Healthcare needs are increasing and care models are changing. All these were accelerated by global shocks such as the pandemic, climate change and geopolitical instability. To stay ahead, health professions curricula have to keep pace. In turn, reforms must be carried out in the way faculties are being recruited, students are being taught, and the Schools are being managed. The thinking of how medical science subjects like Biochemistry and Physiology that are essential to all health professions, are taught and learned, too, needs to evolve. What kind of skills do medical science leaders require to handle this? Are current leaders sufficiently equip to inspire and manage change in a VUCA world? What are the blind spots that newer generation leaders may have? More importantly, where do we see medical sciences in health professions education in the next 20 years, and what are the educational leadership skills needed to take us there? This panel discussion will discuss these and more including threats and weaknesses of current faculty recruitment system to education, challenges in identity transformation of current leaders, and opportunities to prepare and nurture new ones. This session invites all existing leaders and administrators of health professions schools as well as aspiring faculty for a healthy and open dialogue.

Leading Educational Associations in Times of Crisis

Neil Osheroff
Professor, Vanderbilt University School of Medicine, United States of America

The COVID-19 pandemic swept over the world quickly, throwing health professions education and educational associations into disarray. How is it that some educational associations collapsed during the past three years while others flourished? To a large extent, it had to do with the leadership. Crisis is one of the ultimate tests of leadership. The skill sets that proved critical to successful leadership during the pandemic are numerous and will help educational associations adapt and thrive in the future. This session will explore these skill sets, including six “C” s: Communication needs to be clear and transparent. This will go a long way toward instilling loyalty, trust, and strong followership. Without followership, leaders lack the mandate to accomplish what needs to be done. Clarity of vision is essential, especially during uncertain times. The vision needs to reflect the values of the association. Caring and empathy are paramount to creating strong bonds with membership in periods of volatility.

These bonds were essential to counteracting the isolation and uncertainty of the pandemic. Character is always an important quality of leadership, but it is amplified greatly during times of crisis. Flaws in character will always show through under pressure and stress. Competence is a given but is put to extreme tests in crisis situations. Courage is a must in difficult times. Crises are not times for leaders to shrink and set goals of mere survival.

On the contrary, they are times for leaders to be bold and decisive. This creates hope. Even if mistakes are made, it is better to do something than to be indecisive and do nothing. Finally, crisis breeds chaos. Strong leaders find the opportunities that accompany chaos. Rather than fighting the headwinds of the pandemic, educational associations that flourished found ways to embrace and harness them.

Leadership and Followership: Critical Roles in Medical Education

Aviad Haramati
Professor, Georgetown University, United States of America

Academic medicine has long focused on cultivating leadership skills, as the perception persists that medical education evolves through the action of enlightened leaders. Indeed, mindful leaders, with well-developed characteristics of emotional and social intelligence, are necessary to effect change. However, they are not sufficient. Leadership does not exist without followers. In this presentation, the critical and underappreciated role of followership will be explored, with the hypothesis that mindful followers are not passive entities, but rather serve as essential partners in leading change. In fact, leaders cannot lead effectively, if there are no engaged followers. Followers can range from passive bystanders to active participants all the way to zealots. The effectiveness of their engagement depends on the degree of alignment with the leader's vision and goals. If the leader's vision resonates with followers, and support is forthcoming, then change will occur. However, if followers are apathic, even the best vision is doomed to fail. Sometimes, if the leader's vision is misaligned with institutional values, activist followers can prevent poor or destructive decisions. This is why advancing change needs both effective leaders and effective followers. Medical educators function as both leaders and followers, depending on circumstance. In addition to leadership skills, it is necessary for medical educators to learn how to be effective followers as part of their professional development. Some mistakenly believe that individuals can grow professionally only by acquiring positions of leadership. We can change the mindset that leadership is a position or title, and define it more as a partnership with followers. In this way, participants can see that all educators, regardless of their position, authority, or influence, can be effective and bring about change, as both leaders and followers, and that effective followers can make a positive difference in their teams and in the institution.

Leadership That Addresses Local Healthcare Needs with a Global Influence

Solomon Sathishkumar
Professor, Christian Medical College Vellore, India

Healthcare needs are constantly increasing and several of these are yet to be addressed. This requires urgent attention from the leadership in health professions education, so that the current education process and healthcare delivery systems may be transformed to meet the health needs of the people. Several medical institutions were founded to address local health needs. These institutions have strived to develop an educational system than can train health professionals to meet these health needs. In order to address the local healthcare needs, the leadership has to look at the curriculum. A contextual curriculum emphasises the importance of the social and healthcare context in the process of curriculum design. It is premised on the need for curricula to be aligned to the healthcare needs of the population in the community. Excellence can be achieved through contextual relevance. Contextual curriculum emphasises 'situational excellence', providing care that is best for the particular situation. The educational setting provides the context for learning. Therefore, the leadership has to ensure that the health profession curricula continuously keep pace and are aligned to the increasing health needs. There is a need for transformational leadership in health professions education in order to bring about the change that is required and have a global influence. The transformational leader should have a pulse of the ground level realities by constantly engaging with all the stakeholders. This will help to identify issues and bring about a transformation both locally and globally. The transformational leader must inspire and motivate followers to achieve higher goals than they ever thought possible.

FRIDAY 26TH MAY 2023, 4.45PM
THEATRE, UNIVERSITY CULTURAL CENTRE

SYMPOSIUM 5 – HARNESSING PREDICTIVE BRAINS TO IMPROVE CLINICAL THINKING

Basic Principles of Naturalistic, Intuitive, Bayesian Active Inference
Lim Tow Keang, Singapore

How to Cope Better with Uncertainties in Diagnosis
Benson Ang, Singapore

How to Cope Better with Uncertainties in Management Thresholds
Xu Hongyun, Singapore

HARNESSING PREDICTIVE BRAINS TO IMPROVE CLINICAL THINKING

"Biological agents must engage in some form of Bayesian perception to avoid surprising exchanges with the world. In this view, the Bayesian brain ceases to be a hypothesis, it is mandated by the free-energy principle; free-energy is not used to finesse perception, perceptual inference is necessary to minimise free-energy"

Friston K. The free-energy principle: a rough guide to the brain? Trends Cogn Sci. 2009 Jul;13(7):293-301

Advanced research in information technology, artificial intelligence, neuro-imaging, cognitive science, psychology, philosophy and thermodynamics have converged on an ambitious, integrated model of the brain. The theory of predictive brains (the free-energy principle) has emerged as a major narrative in the understanding of how our mind works. It may account for the limitations of interventions designed to improve clinical problem-solving based on the dual process theory of cognition. We describe an approach to teaching clinical thinking based on the PB or active inference model of cognition with practical examples and early results.

(Ref. https://medicine.nus.edu.sg/taps/the-predictive-brain-model-in-diagnostic-reasoning/)

Basic Principles of Naturalistic, Intuitive, Bayesian Active Inference

Lim Tow Keang
Senior Consultant, National University Hospital System (NUHS), Singapore

The predictive brain (PB) is an adaptive, generative, energy-frugal, context-sensitive, action-orientated, probabilistic, predictive engine. It responds only to predictive errors and learns by iterative predictive processing and hierarchical neural coding. The predictions arise from "backwards thinking" as inferential Bayesian approximations based on "bottom-up" sensory data and "top-down" prior experience. Thus, clinical reasoning is predictive error processing and learning is predictive coding. Furthermore, we may exploit the efficiency of PBs by using simple rules of thumb to optimise metacognitive calibrations of the predictive processes as "levels of confidence". (Ref. 1)
Students need NOT know any "theory of thinking" – they do this automatically – they only need to know the right type of habits to practice for lifelong improvement. (Ref. 2)

1. https://medicine.nus.edu.sg/taps/the-predictive-brain-model-in-diagnostic-reasoning/
2. Methods to Improve Diagnostic Reasoning in Undergraduate Medical Education in the Clinical Setting: a Systematic Review. Xu H, Ang BWG, Soh JY, Ponnamperuma GG. J Gen Intern Med. 2021 Sep;36(9):2745-2754

How to Cope Better with Uncertainties in Diagnosis

Benson Ang
Medical Officer, MOH Holdings, Singapore

Students will be motivated to practice with (i) illness scripts & compare-n-contrasting (ii) key features to reduce base rate (pre-test) variations/uncertainties (Ref.). We will demonstrate the use of (iii) “pivot-n-cluster” Venn diagrams to prune reduce less likely diagnoses. We will encourage routine (iv) self-appraisal of diagnostic uncertainties meta-cognitively expressed as levels of confidence (LOC). Tutors will (v) calibrate their students’ LOC by comparting them with their own; where appropriate, giving real-time (vi) feedback.

Ref. Morgan DJ, Pineles L, Owczarzak J, Magder L, Scherer L, Brown JP, Pfeiffer C, Terndrup C, Leykum L, Feldstein D, Foy A, Stevens D, Koch C, Masnick M, Weisenberg S, Korenstein D. Accuracy of Practitioner Estimates of Probability of Diagnosis Before and After Testing. JAMA Intern Med. 2021 Jun 1;181(6):747-755.

How to Cope Better with Uncertainties in Management Thresholds

Xu Hongyun
Medical Officer, MOH Holdings, Singapore

We describe an intuitive-heuristic version of the classic threshold method (Ref. 1) to clinical decision making. This is more naturalistic than formal decision analytical methods yet retains the core elements of probabilistic theory & Bayesian principles. We express uncertainties in the management of decision-making as “action threshold spans”. (Ref. 2) We furthermore describe how these uncertainties may be finely calibrated individually and in teams by activating the meta-cognitive capabilities of trust/confidence.

1. Pauker SG, Kassirer JP. The threshold approach to clinical decision making. N Engl J Med. 1980 May 15;302(20):1109-17.

2. Stojan JN, Daniel M, Hartley S, Gruppen L. Dealing with uncertainty in clinical reasoning: A threshold model and the roles of experience and task framing. Med Educ. 2022 Feb;56(2):195-201.

FRIDAY 26TH MAY 2023, 4.45PM
ATRIUM, UNIVERSITY CULTURAL CENTRE

SYMPOSIUM 6 – SHARING CHALLENGES AND OPPORTUNITIES IN CLINICAL CLERKSHIP TO PROMOTE SUPPORTED PARTICIPATION AMONG STUDENTS

Can We Promote More Student Participation in Clinical Clerkship?
Harumi Gomi, Japan

Experiences of the Enablers, Barriers, and Adaptations of Clerkship Training in Taiwan
Henry Yang, Taiwan

To Promote Supported Participation Among Students in Clinical Clerkship in Vietnam: Experience from CBME Curriculum Reforming at Hue University of Medicine and Pharmacy
Nguyen Thi Anh Phuong, Vietnam

SHARING CHALLENGES AND OPPORTUNITIES IN CLINICAL CLERKSHIP TO PROMOTE SUPPORTED PARTICIPATION AMONG STUDENTS

Assuring the quality of education in clinical clerkship has been a challenge especially when it comes to balancing clinical practise and student learning. Literature has reported that “supported participation” is one of the key factors for students to learn in workplace as part of the clinical team. This symposium will describe and discuss current status, challenges, and opportunities for improvement on clinical clerkship in Asian-Pacific context.

Can We Promote More Student Participation in Clinical Clerkship?

Harumi Gomi
Professor, Office of Medical Education, Center for Infectious Diseases, International University of Health and Welfare, Japan

In Japan, a major legal change will be made as of April 2023 to allow medical students to do more medical procedures under the supervision of medical doctors during clinical clerkship. The status of a medical student will be legally protected to function as part of the medical team. “Clinical observership” and “Clinical clerkship” are very different in terms of students’ experiences and learning. In Japan, “clinical observership” has prevailed for a long period of time. Legal support has been desired to help develop clinical skills such as taking history and physical examinations, writing medical records, and making patient presentations and finally, the law has been changed for medical students in Japan. Now is the time to change the learning environment for students so they can learn in the workplace. There are challenges such as faculty development, maintain patient safety, and opportunities for improvement including workplace-based assessment. Literature will be reviewed for best available evidence to support students in this new learning environment.

Experiences of the Enablers, Barriers, and Adaptations of Clerkship Training in Taiwan

Henry Jen-Hung Yang
Chair Professor and Director of Medical Education and Humanities Center, Chung Shan Medical University, Taiwan

Technology, global climate changes, and COVID-19 accelerate the complexity of the healthcare system. Medical educators are facing challenges in leading and transforming clinical teaching and learning in a highly complex health care system. I will share our experiences in undergraduate clerkship training in the past 10 years. We launched medical curriculum reform from 7-year Program to 6-year Program in 2013, and I will introduce the challenges and changes in clinical education based on CBME and experiential learning in Taiwan. We arrange students in different settings including the inpatient ward, outpatient clinic, operation room, simulation lab, and case and journal conferences, and assess with diverse work-based assessments and timely feedback. I will use the “5W1H” model — “why, who, what, when, where, and how” to introduce what we have done on teaching and learning in the clerkship curriculum. I will share the students’ and program directors’ reflections to identify the enablers and barriers of clerkship education in Taiwan.

To Promote Supported Participation Among Students in Clinical Clerkship in Vietnam: Experience from CBME Curriculum Reforming at Hue University of Medicine and Pharmacy

Nguyen Thi Anh Phuong
Dean of International Education Faculty and Deputy Head of Office of Science-Technology and International Relations, Hue University of Medicine and Pharmacy, Vietnam

The reforming process in medical education in Hue UMP has been implemented since 2017 based on Educational Science and Research toward the competency based medical education (CBME) in which the core organizing principles for clinical training applied and continuously improved that showed the significant changes in terms of “supported participation among students”. This presentation would share a few initial achievements and next steps particularly in applying the principle of education continuity. Our clerkship curriculum designed in ways that enhances the continuity of patient care, student learning, well-being and faculty satisfaction as follows: Patient care: students work with patients over time; Curriculum: students learn core material and professionalism over time; Cohort: students learn from and with peers over time; Supervision: students work with faculty preceptors over time.

4 disciplines of internal med., surgery, OB/GYN and paediatrics reviewed what have done to share for consolidating the results, findings and challenges. An online survey is conducted among students who participated in pilot on 3 EPAs. The findings are used to recommend for next steps to continuously improve the supported participation among students in clinical clerkship training.

SATURDAY 27TH MAY 2023, 9.00AM
HO BEE AUDITORIUM, UNIVERSITY CULTURAL CENTRE

SYMPOSIUM 7 - ACCREDITATION AND CERTIFICATION OF PROGRAMMES: STRENGTHS, LIMITATIONS AND WAYS FORWARD

Health Profession Accreditation: A View from Down Under
Wayne Hodgson, Australia

The Development and Way Forward of Medical Education Accreditation in China
Wang Weimin, People's Republic of China

Towards Setting Up an Accreditation Agency Recognised by WFME in Vietnam
Tran Diep Tuan, Vietnam

ACCREDITATION AND CERTIFICATION OF PROGRAMMES: STRENGTHS, LIMITATIONS AND WAYS FORWARD

Health Profession Accreditation: A View from Down Under

Wayne Hodgson
Deputy Dean (Education), Faculty of Medicine, Nursing & Health Sciences, Monash University, Australia.

Accreditation is a vital component of a thriving healthcare system and provides reassurance to a variety of stakeholders as well as providing the opportunity for self-reflection and improvement for the education provider (i.e. university). In this presentation I will provide insights into health professions accreditation in Australia from 'both sides of the fence'. i.e. as a member / Chair of accreditation panels and as an education leader who is often meeting with accreditation panels on site visits and also responsible for the internal accreditation of courses at my institute. The pandemic years of 2020 /2021 were challenging for accreditors as many accreditation / reaccreditation visits were delayed or undertaken remotely. As we emerge from the pandemic it is timely to reflect on how (or if) we can streamline accreditation and how we can improve the process for all stakeholders. i.e. what are the Strengths, Limitations and Ways Forward?

The Development and Way Forward of Medical Education Accreditation in China

Wang Weimin
Vice President of Peking University Health Science Center, Executive Deputy Director of National Center for Health Professions Education Development, Head of Institute of Medical Education of Peking University, China.

China has a long history of medical education. Facing a large population, the quality of medical education and the state of health have always been a matter of close concern. There are currently 202 medical schools in operation in China, with an annual enrollment of about 90,000 students.

After 15 years of development since its establishment in 2008, the Working Committee for the Accreditation of Medical Education (WCAME) has been committed to establishing an accreditation system for medical education with Chinese characteristics and international substantial equivalence. WCAME has passed the WFME recognition in 2020, valid for 10 years. In 2021, WCAME completed the first round of accreditation for basic medical education for medical schools in China and started a new round. Combining the current situation and trends of medical education development in recent years, WCAME revised the 2016 revision of standards for basic medical education and released the 2022 revision, which is the third edition of standards in China and also the basis for the new round of accreditation.

During the epidemic, the use of modern information technology (such as online teaching) has brought changes and impacts to the teaching model and methods of medical education, which prompted the need to consider the impact of these changes on the quality of medical education in future accreditation.

In the new round of accreditation, it is worthwhile to consider and discuss how to conduct continuous quality monitoring of medical schools and how to assess the quality of medical education from an evidence-based perspective.

Towards Setting Up an Accreditation Agency Recognised by WFME in Vietnam

Tran Diep Tuan
Chairman, Board of Trustees of University of Medicine and Pharmacy at Ho Chi Minh City (UMP), Vietnam

In 2005, for the first time the term “quality assurance” in higher education was mentioned by Ministry of Education and Training in Vietnam. It took more than 10 years for the first four accreditation agencies in the country to be established from 2014-2016. The criteria of accreditation were for all fields of higher educational programs and not specific for medical education and health professional education programs. So far, only a few medical education programs out of were accredited either by the criteria of the Vietnamese Ministry of Education and Training or ASEAN University Network – Quality Assurance (AUN_QA). To improve the quality of medical education in Vietnam, setting up a accreditation agency specific to medical education is essential. The University of Medicine and Pharmacy at Ho Chi Minh City and Center for Education Accreditation of Vietnam National University Ho Chi Minh City has initiated the idea, which is supported by Ministry of Health and Ministry of Education and Training. And with the support of Western Pacific Association for Medical Education a master plan is developed towards establishing in Vietnam an accreditation agency recognized by WFME.

SATURDAY 27TH MAY 2023, 9.00AM
THEATRE, UNIVERSITY CULTURAL CENTRE

SYMPOSIUM 8 – VIRTUAL CLINICAL SIMULATION, EDUCATION AND GAMIFICATION: ENHANCING THE PROCESS OF LEARNING AND OUTCOMES

Clarifying What is Virtual and The Authenticity of Learning Environment
Ashokka Balakrishnan, Singapore

Virtual Clinical Education: Should We Focus More on High-Fidelity Simulation, Student Wellbeing or Achieving Learning Outcomes?
Viktor Riklefs, Kazakhstan

Virtual Interprofessional Simulation: Overview and Practical Points
Liaw Sok Ying, Singapore

Gamification in Virtual Simulation for Undergraduate Education
Alfred Kow, Singapore

VIRTUAL CLINICAL SIMULATION, EDUCATION AND GAMIFICATION: ENHANCING THE PROCESS OF LEARNING AND OUTCOMES

Virtual simulation and education have come to the limelight in the last 3years with significant advancements in the platforms used. The learning contexts and environments can vary with the settings and level of learners. Yet the chief aim of virtual education should mirror the foundation in teaching learning: learner-level appropriate content, optimum level of stimulation and proving enough faculty support in helping with the process of learning. Learners could be of varying spectra and could have differing abilities to assimilate, comprehend and apply the information provided and processed through the education methods.

The symposium includes 4 parts, where what virtual is clarified and terminologies specified, followed by insights into fidelity versus learning outcome focus in virtual simulation. This will be followed by the introduction to virtual avatar and virtual clinical environments. This will highlight the development of the platform and the practical conduct and evidence of effectiveness. The fourth segment will introduce the gamification of learning in undergraduate education and the IPE contests where patient safety is taught with interactive and engaging games. The development and successful application of the games will be shared in this segment. This will conclude with the audience interactions and sharing of experiences.

Clarifying What is Virtual and the Authenticity of Learning Environment

Ashokka Balakrishnan
Director, Masters in Health Professions Education (MHPE-S), Academy of Medicine and NUHS, Singapore

Virtual simulation and education could range from screen-based -2D didactics, to interactive immersive highly sophisticated learning environments. These could involve the complete transposition to a virtual clinical world (virtual reality) or could be an enhancement of an existing physical world (augmented reality). The decision of what can be simulated and what can be kept in the real world, how much realism in necessary and how much is acceptable are determined at the curricular stage. Learning outcomes and curricular intent should match the platforms used and level of learner engagement, interactions, and provide optimal stimulation of the learners' minds without cognitive overload.

Virtual Clinical Education: Should We Focus More on High-fidelity Simulation, Student Wellbeing or Achieving Learning Outcomes

Viktor Riklefs
Vice-rector for Academic Work, Karaganda Medical University, Karaganda, Kazakhstan

Virtual clinical education is actively developing now, especially taking in the account the recent COVID-19 pandemic. The medical schools are often faced with the hard choice of purchasing high-fidelity equipment for realistic simulation, but more realistic simulations put more stress on learners causing them to not achieve desired outcomes. What should be the focus of virtual clinical education? Nine students enrolled into emergency simulation course underwent five clinical scenarios delivered through text-based virtual patient, screen simulator, virtual patient immersive trainer, high-fidelity simulation, and standardised patient. Heart rate variability was registered in all students during training sessions to obtain stress index. Debriefing was held after each session. One-way ANOVA revealed significant differences in average stress index during sessions and final grades between the individual students, and significant differences in maximum stress index during sessions between different methodologies. At that, text-based virtual patient and screen simulator were less stressful; immersive trainer, high-fidelity simulation and standardised patient were more stressful. Debriefing revealed that more stress was caused by lack of initial theoretical preparation for the sessions, and less stressful sessions were considered 'boring' by the students. Overall, the efficiency (as measured by grades) is largely dependent on individual abilities of learners with technologies playing only a secondary role. Each student also has individual stress-levels (as measured by average stress index). However, significant difference in maximum stress index between technologies hints us that some technologies overload students potentially reducing learning efficiency. The most promising design for virtual clinical education could be text-based virtual patients preparing learners for the following immersive experiences. The lack of preparation before immersive experience overloads students, while the use of only text-based simulations makes sessions too boring for the learners.

Virtual Interprofessional Simulation: Overview and Practical Points

Liaw Sok Ying
Associate Professor & Director of Education (PET-Academic), Singapore

Interprofessional education is constrained by logistics of coordinating with various fraternities of health professions and requires perseverance in making a physical session to happen. These academic exercises are largely limited by time, space and faculty and are also resource intensive.

The use of virtual simulated patient and learning environment was virtually developed and implemented in IPE context involving the medical and nursing students in undergraduate medicine. The construct, the operationalisation, and practical points in conducting sessions with active synchronous learning was achieved. The fact that the faculty are virtually present and involved in the scene providing learning support is paramount.

Gamification in Virtual Simulation for Undergraduate Education

Alfred Kow
Assistant Dean, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

In undergraduate IPE curriculum, safety is introduced in the clinical year before commencing the housemanship. While students were introduced to WHO patient safety goals, they were also introduced to a patient safety game and learner engagement was enhanced using interactive software. The retention, active participation and learning outcomes were improved by this educational intervention. The process designing a game, incorporating in teaching program, improving the learning involvement and eventually improving the process of learning will be shared at the session.

SATURDAY 27TH MAY 2023, 9.00AM
ATRIUM, UNIVERSITY CULTURAL CENTRE

SYMPOSIUM 9 – NURTURING THE HUMAN SIDE OF CARERS: WHAT WOULD TEACHING AND LEARNING HEALTH ETHICS, LAW AND PROFESSIONALISM LOOK LIKE TODAY?

Medical Professionalism in a Covidised World: What Can Medical Education Learn and Contribute?
Pacifico Eric Calderon, Philippines

Engaging Senior Medical Students in Medical Ethics Teaching: Documentary Video Depicting Real Patients vs Landmark Legal Cases
Wong Wai-Tat, Hong Kong S.A.R.

Teaching and Learning Medical Professionalism and Ethics Today: Sharing the St. Luke's Medical Center College of Medicine Curriculum as a Model
Susan Pelea Nagtalon, Philippines

NURTURING THE HUMAN SIDE OF CARERS: WHAT WOULD TEACHING AND LEARNING HEALTH ETHICS, LAW, AND PROFESSIONALISM LOOK LIKE TODAY?

Amid the tremendous progress of medical science and practice, COVID-19 included, our need for healers remains unchanged. Recent research, however, indicates that doctors often find themselves caught up in the technicalities of medicine at the expense of their capacity to develop and practise the human side of 'good doctoring'. In this symposium, we explore reflections and our commitments to nurture the human side of carers, drawing on our work in health ethics, law and professionalism (HELP) education in various capacities and contexts. The symposium will commence with a thoughtful discussion that reimagines medical professionalism in a COVID-19 hit world. Then, it will present an in-depth comparison between landmark legal cases and documentary videos depicting real patients in illustrating ethical principles. Eventually, a two-pronged discussion will explore institutional experiences with reformulated professionalism and ethics curricula in Asia. The symposium is presented by members of the Asia Pacific Bioethics Education Network (APBEN), an association of clinicians, medical educators and scholars interested in promoting the teaching and learning of bioethics and health care professionalism.

Medical Professionalism in a Covidised World: What Can Medical Education Learn and Contribute?

Pacifico Eric Calderon
Associate Professor, St. Luke's Medical Center College of Medicine of Medicine William H. Quasha Memorial, Philippines

Medical professionalism refers to what the public expects from doctors, and what doctors expect from themselves and from one another. Understanding medical professionalism can allow us to imagine what a 'good doctor' is and what 'good doctoring' looks like. That said, we can hardly leave medical professionalism unquestioned or assume it to be self-evident. I will argue that medical professionalism must be dynamic and fluid even if it tries to adhere to centuries-old Hippocratic norms. Let us consider, for example, how our common experience of COVID-19 has reshaped and continues to reshape medical practice landscapes, and how we think medical professionalism and medical education must adapt. From here, we can ask: What does 'good doctoring' look like in a post COVID-19 world? It is important for us to be invested in this conversation to provide a basis for cultivating moral and relational dispositions in education and practice. In this presentation, I will advance the need to revisit and reformulate our understandings and practices of medical professionalism. In so doing, we can identify what practices can be encouraged, challenged or set aside. I will conclude by inviting thoughtful debate on the topic, with significant implications for educating present and future doctors.

Engaging Senior Medical Students in Medical Ethics Teaching: Documentary Video Depicting Real Patients Vs Landmark Legal Cases

Wong Wai-Tat
Associate Professor of Practice, The Chinese University of Hong Kong, Hong Kong S.A.R.

Hands-on experiential learning in applying ethical principles in the clinical setting is inadequate as ethical issues are rarely touched on in the bedside modules in clinical medical education. To meet these needs, we adopted a new teaching approach using a documentary video explicitly illustrating actual critically ill patients requiring challenging ethical decisions. Multiple facets of the decision-making process, including the patient's value of life, religious beliefs, family expectations and cultural factors, were displayed. The new medical ethics teaching for senior medical students was conducted between 2020 and 2022 in the Chinese University of Hong Kong. The teaching session comprised multiple clips of the documentary video illustrating the conversation between the doctor and the patient or the patient's family about life and death. Students' attitudes towards the value of life, the goal of medicine and four ethical principles were explored by requesting students to respond to our pre-designed open or closed-end questions during the lessons. The strategy to encourage experiential learning through analysing documentary videos can be implemented in bioethics teaching. The effect can be comparable to or superior to the traditional use of landmark legal cases to illustrate essential clinical ethics principles.

Teaching and Learning Medical Professionalism and Ethics Today: Sharing the St. Luke's Medical Center College of Medicine Curriculum as A Model

Susan Pelea Nagtalon
Dean and Chief Academic Officer, St. Luke's Medical Center College of Medicine of Medicine William H. Quasha Memorial, Philippines

We narrate the efforts of St. Luke's Medical Center College of Medicine, Philippines to support medical student capacities in professionalism and ethics by instituting organisational and curricular reforms. In 2019, we reorganised the Department of Professionalism, Medical Ethics, and Humanities, a department strategically dedicated to teaching a kind of medical professionalism focused on holistic outcomes, such as 'what to be', 'what to do', and more importantly, 'knows why'. Although role modelling had its place in character building, we felt it needed to be supported by theoretical underpinnings and explicit instruction of conduct. At SLMCCM, teaching and learning professionalism commences in Year 1. Introduction to the Medical Profession (IMP) 1 is an innovative course that integrates experiential learning with personal reflection in an environment that encourages inquisitiveness, critical thinking, dynamism, innovation, dedication and self-reflection. In Year 2, IMP 2 builds upon the foundations of the self (emphasised in Year 1) and focuses on doctor-patient relationships and social accountability. Alongside IMP 2, Medical Ethics is offered to encourage learners to explore the foundations and carrying theories of ethics and their place in health care. The course underscores philosophical and sociological underpinnings relevant to human health and well-being. It highlights relevant ethical, legal and professional, and social implications of selected issues in human health and medicine. In Year 3, the Introduction to Clinical Clerkship module prepares learners for what it takes to participate in a healthcare team. Emphasis is given on communication, teamwork, collaboration, systems thinking; including advice on navigating 'difficult' patient encounters and disclosing errors. We share representative vignettes presented to learners. In Years 4 and 5, we offer elective rotations in medical ethics and professionalism. We continue to evaluate these programs as we try to invest further on intellectual resources to adapt to our growing needs.

SATURDAY 27TH MAY 2023, 10.30AM
HO BEE AUDITORIUM, UNIVERSITY CULTURAL CENTRE

SYMPOSIUM 10 – DEVELOPMENT IN ARTIFICIAL INTELLIGENCE AND TECHNOLOGY IN MEDICAL AND NURSING EDUCATION

Diving into Metaverse: Moving from Virtual Integrated Patient, an Artificial Intelligence Chatbot Into Emotion-Enabled Avatars
Judy Sng, Singapore

Development and Evaluation of a Virtual Counselling Application for Communication Skills Training in Nursing Education
Shefaly Shorey, Singapore

Artificial Intelligent-Enabled Virtual Reality Simulation for Interprofessional Education
Liaw Sok Ying, Singapore

Holomedicine And Mixed Reality Enhanced Healthcare Education
Gao Yujia, Singapore

DEVELOPMENT IN ARTIFICIAL INTELLIGENCE AND TECHNOLOGY IN MEDICAL AND NURSING EDUCATION

In the last two decades, a revolution has taken place in the use of healthcare simulation. Technological advances in computational power, graphics, display systems, tracking, interface technology, haptic devices, authoring software, and artificial intelligence (AI) have supported creation of low-cost, user-friendly virtual reality (VR) technology, avatars and virtual patients (VPs). In this symposium, each of the speakers will talk about his/her homegrown technologies, the VPs, avatars and VR technology they have developed, how these technologies are implemented in their clinical practice and teaching, and identifies promises and perils posed using them in medical and nursing education.

Diving into Metaverse: Moving From Virtual Integrated Patient, An Artificial Intelligence Chatbot Into Emotion-Enabled Avatars

Judy Sng
Senior Lecturer, Yong Loo Lin School of Medicine, Singapore

Globally, many universities have been compelled to make changes to the way education is delivered because of the explosive growth in information coupled with the increasing demands on larger cohort sizes, relevance, skills and competency training. In Singapore, massive changes are underway to rationalise the curriculum and to re-strategise the way healthcare professionals are trained. One important strategy in healthcare education is the use of artificial intelligence (AI) technology to support these pedagogical objectives. In order to give students more hands-on practise, we have built an AI-chatbot called the Virtual Integrated Patient. While AI-chatbots offers many advantages, there are some major issue hampering its full-blown adoption – its lack of naturalistic conversation, empathy and emotional intelligence that could be delivered with a real audio-visual human voice interaction environment. Our new prototype is a 2D/3D avatar incorporating natural language processing or NLP conversations, in addition to accepting and displaying affective inputs and reflects emotional outputs that can be used in healthcare simulation training.

Development and Evaluation of a Virtual Counselling Application For Communication Skills Training In Nursing Education

Shefaly Shorey
Associate Professor, Yong Loo Lin School of Medicine, Singapore

Background: Communication skills of nursing undergraduates have profound influence on patient outcomes. However, nursing undergraduates often feel less confident in communicating with patients. There is a need to find alternative ways of training communication skills to the nursing undergraduates. Whether virtual patients may provide such alternative training needs to be evaluated.

Aims and objectives: To develop and evaluate the effectiveness of a Virtual Counselling Application using Artificial Intelligence on students' learning attitudes, communication self-efficacies, and clinical performances.

Methods: A mixed-methods study design was used. Second year nursing (N= 104) undergraduates who received the communication skills training via core module in year one were invited to participate in this study in year 2 and 3 of their nursing undergraduate course. They received additional communication skills training via a virtual platform counselling application that involves three dimensional avatars – the virtual patients (VPs). Four Interactive VPs were developed and evaluated for their effectiveness via quantitative (N =104) and qualitative interviews (N = 24). The clinical facilitators (N =6) were also invited for the qualitative interviews.

Results: Additional VP-based training was effective in improving learning attitudes for two scenarios but not the others. Majority of the students maintained high self-efficacy in communication skills but clinical communication scores were lower for some postings. For qualitative interviews, both students and clinical facilitators appreciated the VP-based training and they shared valuable recommendations to improve the VPs.

Conclusions: The mixed effectiveness of VP-based training suggests potential benefits of virtual patient simulations in nursing education. However, further enhancements need to be addressed before official implementations of such trainings with VPs to undergraduate nursing curriculum.

Relevance or implication to clinical practice: With the tech-savvy future generation nursing students and with the enhancements in tele-health, addressing the limitations of VPs may provide valuable and cost-effective communication learning resources.

Artificial Intelligent-Enabled Virtual Reality Simulation for Interprofessional Education

Liaw Sok Ying
Associate Professor, Yong Loo Lin School of Medicine, Singapore

Background: The use of Artificial intelligent (AI) medical doctor agent presents more opportunities for nursing students to engage in interprofessional team training.

Aim: The aim of the study is to develop and implement an AI-enabled virtual reality simulation (AI-enabled VRS), and to evaluate nursing students' interprofessional communication competency and experiences in engaging interprofessional communication with AI medical doctor.

Method: A mixed method using a single group with pre-test and post-test design and a qualitative exploratory study was employed to pilot test the AI-enabled VRS. Thirty-two nursing students from the National University of Singapore were recruited to undertake the 2-hour AI-enabled VRS. Pre-tests and post-tests on communication knowledge and self-efficacy were administered. Survey questionnaires and focus group discussions were administered to examine their experiences with the virtual reality environment and the AI doctor.

Result: Following the AI-enabled VRS, the participants demonstrated significant improvements in communication knowledge and self-efficacy in interprofessional communication. Although the participants rated lowest on the "human-like" feature of the AI medical doctor, they reported positively on the acceptability, feasibility, and usability of the AI-enabled VRS. Three themes emerged from their learning experiences: "relate to the real world", "artificial intelligence versus human intelligence" and "complement with face-to-face learning".

Conclusions: This study provided evidence of AI-enabled VRS in fostering nursing students' learning on interprofessional communication skills. By harnessing the capabilities of AI technology, interprofessional team training can be made feasible and scalable.

Holomedicine And Mixed Reality Enhanced Healthcare Education

Gao Yujia
Associate Consultant, NUH, Singapore

In this talk, I will be speaking on the use of MR technology in clinical care. The research programme I am leading hopes to support the development of next-generation clinical applications and improve patient safety. This would augment clinical processes and enhance both undergraduate and postgraduate education. Holographic technology may radically transform the way we practise medicine and our early adoption will place us at the forefront of medical MR research and position us as a pioneer in the clinical use of this technology. While the use of holographic technology in operating theatres is still nascent, I will show you examples of how our team hopes to apply it in multiple fields of surgery.

SATURDAY 27TH MAY 2023, 10.30AM
THEATRE, UNIVERSITY CULTURAL CENTRE

SYMPOSIUM 11 – SUSTAINABILITY AND RESILIENCE IN HEALTHCARE: ROLE OF EDUCATION

Heat Health and Resilience in a Warming World – Implications for Educators
Jason Lee, Singapore

Role of the Medical Science Educator in Promoting Sustainable Healthcare
Peter GM de Jong, The Netherlands

Role of Medical Specialists Training in Promoting Sustainable Healthcare
Tan Hak Koon, Singapore

Role of an Academic Healthcare Institution in Nurturing Sustainable Healthcare
Amanda Zain, Singapore

SUSTAINABILITY AND RESILIENCE IN HEALTHCARE: ROLE OF EDUCATION

Sustainability and resilience are important topics in healthcare. Sustainability in healthcare involves the efficient use of resources and the implementation of environmentally friendly practices, including the reduction of energy consumption, the use of sustainable materials, and the implementation of recycling programs. Resilience in healthcare is critical for ensuring the wellbeing of our healthcare professionals by increasing their ability to successfully adjust to internal and external demands. The role of education in promoting sustainable and resilient healthcare should not be underestimated. Education is a key driver for promoting sustainable healthcare practices and building a resilient education and healthcare system. Incorporating sustainability and resilience principles into healthcare education can help to build a generation of healthcare professionals who are equipped with the skills, knowledge, and values necessary to promote sustainable healthcare practices. Education on sustainability and resilience may include teaching healthcare professionals to reduce waste, minimize the use of hazardous materials, and implement environmentally friendly practices in healthcare operations, but also training healthcare professionals to respond to high workloads and adapt to crises and changing circumstances, such as global warming, natural disasters, pandemics, and other emergencies. In this symposium, the topics of sustainability and resilience in health care will be approached from four different perspectives and the roles of different key players will be highlighted.

Heat Health and Resilience in a Warming World – Implications for Educators

Jason Lee
Director, Heat Resilience and Performance Centre, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

Feeling hot especially in the tropics is often perceived as normal, but most are unaware of how heat can be detrimental to our overall health, well-being and performance. While heat stress is the effect of the environment on the individual, heat strain is the resultant thermal load the body experiences predominantly from the weather, workload and clothing. Heat stress not only increases the risk of heat injury but can also interfere with work productivity. In addition, heat stress can compromise decision making, thereby increasing the risk of accidents. Long-term exposure to heat stress can also induce diseases such as chronic kidney disease of non-traditional causes even in healthy working adults. The downstream heat-related incidents are often due to a poor start state and therefore so special attention must be given to individuals who are unwell, under-recovered or on medication, as these risk factors would increase one's susceptibility to heat injury. The ageing population, which includes those suffering from chronic diseases, is also affected by heat stress. Chronic heat stress including modest rises in temperature can stress human health and health services. A multidisciplinary approach is therefore required to tackle this multifaceted whole of society public health problem. As we work towards incorporating knowledge in medical schools on the three key pillars of human health and potential (diet, exercise and sleep) as part of an overall preventive health strategy, we should likewise augment current medical curriculum to impart knowledge of how climate change can degrade each of these tenets. Doing so would ensure humans can continue to survive and thrive in a warming world.

Role of the Medical Science Educator in Promoting Sustainable Healthcare

Peter GM de Jong
Editor-in-Chief, Leiden University Medical Center, The Netherlands

Sustainability and resilience are important aspects in healthcare that must be addressed to ensure the continued provision of high-quality healthcare services. Sustainability in healthcare involves the efficient use of resources and the implementation of environmentally friendly practices. Resilience in healthcare is critical for ensuring the wellbeing of students and professionals by increasing their ability to successfully adapt to difficult or challenging life experiences and adjust to external and internal demands.

Medical science educators are responsible for teaching the fundamental principles of science and technology that underpin the provision of healthcare services. By emphasizing the importance of sustainability in laboratory, research and healthcare settings, educators can help to build a generation of healthcare professionals who are committed to promoting sustainable healthcare practices. Educators should also develop wellness interventions and curricula to address issues like stress, anxiety, and burn-out in their students and faculty by paying attention to self-awareness and self-regulatory skills.

Role of Medical Specialists Training in Promoting Sustainable Healthcare

Tan Hak Koon
Chairman and Senior Consultant, Division of Obstetrics and Gynaecology, KK Women's and Children's Hospital; Chairman, Obstetrics & Gynaecology Academic Clinical Programme, Duke-NUS; Designated Institutional Official, SingHealth Residency, Singapore

The Singapore healthcare system is undergoing major transformation through Healthier SG, to meet the needs of our population. Medical specialists training has to evolve to support or even lead the change. With our rapidly aging population and increasing emphasis on community care, there is a need to ensure a strong pipeline of healthcare leaders and competent doctors who are trained to collaborate with the multi-disciplinary and inter-professional healthcare team for the holistic management of the patient.

To ensure competency in clinical skills, a new assessment method was adopted nation-wide for Residency training. There are also increased efforts to inculcate system-based practice and develop a more diverse range of skills, with the aim of nurturing residents into future-ready doctors who are able to navigate evolving care practice, foster good doctor-patient relationships, innovate healthcare practices, and lead the transformation of Singapore's healthcare system.

Role of an Academic Healthcare Institution in Nurturing Sustainable Healthcare

Amanda Zain
Consultant, National University Hospital, Department of Paediatrics; Assistant Dean (Enterprise and Sustainability), National University of Singapore, Yong Loo Lin School of Medicine, Singapore

Health systems are responsible for up to 10% of the world's greenhouse gas emissions – more than double that of the shipping and aviation industries. Increasing awareness of the climate impacts on health merits a health-centred response to climate change. Health professionals are well-poised to lead this discourse given strong public trust in them. Education is hence essential in preparing health professionals for this important role. Numerous calls to action have been made (Goodman 2011, Maxwell and Blashki 2016, Butaric 2017, Mulcahy 2022), but studies reveal that many health educators still struggle to concretize this agenda effectively (Tun 2019, Bray 2022). A survey by the International Federation of Medical Students' Associations (IFMSA) revealed that 31% of medical schools across 112 countries have no mandatory climate change and health content in their curriculum (Omrani 2020). A student-initiated Planetary Health Report Card (PHRC) found in their systematic evaluation of more than 60 medical schools' curriculum in planetary health and climate change, there was inadequate engagement on most domains of assessment (Hampshire 2022). In this segment, we discuss how an academic centre can play a pivotal role in jumpstarting this culture change and bring together elements needed to transition to a more sustainable, low-carbon healthcare.

SATURDAY 27TH MAY 2023, 10.30AM
ATRIUM, UNIVERSITY CULTURAL CENTRE

PANEL DISCUSSION 5 – INTRODUCING THE INNOVATIVE TEACHING MODEL AS A FORMAL CLINICAL PLACEMENT CURRICULUM: ENABLERS, BARRIERS AND ACADEMIC OUTCOME REFLECTIONS FROM STUDENTS AND SUPERVISORS

Introducing the Innovative Teaching Model "Students See the Patients in Consultants' Chair Under Closed Observation with Clinical Reasoning Discussion in Clinical Placements of General Practice Clinic (GPC) and Hospital Out-Patient Clinic (HOPC)" as a Formal Curriculum: The Enablers, The Barriers and The Academic Outcome Reflections from Both Students and Supervisors
Dan Xu, Australia

Closer Examination of The Learning Benefits of Three Common Teaching Methods in General Practice: What Does Educational Theory Say?
Carole Steketee, Australia

Introducing the Innovative Teaching Model as a Formal Clinical Placement Curriculum from Rural General Practice Perspectives: Enablers, Barriers and Academic Outcome Reflections from Students and Supervisors
Karen Flegg, Australia

INTRODUCING THE INNOVATIVE TEACHING MODEL AS A FORMAL CLINICAL PLACEMENT CURRICULUM: ENABLERS, BARRIERS AND ACADEMIC OUTCOME REFLECTIONS FROM STUDENTS AND SUPERVISORS

Clinical placements teaching is challenging in terms of time constraints, lack of effective teaching model and consensus teaching approach. Bedside Inpatient Ward (BIW), General Practice Clinic (GPC) and Hospital Out-Patient Clinic (HOPC) teaching apply theoretical and simulated learnings into clinical practice. The learner-centred approach has been shown to facilitate deeper learning by demonstrating "seeing patients under supervision" to be the ideal teaching model at HOPC and GPC. The main discussant has recently completed a pilot study to investigate the feasibility of an innovative teaching model for introduction into the formal placement curriculum. The pilot study is a mixed-methods study using email questionnaires and written reflection from individual interviews involving twenty-two full-time placement students from Curtin University. Email questionnaires surveyed six teaching models (appendix: six teaching model) during their placements with "students see the patients in consultants' chair under observation with discussion" being the most preferred model. Reflection data were then collected from participating students using the preferred model to perform clinical consultations at GPC. The students' reflections were analyzed based on the pre-designed seven themes including "Clinical Reasoning (CR) learning", "Clinical Competency", "Salient learning points", "Feedback discussion with supervisor", "Impact on OSCE exam preparation", "Limitation from students', patients' and supervisors' perspectives", "Impact on your readiness to become an intern". The conclusion of the study demonstrated through this innovative teaching model in gaining academic benefits to facilitate intern readiness for all participating students. However, the students' reflections raised some enablers and barriers from patients' and supervisors' points of view when implementing this teaching model. The panel discussion will design three sub-topics: 1, Enablers, 2, Barriers, 3, Academic outcome reflections from both students and supervisors. The discussion will focus on the perspectives of students, supervisors, patients, GPC, ultimately generating the strategy to implement the teaching into the formal placement curriculum.

Introducing the Innovative Teaching Model "Students See the Patients in Consultants' Chair Under Closed Observation with Clinical Reasoning Discussion in Clinical Placements of General Practice Clinic (GPC) and Hospital Out-Patient Clinic (HOPC)" as a Formal Curriculum:

Dan Xu
Academic Coordinator, Curtin University, Australia

Clinical placements teaching is challenging in terms of time constraints, lack of effective teaching model and consensus teaching approach. Bedside Inpatient Ward (BIW), General Practice Clinic (GPC) and Hospital Out-Patient Clinic (HOPC) teaching apply theoretical and simulated learnings into clinical practice. The learner-centered approach has been shown to facilitate deeper learning by demonstrating "seeing patients under supervision" to be the ideal teaching model at HOPC and GPC. The main discussant has recently completed a pilot study to investigate the feasibility of an innovative teaching model for introduction into the formal placement curriculum. The pilot study is a mixed-methods study using email questionnaires and written reflection from individual interviews involving twenty-two full-time placement students from Curtin University. Email questionnaires surveyed six teaching models (appendix: six teaching model) during their placements with "students see the patients in consultants' chair under observation with discussion" being the most preferred model. Reflection data were then collected from participating students using the preferred model to perform clinical consultations at GPC. The students' reflections were analyzed based on the pre-designed seven themes including "Clinical Reasoning (CR) learning", "Clinical Competency", "Salient learning points", "Feedback discussion with supervisor", "Impact on OSCE exam preparation", "Limitation from students', patients' and supervisors' perspectives", "Impact on your readiness to become an intern". The conclusion of the study demonstrated through this innovative teaching model in gaining academic benefits to facilitate intern readiness for all participating students. However, the students' reflections raised some enablers and barriers from patients' and supervisors' points of view when implementing this teaching model. The panel discussion will design three sub-topics: 1, Teaching models, 2, Enablers & Barriers, 3, Academic outcome reflections from both students and supervisors. Daniel will focus on the perspectives of students, supervisors, patients, GPC, ultimately generating the strategy to implement the teaching into the formal placement curriculum.

Closer Examination of The Learning Benefits of Three Common Teaching Methods in General Practice: What Does Educational Theory Say?

Carole Steketee
Director Medical Education, Curtin Medical School, Curtin University, Australia

Clinical placements teaching is challenging in terms of time constraints, lack of effective teaching model and consensus teaching approach. Bedside Inpatient Ward (BIW), General Practice Clinic (GPC) and Hospital Out-Patient Clinic (HOPC) teaching apply theoretical and simulated learnings into clinical practice. The learner-centred approach has been shown to facilitate deeper learning by demonstrating "seeing patients under supervision" to be the ideal teaching models at HOPC and GPC. The main discussant has recently completed a pilot study to investigate the feasibility of an innovative teaching model for introduction into the formal placement curriculum. The pilot study is a mixed-methods study using email questionnaires and written reflection from individual interviews involving twenty-two full-time placement students from Curtin University. Email questionnaires surveyed six teaching models (appendix: six teaching model) during their placements with "students see the patients in consultants' chair under observation with discussion" being the most preferred model. Reflection data were then collected from participating students using the preferred model to perform clinical consultations at GPC. The students' reflections were analyzed based on the pre-designed seven themes including "Clinical Reasoning (CR) learning", "Clinical Competency", "Salient learning points", "Feedback discussion with supervisor", "Impact on OSCE exam preparation", "Limitation from students', patients' and supervisors' perspectives", "Impact on your readiness to become an intern". The conclusion of the study demonstrated through this innovative teaching model in gaining academic benefits to facilitate intern readiness for all participating students. However, the students' reflections raised some enablers and barriers from patients' and supervisors' points of view when implementing this teaching model. The panel discussion will design three sub-topics: 1, Teaching models, 2, Enablers & Barriers, 3, Academic outcome reflections from both students and supervisors. Carole will discuss the pros/cons of different teaching models, drawing on cognitive apprenticeship model, highlighting the importance of focused and frequent feedback for learning.

Introducing the Innovative Teaching Model as a Formal Clinical Placement Curriculum from Rural General Practice Perspectives: Enablers, Barriers and Academic Outcome Reflections from Students and Supervisors

Karen Flegg
Associate Professor, Australian National University(ANU), Australia

Clinical placements teaching is challenging in terms of time constraints, lack of effective teaching model and consensus teaching approach. Bedside Inpatient Ward (BIW), General Practice Clinic (GPC) and Hospital Out-Patient Clinic (HOPC) teaching apply theoretical and simulated learnings into clinical practice. The learner-centred approach has been shown to facilitate deeper learning by demonstrating “seeing patients under supervision” to be the ideal teaching model at HOPC and GPC. The main discussant has recently completed a pilot study to investigate the feasibility of an innovative teaching model for introduction into the formal placement curriculum. The pilot study is a mixed-methods study using email questionnaires and written reflection from individual interviews involving twenty-two full-time placement students from Curtin University. Email questionnaires surveyed six teaching models (appendix: six teaching model) during their placements with “students see the patients in consultants’ chair under observation with discussion” being the most preferred model. Reflection data were then collected from participating students using the preferred model to perform clinical consultations at GPC. The students’ reflections were analysed based on the pre-designed seven themes including “Clinical Reasoning (CR) learning”, “Clinical Competency”, “Salient learning points”, “Feedback discussion with supervisor”, “Impact on OSCE exam preparation”, “Limitation from students’, patients’ and supervisors’ perspectives”, “Impact on your readiness to become an intern”. The conclusion of the study demonstrated through this innovative teaching model in gaining academic benefits to facilitate intern readiness for all participating students. However, the students’ reflections raised some enablers and barriers from patients’ and supervisors’ points of view when implementing this teaching model. The panel discussion will design three sub-topics: 1, Teaching models, 2, Enablers & Barriers, 3, Academic outcome reflections from both students and supervisors. Karen will focus on the perspectives of different teaching models, feedback methods like ALOBA approach and enablers and barriers at rural general practice clinics.

SATURDAY 27TH MAY 2023, 11.45AM
HO BEE AUDITORIUM, UNIVERSITY CULTURAL CENTRE

PLENARY 4 – THE ROLE OF SCHOLARSHIP IN RETHINKING HEALTH PROFESSIONS EDUCATION: A 40 YEAR PERSPECTIVE

Ronald M Harden
Editor Medical Teacher, Professor (Emeritus) Medical Education, University of Dundee, United Kingdom

The scholarship, not of tradition, but the scholarship with no fixed boundaries or ideas has contributed to key developments in health profession education. Integral to this is

- Reflecting on teaching – *the scholarship of teaching*
- Making evidence-informed decisions – *the scholarship of integration*
- Undertaking research – *the scholarship of discovery*
- Innovating – *the scholarship of application*
- Communicating – *the scholarship of teaching*
- Evaluating teaching – *the scholarship of teaching*
- Civic scholarship – *the scholarship of application*

Originality is the essence of true scholarship. Creativity is the soul of the true “scholar”. - Naamdi Zikiwe

SATURDAY 27TH MAY 2023, 11.45AM
THEATRE, UNIVERSITY CULTURAL CENTRE

PLENARY 5 – SOTL IN STUDENT AND FACULTY WELL-BEING AND RESILIENCE - DO WE HAVE ENOUGH EVIDENCE FOR A TRANSFORMATIONAL CHANGE?

Muhamad Saiful Bahri Yusoff
Associate Professor, Department of Medical Education, School of Medical Sciences, Universiti Sains Malaysia, Malaysia

Scholarship of Teaching and Learning (SOTL) is a research field that examines the connection between teaching and learning and the most effective methods to improve education quality. The argument is that SOTL can have an impact on the well-being and resilience of both students and faculty. It is suggested that SOTL can enhance student well-being and resilience by elevating the standard of teaching and assessment, offering more meaningful learning experiences, and cultivating a sense of community and inclusion. Additionally, SOTL can foster faculty well-being and resilience by promoting reflection on teaching practices, cultivating a sense of support and empowerment, and providing opportunities for professional growth. The plenary explores the evidence on the connection between SOTL and the well-being and resilience of students and faculty. Moreover, it assesses the adequacy of the evidence that supports a transformational shift in the approach to implementing SOTL in higher education. The discussion raises the question of whether there is sufficient evidence to endorse a more comprehensive and integrated method of teaching and learning that prioritizes well-being and resilience. It also raises crucial questions about the essence and purpose of higher education and urges us to consider the most effective ways to support the well-being and resilience of both students and faculty in an ever-changing and challenging educational atmosphere. In conclusion, this plenary provides an engaging and thought-provoking discourse about how SOTL relates to well-being and resilience.

SATURDAY 27TH MAY 2023, 11.45AM
THEATRE, UNIVERSITY CULTURAL CENTRE

PLENARY 6 – ENSURING QUALITY AND STANDARDS IN UME AND PGME – THE SINGAPOREAN EXPERIENCE

Mabel Yap
Director of Professional Training and Assessment Standards (PTAS) Division , Ministry of Health (MOH), Singapore

Ensuring the quality and standards in medical education for both undergraduates and postgraduates are essential to producing safe and competent doctors for the Singapore healthcare system. Improving the quality of medical education continuously is key to ensuring that the training of our doctors remain relevant.

The presentation will cover the why, what and how Singapore developed the inaugural medical school standards and the associated quality assurance and quality improvement frameworks. It will also trace the journey of local specialist training and how the specialist training and assessment standards and accreditation systems have evolved over the last 2 decades to ensure that training programmes are contextualised to our healthcare needs.

SATURDAY 27TH MAY 2023, 1.45PM
HO BEE AUDITORIUM, UNIVERSITY CULTURAL CENTRE

SYMPOSIUM 12 – MEDICAL AI EDUCATION IN UNDERGRADUATE MEDICAL SCHOOL: HOW TO ALIGN HUMANS AND MACHINES IN EDUCATION AND PRACTICE

Medical AI Development and Application in Korea
Kim Hwiyoung, Republic of Korea

Current Medical AI Development and Application of Medical AI Education in Singapore
Alfred Kow, Singapore

An Effort to Develop Medical AI Competency and a Curricula Model in Korea
Lee Young-Mee and Kim Suyoun, Republic of Korea

Opportunities and Challenges in Implementing AI in Settings with Limited Resources
Indika Karunathilake, Sri Lanka

MEDICAL AI EDUCATION IN UNDERGRADUATE MEDICAL SCHOOL: HOW TO ALIGN HUMANS AND MACHINES IN EDUCATION AND PRACTICE

The practice of medicine is rapidly transitioning from the information age to the age of artificial intelligence. Accordingly, the demand for 'augmented doctors,' or 'enhanced physicians', that is,

physicians capitalizing rather than opposing incoming technology, has been recognized. However, incorporating artificial intelligence and related contents is challenging, especially in already oversaturated medical curricula.

Wartman & Combs suggested that a reboot of medical education is required to pay more attention to the alignment of humans and machines in education and practice. They emphasised that systematic curricular attention must focus on the use of intelligence tools involving large data sets, and machine learning and robots, all the while assuring the mastery of compassionate care.

In this symposium, we will focus on discussion about: how to prepare medical students to practice successfully in a health care environment transformed by artificial intelligence applications; what should be incorporated into medical curriculum to equip medical school graduates to possess a comfortable knowledge of information platforms and intelligence tools, and reinforce the effective use of information and intelligence to improve practice performance and outcomes.

Medical AI Development and Application in Korea

Kim, Hwiyoung
Professor, Department of Biomedical Systems Informatics, Yonsei University College of Medicine, Republic of Korea

A medical AI expert physician will present about the current medical AI research & development, and application in the clinical practice. Also, he/she will talk about the future in medical AI in Korea.

Current Medical AI Development and Application or Medical AI Education in Singapore

Alfred Kow Wei Chieh
Assistant Dean (Education), Yong Loo Lin School of Medicine, National University of Singapore, Singapore

Artificial Intelligence is increasingly being used in all the professional fields, and that includes the healthcare arena. In medical education, this is a rather new field but AI and machine learning carries the potential of advancing precision education, with real-time information processing and guidance of learners. With Open AI and ChatGPT coming aggressively to disrupt the education arena, we need to embrace this development actively.

In addition, there are great values to incorporate precise instructions and capturing of performance using the advanced tools, including VR, mixed reality and other equipment. AI has important roles to enhance the learning experience and outcomes of our students and make them futureproof with this technology.

At NUS Medicine, we have started deploying AI in medical education and we shall be sharing our journey so far.

An Effort to Develop Medical AI Competency and a Curricula Model in Korea

[1]Lee, Young-Mee and [2]Kim, Suyoun
[1]Professor, Department of Medical Education, Korea University College of Medicine, Republic of Korea
[1]Research Professor, Department of Medical Education, Korea University College of Medicine, Republic of Korea

These talks can show the gaps in medical AI education and what should be reformed in the medical education for better preparation for the age of AI. A presenter will talk about a research on developing medical AI competencies and graduation outcomes for medical students and a curricular model to achieve these outcomes in Korea

Opportunities and Challenges in Implementing AI in Settings with Limited Resources

Indika Karunathilake
Professor, Department of Medical Education, Faculty of Medicine, University of Colombo, Sri Lanka

Use of AI could be a valuable tool in medical education particularly in low resource settings where access to educational resource maybe limited. The educators could leverage on AI and AI technologies to enhance the medical and health professional students' knowledge and skill sets. However, this can be challenging due to due to many factors, both from infrastructure challenges, availability of expertise and resources. These areas, as well as ways forward, will be discussed during the session with some examples from these settings around the world.

SATURDAY 27TH MAY 2023, 1.45PM
THEATRE, UNIVERSITY CULTURAL CENTRE

SYMPOSIUM 13 – COACHING AS A HIGH IMPACT INTERVENTION IN HEALTH PROFESSIONS EDUCATION

Overview, Background Theory and Literature Review
Goh Poh Sun, Singapore

Coaching Conversations with Medical Students – How, What and Why
Elizabeth Teh, Singapore

Elevating the Medical School Experience Through Coaching: Common Themes and Approaches to Overcoming Challenges Students Face
Nisha Kesavan, Singapore

Key Considerations in Developing and Implementing a Coaching Programme in Medical Education
Kesavan Esuvaranathan, Singapore

COACHING AS A HIGH IMPACT INTERVENTION IN HEALTH PROFESSIONS EDUCATION

The aim of this symposium is to present a general overview of coaching as intervention, background theory and supporting review of the literature; share our experience as individual in-house coaches at our medical school and academic medical center, coaching undergraduates, postgraduates as well as individual at significant career and life transition points; review the evidence for coaching as a high impact intervention in Health Professions Education; and in closing discussing the value proposition of coaching, lessons learnt and plans for the future.

Overview, Background Theory and Literature Review

Goh Poh Sun
Associate Professor and Senior Consultant, National University of Singapore (NUS), Singapore

Will focus on two areas. 1) Compare and contrast, with examples and literature, what coaching, compared with mentoring, guidance and direct instruction is good for, specifically 'What the job to be done' is, essentially what you 'hire' a coach for. 2) Then describe in outline form 'what' coaching is, compared with mentoring, guiding, and direct instruction.

Coaching Conversations with Medical Students – How, What and Why

Elizabeth Teh
Senior Lecturer, National University of Singapore (NUS), Singapore

Focusing on two main points: 1) Questions that a coach might ask to facilitate the client's self-discovery (as opposed to questions we might ask as a teacher or mentor), and 2) Skills and competencies required of a coach to create a safe, engaging space for an effective coaching conversation.

Elevating the Medical School Experience Through Coaching: Common Themes and Approaches to Overcoming Challenges Students Face

Nisha Kesavan
Dr, National University of Singapore (NUS), Singapore

This session will begin by discussing common themes and challenges faced by medical students. The speaker will then address how coaches approach challenges raised by their clients, and explore collaborative strategies that can be implemented to overcome these hurdles.

Key Considerations in Developing and Implementing a Coaching Programme in Medical Education

Kesavan Esuvaranathan
Professor, National University of Singapore (NUS), Singapore

This will be a candid, before and after narrative of the key considerations in introducing a novel coaching program into a heavily structured and dense medical curriculum.

The presentation will outline the careful planning necessary to avoid major pitfalls and also discuss the flexibility and creativity require to respond strategically to traditional medical culture and legacy systems in medical education.

SATURDAY 27TH MAY 2023, 1.45PM
ATRIUM, UNIVERSITY CULTURAL CENTRE

SYMPOSIUM 14 – PREPARING TODAY'S LEARNERS TO BECOME TOMORROW'S EDUCATOR: MEANINGFUL STUDENT ENGAGEMENT IN MEDICAL EDUCATION

Interprofessional Education: The Impact of Collaboration
Woon Shi Sien, Malaysia

Research in Medical Education
Turar Dildabek, Kazakhstan

A Holistic Approach to Involving Our Students in Medical Education – A NUS Medical Society Perspective
Quek Joo Wei Ethan, Singapore

PREPARING TODAY'S LEARNERS TO BECOME TOMORROW'S EDUCATOR: MEANINGFUL STUDENT ENGAGEMENT IN MEDICAL EDUCATION

The International Federation of Medical Students' Associations (IFMSA) has committed to creating an optimal learning environment for all medical students worldwide in order to achieve personal and professional growth, as well as to empower them to advocate and be a part of the decision-making chain. This is especially important in light of the recent unprecedented COVID-19 pandemic, which has caused significant changes in our educational approach.

Transitions in medical education were inevitable, but the need to adapt has become more pressing. The shift to online learning has forced many students into an unaccustomed learning environment. Although the majority of medical schools are returning to onsite learning, e-learning has been a game changer in medical students' learning. With these changes, students must become more involved through meaningfully engaging in their medical education.

In this symposium, we hope to explore important topics under the umbrella of meaningful student engagement in the medical curriculum. These include research in medical education, interprofessional education based on data obtained from the medical students including those from the Asia-Pacific region, as well as student-led initiatives at a local university level. We will discuss the gaps and issues they are facing; and the strategies that could be put into place to overcome current barriers.

Where could meaningful student engagement in medical education lead us to? How could this participation impact the medical students, future healthcare workers, patients, and lastly communities who are in fact the final beneficiaries of our education?

Interprofessional Education: The Impact of Collaboration

Woon Shi Sien
Regional Director for Asia-Pacific, International Federation of Medical Students' Associations, Malaysia

According to the WHO, Interprofessional Education (IPE) "occurs when students from two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes". When health students understand each other's roles and how to work with an interprofessional approach, they are ready to become members of the health workforce in a collaborative practice team. The implementation of IPE early in our medical education is important, both for patient safety as well as the global health workforce. Implementing IPE benefits the patient by improving patient safety, reducing medical errors, thereby improving patient satisfaction. It is projected that there will be a considerable shortage of health workers in the coming decades. Interprofessional education will lead to better collaboration and more efficiency between health workers. It is therefore an important contribution to solving the Global Health Workforce Crisis.

However, there are many different barriers to the implementation of IPE. These can be divided into different categories such as the differences in curricula in practice, time constraints of the faculty as well as their lack of knowledge regarding the IPE and lack of collaboration and cohesion between the different faculties due to the existing hierarchical structure and ideas.

Source: IFMSA, A Medical Students' Guide to Student-led Interprofessional Educational Activities

Research in Medical Education

Turar Dildabek
SCOME Regional Assistant for Asia-Pacific International Federation of Medical Students' Associations, Kazakhstan

IFMSA has been working on research in medical education with the goal of fully understanding the extent to which research is integrated within the medical curriculum across the world through the lens of medical students and through developing a comprehensive manual/toolkit on research in medical education as a critical tool for meaningful student engagement in medical education.

IFMSA advocates for meaningful student involvement in medical education and one way to involve students is by having them conduct research in the field of Medical education as a crucial step to advocate for change . Though the extent of research done by medical students in the field of Medical education is scarce. In 2018, IFMSA launched a global survey to assess the exposure of medical students worldwide to research education and research opportunities, their satisfaction with research in their medical curriculum, and the research competencies received through their university.

A Holistic Approach to Involving our Students in Medical Education – A NUS Medical Society Perspective

Quek Joo Wei Ethan
Honorary General Secretary, NUS Medical Society, Singapore

Even as we are slowly easing measures, the COVID-19 pandemic has undoubtedly changed the landscape of medical education, accelerating the development of technology-enabled education. The online learning environment has its benefits, allowing for improved flexibility in the curriculum and allowing our students to explore their interests outside of medicine. Yet, navigating this environment brings about a different kind of academic challenge as students may fall through the cracks in light of reduced peer-to-peer interaction.

Hence, we would like to take this time to review the student-led initiatives that have supported our medical students in their academic pursuits. These initiatives revolve around three pillars: Empowering learning, Encouraging mentorship and Engendering change. We also highlight the close collaboration between students and faculty via the NUS Medical Society, the students' representative organisation, to equip our students with the relevant skills to address the academic needs of our students. We conclude by highlighting the challenges faced in conducting these initiatives, such as participation rates and potentially overwhelming our medical students.

SATURDAY 27TH MAY 2023, 3.15PM
HO BEE AUDITORIUM, UNIVERSITY CULTURAL CENTRE

PANEL DISCUSSION 6 – POST-GRADUATE MEDICAL EDUCATION BEYOND THE PANDEMIC

The Context for Advancing Global Post-Graduate Medical Education Beyond the COVID-19 Pandemic
John Ogunkeye, United States of America

Achieving Desired Outcomes in Medical Education Across the Globe
Eric Holmboe, United States of America

Postgraduate Medical Education Beyond the Pandemic: Perspectives from Asia-Pacific Region
Dujeepa D Samarasekera, Singapore

Glocalisation of Medical Education: Perspectives from a US Health System in the International Context
Sawsan Abdel-Razig, United Arab Emirates

POST-GRADUATE MEDICAL EDUCATION BEYOND THE PANDEMIC

The global importance of post-graduate medical education (PGME) in preparing physicians to practice medicine has evolved over the past century in response to societal needs. Progress has occurred out of necessity to address epidemiological and demographic transitions, and out of natural human ingenuity to self-assess, invent, and deploy innovative ideas. These adaptations have resulted in expanded roles and responsibilities across all health profession domains and have had significant influence in the education of health professionals. Importantly, the evolution of medical education has been swift since the turn of the last century, with reforms that redefined how medicine should be taught, including its content, context, and settings.

These reforms have effectively driven change to reflect evolving societal needs. However, the acceptance and suggested implementation of recommendations has been uneven, with variability in both application and ability to adapt them to local conditions, among other reasons. The disruption caused by the COVID-19 pandemic on the educational and clinical systems of PGME has, in some cases, challenged successful initiatives and activities while accelerating adoption of others. As a result, innovation in medical education has taken on increasing importance, requiring organisations to affirm reforms that have worked and refine those that have encountered barriers to implementation. The prioritization of successful ideas and services in the current environment is essential.

Although an endpoint for COVID-19 is unknown, its impact on medical education training globally is rapidly developing, with realization that some or all past and current trends may be present for the foreseeable future.

This session convenes thought leaders for insights on trends facing the global medical education community. Panellists will address challenges faced, solutions tried, and lessons learned as ignited by the pandemic. Their responses will inform conclusions on strategies to improve the future medical training experience and the continued enhancement of global PGME.

The Context for Advancing Global Post-Graduate Medical Education Beyond the COVID-19 Pandemic

John Ogunkeye
Chief Finance and Administrative Officer, Executive Vice President, Global Services
Accreditation Council for Graduate Medical Education, United States of America

The impact of the pandemic on medical education training globally is rapidly unfolding and requires increased attention. To understand the scale of the pandemic's impact on the international medical education community, ACGME Global Services embarked on an initiative to study emerging trends, challenges, and opportunities in post-graduate medical education.

Achieving Desired Outcomes in Medical Education Across the Globe

Eric Holmboe
Chief Research, Milestone Development, and Evaluation Officer, Accreditation Council for Graduate Medical Education, United States of America

Discussion of the critical intersection of health system needs and clinical outcomes, educational outcomes, and professional regulations, and the need for medical education programs to focus on competency-based medical education and co-production to support effective learning trajectories.

Postgraduate Medical Education Beyond the Pandemic: Perspectives from Asia-Pacific Region

Dujeepa D Samarasekera, Singapore
Senior Director, Centre for Medical Education, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

A regional analysis of the immediate and long-term implications on residents, institutions, the national/international agencies in the Asia-Pacific region who support residency programs.

Glocalisation of Medical Education: Perspectives from a US Health System in the International Context

Sawsan Abdel-Razig, United Arab Emirates
Chief Academic Officer and Chair of Medical Education, Cleveland Clinic Abu Dhabi, United Arab Emirates

Front-line experience sharing from an US health system in the Middle East on the importance of aligning health professionals' education with the local health system needs, in the context of an increasingly globalized world of post-graduate medical education.

SATURDAY 27TH MAY 2023, 3.15PM
THEATRE, UNIVERSITY CULTURAL CENTRE

PANEL DISCUSSION 7 – CONTINUOUS PROFESSIONAL DEVELOPMENT: VIEWS FROM ACROSS THE PROFESSIONS AND AROUND THE GLOBE

Continuous Professional Development for Pharmacy – The Singapore Journey
Camilla Wong, Singapore

Driving Collaboration and Change Through Interprofessional Continuous Professional Development
Kathy Chappell, United States of America

Designing and Implementing IPCE
Lawrence Sherman, United States of America

CONTINUOUS PROFESSIONAL DEVELOPMENT: VIEWS FROM ACROSS THE PROFESSIONS AND AROUND THE GLOBE

This panel will present their perspectives on Continuous Professional Development as viewed from their individual roles. This session will include perspectives from across the health professions in hospitals, from leading credentialing bodies, and from the global perspectives of practitioners and CPD systems. The panel will be moderated and will actively engage panelists as well as attendees.

Continuous Professional Development for Pharmacy – The Singapore Journey

Camilla Wong
Chief Pharmacist, Ministry of Health; and Director, Allied Health, Sengkang General Hospital, Singapore

The presenter will share the Singapore CPD journey for the Pharmacy workforce, diving deep and giving examples on how, as a whole professional group from pharmacists to pharmacy support staff, this professional workforce has strategized and developed over the years.

Driving Collaboration and Change Through Interprofessional Continuous Professional Development

Kathy Chappell
Senior Vice President, Accreditation, Certification, Measurement, Institute for Nursing Research and Quality Management, and Advanced Practice Initiatives, American Nurses Credentialing Center, United States of America

This presenter will provide an overview of how organizations that invest in interprofessional continuous professional development have increased collaboration across the professions and improved processes and outcomes of care.

Designing and Implementing IPCE

Lawrence Sherman
President, Meducate Global, LLC; and International Development, Association for Medical Education in Europe (AMEE), United States of America

The presenter will share the Singapore CPD journey for the Pharmacy workforce, diving deep and giving examples on how, as a whole professional group from pharmacists to pharmacy support staff, this professional workforce has strategized and developed over the years.

SATURDAY 27TH MAY 2023, 3.15PM
ATRIUM, UNIVERSITY CULTURAL CENTRE

PANEL DISCUSSION 8 – GLOBALISATION OF HEALTH PROFESSION EDUCATION

Preparing Students for Future Global Challenges
Vishna Devi Nadarajah, Malaysia

Faculty Development with a Global Focus - Preparing the Workforce
Mok Shao Feng, Singapore

Perspectives of Globalisation from Resource-Limited Setting: Challenges Faced by Brain Drain and Loss of Resources
Vajira H.W. Dissanayake, Sri Lanka

Role of Global Medical Associations in Globalisation of Medical Health Professions
Subha Ramani, United States of America

GLOBALISATION OF HEALTH PROFESSION EDUCATION

Globalisation of health profession education (HPE) has become increasingly important as healthcare systems and settings around the world face ongoing changes and shared as well as unique challenges related to emerging diseases, population health, workforce shortages and attention to global areas such as planetary health and sustainability. The focus of globalisation includes the development of international standards, the creation of global networks, exchange of students, faculty, and best practices, and inclusion of cross-cultural perspectives in educational initiatives. It also involves addressing cultural differences and language barriers, improving the cultural competence of all stakeholders. Another aspect of globalisation of education and training includes the recognition of credentials and qualifications across borders. This process has the potential to improve the quality of healthcare education and ultimately lead to better health outcomes for patients worldwide. However, it also requires careful consideration of ethical, legal, and social implications, differences in context, as well as the impact of globalisation on healthcare systems and healthcare professionals themselves. In this sessions, the panellists will share their expert views and perspectives based on their own experiences and available literature, highlighting the best practices of globalisations, strengths as well as challenges faced. Finally, they will emphasise the role that institutions and organisations can play in fostering local and global communities of practice.

Preparing Students for Future Global Challenges

Vishna Devi Nadarajah
Pro Vice-Chancellor, Education and Institutional Development, and Professor of Human Biology, International Medical University, Malaysia

Students today and doctors of tomorrow face evolving learning and clinical practice environments and there are concerns on their preparedness for future global healthcare challenges. As educators it is also challenging to create learning environments with appropriate assessment tools that meets both local healthcare needs and global health requirements. While educators and regulatory bodies can use international frameworks and standards to develop shared outcomes across medical schools, getting the right balance for a medical school will require learning by doing and from others with contextualisation. This presentation will share 3 case studies related 3 Future Global Challenges (Pandemic, Climate Change and Healthcare Accessibility) and describe how we can prepare medical students better. Key takeaways will include the importance of Stakeholder Awareness and Engagement, Curricular Renewal and Intervention with Community and Industry Partnerships.

Faculty Development with a Global Focus - Preparing the Workforce

Mok Shao Feng
Programme Director, NUHS Internal Medicine Residency Programme Senior Consultant, Division of Endocrinology, Department of Medicine, NUH, Singapore

Globally, medical institutions ponder how to keep faculty members relevant and updated in their delivery of education to budding clinicians. Despite the cultural and societal differences between nations, the difficulties we face in implementing faculty development are oddly similar. Adoption of an infinite mindset can help frame our challenges systemically in preparing our work force sustainably for the long haul. This is a leadership philosophy that focuses on long-term thinking and prioritizes the well-being of people and organizations over short-term gains. The key tenets include:

1. Advocating a just cause and purpose: Reminding our colleagues that we are embarking on this journey to ensure that future generations of doctors maintain their clinical competency for our patient; the clients that we all ultimately seek to serve.

2. Prioritising ongoing learning: The infinite mindset recognizes that learning is a continuous process, and that faculty development is not a one-time event, but a lifelong pursuit. Therefore, organisation should enable systems to promote a culture of ongoing learning and continued improvement amongst faculty members.

3. Taking care of people: Education leaders need to empathise and recognise the challenges faced by medical educators in dedicating time and energy to participate in training sessions amidst their own packed schedules. Specifically, this requires conversations with key stakeholders to allow faculty members the time and space for personal development.

4. Building collaborative and inclusive networks that celebrate diversity: We are more than the sum of our parts. From local teams within institutions to collaborative networks that span across different institutions and countries, partnership will enable faculty members to share best practices, learn from one another, and create a global community of medical educators. Our diversity and differences also provide opportunities for innovation and growth and faculty development programmes should welcome members from different backgrounds and cultures.

Perspectives of Globalisation from Resource-Limited Setting: Challenges Faced by Brain Drain and Loss of Resources

Vajira H.W. Dissanayake
Dean, Faculty of Medicine, University of Colombo, Sri Lanka

In the connected world that we live in today innovations in health care and health professions education travel across international boundaries faster than ever before. In the field of medicine, with the introduction of the World Federation of Medical Education accreditation system for national and regional accreditation agencies, we would find many medical schools achieving a higher level of quality in the training that they provide, especially through the adoption of new digital technologies. This poses several challenges for the resource limited settings in today's context where technology is expensive and where there is a dearth of medical manpower in the developed world. The first challenge is of course finding the funds to develop modern infrastructure to meet today's needs. The second challenge is attracting and retaining trained manpower to develop and sustain educational institutions as well as the health care services. These challenges tend to undermine the health services in resource poor settings already stretched to the limit by the increasing burden of non-communicable disorders and an ageing population. There is an urgent need therefore for an international dialog on how we meet these challenges and on the mechanisms to be put in place to ensure that in a globalised world resources limited settings do not suffer.

Role of Global Medical Associations in Globalisation of Medical Health Professions

Subha Ramani
President, Association for Medical Education in Europe (AMEE); Associate Professor of Medicine, Harvard Medical School, United States of America; Honorary Professor of Medical Education, University of Manchester, United Kingdom

National, regional and international organisations for health professions educators aim to support their members in achieving excellence and advance the field across the continuum of undergraduate, postgraduate and continuing education. There is no single pathway to becoming, being and growing as a 'health professions' educator' and the roadmap is not always clear to early career or even mid-career educators. Educational organisations possess the resources and capabilities to support and guide educators in their journey. Belonging to a community of practice and peer mentoring are powerful vehicles to help individuals develop and refine their educational identities. Additionally, an inclusive community is essential for successful global collaborations, where members can share best practices, challenges, and successes, and contribute to each other's professional identity formation and professional growth. In this session, we will share personal reflections on the benefits of belonging to a community of scholars and suggest concrete strategies to network, engage and participate at an organisational level and develop as educators, scholars and leaders. At the end of this discussion, we anticipate that health professions educators, at different stages of their career, across disciplines and spectrum of education, will be able to identify areas of interest, craft their own roadmap for professional development, engage in professional identity formation, and find a niche through which they add to knowledge in the field and impact their learners and fellow educators.

SATURDAY 27TH MAY 2023, 4.30PM TO 5.00PM
HO BEE AUDITORIUM, UNIVERSITY CULTURAL CENTRE

CLOSING KEYNOTE – SCHOLARSHIP IN HEALTH PROFESSIONS EDUCATION - DEVELOPMENT FROM THE PAST TO FUTURE POSSIBILITIES

John Norcini
Research Professor, SUNY Upstate Medical University, United States of America

The history of APMEC offers a way of looking at the expansion of scholarship in the health professions throughout the 21st century. This talk will identify the major topics addressed at various points during the 20-year history of the conference. Changes over time will serve as a basis for reflecting on where we have been as a community and the growth of the field.

At the same time, the recent history of the conference offers a basis for thinking about near future developments in health professions education. Topics that have arisen more frequently include interprofessional education and practice, the scholarship of teaching and learning, and the growing role of technology. It is fitting to consider these in the context of the 20th anniversary of APMEC and its contributions to health profession education.

W3A3

SUNDAY 28TH JANUARY 2023, 8.30AM – 12.30PM
VIRTUAL PLATFORM

CRITICAL REFLECTION OF YOUR CURRICULUM: DEVELOPING A GRADUATE PROFILE

Hong Wei-Han, Yang Faridah Abdul Aziz, Vinod Pallath and Jamunarani Vadivelu
Malaysia

Workshop Description

Review of the graduate profile is a process to ensure your programme remains relevant, competitive and sustainable. A systematic approach of this process is essential in ensuring gaps in your existing programmes are rationally addressed. During this workshop, participants will be expected to reflect on the impact of their current curriculum on the expected attributes of their graduates. Discussions and activities will involve the development of competencies and strategies to ensure the development of a future-proof graduate as healthcare professionals.

Workshop Objective

On completion of the workshop, participants will be able to:

1. Reflect and systematically review existing curriculum and its intended outcome for your graduates.
2. Consolidate expected competencies of your graduates' profile.
3. Identify the gaps in your existing curriculum that do not align to the expected graduate profile.
4. Propose strategies to implement the expected graduate competencies.

Who Should Attend

Health Professional educators, health professionals, leaders and educational management professionals who are interested in promoting relevant and sustainable healthcare programmes.

W3A4

SUNDAY 28TH JANUARY 2023, 8.30AM – 12.30PM
VIRTUAL PLATFORM

POSTGRADUATE SUPERVISION AND MENTORING IN HEALTH PROFESSIONS EDUCATION (HPE)

[1]Veena Singaram, [2]Diantha Soemantri, [3]Vishna Devi Nadarajah
[1]South Africa and [2]Indonesia and [3]Malaysia

Workshop Description

Attraction and retention of healthcare professionals into postgraduate research programmes is a multifaceted challenge in higher education. Postgraduate supervision directly influences the success of master's and doctoral researchers' progression, attrition rates and quality of experiences. Clinical educators hold a high degree of structural power over students and junior colleagues. Postgraduate supervisors must become more conscious of how this may impede the supervisor relationship and feedback-seeking behaviour in health professions postgraduate research. We need to advocate for aspects of psychological safety that include trust, relationship building, and supervision alliances and create more inclusive 'safe' neutral supervision spaces that dismantle the negative impact of the power dynamics in postgraduate research. This interactive workshop aims to provide insights into the supervisor's role as a mentor at different stages of the master's and doctoral journey. Practical and educational strategies will be shared to enhance the knowledge, skills, and attitudes of postgraduate supervisors in HPE. Participants will also be introduced to the latest frameworks, theories, tools, and strategies to enhance their supervision and mentorship styles to facilitate the success and wellbeing of both postgraduate students and supervision in health professions graduate education.

Workshop Objective

- Introduce doctoral supervision and mentorship models and pedagogies
- Identify styles, attributes, and skills needed for effective doctoral supervision and mentorship.
- Explore how informal online and face to face spaces can be used to create and foster supportive supervisory environments and relationships
- Develop and enhance the mentorship skills of HPE postgraduate supervisors through interactive activities, and role plays.

Who Should Attend

Novice and intermediate educators interested or involved in postgraduate supervision.

W3A5

SUNDAY 28TH JANUARY 2023, 8.30AM – 12.30PM
VIRTUAL PLATFORM

ENHANCING BIOETHICS TEACHING AND LEARNING THROUGH THE USE OF LOCAL RESOURCES

[1]Lau Weeming, [2]Olivia Ngan, and [2]Wong Wai-Tat
[1]Malaysia and [2]Hong Kong S.A.R.

Workshop Description

This four (4) hours workshop will focus on active participation by the registrants in exploration of innovative approaches in teaching and learning of Bioethics in an undergraduate medical programme. Students have frequently commented that Bioethics is too philosophical, a dry and dull subject with minimal relevance to their core medical programme or significant enough to impact upon their medical career. On the other hand, teachers have difficulty engaging the students in the subject, or that there are not enough trained Bioethics teachers. There are also universities where Bioethics are taught sporadically throughout the programme, although there are some where these are delivered as modules or a whole discipline. In the former, students may not get a good feel of Bioethics. Irrespective of the settings, teachers need to focus on making Bioethics applicable and pertinent to the students. One way would be to include local resources into the delivery of Bioethics, and this is the main goal of this workshop.

The three (3) workshop facilitators have more than 10 years' experience in the teaching and delivery of Bioethics. They have experimented with various forms of delivery and wish to share the challenges and successes they encountered with these approaches. The format of the workshop will be as follows:

- Ice Breaking and Introduction
- Discussion on the use of local resources by workshop facilitators
- Registrants to create teaching resources using local materials
- Discussion of the challenges (and how to resolve them) when developing these resources

Take home messages: Bioethics teaching is challenging in the undergraduate programme. Teaching and learning approaches can be improved to engage students

Workshop Objective

1. Discuss different delivery methods in Bioethics Teaching
2. Explore the use of local resources to make Bioethics relevant to students
3. Discuss the barriers and enhancers when developing these resources
4. Involve participants in creating local resources for use relevant to their workplace

Who Should Attend

Students, Administrators, Course Coordinators, Curriculum Designers, Educators, Clinicians, Researchers.

MONDAY 22ND MAY 2023, 9.00AM

VIRTUAL ROOM 1, HYBRID CONFERENCE

FREE COMMUNICATIONS 1

The Medical Student Perspective on the Role of Doubt
Madhavi Singh, Australia

Leveraging Digital Technology in Anatomy Education
Shi Le Lam, Singapore

Association between Awareness and Application of One's Learning Preference and Examination Performance in the Biochemistry Metabolism
Benjamin Kyle Macalinao, Philippines

Design, Development and Implementation of Student-Educator Partnership in Reshaping Medical Education
Mei Li Khong, Hong Kong S.A.R.

The Use of The Full Code© Virtual Simulation Mobile Application in the Teaching of Common Medical Emergencies for Post Graduate Year 1 (PGY1) Doctors
Charmaine Sia, Singapore

Student Perceptions of an Online vs In-Person Teaching Setting for Student-led Seminars in Clinical Reasoning
Sze Yi Beh, Malaysia

Attributes and the Level of Significance of the Pre-Class Assignments in the Flipped Classroom from Medical Students in the Faculty of Medicine, Chulalongkorn University
Sirapop Suwankomolkul, Thailand

THE MEDICAL STUDENT PERSPECTIVE ON THE ROLE OF DOUBT IN MEDICAL EDUCATION

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Background and Aims

An Emergency Department consultant identified the failure of medical students to complete the task of clerking a patient in its entirety. As six medical students on our first clinical placement, we recognised our own failure and endeavoured to examine why this failure was consistent among all medical students that had been given this task, despite our best motivations as adult learners.

Our aim is to understand and investigate the elements which impeded our ability to learn and perform as medical students in the clinical environment, with reference to the prescribed task. We also aim to generate a discussion around the delivery of medical education with potential solutions to these barriers.

Methods

Six medical students gathered together to have a comprehensive reflective discussion to identify possible factors leading to the failure of the task. First, we thoroughly analysed the delivery of the instructions with reference to the literature to identify potential flaws. We then examined personal, social, ethical, and cultural factors which may have impacted our ability to complete the task in its entirety.

Results

Through collation of our shared experiences, with support from discussion in the field of medical education and ethics, we identified two major areas that impacted our ability to complete the set task. First, we experienced an ethical conflict where we believed the inconvenience and potential harm inflicted on patients did not justify the positive impact the patient interaction would have on our medical learning. Second, we identified a lack of confidence stemming from multiple factors, including the conflict between preclinical and clinical learning, perceptions of perfectionism in the culture of medicine, and the influence of upward social comparison.

After discussions, we found that the various factors we identified exacerbated the fears and doubts we already had about our own abilities and that of the medical education system. This doubt led us to avoid completing certain aspects of the tasks that were prescribed and further reinforced our vulnerability and perceived incompetence. Exploration of philosophical theories identified the importance of the role of doubt in education. We propose the need for further discussion around incorporating both pedagogical and andragogical teaching styles in clinical medical education and the acceptance of doubt as a driver of our learning.

Conclusion

Doubt will continue to permeate our thoughts and actions no matter what. The moral or psychological distress that arises from this is the key motivating factor for our avoidance of tasks. If we accept this doubt and education embraces this doubt, it will no longer linger in the shadows as a negative and restrictive emotion but fuel a brighter dialogue and positive learning experience, ultimately assisting us in achieving our full potential.

LEVERAGING DIGITAL TECHNOLOGY IN ANATOMY EDUCATION

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Departments of [1]Medicine and [2]Anatomy, Yong Loo Lin School of Medicine, National University of Singapore, Singapore, [3]Engineering Product Development (EPD), Singapore University of Technology and Design (SUTD), Singapore

Background and Aims

Higher educational institutions' pedagogy has been shifting together with digital technological advances. In medical schools, traditional modalities such as cadaveric dissections which include prosections have shifted to digital modalities such as Virtual Reality (VR), Augmented Reality (AR), 2-Dimensional (2D) educational videos and Virtual Dissection Table (VDT). Several studies have been carried out to evaluate the use of different digital modalities to teach anatomy, with most of them comparing student outcomes mostly through test scores. However, most studies focused on evaluating one type of modality. Therefore, we aim to consolidate findings on the effectiveness and limitations of various digital modalities used to supplement anatomy education.

Methods

A literature search was conducted using the keywords "Anatomy Education" AND "Effectiveness" AND "Technology" on MEDLINE. 48 papers were assessed for eligibility, of which 30 were selected for this paper. The selection was filtered to only include published papers between 2012-2022 which studied the effectiveness of VR, AR, 2D educational videos and VDT.

Results

The VR which allowed a highly immersive 3D experience was very engaging. Participants using VR scored better in spotter tests than those using cadavers or atlas. VR also enabled students to dissect and reconstruct anatomical structures. VR caused adverse symptoms of cyber sickness when compared to other modalities.

AR is accessible through mobile electronics, thereby increasing accessibility and affordability. Participants preferred AR over other anatomy learning digital modalities like VDT. Most participants found that AR aided their 3D visualisation and spatial understanding of anatomical structures compared to textbooks. The limitations of AR also include cyber sickness.

2D educational videos were found to be useful for studying due to the increased flexibility in their learning from educational videos. Participants were able to revisit the videos at their own pace. However, participants felt that the videos were time-consuming if they were not included in the curriculum timetable.

VDT users can interact with the virtual human body by rotating, moving, zooming, slicing, selecting or removing individual structures and highlighting whole systems. The responses from participants were positive about appreciating the real sizes, relationships between organs and cross sections of gross anatomy and radiological images. However, the limitation of this modality was insufficient time for users as VDT accommodates only one user at a time. Furthermore, the quality of some images needs improvement for better visualisation.

Conclusion

Digital modalities are increasingly being incorporated into anatomy education to optimise learning experiences and student outcomes. Although digital modalities can effectively supplement anatomy education, traditional modalities are still irreplaceable. With better incorporation of digital modalities into the curriculum timetable, students can capitalise on the learning benefits of technological tools. Further refinement of digital modalities would minimise the limitations of each modality. Hence, the continued leverage of digital modalities is most likely to improve students' learning of anatomy.

ASSOCIATION BETWEEN AWARENESS AND APPLICATION OF ONE'S LEARNING PREFERENCE AND EXAMINATION PERFORMANCE IN THE BIOCHEMISTRY METABOLISM MODULE

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Background and Aims

Learning preferences (LPs) promote effective learning by prompting students to employ strategies that facilitate easier acquisition of new knowledge and skills. It is possible, however, that students may sometimes lack awareness and/or sufficient understanding of their own LPs, leading them to utilise the wrong tools in their learning pursuits. While prior studies that explored the relationship between LP and examination performance yielded mixed results, none have explicitly factored in LP awareness and use of germane LP-optimising means in their analyses to the best of our knowledge. In this study, we investigated if students' awareness of, and use of learning strategies in line with their identified LPs predicted their performance in the Metabolism module examination under the Medical Biochemistry subject.

Methods

This cross-sectional study was conducted among 200 first-year students duly enrolled at the De La Salle Medical and Health Sciences Institute-College of Medicine for the academic year 2021-2022. Ethics approval was granted by our institution's ethics review committee in accordance with ethical guidelines for observational studies. The participants were first instructed to accomplish an online VARK (Visual, Auditory, Reading/Writing, Kinesthetic) LP questionnaire, and to report their results to the research team thereafter. They were then briefed about the different learning strategies applicable to their corresponding LPs. Afterwards, they were directed to a subsequent online questionnaire that inquired about the participants' demographics (age, sex, socioeconomic status, undergraduate

degree). This second questionnaire likewise contained two additional yes-no questions that asked participants about whether they were previously aware of their own LP (LP-awareness), and whether they applied learning strategies congruent with their LP based on their perception (LP-application), regardless of whether they had prior knowledge about their LP. Finally, Metabolism module examination scores (total: 240 points) were obtained from the Biochemistry Department following approval for release by the department chair. Univariate analysis was performed, and summary statistics were computed for all variables. A multiple linear regression model was then constructed using examination scores as outcome variable, and LP, demographic variables, LP-awareness and LP-application as covariates.

Results

Mean examination score was 136.03 (SD=30.94). Majority of students (40.50%) had multimodal LP. More than half (61.00%) were previously aware of their LP, while 71.50% felt their learning strategies aligned with their LP. On multiple linear regression analysis, no single LP was associated with higher examination scores. However, students who were aware of their LP scored an average of 9.55 points higher than those who were not. Similarly, students who applied learning strategies congruent with their LP scored an average of 12.86 points higher than those who did not.

Conclusion

Our analysis revealed that awareness of one's LP and use of learning strategies congruent to their LP was significantly associated with higher examination scores regardless of LP, after controlling for relevant covariates. With these results, we hope to be able to counsel students in terms of understanding their learning preference, and mentor them regarding making use of, or even discovering, learning strategies that best suit their needs to maximise their chances of subject matter mastery, with their progress monitored accordingly.

DESIGN, DEVELOPMENT AND IMPLEMENTATION OF STUDENT-EDUCATOR PARTNERSHIP IN RESHAPING MEDICAL EDUCATION

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[1]School of Clinical Medicine, [2]School of Biomedical Sciences, [5]Department of Ophthalmology, [6]Bau Institute of Medical and Health Sciences Education, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong S.A.R., [3]Centre for the Enhancement of Teaching and Learning, The University of Hong Kong, Hong Kong S.A.R.

Background and Aims

The body of literature asserts that students should not only be consultants providing feedback on teaching, but also full partners in designing pedagogy, courses and curricula. Several papers highlighted the transformative learning outcomes such partnership brings. However, are medical educators prepared to relinquish control? Are medical students equipped to tackle this novel situation? We endeavour to develop and pilot a framework for student-educator partnership (SEP) in medical curriculum. This is to support educators and students towards collaborative curriculum development and pedagogical design. We also aim to evaluate the potential impact SEP brings to students and institutions.

Methods

This SEP pilot has three phases. First phase is onboarding. Student co-designers were invited to initiate and refine learning developments alongside Faculty educators. Depending on students' areas of interest, students were allocated in sub-teams and connected with teammates, as well as the relevant educators. Second phase was shaped by the design thinking approach in a non-linear fashion. Resources and instructional design guidance were provided throughout the project development. Third phase involved qualitative data collection and analysis from multiple stakeholders (student co-designers, student learners, and educators) to assess the overall impact of SEP.

Results

From students' perspectives, the greatest impacts from SEP were deeper understanding of learning, strengthened professional identity formation, and stronger rapport between students, teachers and Faculty. Students transitioned from merely doing what is required of them in learning to developing metacognitive awareness of what constitutes and enhances learning. Students and teachers 'stepped into each other's shoes to understand each other's perspective of teaching and learning. Through this partnership, learning goals were better aligned and that led towards clear curricular improvements. SEP resulted in development of gamification strategies in MBBS learning to facilitate critical thinking and clinical reasoning skills; highly interactive workshops that promote active learning; and student-centred online learning platform prioritising a mutually supportive learning environment.

Conclusion

SEP has empowered students as equal stakeholders in the enhancement of teaching and learning and has brought about student-centred improvements. The potential impact of SEP is positive. Our next step is to adopt the aforementioned tried-and-tested practices and framework to sustain future student-educator partnerships in medical curriculum and beyond.

THE USE OF THE FULL CODE© VIRTUAL SIMULATION MOBILE APPLICATION IN THE TEACHING OF COMMON MEDICAL EMERGENCIES FOR POST GRADUATE YEAR 1 (PGY1) DOCTORS

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[1]Department of Medicine, [3]Department of Paediatrics, Khoo Teck Puat-National University Children's Medical Institute, [4]Division of Nephrology, Department of Medicine, National University Hospital, National University Health System (NUHS), [2]Centre for Medical Education, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

Background and Aims

The COVID-19 pandemic has brought with it an increased reliance on education technology. In this climate, virtual simulations serve as a critical adjunct to support realistic teaching of medical scenarios. The mobile virtual simulation application (Full Code©) utilises artificial intelligence technologies to create unlimited replications of high fidelity virtual clinical scenarios, with immediate feedback for learners to identify knowledge gaps that may be assessed on the go.

We aim to assess the attitudes and behaviours of junior learners - PGY1 doctors and educators at the National University Hospital (NUH) toward the use of Full Code© specifically evaluating its effectiveness in teaching common medical emergencies and improving confidence of PGY1 doctors in dealing with medical emergencies.

Methods

This is a prospective qualitative single centre medical educational study. Full Code© was introduced to all PGY1s (n=50) enrolling in NUH from May 2021 to Aug 2021 and used as a teaching tool before their objective structured practical examination (OSPE). A questionnaire was administered to the PGY1s after their OSPE to evaluate their virtual simulation experience. Subsequently, the PGY1s were given 4 new cases a month for 4 months as part of their learning curriculum. A representative group of 6 PGY1s and 4 educators were invited for respective focus group discussions. Interviews were recorded, transcribed by an independent party, coded into themes, and analysed using the NVivo qualitative data analysis software.

Results

The quantitative results from the questionnaire showed a positive experience in terms of usability and applicability. Learners had increased confidence towards managing medical emergencies. Seven themes were derived from the learners regarding application usage, features, incorporation and technical improvements, strengthening of cognitive skills and application of knowledge, and overall utility of the application. Overall, learners felt that virtual simulation allowed for convenient and reasonably realistic learning in a safe environment, aided in clinical reasoning

and is best introduced before the start of a clinical rotation to increase their confidence. The learning benefit tapered off as learners progressed in clinical work to which progressive difficulty levels were perceived to be useful. Five themes were identified from the educators' data including learner benefits, application features, improvements and endorsement, and overall utility of the application. The educators' felt that the application is best suited for junior learners to build up their knowledge base and is most useful when learning objectives are clearly outlined with tailored feedback. Realism could be further enhanced with incorporation of teamwork, otherwise virtual simulation is not able to fully replicate the practical skills, time pressure, need for prioritisation and complexity required of a real clinical scenario.

Conclusion

Virtual simulation is an effective tool in enhancing knowledge and increasing confidence towards managing medical emergencies in PGY1s. Both learners and educators found it useful to supplement continuity of education. Further improvements should encompass an educator-guided approach outlining objectives of the cases and debriefing while facilitating independent learning in an engaging way.

STUDENT PERCEPTIONS OF AN ONLINE VS IN-PERSON TEACHING SETTING FOR STUDENT-LED SEMINARS IN CLINICAL REASONING

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Background and Aims

The COVID-19 pandemic has instigated a significant shift in the delivery of medical education towards distanced learning. Fourth-year medical students in Newcastle University Medicine Malaysia (NUMed) underwent a 19-week student-led course called Clinical Decision Making (CDM), which was designed to develop clinical reasoning skills in various medical specialties. In the midst of the COVID-19 pandemic, these seminars were delivered online, facilitated by clinical lecturers. Following the easing of restrictions, these then moved to an in-person setting after 9 weeks of online delivery. As the format and content of the sessions were consistent between both settings, this allowed students to compare and reflect upon their experiences of online and in-person teaching. This study aimed to explore the reasoning behind students' preferences towards the different settings to help us better understand how we can improve aspects in various teaching modalities to enhance the student experience, particularly in student-led seminars.

Methods

Microsoft Forms surveys were sent out to fourth-year NUMed medical students who had received CDM teaching both online and in-person following completion of their course. There were 60 responses to the survey. Students were asked to rank their reasons for their classroom setting preferences and identify which setting best facilitated various factors. The survey outcomes were cross-tabulated using SPSS to identify the most significant aspects that influenced student preferences.

Results

Thirty-nine (65%) students preferred in-person teaching and 21 (35%) students preferred online teaching. Of the students who preferred learning in-person, all 39 (100%) students found that interaction with friends and the facilitator were better in-person. Whereas only 14% ($p=0.015$) and 23% ($p=0.001$) of students who preferred online thought that interactions with friends and the facilitator were better in the online setting, respectively. In a similar pattern, the majority of those who preferred in-person teaching thought that this setting was better for enjoyment (94.9%), mental health (79.5%), communication (69.2%), peer learning (79.5%), flow of the session (89.7%) as well as the ability to facilitate use of important clinical reasoning skills (89.7%). Whereas there was a significantly lower percentage of students with an online preference, who thought these factors were better in the online setting. 98% of all students found the online setting to be more comfortable and convenient.

Conclusion

This analysis identified factors that were perceived to be significantly better in-person and online. Students who preferred in-person teaching found the classroom to be a much better foundation for communication and socialising with friends and these were subsequently some of the most important factors that influenced their preference. Interestingly, those who preferred the online setting did not reflect this same pattern and in the majority of factors, a larger percentage of these students believed in-person teaching to be better at facilitating these factors. Despite this, they still had a preference towards online teaching, which may suggest that these students prioritise different aspects, such as convenience and comfort higher than other factors in their learning experience.

ATTRIBUTES AND THE LEVEL OF SIGNIFICANCE OF THE PRECLASS ASSIGNMENTS IN THE FLIPPED CLASSROOM FROM MEDICAL STUDENTS' IN THE FACULTY OF MEDICINE, CHULALONGKORN UNIVERSITY

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Background and Aims

The traditional lecture-based teaching has developed into a "flipped classroom" (FC) model, which is a pedagogical method in which students are introduced to fundamental concepts prior to class so that class time can be used to apply and develop on those basic concepts. FC mainly relies on pre-class learning materials to provide students with the necessary core knowledge. The specific objectives of this study were to identify attributes of the pre-class assignments in the flipped classroom from medical students' expectations and to rate the level of significance of each attribute of pre-class assignments.

Methods

The design of this study was based on an explanatory sequential mixed-methods model that can be divided into the following two phases. Phase 1: A qualitative inquiry was utilised to get information about the pre-class assignment's important factors by using interviews and open-ended questionnaires developed following a literature review. Phase 2: The process validated the factors (rate the importance of each factor) and level of significance of each attribute of the pre-class assignment by using a close-ended questionnaire with a rating.

Results

In the quantitative phase, the response rate of students was 94.28% (n = 33 from the total of 35 students in the program).

The top three practices for pre-class learning assignments that students strongly agreed on were being conscientious of preparation time and other demands on students' time (79%), providing access to pre-class learning materials in a timely fashion (76%), and highlighting reading materials given on areas that are important (73%), respectively. In the cognitive domain, pre-class assignment formats promote students' understanding of knowledge differently. Participants found that instructor-recorded videos were by far the most efficient (very efficient-most efficient = 88%). Notably, 51%, 48%, 39%, 18%, and 6% of participants found that instructor-developed texts, free online videos, third-party resources/videos, textbooks, and articles/research papers were very efficient-most efficient, respectively. Appropriate length and duration of the pre-class assignment; the optimal length of the pre-class assignment (supposing the in-class activity lasts 1 hour) should be less than 60 minutes, the duration per day students would like to spend time doing the pre-class assignment should be less than 60 minutes, and maximum hours per day students could tolerate spending time doing pre-class assignments should be less than 2 hours. The most significant obstacle that led to the incompleteness of doing pre-class assignments was the pre-class itself requires more time than what is given. Interestingly, the top three factors that motivated students to complete pre-class assignments continuously were understanding in-class activities better, being afraid of not understanding in-class activities, and becoming knowledgeable doctors.

Conclusion

The findings of this research provide insights for developing FC model. There is no one optimal pre-class assignment that can be applied to every session because each lesson has various objectives and learning styles. When using this special project's results to curriculum application, it is important to take the context in which it will be utilised into account, choosing the benefits of each format to use based on the instructor's and the lesson's objectives.

MONDAY 22ND MAY 2023, 9.00AM

VIRTUAL ROOM 2, HYBRID CONFERENCE

FREE COMMUNICATIONS 2

Clinical Supervision of Singapore-Based Physiotherapists: A Mixed Methods Exploration
Clement Yan, Singapore

Clinical Skills Training – Flap Management and Suturing Course – During the COVID-19 Pandemic
Marianne Ong, Singapore

Development of an Innovative Examination Test Using High-Quality Patient-Simulated Video to Evaluate Multiple Domains of Clinical Competence: A Nationwide Cross-Sectional Study
Kiyoshi Shikino, Japan

Comparison of the Perceptions and Experiences for Simulation-Based Shared Decision-Making Training Between Undergraduate Medical Students and Standardized Patients: A Mixed-Method Study
Jeng-Cheng Wu, Taiwan

Integrated Assessment in Labs: A Novel Modified Team-Based Approach in Preclinical Curriculum
Varna Taranikanti, United States of America

The Psychiatric Learning Activities Preferences and Attitudes Toward Psychiatry of Medical Students
Tidarat Thodthankhun, Thailand

Quality Assuring Health Professional Curriculum: An Evidence-Based Scaffold
Carole Steketee, Australia

CLINICAL SUPERVISION OF SINGAPORE-BASED PHYSIOTHERAPISTS: A MIXED METHODS EXPLORATION

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Physiotherapy, Sengkang General Hospital, Singapore

Background and Aims

Clinical supervision has been a part of physiotherapy for as long as the profession has existed. The literature review has revealed that there have been studies on the clinical supervision of physiotherapists in overseas contexts. However, physiotherapists' experiences of clinical supervision around the world cannot be unquestionably generalised to physiotherapists in Singapore. Clinical supervision is now expected and required by Singapore's Allied Health Professions Council (AHPC). Despite this, the clinical supervision of physiotherapists in Singapore has been largely unexamined. Therefore, this study examines the effectiveness of clinical supervision and explores the phenomenon of clinical supervision of physiotherapists and how they perceive and experience clinical supervision as it occurs in Singapore.

Methods

Pragmatist and constructivist-interpretivist epistemological perspectives and a mixed sequential qualitative-dominant status mixed methods research design (quantitative → qualitative) were used to guide and conduct this study. Phase 1 of the study generated quantitative data that involved the administration of the Manchester Clinical Supervision Scale 26-items version (MCSS-26) survey tool to examine the physiotherapists' perceived effectiveness of clinical supervision. Of the approximate 1,892 registered physiotherapists, 301 responded to the survey (response rate of 15.9%). Phase 2 of the study generated qualitative data via individual semi-structured interviews with a purposive sample of 30 physiotherapists who participated in Phase 1 of the study to explore their experiences with clinical supervision and the aspects of supervision they perceived to be effective.

Results

The mean total MCSS-26 survey score was 70 (SD = 10.3; 95% CI [68.8, 71.1]), below the recommended threshold score of 73 for effective clinical supervision. Thus, in general, the clinical supervision received by physiotherapists working in Singapore across different work settings and job designations was perceived to be marginally ineffective. The qualitative interviews revealed that physiotherapists in Singapore perceived clinical supervision was most effective when it focused on addressing their specific learning needs and that physiotherapists preferred supervisory styles that best suited their learning styles and desire for practice autonomy. The challenge of finding time for clinical supervision is consistent with the convergence of both quantitative and qualitative data. A working definition and a conceptual framework for the clinical supervision of physiotherapists were also constructed based on the study's findings to guide best practices for effective clinical supervision.

Conclusion

This mixed methods study investigated the phenomenon of clinical supervision of physiotherapists in Singapore. The clinical supervision of physiotherapists in this study's sample is marginally ineffective. The conceptual framework or preferred model of clinical supervision contributes to the evidence base of clinical supervision and enables physiotherapists to plan and deliver or conduct clinical supervision more effectively. To date, this is the first study to be conducted to explore the phenomenon of clinical supervision of practicing physiotherapists in Singapore. It contributes to the limited extant literature on the clinical supervision of physiotherapists. Consequently, this study adds to the understanding of the place and value of clinical supervision in physiotherapy in Singapore.

CLINICAL SKILLS TRAINING - FLAP MANAGEMENT AND SUTURING COURSE - DURING THE COVID-19 PANDEMIC

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Background and Aims

In light of the COVID-19 pandemic and safe management measures, an essential clinical skills training course was developed and delivered in a hybrid format. The course objectives were for participants to understand and explain the principles of surgery, wound healing and demonstrate the basics of suturing and flap design for use in endodontic surgery using a pig-jaw model.

Methods

Participants completed a pre-workshop on-line module with MCQs for acquisition of foundational knowledge prior to attending an in-person 4-hour hands-on workshop at a surgery wet-lab on 6 February 2021. In accordance with COVID-19 safe management guidelines, participants were divided into 2 groups and the workshop was run in the morning and afternoon on the same day. A modified Peyton's 4 step approach (demonstration, deconstruction, formulation, performance) to skills teaching and Pendleton's feedback model were adopted for the face-to-face workshop. During the workshop, a 45-minute lecture was given highlighting important aspects of the topics covered in the on-line module in addition to practical clinical tips. Subsequently, using a clinical case scenario, a clinical

instructor demonstrated a step-by-step flap design with suturing on a pig-jaw. There were six different clinical case scenarios. After each clinical case scenario demonstration, participants put into supervised practice what they had learnt and seen, performing various flap designs and suturing techniques on the pig-jaws. A 15-minute debrief with a question and answer session followed at the end of the workshop.

Results

Eight endodontists (6 registrars, 2 associate consultants) completed the on-line module and 10 endodontists (6 registrars, 2 associate consultants, 2 consultants) and 3 clinical instructors participated in the workshop (instructor: participant ratio was 1:2/3). A 100% response rate was obtained for the on-line module MCQs (N = 8) and the pre- (N = 8) and post- workshop surveys (N = 10). The on-line module pre- and post-MCQs showed an improvement in average percentage scores (N = 8; pre: 75.74%; post: 91.52%) while pre- and post-workshop surveys showed an improvement in the participants' self-perceived confidence levels in acquiring and in applying new knowledge learnt by their indication of level of agreement with 7 statements scored on a 5-point Likert scale (1- strongly disagree to 5- strongly agree). There was an increase of more than 50% of participants indicating an improvement from pre- agree/ strongly agree to post- agree/ strongly agree for 3 out of the 7 statements. Participants indicated a preference for learning foundational knowledge via the online module versus a classroom setting citing the convenience of being able to learn at their own pace. Instructors perceived more time could be spent focusing on honing participants' practical clinical skill sets during the workshop.

Conclusion

This small cohort of participants found the hybrid clinical skills course effective for training. However, this is just a snapshot of participants' perceptions of gaining knowledge and knowing how to apply it in a controlled environment shortly after attending the course. This needs to be followed through longitudinally with peer observation of how participants apply the knowledge and skills when managing and treating their patients in daily clinical practice.

DEVELOPMENT OF AN INNOVATIVE EXAMINATION TEST USING HIGH-QUALITY PATIENT-SIMULATED VIDEO TO EVALUATE MULTIPLE DOMAINS OF CLINICAL COMPETENCE: A NATIONWIDE CROSS-SECTIONAL STUDY

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[1]Department of Community-Oriented Medical Education, School of Medicine, Chiba University, Japan, [2]Division of Medical Education, School of Medicine, Juntendo University, Japan, [3]Department of Emergency and General Medicine, School of Medicine, Kyorin University, Japan, [4]Department of General Medicine, Chiba University Hospital, Japan, [5]Muribushi Okinawa Centre for Teaching Hospitals, Japan

Background and Aims

In Japan, medical students undergo a two-year postgraduate residency program after finishing their medical school education. This training helps residents acquire basic clinical knowledge and general medical skills. The General Medicine In-training Examination (GM-ITE) assesses residents' clinical knowledge during the program. The GM-ITE was developed by the Japan Organisation of Advancing Medical Education (JAMEP; a non-profit organisation) in 2011, on the lines of the US Internal Medicine Residency Examination. Purpose of the GM-ITE is to provide residents and program directors with an objective and reliable assessment of clinical knowledge.

The examination includes 80 multiple-choice questions covering medical interview/professionalism (MP: 8 questions), clinical diagnosis (CD: 18 questions), physical examination/procedure (PP: 18 questions), and disease knowledge (DK: 18 questions). Participation in the examination is voluntary, and approximately one-third of residents take the examination each year (7,681 residents in academic year 2021). Validity of the GM-ITE was confirmed in previous studies.

In order to assess residents' clinical competency in real-world settings, it is imperative to develop questions related to multiple domains in clinical reasoning. Accordingly, we developed a patient-simulated video of a medical interview and physical examination of a patient and his/her family in the emergency room. The simulation was performed by professional actors under medical supervision. This study aims to evaluate the relationship of scores between high-quality patient-simulated video questions and the GM-ITE in postgraduate residents.

Methods

This nationwide cross-sectional study involved postgraduate year (PGY) 1-2 residents who took the examination in the academic year 2021. An examination with the patient-simulated video question was provided for GM-ITE examinees who consented to the test participation. After watching the video question, participants returned the most likely diagnosis. We evaluated the relationship of scores between the video question and the GM-ITE. We examined the validity of video questions using the discrimination index. An index of ≥ 0.20 indicates that the question has a high discriminatory power, while >0.40 indicates a very good measure of the subject's qualifications.

Results

Overall, 56 participants responded to the video question in the study (23 PGY-2 and 33 PGY-1). The correct answer was returned by 6 participants (10.7%), all from PGY-2 residents. The discrimination index for the entire GM-ITE by the patient-simulated question was 0.47: 0.39 for MP, 0.34 for CD and PP each, and 0.27 for MD, showing high discriminatory power in all domains. Twenty-three participants responded to an anonymous questionnaire after the questions. Regarding the question type, respondents (response rate: 41.1%) found the format using patient-simulated video more suitable for assessing clinical competence than the conventional format, with 12 respondents (52.2%) felt positively, 4 (17.4%) negatively, and 7 (30.4%) neutrally.

Conclusion

The patient-simulated video showed a high identification index for overall and multiple domains of competence in conventional GM-ITE. The video question helped residents examine patients through visual and auditory clinical information. It is useful for assessing multiple domains of clinical competence.

Using patient-simulated videos could serve as innovative questions simulating a real-world clinical setting and assessing wide-range domains of clinical competence.

COMPARISON OF THE PERCEPTIONS AND EXPERIENCES FOR SIMULATION-BASED SHARED DECISION-MAKING TRAINING BETWEEN UNDERGRADUATE MEDICAL STUDENTS AND STANDARDISED PATIENTS: A MIXED-METHOD STUDY

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Background and Aims

Shared Decision Making (SDM), an essential skill of Accreditation Council for Graduate Medical Education (ACGME) Competencies Interpersonal and Communication Skills, is critical for physicians to provide patient-centred care. However, a previous systematic review and meta-analysis found that physicians and patients evaluate communication differently and at best, only slightly agree in their ratings, indicating that the construct of communication is not measurable in a stable manner. This study aimed to compare the perceptions and experiences for simulation-based shared decision-making training between undergraduate medical students and standardised patients (SP) quantitatively and qualitatively.

Methods

We conducted a pretest-posttest study in a regional teaching hospital for undergraduate medical students. The curriculum design was based on Kolb's experience learning cycle, and contained blended teaching methods of self-learning materials including online video and printed information, hands-on simulation with SP, and debriefing with twice formative Objective Structured Clinical Examination (OSCE).

Results

A total of 122 undergraduate medical students completed this training program with pre-/post- assessments and after-training qualitative interviews. Three trained SPs role-playing in the OSCE and debriefing as patients' viewpoint also administered the pre-/post- assessments and qualitative interviews. The rating scores of students' self-rating SDM process (SDM-Q-Doc) and clinical behaviour (OPTION5) were almost twice higher than SP's ratings (SDM-Q-9 and OPTION5) in the pre-test assessment; while the rating scores between students and SP toward the consensus and consistency in both SDM process and clinical behaviour during the post-test assessment. All ratings of clinical behaviours of SDM improved more from SP than from students. Thus, the SP's pre-test rating was significantly lower than students' self-rating while SP's post-test rating showed significantly higher than students' self-rating. The content analysis of SP and students' interviews emerged three main themes as follows: defensive behaviour or autonomous attitude towards SDM communication; open mind and learn empathy from simulation-based SDM training; preparing the transition of SDM medical environment with patient information, role models, and practice guidelines. Therefore, inconsistencies and comparison of score ratings and perceptions for training effectiveness between medical students and SP were noted quantitatively and qualitatively.

Conclusion

Although different ratings and perceptions of SDM communication skills between medical students and SP, our simulation-based shared decision-making training program effectively decreased the gap of perceived SDM communication skills between undergraduate medical students and SP. To alleviate medical paternalism and facilitate patients' participation by cultivating students' patient-centered mindset, simulation-based shared decision-making training programs might be feasible for undergraduate medical students. In addition, clinical teachers and researchers should be aware that the performance rating and perceived experiences of SDM communication skills from undergraduate medical students and SP could be obviously different, depending on the perspective explored.

INTEGRATED ASSESSMENT IN LABS: A NOVEL MODIFIED TEAM-BASED APPROACH IN PRECLINICAL CURRICULUM

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Background and Aims

Preclinical years (M1 and M2) in medical schools around the world have moved away from discipline-based didactic pedagogies into system-based, integrated curricula. The integrated curriculum is based on sound pedagogical principles where interdisciplinary, collaborative, and active learning occurs both in classrooms as well as in labs. Integrated sessions are delivered mainly through case-based learning, team-based learning, or self-directed learning where timely feedback is obtained during active learning sessions. However, most lab practical examinations are discipline centred, which solely test students' knowledge recall with minimal integration, and lack of timely feedback. As assessment drives learning, it is important to assess students in a similar manner they learn. Herein, we describe a novel assessment approach called Integrated Team Assessment In Labs using a modified team-based approach that addresses three major aspects: 1. Integration (interdisciplinary knowledge & high order reasoning), 2. Collaboration (individual, teams), and 3. Feedback (immediate and student peer).

Methods

Integrated assessment in the lab was developed for the second-year medical students where each student team (5 students) rotates through seven stations to complete an individual assessment and a team assessment at each station. The individual test consisted of five tagged structures on prosection and images which included multiple disciplines (anatomy, histology, radiology & pathology) and were identified. This was followed by a patient scenario displayed on the monitor at the same station, where each student team collaborated and applied basic concepts for clinical reasoning to arrive at a solution from the tagged structures at each station. They collectively recorded their answer on the Immediate Feedback Assessment Technique (IF-AT) card and proceeded to the next station.

Results

Comparing Individual and team scores showed that the average students' scores were higher when in a group (M=.91) as compared to individual scores (M=.46). A Wilcoxon signed-rank test indicates that these differences are significantly different, T=39379, z=-13.92 p<.001.

In addition, it was observed that team questions generated discussions that transcended disciplinary boundaries and helped individuals realise their mistakes thereby receiving immediate and peer feedback.

Conclusion

Integrated assessment in labs is a novel method of learning that is active, contextual, collaborative, and engaging. It provides instant feedback which is student-owned and reduces time by testing different disciplines within a single examination. Team discussions help develop students' analytical skills and provide immediate feedback similar to bedside case discussions. With advanced planning, this type of assessment is highly feasible and can be replicated in other system modules and educational institutions.

THE PSYCHIATRIC LEARNING ACTIVITIES PREFERENCES AND ATTITUDES TOWARD PSYCHIATRY OF MEDICAL STUDENTS

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Background and Aims

The teaching methods should be directed toward seeding commencing knowledge and changing the attitudes of students. Thus, how attitudes toward psychiatry can be changed is a topic of widespread interest. However, studies have rarely been conducted in the context of learning activities. This study aimed to examine the attitudes of medical students towards psychiatry and to identify their learning activity preferences that affect their knowledge about psychiatry and attitudes towards psychiatry.

Methods

Data were collected from 32 (94.1%) fifth-year undergraduate students who studied at Pranangklao hospital, the Faculty of Medicine, Siam University at the start and end of two weeks of psychiatric rotation in 2019. All participants completed two questionnaires: 1) personal information and 2) the Thai version of the modified Attitudes to Psychiatry Scale (Cronbach's alpha = 0.81). At the end of their rotation, the students also responded to the additional ranking questions in order to determine their preferences regarding the learning activities during the rotation from eight learning activities: new case assignments, OPD observations, bedside teaching, one-day visits to a psychiatric rehabilitation program, lectures, topic discussions, writing the patient reports, and self-study. The questions were as follows: (a) "What are the top three most useful learning activities for enhanced knowledge about psychiatry?", and (b) "Which of these top three learning activities most effectively improves your attitude toward psychiatry?". The collected data were presented as descriptive statistics (percentage and mean), and comparisons between the pre-rotation scores and the post-rotation scores on the mAPS were made using paired T-tests.

Results

Significant improvements in attitudes toward psychiatry were highly correlated with the merits of psychiatry as scientific medicine ($p < 0.01$), the effectiveness of treatment ($p < 0.05$), and the inspiration from medical school ($p < 0.01$). There was also a positive trend in the stigma of psychiatry, but this change was not statistically significant ($p = 0.81$).

The top three most useful learning activities preferred for enhanced knowledge about psychiatry were new case assignments (35%), followed by bedside teaching (26%), and OPD observations (23%). The top three preferences for learning activities that most effectively improve the attitudes toward psychiatry were one-day visits to a psychiatric rehabilitation program (39%), followed by OPD observations (28%); and new case assignments (26%).

Conclusion

The psychiatric education and personal experience from direct patient contact and observing psychiatrists interacting with patients not only enhances students' clinical knowledge but also contributes to positive attitudinal change. The preferences of students include psychiatric learning activities in which there are interactions with psychiatric patients, as these activities enhanced their knowledge about psychiatry and helped them to develop more positive attitudes towards psychiatry. Especially one-day visits to a psychiatric rehabilitation program which provided an aspect of treatment that focuses on helping psychiatric patients who feel better after the treatment, but their illness leaves some impression on their functioning return to an optimal level of function and achieve their life goals contribute the most positive attitudinal change.

QUALITY ASSURING HEALTH PROFESSIONAL CURRICULUM: AN EVIDENCE-BASED SCAFFOLD

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Background and Aims

Ten years ago, a group of health professional education scholars created the Four-Dimensional Curriculum Framework (4DF) for the development of interprofessional health professional curricula (Lee et al, 2013). This was in response to a gap in the literature for a tool that could connect educational outcomes with societal and workforce needs, and that could navigate the political, cultural and practical challenges associated with bringing traditionally siloed health professional students together to develop interprofessional collaborative practice capabilities. As a high-level theoretical framing tool, its aim was to allow curriculum developers to explore the interplay between four equally valued, intersecting and complex dimensions of health professional curricula. Since 2013, the 4DF has been applied by a range of researchers and educationalists around the world to broadly examine the attributes of various uni- and interprofessional curricula (under review, 2022). Whilst this high-level framing of curricula is clearly valuable, a more practical application of the 4DF whereby criteria within the dimensions are operationalised to systematically monitor and evaluate the quality of curricula would expand its usefulness. The aim of this presentation is to outline the features of a quality assurance checklist that represents the next phase of the 4DF's evolution, which takes it from a theoretical framing tool to a more practical one.

Methods

The Interprofessional Collaborative Organisational Map and Preparedness Assessment (IP-COMPASS) (Parker et al, 2012) was drawn on to operationalise the criteria within each of the four dimensions of the 4DF to create a self-assessment quality assurance checklist. The IP-COMPASS invites educators to engage in a critical review of their curriculum by working through a four-step process that involves a) establishing a review team comprising a cross-section of stakeholders, b) evaluating the strength of the criteria using a comprehensive self-assessment checklist, c) celebrating strengths and identifying areas for improvement and d) periodically reviewing progress against an action plan.

Results

A self-assessment checklist that facilitates an extensive evaluation and monitoring of a curriculum according to key 4DF criteria has been developed. Rating scores according to whether the criterion is absent, weak, adequate or strong leads to a plan of action, implementation and ongoing review. The expectation is that through the process of working through the self-assessment, stakeholders engage in a structured discussion and systematic reflection.

Conclusion

Although the 4DF was initially developed to support interprofessional health curricula, it can be applied to programs of learning in any discipline. Additionally, it can be used to review and reform existing curricula or to guide the development of new programs. Informed by the IP-COMPASS, the expansion of the high-level 4DF into a structured framework that guides systematic and critical analysis of curricula has increased its potential as a practical curriculum development tool, but without compromising the broad drivers of a program.

MONDAY 22ND MAY 2023, 10.45AM

VIRTUAL ROOM 1, HYBRID CONFERENCE

FREE COMMUNICATIONS 3

A Qualitative Exploration of Medical Students' Perceptions of Wellness
Zi Xian Justin Chou, Singapore

Adapting Immersive Gameplay for Learning Family Caregivers' Emotions in End-Of-Life Care and for Training Medical Students' Grief Literacy
Ki Sum Samson Wong, Hong Kong S.A.R.

Developing EPAS - A Systematic Review of Methods Used across the Healthcare Professions
Tayla Douglas, Australia

Factors Influencing Medical Error Disclosure among Internal Medicine Residents in Simulation-Based Training
Cheng-Heng Liu, Taiwan

Validation of a Script Concordance Test to Assess Postgraduate Year One Doctors' Clinical Reasoning in Acute Internal Medicine Scenarios
Jie Ming Nigel Fong, Singapore

Online Micro-Modules to Improve Medical Students' Anti-Sexual Harassment Awareness: A Scenario-Based, Interactive, Self-Paced Multimedia Approach
Wing Sum Amy Lo, Hong Kong S.A.R.

IFMSA Activities and Programs: Students' Journey of Creating Local Impact in Medical Education
Turar Dildabek, Kazakhstan

A QUALITATIVE EXPLORATION OF MEDICAL STUDENTS' PERCEPTIONS OF WELLNESS

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Background and Aims

Despite increasing awareness of the importance of wellness for healthcare professionals, there has been little exploration of perception of wellness in Asian populations or in medical students. Wellness is commonly defined as physical health and its subsidiary components including a lack of stress. Thus, this study aims to explore how Asian medical students define wellness.

Methods

This was a qualitative study using individual, semi-structured interviews for data collection. Senior year LKC Medicine students were the target group, with the view that stress may be related to clinical learning and teaching. Interview questions focused on perception of wellness, importance of wellness and what affects wellness. Interviews were recorded and transcribed verbatim. Qualitative data was coded using thematic analysis.

Results

Nine students completed the interview. The data analysis revealed three themes. 1) 'What is wellness' which consisted of the sub-themes 'Physical wellness' and 'Mental and spiritual wellness'; 2) The 'importance of wellness' which consisted of sub-themes 'physical' and 'mental effects' on the individual; 3) 'What affects wellness, with the sub-themes 'Individual level requirements and activities', 'Interpersonal relationships' and 'Academics/work' with mental wellness the most often neglected. Students also believed that wellness had a tangible effect on their day-to-day life.

Conclusion

Medical students articulated various domains of wellness, and its impact on their personal and professional success. Maintaining wellness was highly individualised but included reflection, engaging in hobbies and taking time for themselves in individual level activities and spending time with friends and family. Institutions could also play a role in wellness in terms of providing a supportive environment.

ADAPTING IMMERSIVE GAMEPLAY FOR LEARNING FAMILY CAREGIVERS' EMOTIONS IN END-OF-LIFE CARE AND FOR TRAINING MEDICAL STUDENTS' GRIEF LITERACY

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Background and Aims

In the face of impending death of a terminally ill loved one, there is anticipatory grief (AG). With physical distancing and strict isolation rules in healthcare facilities, COVID-19 has fundamentally altered our human experience of grieving and end-of-life caregiving. Experiencing bereavement during COVID-19 was found to elicit more severe acute grief reactions than before the pandemic. Recently, a panel of death studies scholars have called for developing grief-literate cultures and societies. While visual literacy refers to one's competency to read and create images whereas digital literacy concerns navigating digital worlds, "grief literacy" could be understood as medical students' capacity to identify, process signs of grief, and their readiness and initiative in attending to the emotional needs of families of dying patients. To this end, could we envisage a safe but authentic virtual experiential learning for training medical students' grief literacy?

Methods

"That Dragon, Cancer" is an autobiographical video game developed by a bereaved family in the U.S. that chronicles their deceased baby son's 4-year journey with an aggressive brain cancer. It allows players to be fully immersed in the family's re-telling of their significant life events (e.g. transitioning from hospital to hospice, experiencing family tensions, witnessing the torment of advanced cancer) where feelings of AG were most intense. While the game has been acclaimed in top journals (JAMA and The Lancet Oncology), only one existing study has applied it to medical education. The study reported that, even without debriefing, empathy scores in U.S. medical students had improved after experiencing the game.

We sought to harness the untapped potential of this game for teaching anticipatory grief to undergraduate medical students within a medical humanities curriculum. In 2022-23, 22 year-two MBBS students participated in a 2.5-hr "virtual" experiential learning workshop which comprised immersive video gameplay and debriefing discussions. We attempted to assess student attitudes toward caring for dying persons using Frommelt Attitude Toward the Care of the Dying scale. Student feedback and comments were collected.

Results

Students found the immersive experience highly effective in illustrating the profound emotions tormenting family members of dying patients, and the complexities of AG in real-life clinical settings. Over 85% respondents strongly agreed that the novel instructional method was effective in helping them learn.

A majority recalled a most compelling scene where the player became stuck in a secluded hospital ward, not being able to comfort a “virtual” paediatric cancer patient who was sobbing and struggling with dehydration as a result of advanced brain tumour. Students felt this vignette allowed them to personally relate to grief reactions of helplessness, extreme guilt and anger felt by family caregivers. This scene has caused some students to tear up.

Conclusion

Use of immersive gameplay centred around the lived experience of a bereaved family offers great potential in teaching grief literacy. In view of the possibility that simulation may elicit raw, profound emotions which affect learner wellbeing, nuances must be made when it comes to debriefing - for instance, using “gamer’s grief” as an analogy to help students develop insight into physician grief.

DEVELOPING EPAS - A SYSTEMATIC REVIEW OF METHODS USED ACROSS THE HEALTHCARE PROFESSIONS

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Background and Aims

Entrustable professional activities (EPAs) are a rapidly growing concept in medical and health professional education. Many institutions and national groups have incorporated EPAs into their educational practice. Commonly, EPAs are developed in consultation with relevant stakeholders. However, this has varied across institutions and professions. The aim of this review is to explore the methods used to develop EPAs in undergraduate healthcare education across medicine, pharmacy, dietetics, physiotherapy and exercise physiology.

Methods

This review was part of a larger project evaluating the utility of EPAs in undergraduate health education. It followed the preferred reporting items for systematic reviews and meta-analysis (PRISMA) 2020 guidelines. A search was executed through Medline, Embase, PsychINFO, Scopus, ERIC and CINAHL databases. Eligible studies were required to report an EPA development process for undergraduate or entry-level programs in the professions of medicine, pharmacy, dietetics, exercise physiology and physiotherapy. At least two reviewers extracted and compared the following data points: profession, country and institution of origin, development team members and the described development process. Disagreements were resolved by consensus amongst the research team.

Results

The electronic search retrieved 752 studies, and 12 were included for review. The majority of studies developed EPAs for medicine (n=8), followed by dietetics (n=3), pharmacy (n=1), and physiotherapy (n=1). Most studies (n=9) developed EPAs for the purpose of local teaching and assessment. However, three reached national consensus in medicine, pharmacy, and physiotherapy. Specific development processes varied significantly across studies. Nine studies drafted EPAs in a small, purposely selected writing team comprising of academics, practitioners, or personnel with experience in health education and curriculum development, before proceeding to an external group of stakeholders for EPA refinement or consensus. In contrast, three studies commenced with a large group of stakeholders to brainstorm professional activities. Five studies reported an initial literature review to conceptualise key activities in the profession. The remaining 7 studies utilised primary data collection methods, such as stakeholder discussion, workshops, and other qualitative methods. Six studies utilised a Delphi or modified-Delphi process.

Conclusion

EPAs are becoming more accepted as the method to operationalise competency-based healthcare education. Several professions have developed EPAs but development processes are highly varied and clear links to established competency frameworks are not always present. The results from this review could inform future organisations and professions aiming to develop EPAs for their local context.

FACTORS INFLUENCING MEDICAL ERROR DISCLOSURE AMONG INTERNAL MEDICINE RESIDENTS IN SIMULATION-BASED TRAINING

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Background and Aims

Medical errors are encountered on a daily basis worldwide. However, less than thirty percent of medical errors were adequately disclosed to the patients. Previous studies reported that factors influencing error reporting include fear of medical disputes, losing patient's trust and ethical issues. Residents have dual roles of both healthcare providers and learners in training, and few studies have probed this topic from residents' perspectives. We aimed to explore considerations regarding medical error disclosure during scenario simulation among internal medicine trainees. We also valued junior doctors' feedback and views of training, which may provide a more comprehensive and constructive view of frameworks for medical error disclosure.

Methods

We conducted a qualitative investigation using semi-structured interview methods on internal medicine trainees partake critical medicine training course in 2013. Before rotating into a critical care medicine course, the trainees underwent a series of lectures and simulations for medical management and physician-patient communication, one of which was a medical error disclosure scenario. Semi-structured interviews probing factors influencing the decision to error disclosure were conducted on residents using purposive sampling. All the interview processes were recorded and transcribed verbatim. Data analysis was performed by C.H Liu using a text editing method. The transcript underwent opening coding, followed by axial coding and thematic analysis in an iterative process. Meaningful segments were aggregated into common themes according to the coding framework.

Results

A total of twenty-two trainees responded to our interview before theoretical saturation was reached. The mean interview time was 38 minutes. Four themes with 11 sub themes emerged after qualitative analysis. The four themes include event factor, patient factor, physician factor, and system factor. Sub themes including causal relationship, medical dispute, moral guilt, information load, emotional response, physician-patient relationship, previous experience, personal style, and medical teamwork were denoted as the interaction between themes. Hence, we propose the four-factor model, with the four themes acting as pillars with lines connecting each other as basis for sub-themes.

Conclusion

The four-factor model for physician-patient communication during medical error disclosure may be a useful framework for clinical or educational purposes, and can provide further extension for various aspects to consider during medical error disclosure.

VALIDATION OF A SCRIPT CONCORDANCE TEST TO ASSESS POSTGRADUATE YEAR ONE DOCTORS' CLINICAL REASONING IN ACUTE INTERNAL MEDICINE SCENARIOS

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Background and Aims

Clinical reasoning is essential for post graduate year 1 (PGY1) doctors to deliver safe inpatient care, particularly in acute scenarios when PGY1s may be the first responders, or on-call when supervision is reduced. No validated tool is available to assess clinical reasoning in this context. A script concordance test (SCT), with specific scenarios for diagnostic reasoning and management reasoning, was created and validated to assess PGY1 clinical reasoning in acute internal medicine scenarios.

Methods

We developed a SCT comprising 26 scenarios (73 items) based on a blueprint for common acute medical conditions. A scoring key was derived using established procedures from a reference panel of 20 senior residents, who are graduates of the internal medicine residency programme and typically the most senior clinician responding to these acute scenarios. PGY1 doctors and medical officers in postgraduate years 2 to 5 completed the SCT and were scored against the scoring key.

Results

Thirty-three PGY1s, 22 medical officers, and 20 senior residents completed the SCT. The SCT had high reliability (Cronbach α = 0.850). SCT scores increased with level of training, with mean scores (± standard deviation) of PGY1s 60.3 ± 8.90, junior residents 70.4 ± 7.46, and senior residents 78.2 ± 4.48 ($p < 0.001$). PGY1s with less acute medicine experience (first clinical posting compared to second and third postings) scored lower (54.3 ± 8.69 vs 62.9 ± 7.77, $p=0.015$). No significant differences in performance between diagnostic reasoning and management reasoning were noted across all levels of training.

Conclusion

Our SCT demonstrated validity as an assessment tool for clinical reasoning in acute medicine. It is an efficient tool to administer, and may aid in formative assessment and the provision of targeted feedback to PGY1s and junior medical residents.

ONLINE MICRO-MODULES TO IMPROVE MEDICAL STUDENTS' ANTI-SEXUAL HARASSMENT AWARENESS: A SCENARIO-BASED, INTERACTIVE, SELF-PACED MULTIMEDIA APPROACH

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Background and Aims

Anti-sexual harassment medical education insufficiency worldwide is a serious issue. Medical students interact with fellow classmates, teachers, healthcare professionals and patients daily, involving communication and physical touch in the learning process, and will continue doing so as future doctors. There is an urgent need to prioritise anti-sexual harassment training, starting from preclinical teaching. Therefore, The Chinese University of Hong Kong's Faculty of Medicine pioneered incorporating it into the preclinical curriculum.

Methods

With support from the Faculty Student Wellness Team, anti-sexual harassment online micro-modules (bilingual: English/Chinese) with case studies of healthcare professionals and patients' interactions were written by medical teachers and approved by the Equal Opportunities Commission of Hong Kong, a statutory body implementing the Sex Discrimination Ordinance. Newly-admitted students must complete these self-paced, interactive, multimedia micro-modules that include audio and text, healthcare-tailored scenario-based videos and self-check quizzes with feedback.

With active student participation, the micro-modules were prepared and evaluated, assessing students' knowledge, attitudes and practices regarding anti-sexual harassment and the micro-modules' effectiveness in pre-/post-module surveys. Unpaired t-test analysis of 172 pre-survey and 150 post-survey responses was done to assess respondents' awareness level pre/post micromodules and their changes.

Results

In general, students struggle with situations that may cause conflict between their personal rights and their roles as medical professionals. Many mistakenly believe that they must continue to care for patients even when verbally sexually harassed, or that they may touch patients for training and physical examination without being potentially regarded as sexual harassment. Males ($P < 0.001$), students residing at home ($P < 0.00005$) and students of lower academic years ($P < 0.005$) tend to have lower awareness towards anti-sexual harassment than their respective counterparts, as they are likely to have received less education to combat sexual harassment and protect oneself and others.

After completing the micro-modules, there is significant improvement in students' knowledge of sexual favours ($P < 0.005$) and physical acts ($P < 0.00001$) that constitute sexual harassment. Students make less inappropriate sex-related comments ($P < 0.00001$) and avoid making classrooms and dorms sexually hostile environments ($P < 0.0005$). There is an overall improvement in students' knowledge, attitudes and practices regarding anti-sexual harassment. 91% of students found the micro-modules effective in raising their awareness, and 94% felt more confident in identifying and handling potential sexual harassment in campus or clinical settings.

It is of utmost importance to raise students' awareness on the issue, especially males, younger students and students who are more likely to encounter such situations. With more exposure and education on combatting sexual harassment, students can better protect themselves and others, and identify and handle potential sexual harassment more effectively. The evaluation showed that students found the micro-modules effective in raising their awareness and confidence towards combatting sexual harassment. It is recommended that other medical schools also incorporate anti-sexual harassment training into the curriculum to protect future medical professionals and patients better.

Conclusion

Online micro-modules can effectively raise medical students' anti-sexual harassment awareness and should be implemented in all medical schools to ensure professionalism and well-being.

IFMSA ACTIVITIES AND PROGRAMS: STUDENTS' JOURNEY OF CREATING LOCAL IMPACT IN MEDICAL EDUCATION

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Background and Aims

The International Federation of Medical Students Associations (IFMSA) aims to empower medical students to strengthen their own medical education systems. Because of this, the IFMSA provides two programs: Teaching Medical Skills (TMS) and Medical Education Systems (MES), which allow students to be engaged in global, regional, national or local activities that fall under the purview of the organisation. IFMSA has been working to align all of its initiatives with the Sustainable Development Goals (SDGs) since the previous year in order to evaluate how our efforts are affecting the UN's Agenda 2030.

Methods

A quantitative and qualitative analysis was performed on each activity that was submitted from the program database from the last three terms. Additionally, the IFMSA Annual Impact Reports were assessed. Each program has a set of focus areas that assist the activity coordinators to better enrol their projects. A small working group is now tracking the connections between each program and the SDGs and creating a toolkit to help future projects align. Most of IFMSA's data analysis has been done on all projects in a global context, hence we plan to analyse all projects enrolled specifically from the Asia Pacific by March 2023 for the APMEC 2023 conference.

Results

In the global context, more than 380 activities that benefited over 900,000 people, including medical students, patients, and the community, took place over the course of the last seven years. Most of these initiatives have mostly benefited SDG 4, namely Quality education. Over the last year, 10 activities on Medical Education systems and 15 activities on Teaching Medical Skills were enrolled from the Asia Pacific. Activities include training sessions, advocacy efforts, conferences, and capacity building in domains including social accountability, accreditation, CPR, surgical skills, and other related groups.

Conclusion

The educational system assists medical students by providing them with a distinctive perspective that equips them to be changemakers. The diversity of student activities and their influence on medical education innovation are both reflected in this abstract. Additionally, we wish to educate medical students about the SDGs and the global impact of their national and local projects.

MONDAY 22ND MAY 2023, 10.45AM

VIRTUAL ROOM 2, HYBRID CONFERENCE

FREE COMMUNICATIONS 4

Development of a Chatbot for Training of Clinical History Skills - A Prospective Case-Control Study
Michael Co, Hong Kong S.A.R.

Simulation-Based Medical Education of the Professional Learning from Reflection and Feedback
Panuwat Sanguansak, Thailand

The Transition of Basic Scientists to Basic Science Educators in Medical and Health Professionals' Education: Perceived Challenges and Opportunities
Lik Wei Wong, Singapore

Emyway Web Application Platform for the Multicenter Formative Assessment of Training Programs for Resident Otolaryngologists: Experience During the First Year of its Implementation in Taiwan
Jeng-Wen Chen, Taiwan

Relationships of Social Media Use by Medical Students with Their Gender, Education Level and Self-Regulated Learning Skills
Ardi Findyartini, Indonesia

Outcome of Pharmacist Teaching Sessions in Undergraduate Medical Education at a Dermatology Ambulatory Care Setting
Germaine Chua, Singapore

Reflecting and Evaluating Exchanged Students' Clinical Reasoning Learning through An Elective Program: Bedside Skill Demonstration, Case Reporting and Clinical Practice
Dan Xu, Australia

DEVELOPMENT OF A CHATBOT FOR TRAINING OF CLINICAL HISTORY SKILLS - A PROSPECTIVE CASE-CONTROL STUDY

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Background and Aims

Strict social distancing measures during COVID-19 pandemic has resulted in disruption of bedside clinical teachings. As such, a novel chatbot mobile app for training of undergraduate medical students' clinical history taking skills was developed in 2021. Students were able to take clinical history from the virtual patient for bedside teaching. A case-control study was conducted to evaluate the effectiveness of learning with chatbot mobile app, versus conventional bedside teachings with real patients.

Methods

The Chatbot app was developed by using a number of softwares from Google. At the front end, the student input is handled by “Actions on Google” in a conversational user interface. At the back end, an algorithm was implemented to construct a dynamic conversational response.

The input message from the student is processed by Dialogflow to identify the meaning of the questions. Dialogflow is a natural language processing platform which uses machine learning technology to understand how people talk with the intent from the conversation being extracted and processed. Appropriate answer is then searched as a response to the student. As such, this chatbot app is equipped with artificial intelligence and natural language processing ability, in which consistent answers will be given regardless of the words / phrases used by the student.

This is a prospective case control study conducted in 2021. Ethical approval was sought. 132 final year medical students were block-randomised into two groups according to the group number - Conventional bedside teaching with clinical history taken from a real patient, versus Bedside teaching with clinical history taken from the Chatbot. Independent blinded assessment of students’ history taking skills was conducted.

Students’ performances were assessed by an independent assessor using a standardised marking scheme. Students’ feedback were anonymously assessed by the modified system usability scale at the end of the bedside teaching.

Results

Median age was 23 years old (Range 21 - 30 years old). There were 62 female and 70 male students. 64 students were randomised into conventional group while 68 students were randomised into the chatbot group. Baseline demographic data were comparable between the two groups.

Blinded assessment of students’ performance in clinical history taking was comparable between the conventional group and chatbot group ($p > 0.05$).

Students’ feedback on clinical history taken from the chatbot system were generally positive. Median Likert scores of user friendliness, keyword identification, student-chatbot interaction, efficiency of learning and overall experience was 8 (Range 6-10), 7 (Range 5-9), 7 (Range 5-9), 8 (Range 6-9) and 8 (Range 6-9), respectively.

Conclusion

With the promising results we have demonstrated in this study, we believe training of history taking skills by chatbot will be a feasible alternative to conventional bedside teaching. It allows training of clinical history taking skills without geographical constraint and student exposure to rare clinical scenarios.

SIMULATION-BASED MEDICAL EDUCATION OF THE PROFESSIONAL LEARNING FROM REFLECTION AND FEEDBACK

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Background and Aims

Simulation-based medical education (SBME) has provided real active learning, a dynamic system, and an appropriate environment for integrating clinical scenarios.

The metacognitive is the process of self-understanding with reflection. This is the essential aspect experienced and a critical part of professional development.

Methods

SBME was performed in the clinical year of medical students during the 2000-2022 academic years. Aim to evaluate perceptions in reflection and feedback on the class of SMBE compared to case-based discussion. Teamwork case

base scenario of critical care case management, followed by a debriefing of SMBE. Semi-structured questionnaires were used to evaluate the perception in the feedback of the effectiveness of the class. Evaluate effectiveness in knowledge, learning engagement, self-efficacy, and course satisfaction. Follow up with an assessment of knowledge and learning engagement after eight weeks with the final examination using Modified Essay Question (MEQ).

Results

The 128 clinical medical students enrolled in the study, and 67 students attended the SMBE class. The class of SMBE had a similar score of knowledge (79.30±12.52 VS 79.21±13.0; P=0.80) and self-efficacy (88.2±12.29 VS 89.21±13.0; P=0.19) compared to a case-based discussion. SMBE class had a higher score for learning engagement (80.8±14.68 VS 85.7±11.76; P=0.02) and course satisfaction (83.8±14.68 VS 92.7±9.53; P=0.01) compared to case-based discussion with statistical significance. After eight weeks of follow-up with the MEQ examination, the class of SBME had better score results than the case-based discussion with statistical significance (15±1.76 VS 12.8±1.68; P=0.01). The SMBE class had better learning engagement with more self-confidence. 90% reported that reflection and feedback during debriefing in SMBE class were very beneficial.

Conclusion

The SBME is an effective method to gain learning engagement and is well accepted with increased efficiency by the participants. The class of SBME using reflection improves confidence and attitude in learning knowledge.

Take home message: Learning from SBME with reflection and feedback improved knowledge, learning engagement, and self-confidence.

THE TRANSITION OF BASIC SCIENTISTS TO BASIC SCIENCE EDUCATORS IN MEDICAL AND HEALTH PROFESSIONALS' EDUCATION: PERCEIVED CHALLENGES AND OPPORTUNITIES

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Background and Aims

Basic science educators play a key role in integrating the basic sciences and clinical sciences in contemporary medical and health professionals' education. Most biomedical PhD scientists lack clinical-related knowledge and training but they are expected to appropriately integrate basic science content with clinical application. The tantalising question is how contemporary medical and health professionals' education and self-awareness of basic scientists affect their perception about the challenges in teaching medical and health care curriculum.

Although there is some literature discussing the challenges faced by basic scientists in their transition to teaching and education, the voices and opinions of basic scientists in this matter are still lacking especially for those who are considering teaching as their career option. This study aims to identify and explore issues and challenges faced by basic scientists in teaching medical and health professionals' curriculum.

Methods

An anonymous online survey was administered to all basic scientists in NUS Yong Loo Lin School of Medicine. These survey questions were adapted from literature reviews and opinions on the challenges in teaching contemporary medical and health professionals. This study consisted of 11 Likert type scale questions asking participants' opinions on the challenges of teaching medical and health professionals, one MCQ asking participants chose three most important skills in better equipping them in teaching medical and health professionals from eight choices given, and two OEQ asking their opinions on the skills required to better equip themselves. Each open-ended response was analysed and coded to the most appropriate theme. Thematic analysis was conducted through ranking themes according to frequency and analysing the results.

Results

It was found that 61.90% (13/21) of the basic scientists felt that they have insufficient content expertise to effectively teach medical and health professions. 66.67% (14/21) of the basic scientists did not feel confident about the clinical content. 80.96% (17/21) of them felt that they must recontextualise the subject content to fit to its clinical application. Besides clinical content and expertise, understanding teaching pedagogy (n=6) and teaching opportunities (n=3) were among the other major concerns for basic scientists. In general, they felt that clinical shadowing opportunities and collaborations with clinician educators (25.81%), and education mentorship (25.81%) were the top two most important strategies in equipping themselves for teaching. They also felt that teaching training (n=6), collaboration with clinicians (n=2) and career path (n=1) were the other important approaches in preparing them for teaching medical and health professions.

Conclusion

The transition to basic science educators is a gradual process with a steep learning curve for basic scientists. By acknowledging the challenges in teaching medical and health professionals' education, it provides the opportunity to address those concerns, so they are more ready and prepared before embarking on their career in medical and health professionals' education. Insights into the challenges faced by basic scientists also provide opportunities for personal reflection and development so that basic science educators will be more prepared for greater challenges and the ever-changing demands of contemporary medical and health professionals' education.

EMYWAY WEB APPLICATION PLATFORM FOR THE MULTICENTER FORMATIVE ASSESSMENT OF TRAINING PROGRAMS FOR RESIDENT OTOLARYNGOLOGISTS: EXPERIENCE DURING THE FIRST YEAR OF ITS IMPLEMENTATION IN TAIWAN

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Background and Aims

Milestones and entrustable professional activities (EPAs) are two emerging assessment tools in competency-based medical education (CBME). Milestones help assess physicians' core competencies, whereas EPAs operationalise workplace-based assessments and facilitate coaching and feedback. In 2020, the Taiwan Society of Otorhinolaryngology-Head and Neck Surgery (TSO-HNS) developed an EPA-based learning and assessment framework comprising a total of 11 EPA titles associated with the competencies and milestones of resident otolaryngologists in Taiwan. Using a CBME-based platform in the present study, we report the outcomes (during the first year of the platform's implementation) of a multicenter evaluation of training programs for resident otolaryngologists in Taiwan.

Methods

In 2021, the Joint Commission of Taiwan (JCT) launched an information platform, "Emyway", to expedite the developing and implementation of a competency training framework for postgraduate resident physicians. The CBME core group members from the TSO-HNS, which was among the first 3 specialist societies to host the integrated EPA assessment framework on Emyway, cooperated with the information technologists of the JCT to develop a tailor-made system. This system comprises a study calendar, a case log, an EPA-based workflow for formative assessment and feedback, and a dashboard to demonstrate resident physicians' real-time achievement in entrustment levels.

Results

Trainers and trainees enrolled in a total of 11 training programs (medical centres, 8; regional teaching hospitals, 3) completed a test on Emyway; the corresponding coverage rates were 25.5% (105/412) and 33.3% (90/270), respectively. Between July 2021 and July 2022, a total of 1210 responses were collected, which occurred mainly in

the surgical theatre (62.5%; 756/1210) and from third-year (31.4%; 380/1210), and fourth-year (30.8%; 373/1210) residents. The most frequently evaluated task among the 11 EPA titles was EPA06 (related to the head and neck), followed by EPA08 (nose and sinus disorders), EPA07 (ear), and EPA01 (airway). The complexity of EPA tasks increased with the seniority of resident physicians (chi-square test for trend; P < .0001). The trainees' self-rated scores correlated positively with their trainer-rated scores (r = 0.578; P < .001). Of the trainers, 19.8% responded on the same day as the EPA initiation. Word counts of ≥10 were noted in the reflection texts of 93.3% of trainees and the feedback texts of 68.7% of trainers. The stratification of entrustment levels by program and EPA title helped identify the target for faculty development and tasks necessitated high levels of teaching activities, respectively. The coding of the trainers' feedback texts regarding the ACGME's 6 core competencies revealed a need for communication skill training.

Conclusion

In addition to the sequenced framework, the custom-built information platform Emyway can facilitate workplace-based learner-centred teaching and enhance the learning experience; this platform can also augment programmatic assessment and coaching feedback. Our study results may serve as a reference for future implementations aimed at improving the competencies of specialist resident physicians.

RELATIONSHIPS OF SOCIAL MEDIA USE BY MEDICAL STUDENTS WITH THEIR GENDER, EDUCATION LEVEL AND SELF-REGULATED LEARNING SKILLS

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Background and Aims

Social media has been widely used by medical students for different purposes. Navigating the use of social media requires self-regulated learning skills. Despite the importance of this issue in the medical education context, there is limited study on the relationships of the social media use for learning and medical students' self-regulated learning skills. This study aims to investigate the relationships between social media use by medical students and their self-regulated learning skills. Our research questions are three-folds: a. Is social networking site for medical education (SNME) questionnaires valid for use in the Indonesian setting? b. What are the comparisons of SNME and MSLQ scores based on gender and education stages? c. What is the relationship between medical students' SRL (as measured by MSLQ) with their social media use for learning (as measured SNSME)?

Methods

This is a cross-sectional study using two validated questionnaires: Social networking sites for medical education (SNME) questionnaire (19 items) and Motivated Strategies for Learning Questionnaire (MSLQ; 81 items). Cross cultural adaptation and exploratory factor analysis were completed for SNME. Reliability analysis was conducted for both questionnaires. Descriptive and bivariate analyses were further completed.

Results

A total of 1122 medical students from different schools in Indonesia (34.5% male, 65.5% female; 56% preclinical, 44% clinical year students) participated in the study. The exploratory factor analysis of the SNME resulted in three subscales: 1. Attitudes towards the use of social media for learning and knowledge development (Cronbach α = 0.941); 2. The use of social media for information sharing and interaction (Cronbach α = 0.651), and 3. The use of social media for knowledge development and research (Cronbach α = 0.707). The overall Cronbach α of MSLQ was 0.973. The data was not normally distributed. Male students showed lower scores of SNME subscales 2 and 3 (12 vs 13, p = 0.002; 9 vs 10, p = 0.004). There was no difference in SNME scores between preclinical and clinical year students. On the other hand, the total MSLQ scores of preclinical and clinical year students were significantly different (426 vs 418, p = 0.003). There were low to moderate correlations between SNME and MSLQ total and subscale scores (R = 0.195 - 0.462, p < 0.001).

Conclusion

This study shows that the adapted SNME in the current setting is valid and that use of social media for learning can be influenced by gender. The SRL of preclinical year students was higher compared to clinical year students. Finally, the use of social media is moderately correlated with the students' SRL. Therefore, optimising the use of social media for learning should involve strategies to support student's SRL development.

OUTCOME OF PHARMACIST TEACHING SESSIONS IN UNDERGRADUATE MEDICAL EDUCATION AT A DERMATOLOGY AMBULATORY CARE SETTING

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Background and Aims

Pharmacist-led education sessions have been an effective method of teaching medical students[1], given the limited amount of pharmacy-based education included in the medical school curricula.[2] Interprofessional learning activities embedded into curricula gives greater exposure to understanding interprofessional roles and learning experience.[3]

Undergraduate students from 3 Medical Schools in Singapore attend the National Skin Centre as part of their pre-clinical medical education in dermatology. During this time a pharmacist conducts a mini-station activity to teach how to choose appropriate dosage forms based on body site, the morphology of the disease, potency of topical corticosteroids and to estimate the amount of topical medications needed for therapy based on body surface area and frequency of application.

Thereafter, to determine if the interprofessional teaching methods are effective in helping students understand the dermatology topic, the student satisfaction with the mini-station activity is measured.

Methods

Medical students attended lectures conducted by the pharmacist on 'Topical dermatological dosage forms' and 'Body surface area and amount of cream to prescribe.' An interactive mini-station activity was completed following the lecture.

At the mini-station, students sampled the texture and consistency of 7 types of different dosage forms (cream, ointment, paste, gel, lotion, suspension and solution). They also learnt to choose appropriate dosage forms for skin conditions as illustrated in a series of photos, performed calculations to estimate the amount of creams to be prescribed, and gained awareness of product ingredients and composition.

Their knowledge was tested by attempting a QR code-based, on-line assessment comprising of MCQs, short answers and matching questions. At the end of the session, students were provided with a feedback form to evaluate their learning experience.

Results

A total of 364 medical students in 11 batches attended the teaching sessions over 9 months for 2022. The interprofessional teaching method using a mini-station hands-on activity was rated as good, very good or excellent by 80-90% of the students.

Conclusion

Hands-on group activities made an interprofessional learning experience more interesting. The majority of medical students were able to apply new knowledge gained by attempting the quizzes and indicated high satisfaction after attending the interactive mini-station activities conducted by pharmacists.

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REFLECTING AND EVALUATING EXCHANGED STUDENTS’ CLINICAL REASONING LEARNING THROUGH AN ELECTIVE PROGRAM: BEDSIDE SKILL DEMONSTRATION, CASE REPORTING AND CLINICAL PRACTICE

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Background and Aims

The increasing opportunities for medical students to participate in international, supervised and structured electives have been shown in a recent study, which enhanced medical students’ professionalism, cultural competence and clinical reasoning (CR) skills in preclinical years. Evidence is scant in achieving the specific learning objectives, improving CR skills during senior clinical years and subsequent clinical practice. This evaluation study aims to demonstrate how the short-term supervised exchange elective can improve medical students’ CR skills with senior years’ study and create a solid foundation for ongoing CR learning in the early clinical practice through bedside demonstration, case presentation at the bedside and case report writing.

Methods

This is an evaluation study of reflecting and evaluating CR learning with six medical students from Australia during a 19-day supervised elective at the tertiary hospital in China. The six students attended the academic schedules organised by Chinese supervisors. Under joint supervision from China and Australia, students were exposed to case studies in medicine, surgery, pathology, laboratory medicine and radiology during the daily ward rounds. The daily schedule included the morning and afternoon sessions with either the end-of-session debrief or the end-of-the-day summary. The supervisors and the students recorded the daily CR discussions, case collection for case report writing and bedside clinical skill demonstrations in different disciplines for reflecting discussion at the semi-structured individual interview. The interview enables students to delve deeply and reflect on their experiences in anticipation of the emergence of new learning themes including CR learning, case report writing for journal publication and impact on ongoing clinical learning The design of individual interviews is based on the modified 6-step feedback tool including six sets of questions, while the case selection for journal case report writing is through the 4-step framework to select the cases with the most learning points for publication. In terms of impact on ongoing learning and competence in clinical practice, there are collections of 6-months, 12-months and 24-months post-elective reflection and feedback focussing on CR learning, academic achievements and clinical practice capability. The reflection and feedback form the important elements of the evaluation study.

Results

There are six individual reflections as qualitative evaluation for the study. The main themes of case-based CR learning identified in the daily discussions through reflections were described by the students to be very beneficial in case report writing and clinical practice as an intern. Learning through the five domains of clinical reasoning is claimed by the students to be incorporated into daily clinical placement learning for the senior-year students and clinical practice as an intern. All six students have completed two case reports individually for successful journal publications. The written reflections on 6-months, 12-months and 24-months post-elective demonstrated qualitatively the transfer of learning into competent clinical practice in these students and highlighted the excellent outcome of the elective program.

Conclusion

This evaluation study through elective students' reflections provides insight into how this exchange elective may improve students' clinical reasoning learning, enhance scientific writing skills, strengthen academic performance and facilitate the progression to be a competent medical practitioner.

MONDAY 22ND MAY 2023, 1.30PM

VIRTUAL ROOM 1, HYBRID CONFERENCE

FREE COMMUNICATIONS 5

The Professional, Personal and Social Impact of a New Normal in Dental Education: A Cross-Sectional Study on Indian Dental Students' Perspectives
K Anbarasi, India

Appropriate Semantic Qualifiers Increases Diagnostic Accuracy Using Clinical Decision Support System: A Randomised Control Trial
Yasutaka Yanagita, Japan

Enablers and Barriers to Implementing Infection Prevention Control Practices in Primary Healthcare: A Qualitative Survey from Timor-Leste
"We Wait, And Wait, And Wait...": Barriers and Enablers to Implementing Infection Prevention and Control Training in Primary Healthcare, Timor-Leste"
Joao De Jesus Arcanjo, Timor-Leste

Growth in the Mindset of Medical Students toward Patients With Psychiatric Disorders through Experiential Learning and a Reflection Process
Wachiraporn Arunothong, Thailand

Medical Student's Adaptation to Online Learning, Shows Catch Up with a Lag
Thilanka Seneviratne, Sri Lanka

AR Multiplayer Gamification: New Challenges in Learning Anatomy and Physiology for Health Professional Education
Mei Kuen Florence Tang, Hong Kong S.A.R.

African Mentoring in Health Profession Education
Kimesh Longanathan Naidoo, South Africa

An Evidence-Based Research to Promote Post-Graduate Healthcare Trainees' Inter-Professional Team Performance with Integration of Patient-Centered
Wei-Chun Cheng, Taiwan

THE PROFESSIONAL, PERSONAL AND SOCIAL IMPACT OF A NEW NORMAL IN DENTAL EDUCATION: A CROSS-SECTIONAL STUDY ON INDIAN DENTAL STUDENTS' PERSPECTIVES

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Background and Aims

India is a complex web of 309 dental colleges with approximately 1, 54,000 students. The closure of student clinics during the COVID-19 pandemic has created a complete virtual dental curriculum. This new normal has had both positive and negative effects on dental students holistically.

Aim: To explore the Indian Dental students' perception of the professional, personal, and social impact of the new normal in dental education.

Methods

A cross-sectional online survey research was planned during the COVID-19 second wave period in India. Ethical approval was obtained from the institutional review board. A single-stage, random sampling of clusters of dental colleges was performed across the country. Data was collected from every unit in the sampled clusters. The sample size gauging was done with a priori that there are around 92,700 dental students in the clinical phase. The participants required for the survey were estimated as 1107 with a G power of 90%, 95% confidence interval, and 5% α error.

Using a digital questionnaire as the tool and Google forms as the survey provider, data aggregation was performed. A balanced questionnaire with both open and closed-ended questions was formulated and validated. The questionnaire had three dimensions in the closed-ended questions, which included professional (10 items), psychological (9 items), and social aspects (7 items), and 3 structured open-ended questions. A thematic content analysis was performed to interpret the transcripts from these questions. The data were organised based on key themes. Seventeen themes of the reported open questions were identified; these documentations were subjected to coding analysis expressed descriptively. Data analysis was performed using SPSS software version 20 (IBM Corporation). A Pearson chi-squared test was used for comparison between the sub-variables of the demographic data and the questionnaire responses. Analysis for the Internal validity of the study was done using Cronbach's α.

Results

Professional Impact: The majority of the participants have felt that they require well-structured training to compensate for the missed-out sessions (p=0.049). They have expressed that their teachers have adapted a wide range of teaching aids to compensate for the loss and also have suggested that they are being fairly assessed by their mentors.

Personal impact: Males have been more upset by unexpected events than females with p=0.029. Females have predominantly not shared their emotional status with their family and friends and are more stressed with p= 0.01 & p= 0.001 respectively. They were able to balance the studies better than males (p= 0.002).

Social impact: Information from media and COVID-related casualties have affected the females more with p= 0.001 and p= 0.015 respectively. Females have found it better to cope with the financial conditions of their families than males. 61% of the participants liked to volunteer for SARS-CoV-2-related duties. The students have suggested the incorporation of disaster management in their syllabus.

Conclusion

Our study reports demonstrate the student's viewpoints on missing out on clinical experience despite virtual training. The personal and social impact also shows that it has adversely affected them holistically, but has improved their sense of social responsibility.

APPROPRIATE SEMANTIC QUALIFIERS INCREASES DIAGNOSTIC ACCURACY USING CLINICAL DECISION SUPPORT SYSTEM: A RANDOMISED CONTROL TRIAL

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Background and Aims

Medical information is increasing, and the ability to reach appropriate information resources is required. The Japanese Model Core Curriculum for Medical Education also incorporates the ability to utilise information and science technology as one of the new basic qualities and abilities of a physician. Under these circumstances, the clinical decision support system (CDSS) is attracting attention, and its usefulness is being evaluated from the perspective of avoiding diagnostic errors. To make effective use of CDSS, it is necessary to appropriately set medical terms (Semantic Qualifiers [SQs]), which facilitate the ability to abstractly define the clinical problem that needs to be solved. Here, we investigate whether using appropriate SQs can make a difference in diagnostic accuracy when using the CDSS to verify diagnostic accuracy in the history-taking phase.

Methods

Forty-two fifth-year medical students who were in clinical training at the Department of General Medicine, Chiba University Hospital, from May to December 2020, participated in the study. They were divided into two groups: 22 using the CDSS (CDSS group) and 20 not using the CDSS (control group). Students were presented with 10 paper-based case questions, in which they were asked to answer SQs and provide one diagnosis. Two experts created the case questions, and seven general practitioners verified the validity of the difficulty level of the questions. Based on the results, three appropriate SQs were set for each case. If the SQs answered by the participants were consistent with the set SQs, they received one point; two or more points were considered appropriate SQs. One point was given if the answered diagnosis was correct, and the maximum score was 10 points for answering all case questions correctly. Each student answered the SQs and diagnoses for each of the 10 cases, and 420 questions were analysed. In this study, Current Decision Support®, which is available free of charge to the faculty members and students of this hospital, was adopted as the CDSS.

Results

All 42 targeted medical students participated in the study without dropping out. Of the 220 questions in the CDSS group, 141 (64.1%) were answered correctly, and 133 (60.5%) were appropriate SQs. Of the questions answered correctly, 93 (69.2%) were appropriate SQs. Of the 200 questions in the control group, 101 (50.5%) were answered correctly, and 115 (57.5%) were appropriate SQs. Of the questions answered correctly, 56 (48.7%) were appropriate SQs. For appropriate SQs, a X-square test was performed for correct and incorrect answers and the CDSS and control groups, and a significant difference was found ($\chi 2(1) = 11.6$, $p < .001$). The number of correct answers was significantly higher in the CDSS group than in the control group. For inappropriate SQs, a X-square test revealed no significant difference between the groups ($\chi 2(1) = 8.62 \times 102$, $p = 0.769$).

Conclusion

Medical students make more accurate diagnoses using the CDSS if they set appropriate SQs. By acquiring the ability to set appropriate SQs, it is expected that CDSS will be used more effectively.

ENABLERS AND BARRIERS TO IMPLEMENTING INFECTION PREVENTION CONTROL PRACTICES IN PRIMARY HEALTHCARE: A QUALITATIVE SURVEY FROM TIMOR-LESTE

"WE WAIT, AND WAIT, AND WAIT...": BARRIERS AND ENABLERS TO IMPLEMENTING INFECTION PREVENTION AND CONTROL TRAINING IN PRIMARY HEALTHCARE, TIMOR-LESTE"

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Background and Aims

Since independence, Timor-Leste has expanded the coverage of human resources for healthcare significantly across the country. The Ministry of Health (MoH) recognises the need to improve quality in healthcare services, in part by training and building capacity within the government health service. The ASTEROID (Advancing Surveillance and Training to Enhance Recognition of Infectious Diseases) Project is one project that uses learning technology and 5 days of in-class training to improve detection, early management, and notification of infectious diseases in Timorese primary healthcare facilities. ASTEROID has reached more than 300 healthcare professionals across Timor-Leste. However, like many healthcare workers in low- and middle-income countries (LMIC), they face barriers in implementing practice changes. These limitations can arise from the health system, under resourcing, and infrastructure or be related to broader national and geopolitical conditions.

Methods

The ASTEROID teaching team conducted post-training interviews with 14 doctors, 13 nurses and 2 midwives (n=29) from 2021-2022. Some of these clinicians also had leadership positions in their health centres, e.g. as

Health Centre Manager. Participants were interviewed in 18 health centres across 12 municipalities (Aileu, Liquica, Manufahi, Manatuto, Viqueque, Ainaro, Ermera, Lospalos, Dili, Suai, Baucau, Maliana, and Special Region Oecusse RAEOA). Written consent was obtained prior to each interview. The interviews were recorded, analysed, and coded thematically to elucidate the perceived enablers and barriers to implementation of change after ASTEROID training.

Results

Common barriers identified to implementing infection prevention and control measures included perceived scarcity of resources such as personal protective equipment, medical equipment, and poor infrastructure. Respondents described the process of pedidu (making an official request to Headquarters for equipment) as lengthy, and often ineffective. In addition, the broader cultural context of traditional beliefs held in the community, is perceived as a barrier to people seeking and accepting healthcare interventions. The COVID-19 pandemic also diverted resources and attention, exacerbating these barriers.

Respondents identified enablers of change such as: material resources (small equipment donations, printed handouts of the training), a community of practice (e.g. creating WhatsApp groups where they could ask questions after training) and aspects of the programme that reinforced knowledge acquisition (e.g. frequent pre-/post-testing and Group Case Discussions). On an intra-personal level, respondents described improved understanding of causes of illness, appropriate treatment, and ability to independently access national guidelines. They shared that their new knowledge would help them give better quality care, resulting in better outcomes and clearer messaging to their communities. This empowers and upskills non-medical participants, who may be the only healthcare provider in a rural facility during an emergency. Respondents described a shift in attitudes towards greater awareness of infectious diseases threats and the need for timely, appropriate management including infection prevention and control measures.

Conclusion

The ASTEROID project implemented multidisciplinary infectious diseases training to a range of health professionals. The findings from this study show systemic barriers that healthcare professionals face, but also the positive effects of training and equipping them to implement change. Further study is needed to quantify the impact of similar training and its sustainability.

GROWTH IN THE MINDSET OF MEDICAL STUDENTS TOWARD PATIENTS WITH PSYCHIATRIC DISORDERS THROUGH EXPERIENTIAL LEARNING AND A REFLECTION PROCESS

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Background and Aims

Stigmatising and discriminatory attitudes towards patients with psychiatric disorders can occur automatically. Healthcare providers commonly perceive that dealing with these patients is challenging, and dangerous. These negative attitudes and non-verbal reactions of providers can easily be a model to observant medical students. Consequently, this can be a key barrier for medical students to provide psychoeducation, treatment, and guidance to these patients. To change and shape the students' mindset, empathetic understanding and positive attitude toward these patients should be created in a safe environment.

Methods

We initiated and included a group psychoeducation activity for hospitalised psychiatric patients in a psychiatric rotation curriculum. Hospitalised patients were used because they had active symptoms while students worked with them. Students were divided into groups of 5-6 and were assigned to work with ward staff and patients to find the patients' common health problems. Then, they had to prepare content, media, and materials to educate a group of 12-15 patients, for an hour. An instructor and ward staff attended and observed the activity so that students felt secure and were helped when an emergency situation occurred. Attitude, empathy, and the learning process were assessed through a self-reflection essay.

Results

Before the activity, 95% of students felt nervous, insecure, and scared of the patients. 90% of them thought that patients would be against and not follow the activity. During the activity, 85% of them felt more relaxed and perceived that patients were engaged in their activity. After the activity, 95% of them were impressed by the patients and the activity, and felt that they would like to help the patients more. All of the students achieved the goal of planning, organising, and delivering education, and engaging with the patients.

Conclusion

Students expressed more positive attitudes and empathy towards the patients after the activity. Their mindsets had changed and overcame their previous biased attitude. In addition, students achieved the learning process of providing education for patients with psychiatric disorders and mental infirmity. Mindsets toward patients with psychiatric disorders could be shaped by exposure to an opportunity to assist patients in a secure environment, along with a self-reflection process.

MEDICAL STUDENT'S ADAPTATION TO ONLINE LEARNING, SHOWS CATCH UP WITH A LAG

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Background and Aims

With the advent of the COVID-19 pandemic medical education had to go online very hastily in order to maintain continuation of studies. How medical students cope with this rapid change is a question worth inquiring into. Thus, we aimed to assess the effect of this change on the exam performance of the students.

Methods

We did this prospective study of how students of a single batch went through from face to face to online learning and assessed their exam performance serially. There were 216 students in the batch and they had three semester exams in this period of change. The first semester had the change from face to face to online and the second and third semesters were completely online. At the end of each semester students had MCQ (Multiple Choice Questions) and SEQ (Structured Essay Questions) exams. We compared the change of mean marks of each component serially along the semesters. Also, we analysed the percentage of 'A' grade achieved by the students serially along the semesters. Chi Square test and Paired sample T test was used in the analysis.

Results

All data sets show normal distribution. From first to second semester exams the mean marks showed significant drop in each component (MCQ 70.75(±13.23) to 56.88(±14.98) P< 0.001 and SEQ 61.56(±8.26) to 54. 43(±13.06) (P< 0.001). However, from second semester to third there was a gain. (MCQ 56.88(±14.98) to 67.82(±13.59) P <0.001) and SEQ 54.43(±13.06) to 55.20(±10.63) P= 0.318.

Comparing First semester with third semester, there was still a reduction MCQ 70.75(±70.75) to 67.82(±13.59) P= 0.002 and SEQ 61.56(±8.26) to 55.20(±10.63) P< 0.001. Analysing the percentage of students who secured an 'A' grade, from first to second semester exams, showed a significant drop from 36.5% To 7.5% (P<0.001). From second semester to third, there was a gain from 7.5% to 25.1% (P< 0.001). Comparing first semester with third semester 'A' grade percentage was 36.5 % to 25.1% (P=0.015)

Conclusion

There's a significant effect on student performance when shifting from face to face to online teaching. Yet students adapt to online teaching with subsequent catch up in performances with a lag period.

AR MULTIPLAYER GAMIFICATION: NEW CHALLENGES IN LEARNING ANATOMY AND PHYSIOLOGY FOR HEALTH PROFESSIONAL EDUCATION

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Background and Aims

The knowledge of anatomy and physiology is crucial for fundamental health professional training. Students are required time to memorise and understand the structural relationship and theoretical concept of how body systems work. Digital technology mediates and integrates with teaching and learning in modernised tertiary education, seeking enhancement of efficiency and effectiveness. Augmented reality (AR) technology uses digital three-dimensional elements to overlay and enhance the information in a real-world location. Multiplayer gamification is a new concept to bring a group of players into a digital game-like competition for active learning.

Our team is currently developing an innovative, dynamic approach deliverable with a metaverse concept - a real-time 3D interactive Gamified Platform (Re3D IG) for enhancement and perceived motivational support of anatomy and physiology education with the adaption of virtual and augmented realities technologies. The project aims to serve the urgent need for hybrid teaching in the long-term impact of exploring our university's future educational tool in virtual teaching and learning. The deliverable of the Digestive AR (Augmented Reality) Champion is set up for 3D interactive experiences in a gamified competition to promote the study of the digestive system. Our team has investigated the learning outcome from the student perceptions' if the design fits their cognitive learning perspectives.

Methods

Under the approval of ethics by The Chinese University of Hong Kong, the class of year one Chinese medicine students taking the course of Anatomy were recruited. In the study, all the students studied the structures of the digestive system for the first 60 mins using the plastinated specimen. They were then divided into groups to play the multiplayer gamified competition of Digestive AR Champion. The three best score students were awarded book coupons, and the data collection was from questionnaires using a 7-point Likert scale distributed to all participants.

Results

Eighteen students attended the class, and the response rates were 100%. From the data analysis, around 77.8% played for the first time in the AR gamified competition for educational purposes. They were appraised at about the mean of 5.7 in the 7-point Likert scale analysis for the innovation of such a setting, which can be their preference in gaining their knowledge cognitively.

Conclusion

It is a pilot study to evaluate AR multiplayer gamification setting as a potential anatomy learning tool in professional development competence. Quoting the statement of Confucius, 'I hear I forget, I see I remember, I do I understand, the setting provides an entertaining, stimulating and motivating platform for learners. Our team will further explore students' perceptions if there is an urge in the paradigm shift of blended learning using digital technology, which can make them more proficient in customising their self-learning styles for memory retention beyond the classroom.

AFRICAN MENTORING IN HEALTH PROFESSION EDUCATION

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Background and Aims

A growing evidence base has documented the positive impact of mentorship on various outcomes, including academic promotion, faculty retention, research productivity and career satisfaction in health professional education (HPE). Health professional educators often enter academia after having obtained a health professional qualification and may require orientation and mentoring to progress along the ranks of academic success at Higher Education Institutions. Despite the essential role mentoring plays in ensuring equity, inclusivity and diversity, there is a lack of institutional buy-in and poor strategic prioritisation of mentorship programmes in most African medical schools. This is being recognised as a deficit. The potential expansion of e-mentoring as well as the challenges to inclusivity, identifying barriers and determining recommendations for HPE mentoring programmes across Southern Africa (SA) is needed. In this session, we report on mentoring programmes in SA specifically focusing on institutional buy-in and uptake in relation to academic promotion.

Methods

During the 2022 annual, South African Health Educationalists (SAAHE) conference, an online workshop on mentorship for key Southern African health professional educators was held. Following a presentation on institutional mentorship models and the association with academic promotion, narrative examples of mentorship relationships across three institutions in SA, were explored. We used a thematic content analysis process to summarise the key concepts and workshop participants were invited to review the findings and to identify how these exemplars resonated with them.

Results

There is a heterogeneity in the approaches to mentorship in SA, however 3 key approaches to mentorship were identified:

1. Top-down - deliberate (purposive);

2. Ad-hoc - laissez faire;

3. Supportive/reward positive.

Most of the mentoring models followed a traditional, dyadic style, however cohort, e-mentoring and affirming, purposive programmes were recognised as being the preferred options. A dichotomy between a forced, over-regulated institutional versus a generic, ground-up and needs-based approach was also noted to exist. Participants agreed upon the need for mentorship outputs to be aligned with criteria for success that correlates with academic promotion. This also necessitates that evidence of scholarship in teaching, research and innovation be monitored in all programmes. The mentor's role in ensuring equity for promotion and access to resources for mentees was also seen as an important output for mentorship programmes for HPE. As a collective, African institutions were noted to undervalue the role of mentorship programmes and a focused pivot that allows for formalised, supportive programmes remains a theoretical exercise at present.

Conclusion

Mentorship programmes for health professional educators in African institutions are varied and are seen to lack wide scale adoption. Whilst mentorship is positively viewed as a means to ensure improved career progression, ensuring equity and the practical operationalisation of these programmes requires further exploration, specifically with regard to the models and processes that need to be followed.

AN EVIDENCE-BASED RESEARCH TO PROMOTE POST-GRADUATE HEALTHCARE TRAINEES' INTER-PROFESSIONAL TEAM PERFORMANCE WITH INTEGRATION OF PATIENT-CENTERED

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Background and Aims

For post-graduate (PG) healthcare trainees, competencies of interprofessional collaborative practice (IPCP) were important in the clinical environment. Huge Barr (1998) differentiate IPCP to three competencies of individual complementary, interprofessional collaborative competency and interprofessional common competency. Among those competencies, patient-involvement belonged to common competency, as the key goal of curriculum development. The research assessed clinical performance of patient-centred collaborative practice curriculum (CPC) with action in cooperation to patient-involvement.

Methods

Ethical approval was obtained from the Research Ethics Board, Buddhist Tzu Chi General Hospital. There were 97 subjects of PG trainees enrolled within one teaching hospital in the East part of Taiwan. There were 46 subjects who underwent CPC in the experimental group (E-group), and 51 subjects maintained assignments in the control group (C-group) between Nov 2021 and Apr 2022. A patient-centred CPC consisting of 3 simulation scenarios was developed. Based on the theory of social learning, we organised five different healthcare professions to interact and learn with team members during CPC. The pre-, post- and retention tests were collected with the Taiwan version of Collaborative Practice Assessment Tool (Taiwan-CPAT). The statistical method was analysed by Generalised Estimating Equations (SPSS 22.0).

Results

97 responses (E-group/ C-group: 46/51) were collected and analysed. There were 22 physicians (E-group/C-group:11/11), 58 Nurses (E-group/C-group:26/32), 7 Pharmacists (E-group/C-group:4/3), 3 Nutritionists (E-group/ C-group:2/1) and 7 respiratory therapists (E-group/C-group:3/4). There was no significant difference between two groups about professions, genders and first working institution after graduation. There was significant difference of patient-involvement scores interaction between post- and pretest (E-group/ C-group: B=2.11, p= .014), and there was significant difference also noted comparison retention test with pretest (E-group/ C-group: B= 5.26, p< .001).

Conclusion

Trainees' competency of common competencies improved, significantly focused on the performance of patient-centred IPCP following CPC. Based on trainees' short-term and long-term performance, multiple PG trainees within E-group learned each other's social values and strategies about patient-centred healthcare practice. Furthermore, sustainable improvement was demonstrated after CPC in the clinic. It can be found that an educational intervention with social learning theory efficiently promoted PG trainees' performance about IPCP, especially integration with patient-centred.

MONDAY 22ND MAY 2023, 1.30PM

VIRTUAL ROOM 2, HYBRID CONFERENCE

FREE COMMUNICATIONS 6

Escape Room as a Gamification Strategy for Interprofessional Education on Team Functioning and Psychological Safety
Qianhui Cheng, Singapore

Medical Students' Perception of the Level of Training in Trauma Medicine in Undergraduate Curriculum
Dakshita Wickramasinghe, Sri Lanka

A Counterintuitive Finding in Clinical Examinations
Lambert Schuwirth, Australia

Introducing Virtual Reality (VR) and Online Learning Modules to the Functional Neuroanatomy (FNA) Course: A Positive Impact on Students' Satisfaction
Ameed Raoof, Qatar

Distance Mentor-Mentee Relationship in Ophthalmic Education During COVID-19 Pandemic
Aditya Kapoor, India

Assessment of Online VS In-Person Teaching in Medical Education: Challenges and Possible Solutions at TCVGH
Hsin Tung, Taiwan

Effectiveness of Modified Clinical Placements Due to COVID-19 For Radiography Students in Singapore
Muhammad Khairul Nordin, Singapore

ESCAPE ROOM AS A GAMIFICATION STRATEGY FOR INTERPROFESSIONAL EDUCATION ON TEAM FUNCTIONING AND PSYCHOLOGICAL SAFETY

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Background and Aims

Teamwork and psychological safety are key concepts to building interprofessional collaboration (IPC) among healthcare professionals. Using an escape room as a gamification strategy to promote social constructivism and optimal challenges to get interprofessional groups to come together to solve various puzzles is an innovative way to promote positive team behaviours and psychological safety.

Methods

The escape room was part of NNI Education Day 2022 and it was followed by a facilitated debriefing of small and large group discussions and reflection activity. The activity was evaluated using a post-feedback survey, based on a 5-point Likert scale from strongly agree to strongly disagree.

Results

52 out of 61 healthcare professionals (85.2% response rate) responded to the post-feedback survey. 96% enjoyed participating in the escape room activity. 100% felt psychologically safe in a team setting during the escape room activity. 98% felt that the escape room helped them to better understand the impact of team behaviours in an IPC team. 98% felt the escape room promoted interprofessional teamwork and communication. 94% would recommend the concept of an escape room for Interprofessional Education (IPE). 98% felt that the session as a whole helped them to learn with, from, and about other health professionals. Respondents felt the escape room helped them learn about the topic, some verbatim include “Learning from the escape game”, “games were relevant”, “Escape room is Da Best! Fun way to learn about the topic. Having multiple professions including admin and scientists is very important.” Respondents were also more aware of their own team behaviours and that of others, “To be aware of my destructive behaviours which I sometimes assume are helpful to the group but are actually not. To help others develop constructive behaviours for the betterment of the group”, “Every member has their strengths, to provide an environment of psychological safety for all members”. Respondents were also able to consider applying psychological safety to their workplace by “Making it safe to speak up”, “Greater recognition of different personality types and working styles”, “No blame culture”, “Listen to one another, tap on one another’s strength”, “I’m definitely more aware of any destructive behaviours through this conference and displaying it or observing would make me more obvious to it and prevent or correct it appropriately.” “Instil psychological safety to encourage sharing of ideas and experiences”.

Conclusion

Doubt will continue to permeate our thoughts and actions no matter what. The moral or psychological distress that arises from this is the key motivating factor for our avoidance of tasks. If we accept this doubt and education embraces this doubt, it will no longer linger in the shadows as a negative and restrictive emotion but fuel a brighter dialogue and positive learning experience, ultimately assisting us in achieving our full potential.

MEDICAL STUDENTS’ PERCEPTION OF THE LEVEL OF TRAINING IN TRAUMA MEDICINE IN UNDERGRADUATE CURRICULUM

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Background and Aims

Trauma related deaths are the leading cause of death in the world. Junior doctors are the first contact healthcare professionals to assess and provide initial hospital care for multiple injured patients.

Methods

A descriptive cross-sectional study was conducted between August 2021-August 2022. Self-administered, voluntary, anonymous questionnaire developed by the researchers was used, fifth year students completed professorial surgery appointments were included.

Results

A total of 192 patients [males=86 (44.8%); females=106 (55.2%)] were included. Majority (n=122, 63.5%) attended >75% of trauma module lectures and 189 (98.4%) students attended basic life support (BLS) sessions. Significantly 43 (22.4%) students did not take part in cervical spine immobilisation training.

Highest number of students agreed that they received adequate lecture-based teaching in trauma medicine (n=87, 45.3%) and 73 (38%) agreed that clinical based teaching was adequate. Most students (n=133, 69.3%) agreed that they are confident in performing circulation assessment and 130 students agreed they can perform breathing assessment. However, 64 (33.3%) students disagreed that they cannot insert chest drain confidently. Students’ confidence in performing assessment and procedures in trauma is significantly associated with the number of sessions they have attended in resuscitation room accident service ($p<0.001$) and number of BLS sessions ($p<0.001$).

Conclusion

Students perform well in trauma scenarios if the increased clinical experience is given to them during their undergraduate studies. Although it was identified that students are lacking confidence in performing some life saving procedures which needs to be addressed.

A COUNTERINTUITIVE FINDING IN CLINICAL EXAMINATIONS

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Background and Aims

Despite the growing popularity of workplace-based assessment, OSCE-type examinations are still widely used. This is logical; they allow for the assessment of clinical or consulting skills in a well-controlled and standardised environment. Traditionally, scores on all stations are combined into a total or mean score to determine whether the candidate has passed or failed. This is defensible under the assumption that consulting skills can be seen as a latent trait, and that consequently, deviation in performance between stations is seen as domain specificity and not as part of true score variance. To determine whether this assumption is always defensible for clinical examinations is the aim of this analysis.

Methods

The analyses were conducted in the context of the AMC clinical examination of international medical graduates (IMGs). For this examination, IMGs are presented with 16 stations across four assessment areas and five clinical domains. Fourteen of these stations contribute to the candidates' result, two are so-called trial stations; stations administered for the first time to test their psychometric characteristics. Rather than based on a total score, an overall pass requires successful completion of at least 10/14 stations. However, classical test theory and generalisability analysis are routinely used to identify stations or examiner behaviours that might impact the validity of the examination. In these routine analyses, we observed, in the vast majority of examinations, the reliability of all 16 (14 marked + 2 trial) stations to be higher than of only the marked 14 stations, but that the standard error measurements became poorer. To explore this further, we have analysed 15 most recent examinations with classical test theory and generalisability.

Results

In 13 of the 15 examinations, Cronbach's alpha was higher with 16 stations than with 14 stations. In 10/15 examinations the actual alpha with 16 stations was higher than the predicted generalisability coefficient based on 14 stations (D-study). However, in all cases, the standard error of measurements was actually greater - poorer - with 16 stations than with 14 stations, and subsequently, so were the 95% confidence intervals. This is counterintuitive as one would assume that a K=16 sample of stations would have better measurement characteristics than a K=14 sample. To explore this phenomenon further, we have repeated the CTT analyses by deleting two further stations from the k=14 sample. These stations were picked to ensure that they did not match either the assessment area or the clinical domain. In 15 out of 16 examinations the alpha was lower than 14 stations but the SEM and 95% CI were actually better than with 14 stations in all examinations.

Conclusion

We conclude that in our examinations, the assumption of a stable, latent trait 'consulting skills' is not sufficiently supported by the data to use it for pass-fail decision-making. It supports our approach which is based on a minimum number of successfully completed stations rather than a numerical compensatory model. However, we welcome the opportunity to discuss with delegates any alternative explanations for our findings.

INTRODUCING VIRTUAL REALITY (VR) AND ONLINE LEARNING MODULES TO THE FUNCTIONAL NEUROANATOMY (FNA) COURSE: A POSITIVE IMPACT ON STUDENTS' SATISFACTION

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Background and Aims

Human anatomy, more specifically neuroanatomy, is a critical field in medicine that requires greater dedication and effort to understand its topics and structure. The field of neuroanatomy relies on visualising structures and understanding their placement and function in the human body. Yet, to this day, most of the teaching resources in neuroanatomy courses are nondigital and include case studies, self-instruction laboratory stations and lecture slides. Hence, introducing innovative learning tools that are simultaneously informative and engaging to medical students could play a part in improving comprehension and learning. Moreover, introducing Virtual Reality (VR) to neuroanatomy could help students better visualise neuroanatomical structures in their real third-dimensional form in the human brain. Students would be able to better understand the nature of the structure and its associated pathophysiology and better retain knowledge for the long-term when viewing structures in their real form.

Methods

Two sets of optional online learning modules were created as a study resource to the Functional Neuroanatomy (FNA) course offered to second-year medical students, class size 50. The first set comprised of 13 online learning modules that highlighted important functional neuroanatomy topics. Each module consisted of short educational videos, a practice quiz, and a survey at the end to assess its effectiveness. The second set included brief narrated explanatory VR videos showing three-dimensional structures using the "3D Organon VR Anatomy" application launched on the Oculus Quest 2 Headsets. The modules would correspond to the FNA lab topic of that week. In both sets, students were surveyed about their satisfaction and the validity of the modules. Additionally, in the second set students' performance in the weekly quizzes was compared to those who did not take the modules.

Results

Results showed that over 95% of students agreed/strongly agreed that the modules helped them understand, fostered critical thinking, and were clinically relevant. Furthermore, more than 98% of students rated the narration, images, and clinical cases as excellent or exceptionally good. VR modules surveys showed positive feedback in which most students agreed/strongly agreed that the module material was pertinent and representative of quiz questions. They also agreed that the modules had helped improve their performance. However, there was no statistical significance in overall exam scores or in each quiz separately among students who took the modules and those who did not.

Conclusion

The results clearly demonstrate the students' satisfaction with the online modules supporting the use of this novel resource to aid students' understanding and improve their overall learning experience. The use of VR will have a great and positive impact on the future of medicine and the use of technology of medicine. VR will serve as a great medical education tool. As current medical students are part of the younger generations who are more comfortable with the use of technology, developing such innovative learning tools will be an exciting and engaging part of medical education and can show positive effects on the overall quality of medical education and students' learning.

DISTANCE MENTOR-MENTEE RELATIONSHIP IN OPHTHALMIC EDUCATION DURING COVID-19 PANDEMIC

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Background and Aims

A successful mentor-mentee relationship can bring significant benefits to the mentee in terms of productivity, career advancement and in becoming the best version of oneself. A mentor acts as a role model, friend and a coach to guide the mentee through the different personal and professional challenges.

COVID-19 pandemic affected this interaction between mentor and mentee due to the restrictions enforced to prevent its spread. As a result, the conventional teaching and learning of medical post graduates in the form of lectures and clinics got affected.

To bridge the gap of knowledge transfer from mentor to mentee during pandemic, academy of eyecare education at LVPEI designed AHA creative learning series (AHA-CLS) in ophthalmology integrating novel tools and methods.

Methods

This introductory series was launched to enhance the learning outcomes in vitero-retina. The program was aimed to enhance the existing knowledge of the residents, update them on the newer investigative modalities and treatment algorithms and protocols, and most importantly to prepare them for their upcoming exams and fellowship interviews. Each participants' group consisted of 2 mentors and 8-10 mentees to ensure personalised mentoring and one is to one interaction.

A total of 81 residents across India and Liberia enrolled for the course. Active learning techniques employed to cover each topic were - observation, curiosity and critical thinking. The active learning concepts used were JAM (Just-A-Minute) clinical pearls (each pearl focused on a single clinical information which gives to the point and most relevant information pertaining to a topic), attention to retention (A2R) videos (which are short 4-5 minutes videos covering a specific topic) and detailed discussion on retinal images enhancing observational skills. The mentees interacted with mentors over virtual meetings (three times a week) and over social media platforms (Whatsapp) after the classes. At the end of the course, a survey was conducted to get feedback on the quality of the program.

Results

Among a total of 81 participants, over 95% of participants liked and enjoyed the learning process and only 3% thought the course curriculum should have been different. Regarding the usefulness of the course components, over 95% of participants appreciated the program design and responded that the program helped them achieve their desired goals by the end of course. All three active learning concepts i.e. JAM pearls, A2R videos and observation skills were very well received by all the participants, 100% of the participants found observational skills and JAM pearls to be useful and 97.1% of the residents learned from A2R videos.

Conclusion

This novel program was very well received by both the mentees and the mentors, while the mentees gained knowledge and confidence, the mentors had a sense of fulfilment from the fact that their efforts have helped their mentees grow. A significant change in the thought process of the residents with regards to approaching a clinical scenario and making an appropriate diagnosis was observed. The retention and application could be increased further by use of such an active learning process in medical education.

ASSESSMENT OF ONLINE VS IN-PERSON TEACHING IN MEDICAL EDUCATION: CHALLENGES AND POSSIBLE SOLUTIONS AT TCVGH

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Background and Aims

The COVID-19 pandemic has caused disruption in almost all educational programs across the world. Assessment between online education on the students' attitude and the feedback vs traditional in-person class is very important. Synchronous real-time teaching patterns with half of the students learning online and half in-person were to assess the difference in the attitudes and efficacy in these two teaching models.

Methods

Medical students of year 5 participated in the paediatrics department of TCVGH for the 2-week course. The students who had studied from March to September in 2022 were enrolled. The main curriculum involving knowledge had been carried using either the synchronous in-person or online methods. Webex was used as the platform for simultaneous broadcasting. Students had been divided into two groups, to receive the crossover curriculums with one-week of in-person and one-week of online classes. There were around 2-4 classes each week. The questionnaires were given after each class, regarding the attitudes, interaction, and the efficacy of both teaching models.

Results

Totally, we collected questionnaires from the 105 students receiving in-person class and the 100 students experiencing online class. The scores were significantly higher in-person class, including studying efficacy ($p<0.001$), convenience ($p<0.001$), concentration ($p<0.001$), and satisfaction ($p<0.001$). For the interaction aspect, 70.5% online students did not take the initiative to discuss. For the synchronous online class, students usually stayed in the meeting room (52.6%) and library (20%). Most students used iPAD (49%) for study, followed by cell phones (38%), and the desktop (13%).

Conclusion

Online real-time learning model still could not totally replace the traditional in-person class. It might be due to the habits, the familiarity of web systems, and teaching styles of teachers. It would be a possible solution to raise appropriate short questions during online class to increase the interaction, concentration and satisfaction.

EFFECTIVENESS OF MODIFIED CLINICAL PLACEMENTS DUE TO COVID-19 FOR RADIOGRAPHY STUDENTS IN SINGAPORE

Nordin MK, Monteiro EC
Department of Diagnostic Imaging, National University Hospital, National University Health System (NUHS), Singapore

Background and Aims

Clinical placements are an integral part of learning for radiography students. Many subjects require a practical aspect to enhance their learning. It allows them an opportunity to integrate theory into practice in a real world setting and develop their skills and competency as a radiographer. The COVID-19 pandemic however has caused much disruption to the conventional clinical placement. Safety management measures (SMMs) put in place caused clinical educators to change their teaching methods and strategies, with repercussions to students' education. SMMs such as team segregation, restricted access to high-risk areas and lesser clinical area rotations resulted in students getting lesser opportunities to practice and gain experience, as well as reduced physical supervision by the clinical educators due to the team segregation. As such, modifications had to be made to ensure students were still able to learn and practice their clinical skills in an effective manner.

Methods

Physical interactions were switched to virtual means through online tools such as Zoom or Whatsapp. Student tutorials and feedback sessions also had to be done virtually. To compensate for areas that students were not allowed access to, additional online tutorials were done to compensate and supplement their learning. In addition, one-to-one weekly feedback sessions were introduced as compared to monthly group feedbacks to make up for the lesser physical interactions, as a means to keep track of their learning.

At the end of each clinical placement, students were asked to provide a feedback score out of 4 for the following questions: (Qn1) training facilities and amenities; (Qn2) educational goals and learning objectives; (Qn3) training received; (Qn4) sufficiency of training time; (Qn5) trainer's commitment to teaching; and (Qn6) overall training experience. Student feedback scores were retrospectively reviewed, from 2 years pre-pandemic (2018 - 2019) and compared with the scores during 2 years of the pandemic (2020 - 2021).

Results

The results from the feedback showed a mean score of 3.65, 3.50, 3.56, 3.47, 3.47 & 3.47 for Qn1 - Qn6 in 2018, and 3.65, 3.38, 3.64, 3.57, 3.70 & 3.67 in 2019 respectively. These scores were for the periods before the COVID-19 pandemic and implementation of SMMs started. In 2020, the mean scores for Qn1 - Qn6 saw an increase to 3.80, 3.77, 3.84, 3.77, 3.87 & 3.82, and subsequently 3.60, 3.61, 3.67, 3.51, 3.63 & 3.62 in the year 2021.

Conclusion

Overall, there was no decrease in the feedback scores from before the pandemic and during the pandemic. Students were still able to receive sufficient training time and meet their educational goals. This implies that the changes made to adapt to the SMMs did not negatively impact clinical placements for radiography students. The feedback scores reflect that the modified clinical placements due to COVID-19 were still effective in ensuring students were able to learn and practice their clinical skills in the hospital.

MONDAY 22ND MAY 2023, 3.15PM

VIRTUAL ROOM 1, HYBRID CONFERENCE

FREE COMMUNICATIONS 7

A Meta-Analysis and Systematic Review of Self-Regulated Learning and Self-Directed Learning in Health Professional Education
Arash Arianpoor, Australia

OSCE Prep UK: A Data Driven Virtual Learning Environment Which Identified and Mitigated the Impact of Reduced Physical Interaction on Medical Education
David Hewitt, United Kingdom

Evaluating Manual Dexterity During Obstetrics and Gynaecology Residency Interviews - The Use of a Robotic Surgical Simulator
Ming Fen Grace Chan, Singapore

Delivering Clinical Tutorials to Medical Students Via Using the Microsoft HoloLens 2: A Mixed-Methods Evaluation
Connolly Murray, Ireland

Learners' Involvement in Co-Creating and Collaborative Knowledge Building in Building an Educational Tool, Virtual Integrated Patient
Kylie Leong, Singapore

Implementation of Virtual OSCE in Health Professions Education
See Chai Carol Chan, United Kingdom

A META-ANALYSIS AND SYSTEMATIC REVIEW OF SELF-REGULATED LEARNING AND SELF-DIRECTED LEARNING IN HEALTH PROFESSIONAL EDUCATION

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Background and Aims

Self-regulated learning is a process during which learners use self-generated thoughts and goal-oriented behaviours to transform mental abilities into academic skills. Further, self-directed learners are those who recognise their own learning needs, define their own learning goals, and try to achieve those goals by identifying resources, and adopting and/or adapting learning strategies. It is believed that an essential attribute of health professionals is to have self-regulated and self-directed aptitudes of learning (SEFL-ReDiAL [SR]). Accordingly, it is important to determine factors that promote or hinder SR. This meta-analysis was designed to evaluate these enablers and barriers in health professionals.

Methods

All quantitative studies which had evaluated enablers of, and barriers to, SR in four types of health professionals (dentistry, medicine, nursing, pharmacology) and were published between 1 January 2000 and 31 August 2022, were retrieved from Scopus® and PubMed® databases. The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines were followed for study inclusion and reporting the results. Further, standard formulas for determining comparisons of independent means (Cohen's d) and confidence intervals (CI95%) were used to calculate the pooled effect size for each enabler and barrier, based on individual effect sizes.

Results

In total, 142 papers were initially retrieved from which 43 studies were included in the meta-analysis. According to this analysis, SR is generally associated with wellbeing, teaching method, and academic level.

Wellbeing showed the strongest effect on SR (d=0.806; 95% CI [0.296, 1.316]). In respect of teaching method, problem-based learning, team-based learning, and flipped classroom showed positive effects on SR (d=0.590; 95% [0.375, 0.806], d=0.382; 95% CI [0.232, 0.531], and d=0.095; 95% CI [-0.088, 0.279] respectively), whereas lectures were negatively associated with SR (d=-0.079; 95% CI [-0.389, 0.230]). There was a decrease in the level of SR during the first year of enrolment (d=-0.144; 95% CI [-0284, -0.004]); however, the change in SR was not statistically significant in the second year (d=0.027; 95% CI [-0.044, 0.099]).

Conclusion

In conclusion, SR is predicted by learners' wellbeing, the methods with which they are taught, and their academic level. It is suggested that higher levels of wellbeing potentially promote SR but there is also a possibility that having higher levels of SR contributes to wellbeing. Further, teaching methods that provide learners with freedom to define their own learning needs and choose their own learning strategy, and those which give learners appropriate feedback, have the potential to enhance SR. It is noteworthy that the level of SR generally decreases by entering a new learning environment, but as learners gain experience in this new context, it levels out, or even increases.

It is therefore suggested that maintaining learners' wellbeing would enhance their SR and contribute to them becoming health professionals that embrace lifelong learning.

OSCE PREP UK: A DATA DRIVEN VIRTUAL LEARNING ENVIRONMENT WHICH IDENTIFIED AND MITIGATED THE IMPACT OF REDUCED PHYSICAL INTERACTION ON MEDICAL EDUCATION

Hewitt D
NHS Lothian, NHS, United Kingdom

Background and Aims

The COVID-19 pandemic led to reduced physical interaction and prompted paradigm shifts in medical education. Facilitating high quality learning on areas normally taught in person, such as clinical examination, posed the greatest challenge. Infection control aside, in-person interactive teaching is becoming increasingly strained by time pressures and logistical issues. Supplementary virtually delivered materials covering a sub-set of content that would normally be delivered in person, could be extremely valuable in optimising efficacy and efficiency of medical education, particularly when in-person interaction is limited. This study aimed to firstly characterise potential deficits in undergraduate medical education due to COVID-19, secondly, provide a virtual interactive learning environment to mitigate these shortfalls, and thirdly, assess the effectiveness of this approach using data driven methodology.

Methods

Over 2021 and 2022, medical students from across the UK completed online questionnaires detailing opinions on the impact of COVID-19 on their training. During this time, 30 online, interactive system-specific clinical examination tutorials were delivered by junior doctors. Asynchronous online content accompanied live sessions to enrich the virtual learning environment. Feedback on perceived quality and satisfaction from the sessions was collected.

Pre-and-post session quizzes assessed topic specific knowledge and confidence, and were analysed using the Wilcoxon-signed rank test for non-parametric paired data.

Results

There was diverse participation in terms of year of study, and universities from across the UK, for both the COVID-19 questionnaire and the participants who attended the sessions. 1693 students responded to the survey on the impact of COVID-19. >75% described reduced patient contact, bedside teaching, and teaching of clinical skills. 69% stated that this translated to a gap in university provided teaching. <20% were satisfied with the clinical skills training they were currently receiving, <35% felt they had sufficient knowledge or skill to perform clinical examinations expected of them at their level. >85% agreed that supplemental teaching would be beneficial.

Over the series, there were 689 attendances. Statistically and clinically significant increases were observed for confidence in all sessions, and knowledge for all but one session. The average percentage increase in quiz scores and confidence scores across all sessions was 25% (IQR: 0-60%, $p<0.01$) and 43% (IQR: 23-81%, $p<0.01$) respectively. >95% of the feedback on the perceived value, relevance and quality of the series was positive.

Conclusion

A high proportion of medical students reported reduced clinical contact, curricula gaps, dissatisfaction, low self-reported measures of clinical examination competence, and a desire for supplemental teaching. This had not eased by 2022, indicating either an ongoing disruption and/or a pre-existing demand for more clinical examination training. A data driven approach was effective in facilitating real-time assessment of material demand and efficacy, and will enable an iterative approach of continuous teaching quality improvement. This virtual learning environment was in high demand, demonstrated statistically and clinically meaningful increases in knowledge and confidence, and received overwhelmingly positive feedback on the value it provided. This methodology is effective, reproducible, and highly scalable for delivering virtual education to improve outcomes, particularly in periods where physical contact is limited.

EVALUATING MANUAL DEXTERITY DURING OBSTETRICS AND GYNAECOLOGY RESIDENCY INTERVIEWS - THE USE OF A ROBOTIC SURGICAL SIMULATOR

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Background and Aims

Residency application interviews aim to select candidates that have the potential and qualities for success in the long term. In a surgical speciality such as Obstetrics and Gynaecology (O&G), manual dexterity, spatial awareness and hand-eye coordination are important skills that are required for a future specialist. Robotic surgery is playing an increasingly important role in minimally-invasive surgery in both Benign and Gynaecological Oncology. Currently, there are no validated objective measures for the assessment of spatial or manual skills at residency interviews. We aim to evaluate the effectiveness of a robotic surgical simulator as a tool for manual dexterity aptitude testing of potential residents at O&G residency interviews.

We introduce a robotic surgical simulator as a tool to evaluate the manual dexterity of applicants to O&G residency programme in National University Hospital, Singapore. It can assess the time taken, economy of motion, instrument collision, excessive instrument force, master workspace range and drop rate during the module to produce the overall score.

Methods

We incorporated the da Vinci Surgical System (Intuitive Surgical Inc., Sunnyvale, CA) Skills simulator as a station during our department's Residency interviews in November 2021. The da Vinci Skills simulator provides an immersive virtual practice environment using the original robot surgeon console controls. Built-in metrics such as

time taken to complete tasks, economy of motion, instrumental collision, excessive instrumental force, master workshop range are recorded to provide objective measures of performance. During the interview, residency applicants were first given a brief introduction to the robot console, and given time to go through a practice module on the simulator independently. They proceeded to complete a second simulation module where their performance was assessed. The simulation task involved participants picking up rings with one robot 'hand' and transferring to the other 'hand', then placing it in designated areas. The whole process took approximately 10 minutes in total.

Subsequently, all residency applicants and faculty members involved in the interview filled in a short questionnaire form on their experience. Performance scores, feedback from applicants and faculty were collated.

Results

A total of 10 applicants were recruited. The time taken for participants to complete tasks was 86.1 seconds ± 14.2 (means ± SD) and the overall performance score was 67.4 ± 12.5 (means ± SD). Participants responded favourably to the robotic simulator. Participants rated the robotic simulator as easy to use, realistic, and were able to complete the modules without much difficulty. One participant commented that it was a valuable hands-on experience to practice on the robotic console. 87.5% of respondents to the survey agreed or strongly agreed that the robot simulator should be integrated as a component into future residency interviews.

Conclusion

The incorporation of the robotic simulator into the O&G residency interview process can provide additional objective metrics about a participant's manual dexterity aptitude. This may potentially refine the interview process to select candidates with potential surgical skills. Such additional testing can be conducted within the constraints of a standard residency interview day. Future research should include longitudinal results of these assessments.

DELIVERING CLINICAL TUTORIALS TO MEDICAL STUDENTS VIA USING THE MICROSOFT HOLOLENS 2: A MIXED-METHODS EVALUATION

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Background and Aims

Augmented reality (AR) is a virtual environment that allows the user to interact with both physical and virtual elements in real-time. The Microsoft HoloLens2 is a Head Mounted Display which enables creation of an immersive Mixed Reality (MR) environment and can superimpose holographic images onto the user's surroundings.

This study aimed to assess the feasibility, efficacy, and the perceptions of students, tutors and patients of bedside tutorials delivered to medical students using a Microsoft HoloLens 2. The tutorials involved teaching a preoperative anaesthetic history and physical examination of the upper airway.

Methods

Tutorials were delivered to groups of 4-10 students. The tutor carried out a preoperative anaesthetic history and physical examination of the upper airway on a patient while wearing the HoloLens which facilitated two-way audiovisual communication with the students located remotely. The students received the tutor's field of vision and audio from both the tutor and patient. Mixed Reality capabilities including the use of holographic pointers and diagrams were employed.

The tutor completed a System Usability Scale questionnaire, and summarised their perceptions of the device. Students completed a modified Evaluation of Technology-Enhanced Learning Materials: Learner Perceptions questionnaire, patients completed a mixed quantitative and qualitative questionnaire and three students took part in interviews to evaluate their perceptions of the tutorial. Students completed MCQs before and 2-3 days after the

tutorials, as well as a data interpretation exam and an Objective Structured Clinical Examination at the end of the academic year.

Results

Twelve tutorials were completed involving 12 patients and 78 students. Five students were lost to follow-up. We found that it was feasible to use the HoloLens 2 to facilitate bedside tutorials on patients in a University hospital. It was necessary to use a USB microphone, which is not routinely supplied with the HoloLens 2 to improve sound quality.

The tutor-elicited System Usability Scale score was 72.5. The tutor stated that the HoloLens 2 was unobtrusive and did not interfere with interaction with the patient. Feedback is presented as (median, [IQR]) and refers to a seven-point Likert scale. Students agreed the tutorial replicated a live patient encounter (6, [5-7]), was more beneficial than a PowerPoint-based tutorial (7 [6-7]), and to a lesser degree was as beneficial as a live encounter (5, [4-6]). Patients agreed that the communication with the tutor was clear, and that the experience was preferable to both small (6, [5-7]) and large group bedside tutorials (6, [6-7]). Qualitative feedback was positive overall. Occasional issues with audio-visual quality were the most frequent issues identified.

A significant improvement was observed between overall students' pre and post tutorial examination scores (mean 59.2% Vs 84.7%, p = <0.005). There was no statistically significant difference in student performance between the post tutorial MCQ and the composite End-of-Year scores (84.7% Vs 82.2%, p = 0.08).

Conclusion

In conclusion, this paper demonstrates the feasibility and efficacy of the HoloLens 2 to facilitate remote bedside tutorials. The tutorial was found to be agreeable to students, patients and tutors. Occasional poor audio-visual quality was most frequently identified as an issue.

LEARNERS' INVOLVEMENT IN CO-CREATING AND COLLABORATIVE KNOWLEDGE BUILDING IN BUILDING AN EDUCATIONAL TOOL, VIRTUAL INTEGRATED PATIENT

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Background and Aims

The Virtual Integrated Patient (VIP) is an artificial intelligence (AI)-enabled platform, which uses a random patient generator based on natural language processing (NLP) to create naturalistic conversations. As medical students, we co-created this platform as part of our Phase IV elective "Inspiring Health for All", under the guidance of our faculty staff and mentors. Through this experience, we aimed to take on an active role in the co-creation process of a learning tool for medical education.

Methods

We were guided by our mentors through the process of designing cases for the VIP platform. The cases were all based on common presenting complaints such as abdominal pain, chest pain and vomiting. During the case design process, we received regular feedback from our mentors and could also readily consult our team clinician on the accuracy of the clinical cases. Our mentors were also open to our feedback and these bi-directional conversations provided a psychological safety net for us to improve the quality of the educational tool. After designing the cases and uploading them onto the VIP platform, we pilot tested the platform on Year 1 nursing students and collected data on the effectiveness of the platform as a learning tool.

Results

The co-creation of VIP built confidence in us to foster mutual learning, autonomy, and a sense of ownership. We were motivated by this project and introduced more juniors to the VIP team over the last two years. Our co-created product won the faculty digital educator team award, presented at the end of the elective module and internationally at two conferences and the VIP was featured in several university's publications. This is: a testimony of how co-creation improves the quality of our educational design and a product built with students and made for students in mind.

Conclusion

The process of co-creation is one that is ultimately mutually beneficial to the students and educators alike. As students, we gained added insight into the rigorous process behind creating an educational tool, and simultaneously enhanced our learning through the designing and crafting of clinical cases. As educators, having the ultimate end-users of the learning tool provide feedback on efficacy from a learner's perspective proved useful in creating and refining a platform that is effective for medical education.

IMPLEMENTATION OF VIRTUAL OSCE IN HEALTH PROFESSIONS EDUCATION

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Background and Aims

The Objective Structured Clinical Examination (OSCE) has been widely used in health professions education since the 1970s. However, the global disruption caused by the COVID-19 pandemic restricted in-person assessments and medical educators globally sought alternative means to assess and certify students and trainees to meet the acute demand for healthcare workers. One such solution was through virtual OSCE (vOSCE), which modified traditional in-person OSCE using videoconference platforms. Existing commentary about vOSCE has been mixed, and many institutions around the world are reflecting on the extent to which vOSCE may have a role in future assessment practices. Therefore, the authors conducted a systematic review to synthesise qualitative literature on candidates' and assessors' experiences of vOSCE in health professions education.

Methods

The authors systematically searched PsycINFO, Medline and ERIC for peer-reviewed qualitative and mixed-methods articles that described candidates' and assessors' experiences of vOSCE in health professions education. Of 1069 articles identified, 17 were synthesised using Noblit and Hare's meta-ethnography approach. They were also evaluated for quality using the Critical Appraisal Skills Programme qualitative research checklist and assessed for relevance using Dixon-Woods' criteria.

Results

The final synthesis represented 1190 candidates and assessors from faculties of medicine, dentistry, nursing, pharmacy, and osteopathy. The findings were developed into four key concepts.

1. 'Strengthening confidence in a virtual environment' highlighted attempts to overcome and mitigate concerns associated with transitioning from in-person to virtual assessment. Students overall found the virtual environment less intimidating and stressful.

2. 'Understanding the scope of use as an assessment' reflected on the suitability of vOSCE in assessing various skills. Practical skills and physical examinations were more challenging to assess in comparison to data interpretation and communication skills.

3. ‘Refining operational processes’ emphasised the technical challenges of implementing vOSCE and impacts on accessibility and resources. Although students and faculty members appreciated how remote assessment brings comfort and convenience, it introduced issues with exam security such as appropriate invigilation and sequestering. Many participants also faced unpredictable operational difficulties, including internet connection and incompatible computer programmes.
4. ‘Envisioning its future role’ considered the applicability of vOSCE in the climate of rapid development in telehealth. While favour was given to vOSCE during the pandemic, there were divided views on whether it is appropriate beyond the pandemic.

Conclusion

This meta-ethnography highlighted that although vOSCE was primarily considered a temporary and crisis response, candidates and assessors recognised both positive and negative consequences of the transition to this remote assessment. Fundamentally, there were complex technical and non-technical factors that shaped how vOSCE was implemented and experienced. Given that vOSCE remained as a relatively new assessment tool, further research is warranted to understand the variations in its implementation, the relationships between virtual teaching and virtual assessments, and its authenticity and validity as an assessment.

Moving forward, medical education policymakers should carefully consider the extent to which elements of vOSCE could be incorporated into assessment systems. It is clear from existing literature that despite challenges and limitations, vOSCE could have an important ongoing role in the climate of rapid development in telehealth.

MONDAY 22ND MAY 2023, 3.15PM

VIRTUAL ROOM 2, HYBRID CONFERENCE

FREE COMMUNICATIONS 8

EPAs in The Health Professions - Developing a Universal Entrustment Scale for Healthcare Education
Prashant Jhala, Australia

Learner Neglect: An Explorative Analysis of Factors and Consequences on Undergraduate Medical Students
Valencia Long, Singapore

Back to Basics at the Bedside
Tom Sunny, United Kingdom

Blended Approach for Teaching and Learning of Anatomy Using Bite-Size Videos
Shi Hui Wong, Singapore

Students' Interaction Anxiety and Social Phobia in Interprofessional Education in Hong Kong: Mapping a New Research Direction
Xiaoai Shen, Hong Kong S.A.R.

Visper Trial - Virtual Reality for the Improvement of Simulation Performance and Education Resources
Sindoora Jayaprakash, United Kingdom

EPAS IN THE HEALTH PROFESSIONS - DEVELOPING A UNIVERSAL ENTRUSTMENT SCALE FOR HEALTHCARE EDUCATION

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Background and Aims

Since the inception of Entrustable Professional Activities (EPAs), several entrustment scales have been proposed. The language of entrustment scales can however, cause some confusion, and difficulty has been reported interpreting the subcategories of supervision required. Similar confusion is foreseeable with other granulations that may not clearly differentiate between levels of responsibility afforded to the student at different levels of entrustment. Entrustment scales that modify the original proposed by ten Cate (2005) have been proposed in several health disciplines other than medicine, including pharmacy, dietetics and physiotherapy. However, no uniform scale has ever been used across several disciplines at the undergraduate or entry-level. The aim of this paper is to propose a new scale that can be used inter-professionally and throughout a curriculum in several professions, based on an Australian healthcare context.

Methods

Literature searches were conducted as part of a broader review to develop and implement EPAs within several healthcare programs including medicine, pharmacy, dietetics, physiotherapy and exercise physiology. The search revealed no uniform entrustment scale that would enable consistent and relevant application to each professional program. A small writing group consisting of experienced academics, recent graduates and educationalists from medicine and physiotherapy developed a new scale through several rounds of discussion, refinement and consensus.

Results

An entrustment scale was created that consisted of seven levels across three key phases of curriculum namely, foundational knowledge and skill development, work integrated learning and clinical practice. Each stage of the scale was mapped to an extended Miller's Pyramid (ten Cate et al., 2021) enabling an understanding of the student's progression throughout a curriculum and reflecting different levels of development and competence. New descriptors were proposed which will provide greater clarity and create a shared language that could be understood by academics, students and supervising clinicians.

Conclusion

Entrustment scales have varied substantially in the literature by both profession and stage of education. We propose a new scale that can be used in healthcare education by several professions. This scale will be utilised in several programs, and future research will focus on the development of common EPAs that can be evaluated using this common scale.

LEARNER NEGLECT: AN EXPLORATIVE ANALYSIS OF FACTORS AND CONSEQUENCES ON UNDERGRADUATE MEDICAL STUDENTS

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Background and Aims

Learner neglect is an emerging concept in medical education; it refers to behaviours exhibited by clinical educators that prevent individual learners from reaching their potential. This study aims to explore the phenomenon of learner neglect, elucidating factors which drive neglect at an individual and systems level, mitigating factors, and delineating outcomes associated with learner neglect.

Methods

Prospective mixed qualitative-quantitative study using in-depth semi-structured interviews and analysed using thematic analysis. Participants were also invited to complete a short personality quiz based on the Ten-Item Personality Inventory (TIPI). Participants comprised of medical educators, medical students from the Yong Loo Lin School of Medicine in their fourth or fifth clinical year, and were recruited via a snowball sampling method.

Results

20 participants were interviewed, of which 10 were clinical educators and 10 were medical students. The mean age of educators was 41.8 years old. The mean number of years delivering medical education was 14.1 years. 60% of educators assumed educational leadership positions (head of department/division head/programme head). The mean age of students was 23.5 years old, of which 60% were in the fifth clinical year. All 10 medical students reported either personally experiencing or witnessing neglect by educators, whilst the majority of educators (88.9%) had reported awareness of students potentially experiencing feelings of neglect.

We found differences between students and educators in the manner and magnitude to which they perceive neglect. The driving forces of neglect could be classified as student factors, educator factors, and institutional/system factors. Student factors include: learner's stage of training, personality traits (open-ness to experiences and an extraverted personality, assessed as part of the TIPI, being protective factors to experiencing neglect), and presence of student ownership in learning. Educator factors include: personality traits, 'approachability', and ability to set goals for the teaching encounter. Institutional/system factors include: time constraints, production pressure, absence/presence of faculty development/mentorship and practicing specialty.

Conclusion

The interplay between student and educator factors causing neglect is complex. Identifying factors could lead to targeted interventions to address modifiable contributors of neglect - for instance, improving student ownership in learning, offloading system pressures on time and production. Further studies should be directed at assessing the usefulness of potential interventions to tackle learner neglect.

BACK TO BASICS AT THE BEDSIDE

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Background and Aims

Clinical year medical students across the globe have been profoundly affected by the coronavirus-19 pandemic (COVID-19). Most significantly, it has resulted in the cancellation of objective structured clinical examinations (OSCE) - a practical series of examinations to test students in a variety of clinical environments. OSCE preparation from the year 2020 onwards was hindered as time in the hospital and group practice sessions were greatly reduced.

A scheme called 'Clinical prep for Hospital-based University Medical Students' (CHUMS) was introduced to counter the disadvantages of this pandemic. The primary focus of this teaching scheme was first-clinical-year students at Keele University before their 2022 OSCE examinations. One of the main aims of CHUMS was to improve students' competency and confidence in the clinical environment.

According to the 'Classification of Educational Goals', the core of medical teaching consists of "Knowledge, attitudes and skills" and there are many ways to achieve this. Bedside teaching, lectures, and simulated patient role play are all such means. Clinical skills are vital in medical training and the only way to master them is through experience in the clinical environment. These experiences were denied to medical students during the pandemic due to a lack of face-to-face teaching and patient contact. As a result, medical schools attempted to overcome these challenges by introducing virtual teaching. These were not well received by students and were less effective than intended. The most effective form of clinical teaching remains bedside teaching.

Methods

The scheme was run as follows: 3 students were assigned to 1 doctor who had signed up from the hospital. 117 students were enrolled in total via recruitment through social media, word of mouth and official faculty communications. Furthermore, a basic curriculum was suggested to include cardiovascular, respiratory, abdominal, neurological and breast examinations. For taking part in long-term teaching tutors received certificates and students received opportunities to demonstrate their proficiencies and be signed off for those under supervision.

After the conclusion of the teaching programme, surveys were sent out to all participants and covered the following domains:

1. Changes to clinical proficiency
2. Changes to self-perceived skills and confidence
3. History-taking skills
4. Programme evaluation for ease of set-up and continuity.

Results

We received feedback forms from students (n=47) and trainees (N=26). 87% found participating in CHUMS helped them prepare for their OSCEs and written examinations. 88% of participants believed that their clinical skills improved and 85% believed their history-taking improved. 93% of the participants agreed that this would be useful for future clinical-year medical students.

Conclusion

The use of bedside teaching as a curriculum-enhancing tool has diminished over the past 2 years. However, as normality returns, we must focus once again on high-quality consistent bedside teaching. It is clearly shown from our study that such a programme yields huge benefits to both tutors and students. Introducing schemes such as this not only allows a constructive environment for learning but also adds an element of mentorship and inspiration for clinical year students.

BLENDED APPROACH FOR TEACHING AND LEARNING OF ANATOMY USING BITE-SIZE VIDEOS

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Background and Aims

Traditional didactic lectures (TDL) adopt a passive transfer of information, restrict the student's attention span, and affect the declarative/explicit memory formation. As a result, higher education institutions are implementing a paradigm shift from teacher-centered (didactic) to student-centered (flipped classroom or blended) approach. Blended learning is the integration of information delivered through bite-size online videos or long-form pre-recorded lectures with face to face (F2F) interaction. The National University of Singapore Yong Loo Lin School of Medicine (NUS YLLSOM) has adopted the use of Blended Learning 2.0 (BL 2.0) to help improve students' learning outcomes. The present study aims to evaluate the effectiveness and usefulness of BL 2.0 in teaching and learning of anatomy using bite-size videos.

Methods

NUS medical students from cohort AY20/21, AY21/22 and AY 22/23 were recruited (n=840). Students were provided bite-size videos and pre-recorded lectures in the form of voice-over to PowerPoint presentations (VOPPTs) as preparatory materials for their self-directed learning (SDL) followed by F2F interactive sessions. These materials are available to students prior to the teaching of thorax and abdomen anatomy. This study was approved by the Institutional Review Board, NUS (IRB-2022-596). Informed consent was obtained from all the participants before the collection of feedback data. The questionnaire consists of five-point Likert scale questions and open-ended questions. The questionnaire was delivered using the Qualtrics survey software. Descriptive statistics were generated using Qualtrics survey software. Data were reported as mean ± standard deviation (± SD).

Results

Out from the three cohorts, 77.9% (n=654) of the students viewed the bite-size videos and VOPPTs, with an average of 70.3% (n=591) watched the video till completion. Despite the high participation, survey response rate was 10.8% (n=91). About 14.3% (n=13), 16.5% (n=15), and 69.2% (n=63) were from AY20/21, AY21/22 and AY22/23 respectively. Upon evaluation by the students, blended (flipped classroom) approach nurtures analytical and critical thinking. 42.9% (3.97 ± 1.07) from the 3 cohorts agreed that they prefer learning from anatomy videos over TDL. 95% confidence interval (CI) was observed to be 1.7% to 10.8%, 6.1% to 19.1%, 19.4% to 37.4% for AY20/21, AY21/22 and AY22/23 respectively. Further, 61.5% (4.48 ± 0.69) of the students strongly agreed that the educational videos enhanced their SDL ability. 47.3% (4.25 ± 0.82) of the students strongly agreed that the educational videos increased their confidence to participate during F2F sessions. Thematic analysis of open-ended responses shows majority of students being engaged in their F2F sessions as the discussions were more deliberate and focused. Limitations identified regarding the use of educational videos (when used as a standalone) include lack of interaction and participation with the faculty and the need to integrate with other teaching methods. Majority of students also suggested the need for similar educational videos for other systems besides respiratory, cardiovascular, and gastrointestinal systems.

Conclusion

Our study concluded that the use of educational bite-size videos helped to improve students' learning outcomes. However, anatomy education delivered by BL 2.0 can be enhanced further by implementing this modality across all the systems.

STUDENTS' INTERACTION ANXIETY AND SOCIAL PHOBIA IN INTERPROFESSIONAL EDUCATION IN HONG KONG: MAPPING A NEW RESEARCH DIRECTION

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Background and Aims

Interprofessional education (IPE) has been promoted as a breakthrough in healthcare because of the desirable impact when professionals work together as a team. Although its inception dates far back, its science has developed slowly. This necessitates the need for researchers to theorise IPE to cultivate creative insights for a nuanced understanding of interprofessional sciences. Social interaction, including anxiety, is a relevant construct to explore in IPE, given the emphasis on students' interaction which may impact processes and outcomes. Measuring this construct is essential to developing a research agenda on social interaction. The psychometric acceptability of the Social Interaction Anxiety Scale (SIAS-6) and Social Phobia Scale (SPS-6) has been studied in different populations. However, it remains unstudied in the IPE. The study aims to examine the validity of these scales in Asian culture in the context of IPE using within-network and between-network validation.

Methods

The study conducted a blended learning model through the LMS, taking advantage of the combined benefits of online and face-to-face learning and allowing participating students and content experts from three HEIs to come together to learn with, about, and from one another. 925 pre-clinical healthcare students (Medicine, Nursing, Social Work, Chinese Medicine, Pharmacy, Speech Language Pathology, Clinical Psychology, Food and Nutritional Science, and Physiotherapy) were involved in the IPE program in Hong Kong. Grouped into teams of five to seven members following team-based learning principles, these participants completed team-based tasks consisting of four parts: preparation, readiness assurance, application exercise, and enrichment activity. After the IPE program, participants completed two scales: SIAS-6 and SPS-6 used for diagnosing distinct facets of social phobia, and behavioural engagement and behavioural disaffection used for between-network validation.

Results

The confirmatory factor analysis results indicated that current data fit the a priori bifactor model according to the criteria of acceptable fit and reliability, providing support to within-network validity. The scales were invariant between gender, across year levels, and disciplines. Regression results indicated that social interaction anxiety and social phobia negatively predicted behavioural engagement and positively predicted behavioural disaffection suggesting between-network validity in IPE activities.

Conclusion

Theoretically, the data supported the psychometric acceptability of the scales when used among healthcare students in the IPE context in Hong Kong. Practically, the findings provided the research direction to IPE-related researchers (e.g., the factors which trigger interaction anxiety in IPE, and cultural dimension of social interactional anxiety in IPE). It served as an invitation to all researchers to advance the research scholarship and guide researchers in getting involved in the discussion of students' social interactions in IPE.

VISPER TRIAL - VIRTUAL REALITY FOR THE IMPROVEMENT OF SIMULATION PERFORMANCE AND EDUCATION RESOURCES

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Background and Aims

Virtual reality (VR) as a tool for medical simulation has seen a sudden rise in recent years. The development of VR hardware and software has seen developments in realism and audio-visual systems thus making it an immersive simulated experience. The use of this technology creates an opportunity to conduct simulation with reduced costs, lower staff requirements and a high level of realism. Since the use of VR in medical simulation has been mandated by Health Education England for foundation trainee doctors since 2021, it seems necessary to investigate its value as an educational tool. VR, as with simulation, cannot replace real-life experiential learning therefore this study explores the role VR plays in medical education; particularly whether the role of VR as an adjunct to simulation is beneficial.

Whilst there has been a growing interest in the use of VR for medical education, there is little research into the use of VR as an adjunct to simulation. We aim to determine the utility of VR, when used in conjunction with simulation, to increase familiarisation with the topic, improve the performance in high-fidelity simulation and increase retention of technical and non-technical skills.

Methods

We intend to conduct a randomised control study to determine whether prior exposure to a deteriorating patient case within VR has a demonstrable impact upon the performance of medical students and doctors (hereafter referred to as subjects) in a related simulation when compared to control. Informed written consent will be ensured prior to study recruitment. The study's estimated time frame is from September 2022 to April 2023.

Inclusion criteria: final year medical students based at Russells Hall Hospital, Dudley. Exclusion criteria: intellectual or physical disability that would interfere with involvement in the trial at time of recruitment.

The HTC Vive Focus 3 and Meta Quest 2 VR headsets will be used in conjunction with Oxford Medical Simulation (OMS) software platform. This is a validated VR simulation experience. Due to the nature of the study, it will not be possible to blind the subjects or investigators to arm allocation. The control arm subjects will complete a lecture prior to completing a simulation scenario. The intervention arm (hereafter referred to as the VR arm) will complete the lecture and a related VR simulation prior to the simulation scenario. The lecture, VR scenario and simulation will revolve around a common theme. Those in the VR arm of the trial will undergo a tutorial session with the VR equipment and software.

Results

Primary outcomes: We intend to use the validated Behavioural Markers System (BMS) to assess non-technical skills. Technical skill in scenarios will be measured according to time taken to perform critical actions. Secondary outcomes: Participants will complete questionnaires to assess prior experience, immersion level and self-reported confidence at the specified scenarios. Questionnaires will be performed at multiple different stages.

Conclusion

Through this research project we hope to transform the scope of medical education through the use of VR medical school to junior doctor training as a cost-effective and non-labour-intensive teaching tool.

MONDAY 22ND MAY 2023, 3.15PM

VIRTUAL ROOM 3, HYBRID CONFERENCE

FREE COMMUNICATIONS 9

SUPPORTING STUDENTS' WELLBEING AND LEARNING IN THE CLINICAL ENVIRONMENT

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Background and Aims

The most challenging clinical placement for nursing students is pre-registration consolidation placement (PRCP) for Nursing Diploma course and Transition To Practice (TTP) for Nursing degree course. During PRCP and TTP, students need to consolidate academic studies and nursing skills they have learnt from their nursing course to facilitate the transition from student to a newly graduated registered nurse. In the midst of PRCP and TTP, many students reported high stress levels and difficulties in coping. The clinical nursing education liaison team from National University Hospital (NUH) initiated a full day Mid-Consolidation Student Engagement Programme to support the nursing students. The aims of the engagement programme are to support students' wellbeing; share strategies to cope with stress; address any challenges and concerns related to consolidation attachment and provide information on students' learning and development.

Methods

The clinical nursing education liaison team involved the training institutes and various nursing colleagues to support the student engagement programme. The Mid-Consolidation Student Engagement Programme included pre-engagement survey on students' stress level, dialogues with clinical facilitators from training institutes to check on students' wellbeing, talk by mental health trained nurse on stress management and self-care, nurse ambassadors' sharing on their learning experience and development journey, dialogue with nurse educators to address any

challenges and concerns related to consolidation, and engagement with Senior Nursing leaders to encourage and inspire the students to persevere. Due to COVID-19 safety measures, the full day engagement programme had to be held virtually. Our team used various virtual platforms to promote active participation and vibrant interaction between speakers and students.

Results

The Mid-Consolidation Student Engagement programme was implemented in April 2022. A total of 83 nursing students who were on consolidation placement in NUH participated in the programme. Eighty one out of eighty three (97.5%) students participated in the programme evaluation survey. Eighty out of eighty one (98.8%) students felt the Mid-Consolidation student engagement programme was helpful. They were able to learn practical and useful information to cope with stressors and challenges encountered during the consolidation clinical placement.

Conclusion

A well-planned Mid-Consolidation Student Engagement Programme which engaged various key stakeholders is an excellent platform to support students' wellbeing, to share strategies to cope with stress and to address challenges and concerns during the consolidation clinical posting.

A HEALTHIER SG: ENGAGE, EMPOWER AND EDUCATE PRIMARY CARE PROVIDERS IN CANCER CARE

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Background and Aims

Healthier SG is Singapore's new preventive care strategy aimed at helping all Singaporeans take steps towards better health. This initiative also involves the role expansion of primary care providers (PCP) in chronic care. With the rising incidence of cancer, the need for PCPs trained in cancer prevention, screening and management of cancer survivors are increasingly pressing. Studies have shown the lack of trained cancer care providers and formal oncology training programs for PCPs in Singapore. A collaborative effort initiated by the Singapore Primary Care Cancer Network with National Cancer Centre Singapore and National University Cancer Institute, Singapore was formed to assess the support structures around PCPs to determine the need for training and support interventions.

In this study, we examined PCPs knowledge and attitudes regarding their evolving role in this new care paradigm. We also evaluated the primary care cancer learning series (PCCLS) training program that was designed to equip PCPs with the essential knowledge and clinical skills in the management of cancer care.

Methods

A self-administered online survey was sent to all participants prior to the PCCLS program. A pre-questionnaire was developed to establish PCPs' baseline knowledge, confidence and barriers towards PCP involvement in various aspects of cancer care and adequacy of ongoing education. A post questionnaire was undertaken to evaluate the effectiveness of the PCCLS training program and included questions about their learning preference and topics of interest for future runs.

Results

39 PCP participated in the survey (92% response rate). Most of them saw at least 10 cancer survivors a month. Majority of participants agree that PCP plays a valuable role in all aspects of the cancer care continuum and are willing to be part of a shared-care model of cancer survivorship if guidelines and infrastructures are available. Most highly ranked PCP roles include cancer screening, preventive care, cancer surveillance, treatment related toxicities, comorbidities and psychosocial support.

However, the level of confidence in managing cancer survivors was low with at least 71% of participants reported having slightly or no confidence. Lack of knowledge, training confidence, time and infrastructure were identified as barriers. Surveys also identified 82% participants not aware of cancer survivorship clinical practice guidelines and care plans. Nonetheless they are willing to take on the role and desire more education on how to do so effectively.

Majority of the participants found the PCCLS program useful and expressed interest in attending future programs.

Conclusion

Healthier SG will result in a greater emphasis on PCPs playing a larger role to help residents manage their health. To achieve this, we need to educate, empower and engage our PCPs. Our studies have shown that PCPs are willing to be part of this endeavour but the gap of knowledge, skills and infrastructure in providing cancer care must be addressed in tandem. The implementation of an oncology care training program has also proven to be feasible and effective. This study provided an important insight on the potential improvements in cancer care management that can lead to a healthier and happier SG.

THE USE OF REFLECTIVE GROUP IN TEACHING HUMANISTIC CARE

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Background and Aims

Humanism is essential to achieving and maintaining health. How to teach or reinforce learners to provide humanistic care is the current challenge for healthcare professional education. Emotions not only provide the insight in pre-reflection but also a clue for learners to develop their visions and perspectives for action. Group dialogue education helps learners to develop their emotional awareness. This study presents the findings of a qualitative study exploring students' self-reflection to better understand their transformative process during a 14-week free-floating group discussion class.

Methods

This qualitative study, using an interpretive descriptive approach, with 11 nursing students (2 doctoral, 6 master, and 3 undergraduate) was conducted at a Taiwan university between September and December 2021. Data were gathered from the text of group dialogues transcripts, students' reflective journals and researchers' fieldnotes.

Results

A series of transformation in the students' emotional processes was observed: feeling warmth and acceptance in the group, taking off the mask of trying to make a good impression, connecting with others sincerely, healing the wounds of the original family, learning to deal with internal and external conflicts, and accepting self and others.

Conclusion

Students can experience the changes of self in the reflective group. The foundation for facilitating students' transformation is a safe learning environment for them to recognise and manage their own emotional distress in the intersubjective experience. A free-floating group discussion class can enhance students' ability to understand themselves, to practice reflective thinking and their willingness to adjust their emotions and behaviours.

RELATIONSHIP BETWEEN GRIT SCORE AND ACADEMIC SUCCESS OF UNDERGRADUATE DENTAL STUDENTS IN A UK BASED INSTITUTION

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Background and Aims

The importance of non-cognitive skills as indicators of future success is being increasingly recognised. Grit is the perseverance and passion needed to achieve long-term goals in the face of challenges. However, it is not well understood if there is a relationship between undergraduate students' grit score and their academic achievement, more so within dental students. Therefore, this study aims to determine the grit score of 3rd year undergraduate dental students at Cardiff University and how it relates to their academic grades, in addition to exploring if students' learning approaches are associated with the grit score.

Methods

In this mixed method study, the grit score of 62 third year dental students at Cardiff University was determined, using a validated short grit scale (GRIT-S), and co-related to their academic grade. Two separate focus group discussions with 6 students in each, were conducted representing those with high and low grit scores respectively. These were audio recorded, transcribed verbatim and thematic analysis was carried out to explore the differences in their approach to learning in relation to their grit score.

Results

There was no significant relationship between grit and academic success of the dental students, although their grit score was high. However, qualitatively several differences between the high and low grit groups were revealed. Major themes that evolved were motivation, personality characteristics that equip students to deal with challenges and setbacks, self-directed learning, and role of peers.

Conclusion

The average grit score of dental students was high. Students with high grit appeared to be deep learners, were intrinsically motivated, deployed metacognitive strategies to make their learning more efficient and exhibited personality characteristics that appear to equip them to deal better with challenges. The low grit students were assessment driven, depended on peers' support, and exhibited a strategic learning style. Therefore, Grit appears to be a desirable construct to be developed in dental students.

REIMAGINING BETTER LEARNING COMMUNITIES IN MEDICAL EDUCATION - INSIGHTS FROM RAPID CHANGE

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Background and Aims

The COVID-19 pandemic has catalysed change in medical education globally. We have gathered evidence collected during various changes made in the first two years of the MBBS curriculum at the University of Hong Kong Faculty of Medicine (HKUMed). Major changes include a shift to far more widespread e-learning, increased proportions of blended learning, highly active online forums, and innovative new approaches in student-educator partnership. Herein, we aim to bring together these threads to build recommendations for critical directions in post-COVID medical education.

Methods

A revised study process questionnaire was used across multiple academic years to assess student surface and deep learning. A learning experience questionnaire was administered over the domains of learning engagement, outcomes of learning approach, and appropriateness of blended learning approach. In-depth interviews were carried out to understand the context of students' responses to questionnaires. A student educator partnership pilot also fed into conclusions.

Results

Year 1 MBBS students tended to maintain deep approaches in learning more significantly than year 2 MBBS students. Rote learning was a frequent response to overly high workloads in year 2. Blended learning led to deeper interest in the subject, more manageable workload, and better learning feedback. Students partnered with educators to improve the online discussion forum accessibility, involve near-peers in facilitating discussions and develop a forum moderation system. Peer collaboration on these platforms were weaker. Interviews revealed that in-person rapport building was necessary for peer interaction and collaboration to occur. Whilst online components can enable positive self-directed learning with higher learning efficiency, reduced stress, and deep learning, it needs to be reinforced by in-person learning activities.

Conclusion

The COVID-19 epidemic has accelerated various effective approaches for better e-learning. The most critical factor going forward is reinforcing learning communities through various innovative methods in both the online and real-world spaces.

MAXIMISING THE GIFT OF BODY DONATION

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Background and Aims

For the first time in the United Kingdom, a donor consented to 'Public Display' in addition to 'Anatomical Examination'. Under normal circumstances in the United Kingdom, learning from body donation is restricted to medical and allied health students. This first-of-its-kind donation allowed a wider group of individuals to gain access to this unique learning opportunity.

Methods

The donor consented to images being taken, and they waived their anonymity, which allowed for the sessions to be recorded and shared with the public. The donor was 30 years old and died from metastatic spread of an adenocarcinoma of the lacrimal gland. Over a series of 12 workshops, approximately 800 students learnt about anatomy by watching a live dissection, while also learning about this donor's rare form of cancer.

Results

Feedback (N=47) highlighted that 85% of the students found the session fascinating and learnt more about the human body, as highlighted in the evaluation quote "There was so much information that tied in together and made for a uniquely comprehensive learning experience. I felt more energised in my studies than ever". As a result of attending the sessions, 48% of students said they would change an aspect of their life or health following the session, for example "I always went in sunbeds but now seeing the skin cancer I will never again" and 43% would change an aspect of their clinical practice. Analysis of free text comments revealed that many attendees experienced a sense of privilege to have had the opportunity to attend and learn from such a unique experience. Attendees also described feelings of gratitude toward the donor, as captured in the quote: "It was the most amazing experience of my life. What an incredibly brave donor and the family". Feelings of gratitude were occasionally

associated with positive changes in attitudes toward body donation. The process was followed by a documentary team, resulting in a documentary titled “My Dead Body” that was viewed by millions and was highly reported in the press, thereby further educating individuals.

Conclusion

This case study highlights the wider health education benefits that can occur from ‘Public display’ and challenges the traditional role of the anatomy facility and who can access the learning opportunities they provide.

TUESDAY 23RD MAY 2023, 9.00AM

VIRTUAL ROOM 1, HYBRID CONFERENCE

FREE COMMUNICATIONS 10

Mapping Impact of COVID-19 on Work Readiness of Pharmacy Graduates as Future Members of The Healthcare Workforce: A Qualitative Approach
Wei Jin Wong, Malaysia

Understanding Health Professions Education Leadership through a Pacific Cultural Lens: An Interpretivist Case Study
Sinead Kado, Australia

Fostering Sustained Student Engagement in Generating and Undergoing Test Enhanced Learning
Adithya Srinivasan, Singapore

Developing Extended Professional Identity Scale in Indonesian Context (EPIS-RI)
Fatikhu Asmara, Indonesia

Individualised Learning Plans in Postgraduate Training: A Summary of 3-Year Findings
Tzu-Hung Liu, Taiwan

Is E-Learning Effective for Clinical Skills in Undergraduate Medical Education? A Critical Appraisal of the Evidence on the Medical and Dental Students' Perspective on the Effectiveness of E-Learning for Clinical Skills
Vandana Krishna, Fiji Islands

Exploring Pharmacists' Satisfaction of Using a Professional Development Portfolio and Its Value in Practice
Sei Keng Koh, Singapore

MAPPING IMPACT OF COVID-19 ON WORK READINESS OF PHARMACY GRADUATES AS FUTURE MEMBERS OF THE HEALTHCARE WORKFORCE: A QUALITATIVE APPROACH

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Background and Aims

With the gradual recovery and re-opening of economies globally, the impact of COVID-19 is only beginning to be noticed. One observation is that there is a need for an adaptable yet resilient healthcare workforce and education sector. To curb the spread of COVID-19, all face-to-face teaching and learning activities were switched to virtual sessions in accordance with healthcare recommendations. Against this backdrop, we sought to explore the impact of these changes on work readiness of pharmacy graduates whose studies were affected by the pandemic.

Methods

Study participants included 9 currently practicing pharmacists who supervise early career pharmacists including provisionally registered pharmacists (PRP's) or intern pharmacists. They were recruited from community pharmacies and hospital settings with roles ranging from primary care, clinically focused roles, and drug information system.

All interviews were conducted on the Zoom platform. The recording was transcribed verbatim and thematically analysed.

Results

We found four themes related to workforce readiness: work competence, social intelligence, personal characteristics, and organisational acumen. Majority of participants reflected that although there were changes on teaching modality due to the shift from physical to online teaching and learning mode, they did not notice any obvious differences in the graduates. Most felt that there were not many differences in their knowledge base when compared to their seniors. There were differences in communication abilities when interacting with patients. However, this improved gradually over time spent in practice. These graduates were comfortable with using technology as they had used these extensively in their learning during the pandemic and thus were comfortable in adopting digital health tools in their practice.

Conclusion

This qualitative study indicated that pharmacy graduates whose undergraduate studies were affected by the COVID-19 pandemic demonstrated issues with their level of confidence and communication skills when interacting with patients. It did improve with increasing time spent in practice. There were no issues with their knowledge or working collaboratively with colleagues. As pharmacists continue to play vital roles as members of the broader healthcare workforce, both in clinical and non-clinical settings, learnings from this study should be considered in designing educational activities to train and develop the workforce of the future. This qualitative study describes two main challenges faced by pharmacy graduates who had online learning because of the recent COVID-19 pandemic. However, these challenges can be overcome by further revision of curriculum design.

UNDERSTANDING HEALTH PROFESSIONS EDUCATION LEADERSHIP THROUGH A PACIFIC CULTURAL LENS: AN INTERPRETIVIST CASE STUDY

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Background and Aims

Health Professions Education (HPE) leadership is necessary for success at the individual, team and institutional level. Many leadership theories exist based mainly on Western perspectives, however, Pacific HPE leadership has not been investigated. Furthermore, leadership theory that informs faculty development has been mainly based on interviews alone. Faculty development for leadership is required in the Pacific where HPE is emerging. Therefore, this research aimed to understand Pacific HPE leaders' perspectives through multiple data collection tools to develop substantive theory. The theory will guide faculty development in this setting and add a fresh perspective to the international HPE leadership discourse.

Methods

Using an interpretivist case study methodology, seven HPE leaders were purposefully recruited. Rich Pictures, Zoom interviews and reflective journals were utilised as data collection tools. Participants drew a picture on 'Being an HPE leader' and subsequently explained their picture. Over a six-month period they additionally reflected on leadership events in their journals, which was followed by a second interview. Codes and themes were interpreted using Miles and Huberman's approach and further conceptualised into three leadership styles. Member checking was utilised to improve trustworthiness.

Results

All participant leaders had the common aim of graduating competent and compassionate graduates and wanting to leave a legacy, however, their secondary aims, strategies and attributes differed. Metaphors were assigned to each

of the three HPE leadership styles identified: The 'Bridge'- helping students from novice to competent; the 'Coconut Tree'- multiple roles and sturdy in the storm; and the 'Drua Canoe' - steering towards the vision. Overall, although participants often found leadership overwhelming and challenging, they were convicted by a sense of purpose and hope to improve the system and build others capacity. They aimed to achieve this through communication and collaboration, whilst being humble and empathetic.

Conclusion

Rich Pictures, interviews and reflective journals allowed HPE leaders to reflect on 'Being an HPE Leader' and revealed tacit perspectives. Data interpretation aligned with participants' perspectives allowing HPE leadership to be viewed through a cultural lens. This study suggests there may be different styles of leadership, in the Pacific context, depending on the aims, strategies and attributes of different HPE leaders. Although specific to the Pacific some aspects may resonate in other contexts. Rich Pictures, interviews and reflective journals assisted in interpreting three HPE leadership styles in the Pacific context. Leadership in HPE needs to be further explored in other cultural contexts to fully understand the different styles of leadership based on their aims, strategies and attributes. This may have implications for career advice and leadership development. The key take-home messages are: Rich Pictures and reflective journals combined with interviews could be considered for future research to understand the nuances of HPE leadership in different cultural contexts. Although some facets of leadership identified in this research align with current leadership models, cultural styles of leadership within HPE should be considered when designing faculty development for HPE leadership in different contexts.

FOSTERING SUSTAINED STUDENT ENGAGEMENT IN GENERATING AND UNDERGOING TEST ENHANCED LEARNING

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Background and Aims

Test enhanced learning, involving deliberate and effortful information retrieval while answering questions, improves knowledge retention. Medical students increasingly utilise online question banks to complement their learning. Student authored question banks are perceived positively due to curriculum specificity and efficiency in question generation. Despite concerns over content validity, most student-authored questions have acceptable discriminatory indices.

To implement test enhanced learning locally, the Question Bank Initiative (QBI) was formed in May 2020 within NUS Yong Loo Lin School of Medicine's Medical Society. Our goal is to foster sustained engagement in test enhanced learning by students, as writers and users of formative assessment material.

Methods

Team selection: Any medical student can voluntarily sign up as a QBI member, regardless of academic prowess and year of study, to promote a culture of peer-driven learning.

Training: An online MCQ Writing Workshop is conducted by our project mentor, a consultant clinician and medical educator, covering best practices stipulated by the National Board of Medical Examiners, common item writing errors, and blueprinting.

Question generation: A QBI member creates 1 question per week, blueprinted to the Year 1 curriculum. Clear explanations are written for all answer options. All questions are independently reviewed by 2 other members for content validity before dissemination.

Dissemination: In academic year (AY) 2020/21, we disseminated questions on PeerWise, a widely used online platform for authoring, answering and discussing MCQs. We invited all year 1 medical students (M1s) but faced limited engagement. We subsequently shifted our focus to Telegram, a cloud-based instant messaging service frequently used by undergraduate university students. We created a Telegram Channel, invited a new cohort of M1s

in AY2021/22, and disseminated questions using an embedded “poll” function. Responses were anonymised to encourage participation. Explanatory feedback was appended in a “comments’’ section, accessible after answering each question. Vetting: After deployment, all questions were collated and shared with designated faculty members for validation and feedback.

Results

92 M1s in AY2020/21 signed up for PeerWise (31% of cohort), while 270 M1s joined the QBI Telegram Channel (92% of cohort) in AY2021/22. In the 1st term, 85% (n=185) strongly agreed on the utility of the Telegram Channel for exam preparation. In the 2nd term, 49% (n=144) found the questions challenging while 47% found them manageable. As curriculum content complexity increased in the 3rd term, more students found questions challenging at 66% (n=108). In total, 261 questions were created for the academic year.

Conclusion

We believe our process can sustainably and effectively generate, grow, and distribute a repository of questions for test enhanced learning. Students perceived the QBI Telegram Channel as useful for learning. Going forward, we aspire towards more granular measures of engagement and rigorous assessments of question quality with validated tools to drive continued improvement and question quality assurance.

DEVELOPING EXTENDED PROFESSIONAL IDENTITY SCALE IN INDONESIAN CONTEXT (EPIS-RI)

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Background and Aims

Interprofessional identity in interprofessional learning is developed by understanding each other’s functions and roles by interacting and discussing in a team. In some cases, professional identity can be boundaries for interprofessional identity, but when it is unbreaking, dual identity will be developed and students will be ready for interprofessional collaboration. Extended Professional Identity Scale (EPIS) is an instrument to measure interprofessional identity that has been composed of existing tools and built on Extended Professional Identity Theory (EPIT). Most studies of EPIS were conducted in developed countries and for general health care while the setting of interprofessional placement can affect the development of interprofessional identity. It is pivotal to match the EPIS with cultural context including language as the original version of EPIS is English and differences in context, especially between developed and developing countries. Furthermore, there is no report about identifying interprofessional identity in IPE implementation and using instruments of measurement such as EPIS in Indonesia. The study aims to develop EPIS in Indonesian (EPIS-RI), including cross-cultural validation and psychometric tests.

Methods

We used the Extended Professional Identity Scale (EPIS) to identify the interprofessional identity of medical, nursing, and nutrition students. It contains 12 statements divided into 3 subscales of interprofessional identity, interprofessional belonging, interprofessional commitment, and interprofessional beliefs. The EPIS was translated into Bahasa in 6 stages using the guideline of cross-cultural adaptation; forward translation, synthesis, backward translation, expert committee, pre-testing, and submission by researchers. We involved four translators who are capable in Bahasa and English during forwarding and backward translation. At the same time, an expert committee was conducted between translators and researchers to identify the suitability between EPIS in English version and Bahasa. 306 of 510 students (response rate 60%) were involved in the psychometric test. A confirmatory factor analysis (CFA) was carried out to identify the construct validity. The loading factor was > 0.4. Furthermore, reliability was tested by identifying internal consistency in both each subscale and overall EPIS-RI. Cronbach Alpha was applied ($\alpha > 0.70$).

Results

There were no big differences between the EPIS English version and EPIS-RI. The word 'menikmati' was chosen rather than 'nyaman' to translate the word 'enjoy'. Factor loading of CFA ranged from 0.530- 0.771 (> 0.4). Internal consistency was 0.810, 0.257, and 0.746 respectively, and 0.764 for overall (95% confidence interval). Subscale interprofessional commitment was not reliable.

Conclusion

The result provides additional evidence for EPIS. EPIS-RI was a valid and reliable instrument. It needs further investigation on subscale interprofessional commitment since it was not reliable. It may relate to the cultural context of Indonesia.

INDIVIDUALISED LEARNING PLANS IN POSTGRADUATE TRAINING: A SUMMARY OF 3-YEAR FINDINGS

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Background and Aims

For postgraduate trainees, self-directed learning (SDL) plays a vital role in their clinical training. The individualised learning plans (ILP) program is one of the potential measures that facilitate SDL. In previous studies, medical residents found that ILPs are great tools in their clinical learning; however, there is limited research in Taiwan. Therefore, we started an ILP program in Taiwan in September 2019. This study aims to evaluate the outcomes of the ILP program.

Methods

We developed an ILP form that fits the context in Taiwan and a protocol including one-on-one, monthly mentoring meetings for postgraduate-year-one (PGY-1) residents in their 3-month internal medicine rotations. In addition, we examined whether the residents' learning goals in ILPs correspond with the Accreditation Council for Graduate Medical Education Core Competencies. The ILP forms of the residents were analysed using the predefined codes, and the residents were asked to fill out a survey questionnaire after the ILP program.

Results

During the last three years, a total of 60 PGY-1 residents participated in this study and generated 120 learning goals. They wrote up their ILP forms and had monthly meetings with the clinical teacher. Their learning goals in ILPs were mainly linked to medical knowledge and patient care. Based on their ILP forms, the learning motivations are "want to perform the task independently" (65.0%), "need more clinical experience" (30.8%), and "encounter too few cases" (4.2%). The residents chose "self-study" (100.0%) and "seek others' feedback" (61.7%) as their two major learning strategies. Regarding the criteria for assessment, the residents used "self-organised notes" (93.3%) and "positive feedback from the attendings" (15.8%) for self-appraisal. The survey results (n=57) have shown that ILPs help align the residents' learning goals with learning needs (94.7%), record their progress toward learning goals (93.0%), and facilitate their lifelong learning (93.0%).

Conclusion

The ILP program can be well incorporated into postgraduate training in the context of Taiwan. The PGY-1 residents can achieve their learning goals mostly related to medical knowledge and patient care through the ILP program. Using the ILP form and meeting with the clinical teacher, the residents can learn how to learn self-directed and self-assess their learning outcomes. This ILP program may further facilitate the residents' lifelong learning.

IS E-LEARNING EFFECTIVE FOR CLINICAL SKILLS IN UNDERGRADUATE MEDICAL EDUCATION? A CRITICAL APPRAISAL OF THE EVIDENCE ON THE MEDICAL AND DENTAL STUDENTS' PERSPECTIVE ON THE EFFECTIVENESS OF E-LEARNING FOR CLINICAL SKILLS

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Background and Aims

E-learning is gaining recognition in learning and teaching of medical education curriculum, especially during the COVID-19 pandemic. However, there is a paucity of evidence with regards to its perceived effectiveness in learning and teaching clinical skills, which is a challenging area of medical education for e-learning. Drawing on adult learning theory, which promotes student-centred learning, it is imperative to evaluate how students perceive e-learning for clinical skills.

This research aimed to evaluate medical and dental students' perspectives on the effectiveness of e-learning for clinical skills in undergraduate medical and dental education.

Methods

A critical analysis of the literature for undergraduate medical education from 2000 to 2020 was conducted. Research articles published on the perceptions of undergraduate medical and dental students on the effectiveness of e-learning for clinical skills were included. A systematic approach was utilised using key terms such as online learning, e-learning, undergraduate, students' perception, medicine and dentistry through the University of the South Wales library search tool kit FINDit. Databases included PubMed, Wiley, Taylor & Francis, and top medical and dental education journals. Both qualitative and quantitative studies were included in this review.

Results

Using the search strategy, 125 articles were retrieved. 32 articles were found to be duplicate on manual selection and were removed. 59 articles were captured through database and journal search (primary references) whereas 34 articles were captured through other articles (secondary references). From these, 19 matched the inclusion criteria. All these articles were published in reputable journals. Analysis of the literature revealed that students, either at preclinical or clinical levels, consider e-learning effective for learning of clinical skills in undergraduate medical education. Multiple reasons were cited for the effectiveness such as the flexibility of learning and ability to revise multiple times. Also, students considered e-learning valuable for acquiring different aspects of clinical skills, for instance history taking. Moreover, students displayed positive perceptions of e-learning for clinical skills in various specialties of the medical program like general practice, radiology, forensic science and rheumatology, however, some students believed that subjects like women's and child health would benefit more from face-to-face teaching. Furthermore, although many students perceived that e-learning is equivalent to traditional learning others believed that e-learning is complementary to traditional learning.

Conclusion

Critical appraisal of the literature highlights that students in undergraduate medical and dental education have positive perceptions towards the effectiveness of e-learning for clinical skills. This review highlighted the need for more research in the areas of women's and child health and how e-learning can be improved with clear specification on the aspects of clinical skills that are being evaluated. Nonetheless, the evidence available from this literature review is significant as most papers in the study had positive students' perception towards e-learning for clinical skills. Curriculum leaders and teachers can be reassured that the current generation of students perceives e-learning to be beneficial in learning undergraduate clinical skills. Further studies will need to be conducted to investigate if this perception translates into competent clinical practice.

EXPLORING PHARMACISTS' SATISFACTION OF USING A PROFESSIONAL DEVELOPMENT PORTFOLIO AND ITS VALUE IN PRACTICE

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Background and Aims

This study explored the value of using a portfolio for individual professional development, the resulting outcomes and impact on the pharmacy workforce and organisation after a decade of use; and the factors influencing and promoting mandatory portfolio use in an academic hospital in Singapore.

Methods

The case study approach was adopted for this study. Two groups of participants - the appraisers and pharmacists were identified based on their years of using a portfolio. Participants were selected randomly. A convenient sample size of 10 was chosen. Twelve invitations were sent via email. Five pharmacists and 4 appraisers gave informed consent. The rest declined due to work commitment. Data collection was done using semi-structured interviews conducted virtually during the pandemic. A coding framework was then developed, and thematic analysis used for data analysis. Approval was obtained from the University of Dundee and local institution review board where the study was conducted.

Results

All participants agreed that the values of using a portfolio include identifying one's areas of improvement, prioritising work for achieving career goals, showcasing achievements and tracking progression. Use of the portfolio was motivating for some pharmacists as they became more self-aware of their areas of improvement.

The perceived outcomes in the workforce include more self-driven pharmacists. The perceived outcomes of the pharmacy department include a structured way to build staff capability and having a more competent workforce but it did not translate into better staff retention. Increased interprofessional collaborations and projects were noted.

The impact of using a professional development portfolio on the organisation was challenging to articulate. The use of a portfolio has a positive impact on the organisation's branding and its association with a competent workforce as pharmacists were called upon to lead national committees and were well-regarded nationally.

A number of factors promoting satisfactory use of the portfolio had been identified. The purpose of portfolio use and how pharmacists would benefit from its use should be communicated. Portfolio domains should be customised to the scope of the pharmacist's practice and designed to facilitate use and reduce time spent on portfolio building. Having meaningful conversations with the appraiser coupled with mentoring; and having the opportunities to develop were important. Training workshops for both pharmacists and appraisers, and exemplars were important to kick start the portfolio building journey with mentoring by the appraisers. Lastly, adequate resources and support such as providing time for portfolio building during working hours were suggested.

Conclusion

Portfolio use has perceived value to the pharmacists and has resulting outcomes and impact on the pharmacy workforce and branding of the organisation. A number of factors have been identified for the satisfactory use of the portfolio in this study.

TUESDAY 23RD MAY 2023, 10.45AM

VIRTUAL ROOM 1, HYBRID CONFERENCE

FREE COMMUNICATIONS 11

Entrustable Professional Activities Within Competency Based Medical Education: A Systematic Review of Global Implementation across Healthcare Professions
Toby Wilcox, Australia

Achieving Clinical Competency for Post Graduate Year 1s in Singapore: Comparing Rotations with Night Float or Traditional Call Systems
Mae Yue Tan, Singapore

Educational Interventions for Medical Students to Improve Pharmacological Knowledge and Prescribing Skills: A Scoping Review
Weiwei Shi, Australia

Digital Competencies for Singapore's National Medical School Curriculum
Humairah Zainal, Singapore

Effectiveness of Technology Integrated Matrix Videos (TIM-V) in Active Learning of Ophthalmology Trainees
Kavya Madhuri Bejjanki, India

Comparison of Immersive Mass Casualty Triage (MCT) Systems: The Efficacy of Multi-Sensory Simulation on NSF Medics Triage Performance, Self-Efficacy, and Satisfaction
Eugenie Yien, Singapore

Exploring Professionalism Dilemma and Moral Distress through Medical Students' Eyes: A Mixed-Method Study
Olivia Ngan, Hong Kong S.A.R.

ENTRUSTABLE PROFESSIONAL ACTIVITIES WITHIN COMPETENCY BASED MEDICAL EDUCATION: A SYSTEMATIC REVIEW OF GLOBAL IMPLEMENTATION ACROSS HEALTHCARE PROFESSIONS

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Background and Aims

Entrustable Professional Activities (EPAs) have been developed to translate competencies into discrete units of professional work that constitute clinical practice, and can be entrusted to a trainee or student once they have demonstrated competence. EPAs have been commonly utilised as an assessment method during substantive clinical placements, however the ideal strategy is unknown. This review aims to determine how EPAs have been implemented into entry level health profession curricula worldwide, and what assessment methodologies have been utilised.

Methods

A literature search was conducted of several databases using broad search terms and across several professions namely, medicine, pharmacy, physiotherapy, exercise physiology and dietetics. The search was limited to publications in English, and those investigating undergraduate training. Articles were screened by at least two authors and were included if they articulated where EPAs were included in their curriculum and described the assessment methodology. Data was extracted by two authors and included the location of EPAs within the curriculum, the assessor, and the frequency, mode and outcome of EPA assessments.

Results

The database search identified 752 articles for screening, of which, 20 articles met the inclusion criteria. Articles were published in the USA, Germany, the Netherlands, Canada, and Australia in the professions of medicine, pharmacy and dietetics. In the North American medical literature, half of the studies incorporated EPAs into clerkships only, while the other half were either pre-clerkship, within final year simulations, or unclear. One study within the European medical literature incorporated EPAs from 3rd year clerkships onwards, while others implemented EPAs into the final year clinical placements or OSCE. The pharmacy and dietetics literature introduced EPAs into final year and early practice experience placements. Regarding assessment frequency, the vast majority of studies involved multiple assessment points. The most common method of EPA assessment was through workplace-based assessments. Additional methods included clinical exams, simulations or written assessment tasks. Assessors ranged from supervising clinicians during workplace-based assessment to clinical competency committees consisting of academic faculty EPAs were used to make a mixture of summative and formative decisions.

Conclusion

EPAs were most commonly utilised during clinical placements only and often assessed by supervisors through multiple WBAs. The ideal implementation strategy is unknown and various professions have utilised different methods. The ideal method of utilising EPAs to operationalise competency-based health education is unknown. Further research should review what assessment tasks should be used to make entrustment decisions and whether EPAs are useful in the pre-clinical phase or if their utility is most valuable as a form of workplace-based assessment.

ACHIEVING CLINICAL COMPETENCY FOR POST GRADUATE YEAR 1S IN SINGAPORE: COMPARING ROTATIONS WITH NIGHT FLOAT OR TRADITIONAL CALL SYSTEMS

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Background and Aims

The night float system (NF) has been in place in some hospitals in Singapore, to eliminate prolonged hours. There have been concerns of inadequate training, compromised patient safety and increased medical errors with NF although junior doctors perceive otherwise- two previous studies in Singapore have shown that residents who have rotated through a department with NF felt that it does not affect learning aims or patient safety. These studies focused on junior doctors' perception with no objective data on learning aims and patient safety. We thus aimed to address this gap - our study aims to show objectively whether clinical competency was affected in post graduate year 1 doctors (PGY1) in the NF versus traditional on-call (TC) systems. Our secondary aim was to explore safety concerns between the 2-call system.

Methods

Prospective data was collected over 3 4-month rotations from May 2021 to April 2022 from PGY1s from two different hospitals with different on-call systems. Data included PGY1s formal assessments (where Entrustable Professional Activities (EPAs) are currently used in standard practice) used as a measure of clinical competency. There are 7 core EPAs being evaluated with each EPA having its own specific sub-EPAs to be evaluated, e.g each EPA may have a few sub-EPAs within it where the supervisor will assess if any 'needs improvement'. Data of reported medical errors or patient safety issues from each hospital's patient safety reporting system was also collected.

Results

One hundred and ninety-three PGY1s consented for their data to be used. No PGY1 failed their posting. On the EPAs, 9.0% of PGY1s on the NF compared to 3.7% on the TC had a 'needs improvement' for subsets of their EPA, p=0.14. While these PGY1s had areas which require improvement, they did achieve the overall core EPA. Furthermore, some of these PGY1s, despite 'needs improvement' in certain activities on the EPAs also received nominations from their department for the outstanding PGY1 award. In terms of medical errors, no serious reportable events were reported at both sites. Over the study period, there were 25 reported events on the NF rotations compared to 12 on the TC. Using the denominator of the number of PGY1s, this was 22.5% at the NF rotations compared to 14.6% in TC, p=02.0. All reported errors were in the 'No Harm', or 'Minor Harm' categories. A quarter (24.3%) of all errors was needle-stick related events while another 24.3% was for wrongly labelled blood tubes.

Conclusion

Clinical competency, using the current assessment matrix for PGY1s via the EPAs, shows the same outcome regardless of call structure. The hospital's reporting system showed no significant safety concern or difference in occurrence in both groups. Despite concerns of inadequate training, compromised patient safety and increased medical errors with NF - our current objective markers of these domains using in formal PGY1 assessments do not show deficits in clinical competency and patient safety issues.

EDUCATIONAL INTERVENTIONS FOR MEDICAL STUDENTS TO IMPROVE PHARMACOLOGICAL KNOWLEDGE AND PRESCRIBING SKILLS: A SCOPING REVIEW

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Background and Aims

Entrustable Professional Activities (EPAs) have been developed to translate competencies into discrete units of professional work that constitute clinical practice, and can be entrusted to a trainee or student once they have demonstrated competence. EPAs have been commonly utilised as an assessment method during substantive clinical placements, however the ideal strategy is unknown. This review aims to determine how EPAs have been implemented into entry level health profession curricula worldwide, and what assessment methodologies have been utilised.

Methods

CENTRAL, CINAHL, ERIC, Ovid Embase, Ovid MEDLINE, Ovid PsycINFO, and Scopus were searched with keywords related to "pharmacological knowledge", "prescribing skills", "educational interventions", and "medical students" for articles that were published between 2016 and July 2021. Relevant articles were screened for inclusion and exclusion criteria by two reviewers independently. Full-text studies were retrieved and assessed for eligibility.

Results

78 studies met the inclusion criteria. 35 studies focused on improving prescribing skills, whilst 43 targeted pharmacological knowledge. A broad range of interventions was implemented, including e-learning, case-based learning, simulation, role-play, interprofessional learning and experiential learning. Pharmacological knowledge and prescribing skills were measured with a variety of tools and only at Kirkpatrick Levels 1 and 2. All studies reported one or more positive findings.

Conclusion

A wide variety of educational interventions have been implemented since 2016 to improve medical students' pharmacological knowledge and prescribing skills. The World Health Organisation's Good Guide to Prescribing continues to serve as the foundation of the development of prescribing educational interventions. Emerging

interventions such as experiential and interprofessional learning could be considered to target prescribing, as well as innovative approaches such as game-based learning, for clinical pharmacology knowledge. Robust methodology, use of standardised outcome measures and measuring outcomes at Kirkpatrick Levels 3 and 4 are needed in future studies.

DIGITAL COMPETENCIES FOR SINGAPORE'S NATIONAL MEDICAL SCHOOL CURRICULUM

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Background and Aims

While some countries have implemented national learning outcomes with respect to digital competencies in the core medical school curriculum, Singapore has yet to standardise these outcomes for its three medical schools. This paper compares how medical schools in Singapore have prepared their students for clinical practice in the digital age and the clinical skills that clinical educators and institutional leaders feel should be emphasised more in the core curriculum. It attempts to outline common digital competencies needed by medical graduates at the national level.

Methods

Findings were drawn from individual semi-structured interviews with 19 clinical educators and leaders of local medical schools. Participants were recruited using purposive sampling. Data were interpreted using qualitative thematic analysis.

Results

Thirteen of the participants were clinical educators while 6 were Deans and Vice Deans of Education of the three medical schools. While some digitalisation courses have been introduced in these schools, they vary in terms of content and duration. Furthermore, participants across all schools acknowledged that more formal training is needed to equip students with relevant digital competencies including skills in: (i) communicating with patients while using digital platforms, (ii) data management, and (iii) knowing the limitations and applications of digital technologies such as Artificial Intelligence. However, the schools' different niches and focus areas make standardisation of digital competencies a challenge.

Conclusion

The findings highlighted the need for medical schools to collaborate better with one another in the sharing of educational resources and expertise. Furthermore, stronger collaborations with professional bodies and the healthcare system should be established to ensure that the goals and outcomes of medical education and the needs of the local healthcare system are aligned.

EFFECTIVENESS OF TECHNOLOGY INTEGRATED MATRIX VIDEOS (TIM-V) IN ACTIVE LEARNING OF OPHTHALMOLOGY TRAINEES

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Background and Aims

Online video-recorded lectures have become popular and an increasingly important means for active learning of students especially in flipped classrooms. However, getting students to process these lectures sufficiently to come to class well-prepared is a challenge for educators. This study investigates the effectiveness of technology integrated matrix videos for accomplishing active learning of students.

Methods

Twenty-four ophthalmology students from a Tertiary Eye Institute volunteered to participate in the study. The study included 8 male and 16 female students, with a mean age of 27 years. Lecture was conducted for 1 hour to make the students understand about the Technology Integrated Matrix Videos (TIM-V) and then applied in group assignments. The TIM videos were recorded by the teacher of the course. The videos were recorded as screencasts of slides with audio and lasted, on average, 4 min. The topics discussed within the videos were management of recurrent pterygium (video 1), traumatic glaucoma (video 2), scleritis (video 3), Behcets disease (video 4). The videos were linked to the online video platform 'playposit' to include pop-up questions within pre-made videos. Students were divided into 4 groups randomly and assigned to the experimental condition. All the participants received 4 videos of similar content each. But pop-up questions were embedded for Group-B (MCQ's), Group-C (open ended questions) and Group-D (open ended questions with literature). Online pre and post tests were designed before and after each TIM-V to check the concepts explained in the videos. These tests were different from the pop-up questions and are used to measure students' learning performance. All the students responded to a questionnaire on self-efficacy and usability of TIM videos.

Results

User logs revealed that the students of Groups B, C, D (100%) engaged significantly more when compared to the Group-A (50%). Engagement was not related to knowledge test results, however. Mean pre-test scores were 50%, 45%, 55%, 40% for Groups-A, B, C, D respectively. The mean post test scores were significantly higher for the Group-D (95%) followed by C (90%), B (85%), A (60%) groups. Uniformly high appraisals were given by groups B, C, D for self-efficacy, usefulness, ease of use and satisfaction. The research results show that the question-embedded video-based environment tool promotes student learning, improves the amount of interaction of the student as well as time spent with the learning materials.

Conclusion

It is concluded that open-ended embedded questions with feedback can increase the effectiveness of online video-recorded lectures as learning resources. Simply incorporating interactive video into an e-learning environment may not always result in improving learning. However, TIM-V tool may lead to better learning outcomes and higher learner achievement.

COMPARISON OF IMMERSIVE MASS CASUALTY TRIAGE (MCT) SYSTEMS: THE EFFICACY OF MULTI-SENSORY SIMULATION ON NSF MEDICS TRIAGE PERFORMANCE, SELF-EFFICACY, AND SATISFACTION

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Background and Aims

The Singapore Armed Forces Medical Training Institute (SMTI) proposed a novel extended virtual reality (XR) simulation system that integrated a physical manikin into virtual Mass Casualty Triage (MCT) simulation to bring advantages of multi-sensory interaction to enhance traditional training. In the designated XR system, participants could directly interact with physical embodiments and implement life-saving interventions in an immersive mass casualty situation. It was hypothesized that incorporating multi-sensory interaction can enhance the perceived immersion and realism of MCT Training, thereby improving triage performance and self-efficacy, compared to the Virtual Reality (VR) and traditional MCT Training.

Methods

This is a between-subject mix-method pilot study to measure the effectiveness of three training methods (i.e. VR, XR, and traditional MCT Training), with enlisted male soldiers in a MCT Training. Servicemen from the Emergency Medical Technician (EMT) course will be randomly assigned into three main groups: (1) eXtended Reality (XR) (2) Virtual Reality (VR) and (3) Conventional teaching method, respectively. Prior to the simulation, each group will receive a 30-minute didactic lecture on the START protocol and a pre-training assessment of their knowledge and self-efficacy. Following the training, a post-test questionnaire (i.e., self-efficacy, satisfaction) and a focus group will be administered. After a 10-day washout period, all participants will return for a theory assessment and triage performance test.

Results

Upon completion of the pilot study, it was noted that there were significant improvements in both self-efficacy and stress levels after using the XR simulation training. For improvements in self-efficacy, the paired samples t-test indicated a significant improvement in self-efficacy after using XR simulation training (M= 37, SD=9.0), t (5) =-2.874, p=0.035. This was supported by qualitative findings, where the interviewees highlighted elements of realism and stress improved their confidence in performing tasks in actual situations. For improvements to satisfaction, an independent sample t-test indicated there was a significant difference in the perceived stress between traditional (M= 2.0, SD =1.3) and XR (M= 5.0, SD= 1.7) groups, t (10) =2/784, p=0.019. This shows that the XR simulation could therefore induce more stress during the simulation experience and therefore contribute to overall realism and satisfaction of the training. Qualitative findings reinforced this, with learners emphasising the importance of teachers' new roles as guides and support-providers during the learning process.

This indicates that XR simulation could induce more stress, and therefore contributing to the overall realism of the training. Immersive technology such as XR therefore provides significant benefits to medical education.

Conclusion

Learners were perceived more stressed in the Virtual Reality (VR) scenarios. The environment with high psychological fidelity where participants perceived more stress during the simulation experience thus contributed to the overall realism of training. The post-test self-efficacy of learners after using XR simulation training was higher and the focus group findings show that this caters to needs of the varying types of learners: visual and auditory learners. XR and VR are therefore recommended for increasing satisfaction, self-efficacy and triage performance in these unique mass casualty scenarios. In the areas of mass casualty simulation, high fidelity training allows participants interaction with physical embodiments.

EXPLORING PROFESSIONALISM DILEMMA AND MORAL DISTRESS THROUGH MEDICAL STUDENTS' EYES: A MIXED-METHOD STUDY

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Background and Aims

Professionalism dilemmas are pervasive, and the exposure of medical students to unethical behaviours persists and remains unsolved. Common day-to-day challenges include performing examinations on sedated or anaesthetised patients without consent, performing procedures with insufficient training, breaches of patient safety and dignity, administering drugs amidst patient refusal, discussing confidential information in inappropriate settings, and covering up mistakes. Previous research on moral distress as a result of professionalism dilemmas induced long-lasting emotional episodes compromising students' well-being, including burnout, emotional breakdown, and guilt. This study aims to understand professionalism dilemmas Hong Kong medical students have experienced during clinical clerkships and the resulting moral distress.

Methods

This study employs an explanatory mixed-method sequential design - an anonymous survey followed by in-depth interviews. The first quantitative phase began with a cross-sectional survey, assessing the prevalence of witnessing or participating in professionalism dilemmas they think unethical during clerkship and examining the moral distress resulting from these experiences. In the subsequent qualitative phase, the semi-structured interviews were adopted as follow-up inquiries to help explain survey findings and explore other professionalism challenges and related emotions and reactions during the clerkship. Results from both phases were integrated and triangulated during the discussion, which enriches the study by confirming and refuting findings on how the two phases shared similarities and differences.

Results

A total of 153 students completed and returned the survey, with a response rate of 21.7% (153/706). The top three most frequently occurring dilemmas were the healthcare team answering patients' questions inadequately (27.5%), providing fragmented care to patients (17.6%), and withholding information from a patient who requested it (13.7%). Students felt moderately to severely distressed when they observed a ward mate make sexually inappropriate remarks (81.7%), were pressured by a senior doctor to perform a procedure they did not feel qualified to do (77.1%), and observed a ward mate inappropriately touching a patient, family member, other staff, or student (71.9%). The thematic analysis based on nine in-depth interviews revealed the details of clinicians' unprofessional behaviours towards patients, including verbal abuse, unconsented physical examinations, bias in clinical decisions, students' inaction towards the dilemmas, and students' perceived need for more guidance in applying bioethics and professionalism knowledge.

Conclusion

This study revealed that witnessing suboptimal doctor-patient interactions when doctors inadequately communicate with the patients and touch or instruct students to examine the patients without proper consent were the most common professionalism dilemmas encountered by medical students in their clinical clerkship. Further studies should be conducted to understand better how students can better cope with these moral dilemmas and how to implement a truly anonymous reporting system for students.

TUESDAY 23 MAY 2023, 10.45AM

VIRTUAL ROOM 2, HYBRID CONFERENCE

FREE COMMUNICATIONS 12

Community-Oriented Interprofessional Education During COVID-19 Pandemic at University of Medicine and Pharmacy at Ho Chi Minh City
Thi-Mai Hoang Nguyen, Vietnam

A Family Medicine Teaching Workshop on Communications with Persons with Disabilities (PWD)
Victor Loh, Singapore

Cloud-Computing OSCE Management System Improved Accuracy and Timeliness of OSCE Test and is Significantly More Friendly to Raters, Test Staff and Environment
Tsu-Yi Hsieh, Taiwan

The Growing Growth Mindset of Medical Students' Motivation
Piyaporn Sirijanchune, Thailand

Adaptive Expertise and Perceived Work Performance among Health Professions Educators of a University During COVID-19 Pandemic
Chantha Jayawardena, Sri Lanka

Effectiveness of Small Group Practical Activity to Improve Higher Order Thinking Skills among Medical Students
Atanu Roy, India

Assessing the Effectiveness of a 2-Week Radiology Program for Year 4 Medical Students Using Focus Group Interviews
Thazin Han, Myanmar

Measuring the Learning Outcomes of Datathons
Mataroria Lyndon, New Zealand

COMMUNITY-ORIENTED INTERPROFESSIONAL EDUCATION DURING COVID-19 PANDEMIC AT UNIVERSITY OF MEDICINE AND PHARMACY AT HO CHI MINH CITY

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Background and Aims

University of Medicine and Pharmacy at Ho Chi Minh City (UMP HCMC) is the first university in Vietnam that has included Interprofessional Education (IPE) in the curriculum for five undergraduate programs, consisting of one simulated hospital-oriented and one community-oriented IPE modules. Community-oriented IPE module is an important step for the transition of interprofessional collaboration from school to practice. This module was planned to be implemented for the first time in the academic year 2021 - 2022. However, due to the COVID-19 pandemic,

our students could not access the community healthcare units which are the practice sites. Hence, we had to adjust the module syllabus for an online format to adapt with the general situation of Vietnam at the moment. This paper aims to describe our adaptation.

Methods

The original community-oriented IPE syllabus included 8 lessons, in which each interprofessional team had to identify specific health problems at their practice community healthcare sites, plan a feasible project to resolve that problem, implement the intervention and report the results. With the online format, we recommended students to identify health problems based on regulatory agency's health reports. The main intervention suggested was to develop materials for health education, which would be posted in the UMP-HCMC IPE fanpage after the course. We did not change the assessment method which was essentially based on 360-degree feedback from peers and faculty members. Students' feedback were collected after each course to adjust teaching materials and methods.

Results

In the academic year 2021 - 2022, four courses of online community-oriented IPE were organised at UMP-HCMC. The rates of students responding to the survey were more than 60% after each course. In the first course, the rate of students satisfying with learning activities and 360-degree feedback were 53.9% and 74.3%, respectively. The most complaints of students in the first course were limited learning material, too closed report deadlines and the disagreement between lecturers about the required quality of interventions. After the agreement meeting between faculty members, we had made some adjustments such as providing more learning materials, clarifying the lesson's objectives and the quality requirement of intervention and reports. Then, satisfaction rates had improved in the later courses. The satisfaction rates of learning activities were 80.0%, 81.0% and 87.1% in the second, third and fourth courses of the academic year, respectively. The same results were observed for 360-degree feedback satisfaction rate (84.4%, 81.0% and 87.7% in the second, third and fourth course, respectively). All students self-assessed their positive progress in interprofessional collaborative competencies, especially interprofessional communication and teamwork.

Conclusion

In limited conditions due to COVID-19 pandemic, transforming learning activities of IPE to online format with appropriate adaptations can bring positive effects.

A FAMILY MEDICINE TEACHING WORKSHOP ON COMMUNICATIONS WITH PERSONS WITH DISABILITIES (PWD)

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Background and Aims

Building on the Singaporean government's Enabling Masterplan 2030 for Persons with Disabilities (PWD), a workshop for year-three medical students titled "Communications with Persons with Disabilities" was initiated in July 2022. The four-hour workshop comprises pre-event videos and reading materials, a plenary, followed by fishbowl discussions where students perform consultation skills in case scenarios with PWD patient educators. Time was set aside for reflection and sharing of their experiences, and a debriefing wrapped up the workshop. The present study aims to evaluate the effect of the workshop on student's attitudes toward PWD.

Methods

A survey was given to students pre and post workshop. The survey comprised of questions on demographics, extent of prior contact with PWD, feedback about the workshop, and questions adapted from the Attitude Towards Disabled Persons (ATDP)-O scale. The data was analysed by R software. Descriptive analysis was used for

demographic, contact with PWD and feedback questions. Paired t-test was used to evaluate change in ATDP-O scores before and after the teaching module.

Results

Sixty students attended the workshop. There were thirty-five (58.3%) complete responses. There were five students (14.3%) who had been diagnosed with a disability. Only five students (14.3%) had formal training on caring for persons with disabilities before. Most students (74.2%) had never or rarely cared for a person with a disability. Most (74.3%) did not know someone with a disability who was important to them. Only one (2.9%) student found that education about persons with disabilities in medical school has been adequate so far. Twenty-four respondents (68.6%) found it important to include education and training on PWD. Interestingly, the students with self-reported disability scored lower on the ATDP-O score (p=0.03). There was an improvement in attitudes towards PWD as shown by an increase of 11.66 in ATDP-O score post workshop (t (34) = 5.76, p-value = <0.001). Non-Chinese ethnicity (p=0.037), older age (r (33) = 0.37, p-value =0.026) and having a diagnosis of disability (p=0.037) showed significantly higher increase in ATDP-O scores post workshop. There were no significant differences or changes in ATDP-O score for those who had training, cared for or knew someone important to them with a disability. Thirty-three respondents (94.3%) agreed or strongly agreed that education provided during the workshop was relevant to their future career as doctors. Further thirty-three respondents (94.3%) enjoyed the workshop much or a great deal.

Conclusion

In addition to demonstrating a measurable difference in students' attitudes toward PWDs; the workshop makes a difference in the medical curriculum by staking PWD as patient educators, sensitising tomorrow's doctors more acutely to the health and social needs of PWD, and by contributing positively to the important conversation around the inclusivity of PWD as envisioned in Enabling Masterplan 2030.

CLOUD-COMPUTING OSCE MANAGEMENT SYSTEM IMPROVED ACCURACY AND TIMELINESS OF OSCE TEST AND IS SIGNIFICANTLY MORE FRIENDLY TO RATERS, TEST STAFF AND ENVIRONMENT

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Background and Aims

The Objective Structured Clinical Examination (OSCE) is a reliable tool for assessing competence with high reliability and validity, for both formative and summative purposes. However, there are many challenges to keep by traditional paper methods, including missing scoring items, documentation errors, and manual calculation errors. We could just depend on labour-intensive and time-consuming overwork to compensate for those defects. It was also hard to keep performance profiles of raters and standardised patients (SPs) updated frequently.

Methods

Based on the requirement of the national board OSCE for medical doctors in Taiwan, we constructed an online cloud-computing OSCE management system. This system could be accessed by tablets, smart phone, notebook, or personal computer as rater's need. Using paper-scored OSCEs from 2013 to 2019 in Taichung Veterans General Hospital, we compare cloud-computing scored OSCEs in 2020 to 2021 for missing data, calculation error, documentation error, time to manage OSCE documentation, time to update performance profiles of raters & SPs and satisfaction of raters & test staff.

Results

Cloud-computing online OSCE management system significantly improved missing data from 2.74% to 0.00%, calculation error from 1.49% to 0.00%. The numbers of documentation-error-free OSCE tests improved from 53.2% to 100%. Time to manage OSCE documentation reduced from 8.2 hours to 0.4 hours with cloud-computing. Time to update performance profiles of raters & SPs reduced from 7 days to 0.25 days. The satisfaction of raters improved from 3.82 of 5, to 4.52. The satisfaction of test staff dramatically improved from 2.77 of 5, to 4.73. Cloud-computing

OSCE management system cited 471.4 A4 papers (equal to CO2 footprint 17718.7gm a year) and 11.89 work-hours for each OSCE test on average.

Conclusion

Cloud-computing OSCE management system helped in better accuracy and timeliness for test results. It remarkably reduced the effort of raters and test staff and helped to avoid human errors.

THE GROWING GROWTH MINDSET OF MEDICAL STUDENTS' MOTIVATION

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Background and Aims

Growing intelligence in a growth mindset believed that all failures were opportunities. A growth mindset drives motivation and achievement. A fixed mindset believes that intelligence and talent cannot develop.

Methods

A cross-sectional survey of undergraduate medical students. They have categorised mindset types by scoring adapted from the mindset questionnaire. Evaluate the motivation and achievement using the Grit test, Reflection-In-Learning Scale (RLS), GPA, and Grade of internal medicine. The grit test is a self-reflection questionnaire for predicted success and reflects perseverance. Survey of the factors that affected their mindset.

Results

A total of 112 medical students completed the questionnaires. 79 medical students (70.5%) had a growth mindset and 43 medical students (29.5%) had a fixed mindset. The growth mindset group was a statistically differenced higher score in evaluations of motivation and achievement using Grit and RLS than the fixed mindset group significantly. RLS mean scores for the growth mindset and fixed mindset groups were 79.39 ± 9.32, 68.92 ± 9.57 ($P < 0.001$). The Grit score for the growth mindset and fixed mindset groups were 3.07 ± 0.61, 2.55 ± 0.55 ($P < 0.001$). There was no significant difference in academic performance evaluated by GPA. The GPA of a growth mindset and fixed mindset groups were 3.19 ± 0.39, 3.21 ± 0.40 ($P=0.7942$). However, the percentage of good grades in internal medicine was higher in the growth mindset group (62%) than in the fixed mindset group (53%).

Survey of the factors affecting the development of the growth mindset, 64 medical students (57%) believe in self-improvement and 18 medical students (16%) believe that previous experience made them successful. Others believe in social environments, friends, parents, and mentors which are affected by developing their growth mindset. We assist students in providing resources and training for encouraging a growth mindset in a fixed mindset group with the associated student well-being support team.

Conclusion

A growth mindset is associated with a more significant effect on motivation and achievement. The academic performance evaluated by GPA was not different. The internal medicine grade which reflected perseverance was better in the growth mindset group than others. Self-improvement is an excellent contributor to the growth mindset.

The home message is that mindset could be developed and improved. A growth mindset is associated with a more significant effect on motivation and achievement.

ADAPTIVE EXPERTISE AND PERCEIVED WORK PERFORMANCE AMONG HEALTH PROFESSIONS EDUCATORS OF A UNIVERSITY DURING COVID-19 PANDEMIC

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Background and Aims

Health professionals and health professions educators (HPEs) worldwide have to confront the COVID-19 pandemic, which disrupted standard practice and forced HPEs to come up with creative, alternative modes for training and education in the shortest amount of time possible. The ability of people to work successfully and efficiently in non-standard situations can be called adaptive expertise (AE). While some people quickly overcome changes in work requirements by inventing new procedures and using their expert knowledge in novel ways, others do not possess this ability. In the current study, we explored how HPE's levels of adaptive expertise (AE) were related to perceived work performance during the ongoing COVID-19 pandemic. The objectives were to investigate how the AE of a group of university teachers of a health education programme influenced perceived work performance in this altered academic environment and to see whether there were any relationships between AE and the academic ranking of university teachers and their work experience.

Methods

A descriptive, cross-sectional study was carried out using a self-reported study tool about AE developed by Bohle Carbonell et al. (2016). The tool is a questionnaire containing 17 items and Likert scale responses ranging from 1 (never or only rarely true of me) to 5 (always or almost always true of me). Three questions about work performance, amount of work done, and teaching quality were added to measure perceived work performance during the pandemic. A scale ranging from 1 (Extremely poor) to 10 (Extremely good) was used to identify the perceived level of satisfaction with the work performed. The sample consisted of university teachers from the Health Professions Education programs of the University of Twente Netherlands: Technical Medicine, Biomedical Engineering, and Health Sciences.

Results

Among 123 eligible participants, 40 individuals (20 females, 19 males, 1 not disclosed) completed the survey, and the final response rate was 32.52%. Kaiser-Meyer-Olkin and Bartlett's Test of Sphericity indicated the adequacy of the number of the present sample for valid statistical analysis (KMO= 0.633, P<0.000). Participants were lecturers, assistant professors, full professors, senior lecturers, and associate professors. The average AE score of the sample was 4.18±0.57. The Cronbach alpha value is 0.72 indicating acceptable internal reliability of all 17 items which measure adaptive expertise. Professors showed higher AE scores than the other ranks. When correlations were calculated between scores of AE and the perceived work performance, a statistically significant positive association ($\rho = 0.56$, $p < 0.0001$) was noted. Furthermore, there was a positive relationship between academic ranking and AE ($\rho = 0.35$, $p < 0.01$). However, the AE score was not associated with the work experience or the age of university teachers.

Conclusion

Our finding of a lack of relationships between AE score and experience and age but significant relationships with work performance and academic ranking of university teachers suggest AE is not auto-generated or acquired with seniority and experience automatically, but it is a skill that should be developed deliberately irrespective of the age and experience.

EFFECTIVENESS OF SMALL GROUP PRACTICAL ACTIVITY TO IMPROVE HIGHER ORDER THINKING SKILLS AMONG MEDICAL STUDENTS

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Background and Aims
Didactic lectures are effective in passing a high volume of information to students very effectively and quickly. However, lectures tend to become monotonous if not structured properly and have less scope to impart higher order thinking skills (HOTS). Lack of HOTS among medical students can critically impact the quality of medical practice. Thus, to address this drawback of didactic lectures, we supplemented the lectures of cardiovascular, respiratory and environmental physiology modules with small group practical activity titled “Effect of change in environmental temperature on the cardio-respiratory parameters”.

Methods
Theoretical knowledge of cardiovascular, respiratory and environmental physiology modules were delivered through didactic lectures before the small group practical activity. On the day of practical activity, the students were divided into small groups of 6-8 students in each group. To evaluate the usefulness of the practical activity, students were asked to answer the same set of HOTS questions on the core concepts of learning modules addressed in the practical before and after the activity. During the practical activity, cardiorespiratory responses such as the core (oral) temperature, skin temperature, blood pressure, heart rate, forearm blood flow, respiratory rate, tidal volume, oxygen consumption, onset of sweat secretion and shivering (via electromyography) to the changes in the environmental temperature (cold: 16°C, hot: 40°C, baseline: room temperature) were studied by the students in the group on a volunteer (peer group member) under the supervision of demonstrator.

Results
Pre- and post-small group practical activity of the students (n = 56) were compared using Paired t test. HOTS scores of the students significantly improved ($p<0.0001$) after the small group practical activity.

Conclusion
The current study findings suggest that well-designed small group practical activity could improve the higher order thinking skills (HOTS) of medical students.

ASSESSING THE EFFECTIVENESS OF A 2-WEEK RADIOLOGY PROGRAM FOR YEAR 4 MEDICAL STUDENTS USING FOCUS GROUP INTERVIEWS

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Background and Aims
Advances in medical imaging has led to almost every patient getting a scan prior to any planned management. It therefore becomes essential for medical students to understand and appreciate the importance and the impact of radiology in clinical practice. This study aims to assess the effectiveness of a 2-week radiology program and the impact that it has on year 4 medical students’ perspectives on radiology using focus group interviews.

Methods
The study is an institution based experiential qualitative study using focus group interviews. Ethics approval was obtained in December 2021. The study period was from January to July 2022. Purposeful sampling for participant selection was used for the study. Academic Year 2020/2021, 4th year medical students, who had completed the

2-week radiology program were invited to participate in the study. A total of 18 students out of 20 consented to participate in the study. There were a total of 4 focus groups, groups 1 and 2 comprising 5 students each and groups 3 & 4 comprising 4 students each. The focus group interviews were carried a week apart and lasted 60 minutes each. Member checks were done at each interview for credibility. The interviews were recorded and transcribed for analysis.

Results

Thematic analysis of the data produced 6 themes from the focus group interviews. (1). Earlier exposure to radiology. (2). Integration of radiology. (3). Collaborative learning and practice. (4). Motivation to learn radiology. (5). Genuine interest in radiology (6). The importance of radiology in clinical practice. The study's theoretical framework provides the basis for thematic analysis.

Conclusion

The 2-week radiology program was effective in enhancing the learning of radiology and impactful in changing year 4 medical students' perceptions regarding the importance of the role of radiology in clinical practice. The outcome of the study provides the evidence and justification to implement and roll out the 2-week radiology program in the 4th year medical students' core curriculum for consecutive academic years.

MEASURING THE LEARNING OUTCOMES OF DATATHONS

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Background and Aims

In this rapidly evolving age of data science and artificial intelligence, there is a need for health professionals to have a basic level of data literacy. Healthcare datathons are events in which cross-disciplinary teams leverage data science methodologies to address clinical questions using large datasets. The aim of this research was to evaluate participant satisfaction and learning outcomes of datathons.

Methods

A multicentre cross-sectional study was performed using survey data from datathons conducted in Sydney, Australia (April 2018) n=98, Singapore (July 2018) n=169 and Beijing, China (December 2018) n=200.

Participants (n=467) completed an online confidential survey at the end of the datathons which contained the Affective Learning Scale, and measures of event satisfaction, perceived knowledge gain, as well as free text responses, and participants' demographic background. Data analysis used descriptive statistics and multivariate analysis of variance (MANOVA). Thematic analysis was performed on the text responses.

Results

The overall response rate was 64% (301/467). Participants were mostly male (70%); 50.2% were health professionals and 49.8% were data scientists.

Based on the Affective Learning Scale (7-point Likert type scale), participants reported a positive learning experience (M = 5.93, SD = 1.21), satisfaction for content and subject matter of the datathon (M = 5.81, SD = 1.17), applying behaviours (M = 4.71, SD =2.02), instruction from mentors (M = 6.01, SD = 1.18), and intention to participate in future datathons (M = 6.03, SD = 1.23).

The MANOVA showed significant differences between health professionals and data scientists in perceived knowledge gained from the datathons. Themes from text responses emerged: (1) cross-disciplinary collaboration; (2) improving healthcare using data science and (3) preparations for big data analytics.

Conclusion

Healthcare datathons provide a positive learning experience for participants across professional and demographic groups. These events promote effective learning, cross-disciplinary collaboration, and knowledge gain in health data science which is moderated by professional background. With the increasing application of big data and machine learning for healthcare, datathons can provide educational opportunities to enhance data science skills and contribute to a cross-disciplinary ecosystem that leverages data to better understand health and disease.

MONDAY 22ND MAY 2023, 9.00AM

VIRTUAL ROOM 3, HYBRID CONFERENCE

SHORT COMMUNICATIONS 1

A STUDY ON NOVICE TRAINEES' PERCEPTIONS OF ATTAINING GI ENDOSCOPY LEARNING GOALS

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Background and Aims

Learning a GI endoscopy skill is complex because it requires correctly performed steps to achieve an overall competency. Therefore, trainees' awareness of meeting the learning goals is crucial in competency-based endoscopy training. This study aims to understand how novice trainees self-monitor and what information they utilise for evaluating attainment of learning goals.

Methods

This qualitative study was conducted on Year One and Two trainees in Gastroenterology Singapore Senior Residency Program. Individual semi-structured interviews were performed on a total of 15 senior residents. Thematic template analysis was conducted on the data.

Results

The trainees monitored their endoscopy learning by identifying the learning objectives and preparing themselves before the endoscopy procedure. The trainees utilised these endoscopy imageries and tactile control information to assist them in monitoring their training. We found that the self-monitoring process occurs continuously during and after the procedure. In addition, the trainees attained the knowledge of learning goals by heavily relying on the supervisor's feedback and guidance. We also discovered that various affective experiences influenced their endoscopy learning.

Conclusion

Novice trainees followed iterative processes when acquiring the awareness of achieving learning goals of GI endoscopy. Therefore, endoscopy training programmes can incorporate crucial elements of defining learning goals with preparation to build the knowledge and supervisor feedback to facilitate effective self-monitoring.

UNLEARNABLE IN TEXTBOOKS: EXPOSING CLERKSHIP STUDENTS TO REAL-WORLD RADIOLOGY

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Background and Aims

Emergency radiology is essential for medical students. Students must know emergency radiology aside form, theoretical radiology knowledge, basic diagnostic imaging skills and ultrasonography procedure. We hypothesised that this topic could not be learned only in a class or from a textbook. Students should have a chance to receive real experience.

Methods

Our medical education center initiated and included a pilot project of a night shift, on-call, short block, into a radiology learning curriculum. This project is aimed to create a real-world learning radiology emergency experience. Students would learn about emergency diagnostic imaging, emergency requesting indications, and ultrasonography and CT-imaging procedure. In this project, we assigned a group of 2-3 medical students to attend a night shift duty with a radiologist in the last 2-weeks, of the 4-weeks radiology rotation. Students would sit alongside the radiologist and observe every activity that happened during the night shift duty. This project was assessed by students through a questionnaire.

Results

Forty-six students completed a questionnaire. 93.8% of them were very satisfied. 98% of them felt excited to observe a radiologist perform ultrasound procedure and a real-time imaging CT-scan. Also, they enjoyed operating the workstation to review post-processed images. Some of the students suggested that they wanted to attend the night-shift duty more, and would like to have more time for extensive discussion about the cases and to learn technical terms that are used in a radiology report. Students learned about radiology emergencies and had experience in the real-world of radiologists. During the night-shift duty, students gained emergency radiology knowledge including requesting indication, emergency radiology procedure, and had a chance to work at the workstation. This fresh, touching, and real experience goes beyond what was written in the textbook.

Conclusion

The night shift, on-call, short block learning with a radiologist has been useful in fully comprehending the role of a radiologist consultant and contributes to increased knowledge and gained experience in radiology emergencies.

PERCEPTIONS OF DENTAL SURGERY ASSISTANT TRAINEES ON MENTAL WELLNESS

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Background and Aims

Newly graduated Dental Surgery Assistants (DSA) trainees are exposed to a high working stress environment when they are transiting from a classroom setting to a clinical work environment that involves patient management and assisting clinicians. An online survey was conducted for a group of National Institute of Technical Education Certificate (NITEC) DSA trainees in National Dental Centre Singapore to find out their perception and understanding of mental wellness. This survey formed part of a needs analysis for a mental wellness module that aims to support DSA trainees in the NITEC DSA Certification programme.

Methods

The online survey was disseminated to all cohort 2022 DSA trainees to complete 1 week prior to attending a mental wellness module that was held in June 2022. The 43-item survey included i. Psychology General Well-being Index (PGWB) with 22 items based on 6 domains (anxiety, depression, positive well-being, self-control, general health and vitality); ii. 5 items on knowledge about mental health; iii. 4 items on lifestyle and iv. 12 items on perception in working in a dental clinic. DSA trainees rated their level of agreement based on a 6-point Likert scale for PGWB and a 5-point Likert scale (1-strongly disagree to 5-strongly agree) for the perception of working in a dental clinic. Responses were collated for descriptive analysis and Cronbach alpha analysis done for internal consistency for Likert scale items.

Results

Sixteen DSA trainees completed the online survey (100% response rate). Only 25% of trainees have more than 1 year of working experience in a dental clinic (4/16). The average PGWB score for this cohort is 61.5 (range 18-89). 14 trainees (75%) admitted they were feeling depressed and 31.2% of trainees (5/16) were feeling under stress in the past month. Majority of DSA trainees (87.5%, 14/16) recognised the role of exercise in mental health and 81.3% (13/16) of trainees were able to differentiate between sadness and depression. However, 56% (9/16) of the trainees incorrectly answered that mental and psychological disorders are not a preventable disease and the majority (87.5%, 14/16) incorrectly answered that mental disorders are caused by a wrong way of thinking. Majority of trainees agreed that mental health is important for their general health (87.5%, 14/16). Majority of the trainees also gave a neutral response (75%, 12/16) to the statement related to stress from working in the dental clinic. Majority of the trainees (81.3%, 13/16) were willing to seek help if they encountered problems working in the dental clinic. The Cronbach alpha analysis on PGWB (alpha= 0.87) and trainees' perception in working in the clinic (alpha = 0.76) revealed good internal consistency.

Conclusion

The PGWB score and analysis indicate there is a knowledge gap about mental health and need to improve mental wellness in this cohort of DSA trainees. Coping mechanisms such as breathing exercises, meditation and positive psychology can be included into the mental wellness module to assess any changes in this cohort's perception of mental wellness after the module.

MEDICAL STUDENTS LEADING EDUCATION ON DIGITAL HEALTH

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Background and Aims

The 2030 Agenda for Sustainable Development Goals has recognized digital health as a tool to hasten the achievement of the goals. The World Health Organisation outlined four strategic goals in its 2020-2025 Digital Health Strategy, all calling for cooperation with healthcare providers. This puts an emphasis on the role of healthcare professionals in raising community awareness of digital health and in the creation of digital health services.

Medical students worldwide believe that digital health should be taught as part of medical curricula to help educate and prepare healthcare practitioners for the digital transformation of healthcare. The International Federation for Medical Students' Associations (IFMSA) have subsequently developed projects focused on digital health in an overarching approach and have also integrated a focus on digital health in its global priority on Human Resources for Health and the Health Workforce. We thus aim to strengthen the future health and care workforce's competence in digital health and emerge as principal advocate between youth organizations to promote health through digital interventions delivered by a post-pandemic health workforce.

Methods

An online survey was conducted between January and July 2021 using the email and social media channels of the IFMSA, targeting medical students and recent graduates. It aimed to understand the current state of digital health in medical curricula and perceptions of medical students. Furthermore, a policy document titled "Digital Transformation of Healthcare" has been subsequently developed in 2022.

Results

In total, we received responses from 714 medical students worldwide. The majority of respondents did not receive digital health education as part of the core curriculum (52.4%) nor facilitated by their medical school outside the core curriculum (58.8%). More than 85% of respondents believed that digital health can improve healthcare's effectiveness, accessibility, and quality. In order to prepare them for their future employment as health professionals, 87.7% of respondents believed that future health professionals should get instruction on digital health as part of the core medical curriculum. A detailed analysis of Asia-Pacific regional responses will be completed for presentation at APMEC.

IFMSA also adopted a policy document on Digital Transformation of Healthcare in 2022 which highlights IFMSA's support for research and development of digital health initiatives, provides an overview of opportunities and challenges in the digital transformation of healthcare, and calls upon different stakeholders to take action. Furthermore, the IFMSA, throughout the upcoming year, aims to share the results of the digital health survey with relevant medical education stakeholders and to include digital health in the medical curriculum as a session topic in IFMSA General Assemblies and/or Regional Meetings to be delivered to healthcare students worldwide.

Conclusion

While many medical students believe in the importance of digital health in improving healthcare and the need for its inclusion in the medical curriculum, the current lack of digital health education both within or outside the core curriculum reflects the need for further advocacy and action.

CLINICAL SCIENCE DOMAINS WITHIN AN INTERNATIONAL DOCTOR OF MEDICINE (MD) PROGRAMME PREDICT SUCCESS IN UNITED STATES MEDICAL LICENSING EXAMINATION (USMLE) STEP 1

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Background and Aims

USMLE Step exams were established to provide a uniform evaluation system for registration in the United States. In partnership with the University of Queensland, MD students from the Ochsner Health System (New Orleans, LA) complete their first two years (phase 1) in Australia, before finishing phase 2 in the United States of America. UQ Ochsner MD students must attempt Step 1 prior to starting phase 2. A dedicated USMLE preparation course was established to support student's preparation for Step 1.

Aim: To evaluate discipline areas within Clinical Science which predict success in Step 1.

Methods

Longitudinal performances in Clinical Science (CS) Multiple Choice Questions (MCQ) in phase 1 of the MD programme were correlated with National Board of Medical Examiners (NBME) Comprehensive Exam (CBSE) performance. MCQ were tagged based on discipline area.

Results

Students have reported feeling disadvantaged in preparation for Step 1 believing that the UQ MD programme does not provide adequate preparation as it was not specifically based on the USMLE curriculum. There is strong evidence however, that performance in clinical science across phase 1 strongly correlates with success in CBSE. Students who perform above average in the cohort were significantly more likely to pass the CBSE. The CBSE significantly correlates with performances in Step 1 and is used to assess students' readiness to take the Step 1 exam within the programme. Students who passed the CBSE showed a higher correlation in performances in Pathology, Anatomy, Physiology, and Pharmacology discipline areas which are highly representative within the Step 1 exam.

Conclusion

The UQ MD programme supports a strong preparation for the Step 1 exam, with high correlations in performances within Step 1 discipline areas.

YOUNG SURGEONS IMPROVED SIGNIFICANTLY IN SELF-ASSESSMENT CONFIDENCE, PROCEDURAL SKILL, AND OPERATIONAL UNDERSTANDING DURING AN OPEN DISTAL ARTERIAL BYPASS CADAVER WORKSHOP

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Background and Aims

Surgical revascularisation of the lower leg utilising an autogenous vein transplant to bypass distant target arteries is the standard gold treatment for severe ischemic illness. In this early period of endovascular therapy, however, most surgeons solely focus on endovascular procedures and devices, forgetting and being unfamiliar with the fundamental technical abilities required for open distal artery bypass surgery. The issue of current vascular surgeons having fewer opportunities to train and get comfortable with open surgical procedures must be carefully explored. The fewer procedures a surgeon performs, the less confidence and procedural competence he or she will have to conduct an open distal arterial bypass.

Methods

Participants received a 2-day cadaveric workshop course on open distal arterial bypass surgery covering knowledge and practical hands-on simulations. Before and after the course, participants completed written tests to assess their procedural knowledge about the index for open distal arterial bypass surgery. Participants also assessed their own surgery confidence and procedural competence levels based on a 5-pointed Likert scale (1: no executive ability, 5: executive independently).

Results

Twenty-three participants completed the course workshop and all assessments and feedback questionnaires. The main level and characteristics of the participants are as follows: 59% are attending physicians, 26% are fellows or chief residents, 15% are under-training residents, 67% are from academic medical centres, and 33% are from metropolitan and local community hospitals. About 66.7% of the participants experienced open distal artery bypass surgery rarely once per year, and another 33.3% probably experienced it only once per month. The pre-seminar questionnaire review for open distal arterial bypass surgery had an almost normal distribution from low to high in terms of confidence level, familiarity with the procedure, anatomical description, and vascular exposure techniques. 63% of participants were unfamiliar with using the Valvulotome device. The workshop's educational impact included learner intent on the process of disease familiarity, change in operative confidence, and self-perceived competency, all of which showed significantly improving ($p< 0.001$). The overall confidence level and the normal surgery processes for open distal artery bypass surgery showed a significant raising to 78.3% and 82.6% on high level, the ability to outline the surgical steps was improved mainly (73.9%), and 73.9% of participants were more familiar with using the Valvulotome device. On the procedure knowledge portion assessments, the average score for five pre-tests was 49.62, and the average score for the same post-tests was 65.22. 100% of participants reported they were delighted with the relevance and realism of this open distal artery bypass surgery cadaver workshop. Almost every participant reported that this workshop provides opportunities to help him grow in an increasingly tricky learning environment and would recommend the course to other trainees.

Conclusion

This cadaver workshop allows international teachers to cooperate in teaching, imparting knowledge of anatomy and surgical theory and skills and allows participants to perform simulated surgical drills with silent teachers in a high-quality environment. After the course, clinical surgeons' confidence in the operation and familiarity with open distal artery bypass surgery surgical procedures can be significantly.

MULTIDISCIPLINARY MEETINGS AS TOOLS OF EDUCATION IN HEALTHCARE

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Background and Aims

Multi-disciplinary meetings (MDM) have long been proven to ensure higher quality decision making and improved outcomes in the management of chronic diseases. The MDM discussion is shown to be an important juncture in the patient care pathway where prior work is reviewed, future work is planned and decisions are made by consensus. MDMs have a multi-faceted nature where new knowledge is generated and shared. Clinically oriented MDMs which are designed for coordination of service delivery can also be educational. Here we explore the potential of these meetings to become effective educational tools when conducted in the right manner.

Methods

An anonymous survey of 20 healthcare staff was conducted in a geriatric ward that has weekly multidisciplinary meetings to coordinate the care of elderly patients (>65 years). The Form SG survey had questions across the domains of reaction, learning, behaviour and results and was based on Kirkpatrick's model of learning. Participants were inclusive of doctors, nurses, physiotherapists, occupational therapists, social workers and care managers who formed the multidisciplinary team in the ward.

Results

All 20 participants completed the survey. 90% (18) of respondents were between 20 to 40 years old and 35% (7) were part of training programmes. 75% (15) attended MDMs at least once a week. Internal consistency for the survey was calculated using Cronbach's alpha score and was noted to be high (Cronbach's $\alpha = 0.89$). Most respondents felt that there was considerable learning value (mean score 4.15 ± 0.58, p-value <0.30) and that MDM was an environment conducive for learning (mean score 4.20 ± 0.31, p-value<0.5). 90% (18) felt that MDMs helped them to identify relevant resources to improve knowledge and 55% (11) felt that it guided them to change their clinical practice. 85% (17) felt that it improved competence and situational awareness and all the respondents agreed that it helps to improve understanding of patient centred care. Free text responses indicated agreement to the learning opportunity provided by multidisciplinary meetings. Few suggestions were to use lesser abbreviations, have a clear agenda and structure for the meeting and to make it a hybrid model of virtual and face to face sessions to allow more members to attend.

Conclusion

Multidisciplinary meetings are a good platform to promote education in healthcare by incorporating structured discussions around patient care inclusive of ongoing management of medical issues, challenges faced by nursing and allied health professionals and coordination of care in the community. Participants can understand their patients better, gain knowledge from the perspectives of other healthcare workers and ultimately result in improving their clinical practices to achieve patient centred care. Hybrid models can also encourage better participation and learning for healthcare providers from multiple disciplines.

IS THE BIOETHICS CURRICULUM IN THE ASIA PACIFIC REGION HEAVILY FOCUSED ON WESTERN PERSPECTIVES?

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Background and Aims

Bioethics has a rich historical background based on Western philosophy, political contexts and social theories. The Western approach to bioethics gives rise to one-size-fits-all principles that may not be responsive to the cultural ethos and moral sensibilities in non-Western practice. The study aim is to explore the discrepant Western and Eastern perspectives and values to draw educational implications in the curriculum design in the Asia-Pacific Region. The objectives are to (1) describe the current status of bioethics teaching and (2) explore perspectives about culture in the undergraduate Bioethics curriculum.

Methods

An exploratory survey was conducted among a convenience sample of 74 bioethics educators in the Asia Pacific Regions between February and June 2021.

Results

Among 74 bioethics educators, 54% were male, 59% were Professorate rank, and 71.6% had some bioethics qualifications and training. Their years of teaching experience in bioethics range from 1 to 25, with a mean and median of 8.83 years and 7 years, respectively. They participated in teaching (87.8%), assessments (66.2%), administration (62.2%), and designing courses (60.8%). In terms of curriculum design, the majority dedicated less than 5 hours to bioethics (60.8%), followed by 5-10 hours (24.3%) or more than 11 hours (14.9%). The courses are largely compulsory (70%) in both the pre-clinical and clinical years. Around half of the respondents (45%) find their institutional bioethics programme had fewer or no Eastern perspective/values in the undergraduate bioethics teaching, compared with the Western perspective/values and around fourth-fifth (78%) agreed with a need to include Eastern perspective/values in the programme. Despite the need, the majority (70%) find a lack of trained

faculty with knowledge of the eastern. They were neither prepared nor confident in teaching Eastern perspectives/ values (40%) and requested specific training before being tasked to lead (60%). Compared with Western counterparts, the majority agreed that there are fewer bioethics professionals with expertise in Eastern perspective (62%), although some disagreed that there is less literature information (25%). Overall, around 82% agreed to establish a collaboration to create a bioethics curriculum from an Eastern Perspective.

Conclusion

There is a need to have a more inclusive undergraduate Bioethics curriculum for the Asia Pacific region that would be practical for all stakeholders. To achieve this, we will need academics to collaborate and create a multicultural Bioethics curriculum and organise structured training programmes. In this way, we will have a sustainable pool of culturally competent Bioethics teachers.

PERCEPTIONS OF THE POSTGRADUATE STUDENTS ON THE USE OF PORTFOLIO IN THE PAEDIATRICS DEPARTMENT OF DEFENCE SERVICES MEDICAL ACADEMY

Hein T, Aung YP
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Background and Aims

A portfolio is a collection of student work that shows effort, progress, and accomplishment in one or more areas that facilitate professional development in medical education. A portfolio can assess clinical performance over time and constitutes one form of authentic assessment that looks at interpretation and the practical application of theory. The portfolio was introduced in 2019 as a formative assessment tool for postgraduate students at the Defence Services Medical Academy (DSMA). The Paediatric Department was the first at DSMA to implement the portfolio. The purpose of this study was to conduct a focus group discussion to explore postgraduate students' perspectives on using a portfolio in the paediatrics department of DSMA.

Methods

The basis of this study was to use a qualitative approach with a constructivist paradigm where meaning is socially constructed through participants' involvement in the phenomenon of portfolio learning, in which ontology is used to guide students to understand their learning and progress and epistemology to establish the acquisition of knowledge. Multiple realities of the participant's perceptions were observed using a constructivist methodology, and qualitative grounded theory research was conducted. This study was conducted with the ethical permission of the DSMA Ethical Review Board. Focus group discussion (FGD) was performed with six postgraduate students with considerable portfolio exposure in the paediatric ward. For participant selection in this study, purposive sampling was applied. The study was conducted from January to July 2022. The data analysis was performed manually and with the aid of MAXQDA software.

Results

The core category from this study under the grounded theory approach is "Portfolio is a student-centred learning method in which specific activities are structured and the students achieve deep learning". Most of the participants mentioned that a portfolio is a valuable and effective learning activity in the DSMA curriculum.

Conclusion

This research gained a comprehensive understanding of the phenomena under study since grounded theory showed that using a portfolio promotes student-centred learning, deep learning, and critical reflection. The impact of the study results on the paediatric PG students will be considered Portfolio as one of the formative assessment standards for future DSMA PG students.

MONDAY 22ND MAY 2023, 9.00AM

VIRTUAL ROOM 4, HYBRID CONFERENCE

SHORT COMMUNICATIONS 2

Using AI to Decipher and Teach the Anatomy of the Inguinal Region. Fact or Fiction?
Joshua Koh Zhi Yuan, Singapore

Scientific Knowledge Production and Student Priorities in University-Based Medical Science Laboratories in Northern Taiwan
Chun-Yi Tseng, Taiwan

A Method for Teaching "Safe Listening" Integrated with Early Clinical Exposure for Third-Year Medical Students
Pattira Rungruangsarn, Thailand

Reviewing the Remediation Process for Under Performing Post Graduate Year 1 Doctors
Lourdes Galang, Singapore

Impact of the COVID-19 Pandemic on Clinical-Year Medical Students in Phramongkutklao College of Medicine
Kanyakorn Siraprapapong, Thailand

Teamwork Performance among Vietnamese Nursing Students and Related Factors
Hoa Le Thi My, Vietnam

How Senior Students Influence the Professional Identity Formation of Novice Students: A Qualitative Study
Indah Puspasari Kiay Demak, Indonesia

Was There an Impact on the Work Quality of Newly Qualified Interns Who Had Online Studies During the COVID-19 Pandemic? - A Qualitative Study
Weeming Lau, Malaysia

Enhancing Teaching and Learning of Evidence Based Practice via Game-Based Learning
Rosy Tay, Singapore

USING AI TO DECIPHER AND TEACH THE ANATOMY OF THE INGUINAL REGION. FACT OR FICTION?

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Background and Aims

Anatomy is often taught through textbook diagrams in pre-clinical years of medical school. However, the views provided in surgery are very different from the diagrams in textbooks and students may find it challenging to read

these new views. In the context of laparoscopic inguinal hernia repair, the anatomy of the inguinal region can be daunting to understand for medical students. We hoped to create an Artificial Intelligence (AI) program that could annotate and label key anatomical structures within videos of laparoscopic inguinal hernia surgery. The AI would be able to produce labelled educational videos where students can learn the orientation of anatomy as seen in surgery. Such videos would previously require painstaking manual labelling by a surgical tutor, but with our proposed method, a higher quantity of videos could be produced by first allowing the AI to learn the anatomy of the inguinal region and then labelling any video of laparoscopic inguinal hernia surgery it is provided on its own. This would reduce the amount of manual labour required and increase the number of good quality educational videos that can be produced.

Watching the unlabelled videos, students can label the structures and put their answers into a web interface and compare their answers with the AI. If the amount of overlap between the student's annotations and the AI model's prediction is > 80%, it will be deemed satisfactory. In this manner, the student will get to learn from their mistakes and understand the orientation of key anatomical structures from a laparoscopic view. We decided to start with labelling blood vessels in videos of laparoscopic inguinal hernia surgery to assist machine learning in order to understand if this proposal was viable.

Methods

We first identified suitable video recordings of laparoscopic inguinal hernia surgery and selected certain frames to annotate within the recordings. Via the computer applications "Docker Desktop" and "Coco Annotator", we labelled the blood vessels on over 500 unique frames of laparoscopic inguinal hernia surgery to act as a dataset. We then trained a new machine learning model on the dataset and analysed the predictions from the model.

Results

The AI did not meet our expectations in being able to correctly identify blood vessels within videos of laparoscopic inguinal hernia repair. The average success rate was only between 10-20%.

Conclusion

A possible reason for why the AI was unable to correctly identify structures within the laparoscopic view of the inguinal region is that the region is extremely complex, and during surgery, the video frame would be mostly filled with blood, as well as tissues and blood vessels of similar colour and size, making it incredibly difficult for the AI to differentiate them all by image recognition alone. However, this idea can continue to be explored in other surgeries such as ophthalmic surgery, where the video frame will have less artefacts and each key anatomical structure would be distinct and better differentiated via image recognition. The AI might have higher success rates in other surgeries and prove useful to creating educational surgical videos.

SCIENTIFIC KNOWLEDGE PRODUCTION AND STUDENT PRIORITIES IN UNIVERSITY-BASED MEDICAL SCIENCE LABORATORIES IN NORTHERN TAIWAN

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Background and Aims

In this preliminary study, we wish to uncover the hidden mechanisms of scientific knowledge production in the laboratory. We aim to reveal students' motivations when considering research careers, qualities of an excellent researcher and whether gender issues in the laboratories contribute to the exodus of female researchers in medical sciences. This study was conducted in Chang Gung University (CGU), a leading university in the field of medicine in northern Taiwan. We hope our findings can provide unique perspectives that can be used to inform and encourage curriculum reforms to nurture the next generation of biomedical scientists in Asia-Pacific.

Methods

Between July to August 2021, close-ended questionnaires were distributed to fifty students based in medical sciences laboratories at CGU. Results were then analysed quantitatively.

Results

1. Participants profile: Students worked in the fields of immunology, microbiology, cancer, neuroscience, pharmacology, molecular biology, Chinese medicine, and natural products. 66% of participants were female and 40% had more than 5 years of experience conducting research in laboratories.
2. Scientific knowledge production: The laboratory is a unique ecosystem where people interact with the built environment. Instruments are positioned based on accessibility, and efficiency while chemicals are arranged predominantly based on alphabetical order. A hierarchical based cognitive apprenticeship is the dominant learning method in medical sciences, with 98% of participants choosing to approach seniors in the same lab compared to 50% who chose to approach fellow research students working in other labs in times of failed experiments. As a space for informal socialisation, the laboratory also facilitates professional identity formation for students.
3. Student Priorities: When asked to rank what attributes were most important for a researcher, physical stamina was deemed the least important (72%) and the most important as diligence and hard work (50%). All interviewed students indicated that their selection of research supervisors were based on their academic interests, while 64% of participants would also formulate their decisions according to the availability of research funding that a supervisor receives. Only 6% would consider the ratio of male and female graduate students as a criterion when selecting research supervisors. Participants deemed gender expectations as the least important factor when choosing to pursue education and training in medical research while interests, expected incomes and job opportunities were the more important factors.

Conclusion

This research provides insights into the complex sociological underpinnings in laboratories based in a medical university in Taiwan. The laboratory serves as a space to facilitate cognitive apprenticeship learning and promotes opportunities for formal professional exchange and non-formal socialisations. Laboratories are managed based on 'cycles of credit' to promote maximal scientific output. Despite the exodus of female scientists as one advances the academic career, our study on the perceptions of the students revealed that societal expectations and gender discrimination do not seem to play a part when students select their supervisors. Female students do not see the need for 'gender performance' by acting like the boys to be respected at work. Other than interests, factors such as job opportunities and income levels concern students the most.

A METHOD FOR TEACHING "SAFE LISTENING" INTEGRATED WITH EARLY CLINICAL EXPOSURE FOR THIRD-YEAR MEDICAL STUDENTS

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Background and Aims

Early clinical exposure narrows the gap between preclinical and clinical training. Increased use of personal listening devices (PLDs) for studying online during the COVID-19 pandemic increases the risk of noise-induced hearing loss. Awareness of the self-listening level is the first step to reducing this risk. Expected to be future doctors, medical students should be role models of having healthy behaviours. A method for teaching "safe listening" integrated with early clinical exposure was initiated.

Methods

A retrospective cross-sectional observational study was done on 3rd-year preclinical medical students at Chiang Mai University, Thailand. After pre-activity instruction, the activity was started in each classroom. The students were

paired. Hearing screenings were performed. Classroom noise level, preferred listening levels (PLLs) while using headphones connected with PLDs, satisfaction level, and comments for the activity were reported.

Results

Completed data of 171 students were analysed. The average PLL was 59.00 ± 7.38 dBA. The classroom noise level was 49.66 ± 8.45 dBA in quiet, and 77.51 ± 10.05 dBA during conversation and listening to PLDs via headphones. In quiet, 97.65% of students can hear finger rubs in both ears. The satisfaction score after the activity was 82.57 ± 13.14%. Extended activity duration and increased classroom size were preferable.

Conclusion

Practice on hearing tests and self-check of PLLs introduced exposure to clinical learning together with the awareness of safe listening. Even though a low level of PLLs was a favourable result, hearing health promotion and awareness of safe listening should be initiated for primary prevention.

REVIEWING THE REMEDIATION PROCESS FOR UNDER PERFORMING POST GRADUATE YEAR 1 DOCTORS

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Background and Aims

Remediating underperforming learners remains challenging in medical education. Fundamental components of remediation include identification of deficiencies, development of individualised learning plans, instructions for practice and reassessment of competence. There is a current paucity of remediation frameworks for faculty. This study aims to identify common areas of learner deficiencies and assess the quality of the current remediation process.

Methods

The standardised assessment and discussion forms of all underperforming PGY1s rotated to SGH DIM between January 2019 and October 2020 were collected and analysed retrospectively. The areas of deficiencies, action plans and the PGY1s' posting outcomes were collated. The quality of action plans was marked against a rubric comprising the essential components of an effective remediation plan.

Results

19 underperforming PGY1s were recruited, of which 15 (79%) passed the posting successfully. The most common deficiency identified was in patient care (90%). Other significant deficits are medical knowledge (74%) and professionalism (74%).

The median remediation quality score was 7 out of 12. In the majority of Action Plans, the deficit needing improvement was stated (100%), the underlying reason for the deficit was identified (94.7%), the Action Plan was stated (89.5%), the Action Plan was individualised (78.9%), the time frame for reassessment was stated (68.4%), and the role of faculty in remediation was defined (68.4%). Other quality components were documented less consistently.

Remediation methods frequently used by Clinical Supervisors were a guided reading program (73.7%) and supervised focus on clinical reasoning (73.7%).

Conclusion

Remediation of underperforming junior doctors is essential for upholding patient safety and care quality while maintaining an efficient and conducive work environment. Limitations in faculty training and resources contribute to variable and suboptimal remediation. We propose a structured and standardised framework to guide faculty and underperforming junior doctors in remediation.

IMPACT OF THE COVID-19 PANDEMIC ON CLINICAL-YEAR MEDICAL STUDENTS IN PHRAMONGKUTKLAO COLLEGE OF MEDICINE

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Background and Aims

Coronavirus disease (COVID-19) is a newly emerging disease that appeared in late 2019. The symptoms of COVID-19 vary from asymptomatic to severe respiratory disease or death. As COVID-19 did not have any specific treatment or prevention, the healthcare personnel must pay attention to the change in the treatment guideline. Hence, this study aims to explore the impact of the COVID-19 pandemic on clinical-year medical students at Phramongkutklao College of Medicine (PCM).

Methods

A cross-sectional study was conducted on fourth and fifth year PCM medical students with a 27-question questionnaire consisting of 12 for knowledge, 9 for attitudes, and 6 for behaviours. Then the descriptive statistic, Chi-square, Mann-Whitney U-test, and Kruskal-Wallis were used for data analysis at a significant level (α) = 0.05.

Results

The average score of students' knowledge of COVID-19 was 10.0 ± 2.2 out of 12. Students reported that they gained information about COVID-19 mostly from social media (71.4%) and their primary source of information was published articles (42.9%). Based on the study, students had problems with the indication for medication, especially if it is not the first line.

For the attitudes, most students were afraid to infect any relatives or people around them while working in the medical field (91.4%) and were more cautious with standard measures (88.6%). However, 55.7% of students were stressed that they chose the healthcare profession, and 58.6% of them reported that COVID-19 negatively affects their mental health. Additionally, only 60% of respondents said they had complete faith in the institution's countermeasures.

Regarding the behaviours, students showed their attention to countermeasures taken in their daily lives (Use of personal protective equipment (100.0%), frequent handwashing (98.6%), avoiding crowded places (90.0%), routine monitoring by ATK (88.6%), avoid physical contact (82.9%), taking a shower upon arrival home (81.4%)).

Furthermore, the study found that students' knowledge did not associate with COVID-19 infection ($p = 0.913$). However, gender, educational level, and source of information were associated ($p = 0.003, 0.009, 0.044$).

Conclusion

Although PCM students had satisfying knowledge, attitude, and behaviour of COVID-19, half of them got infected by COVID-19. The awareness of students' mental health should be increased. The institution must take the issue more seriously as they are a vulnerable group. The college's preventive measures might be reconsidered to ensure the safety of students. Also, the institution should consider providing information, especially the treatment guideline through social media as it was the most chosen source of information among students.

TEAMWORK PERFORMANCE AMONG VIETNAMESE NURSING STUDENTS AND RELATED FACTORS

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Background and Aims

Teamwork is critical in healthcare practice and the nursing profession to reduce medical errors, enhance patient safety and improve clinical performance. Teamwork skills training incorporated into nursing education curriculum helps to improve their professional practice in the future. This study aims to assess teamwork performance of nursing students and identify its related factors.

Methods

An online cross-sectional survey was conducted on 237 third year and fourth year nursing students at University of Medicine and Pharmacy at Ho Chi Minh city, Vietnam between 03 June 2021 and 23 June 2021 with a structured questionnaire implemented through Microsoft form. SATTS was used to measure the teamwork performance of participants. Data were analysed using SPSS software version 22.0 employing univariate, bivariate and multivariate techniques.

Results

The mean score on teamwork performance among nursing students was 5.4 (± 0.76). Findings from multiple linear regression model exposed two factors were statistically significantly related to the prediction of teamwork performance: (1) the perception of the role of effective teamwork (ß = 0.29, 95% CI 0.01 - 0.57, p = 0.043), (2) affordances and engagement of nursing student on the clinical learning environment (ß = 0.03, 95% CI 0.005 - 0.054, p = 0.017).

Conclusion

The teamwork performance among nursing students is quite effective. Training activities to improve students' perception about the role of teamwork and strategies enhancing the clinical practice environment are recommended.

HOW SENIOR STUDENTS INFLUENCE THE PROFESSIONAL IDENTITY FORMATION OF NOVICE STUDENTS: A QUALITATIVE STUDY

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Background and Aims

Students construct their professional identity from the very beginning since their first academic year. This construction happens in a socialisation process under the influence of several social forces. We believe that senior students may play an important role in this process. However, there is not much research exploring this relationship. Therefore, we sought to investigate how senior students influence the professional identity formation of novice students.

Methods

We conducted a cross-sectional qualitative study, adopting the inductive constructivist thematic analysis and the Rich Pictures methodology. We included ten participants (four juniors, three seniors, and three teachers) of the Faculty of Medicine, University of Tadulako. Each participant drew a rich picture regarding a relevant interaction between seniors and novices that impacted their professional development. We analysed the transcripts and the rich pictures iteratively.

Results

The preliminary results showed that the influence of seniors is more likely to occur within the activities which are organised by an independent student organisation. Within these activities, seniors instil a specific moral guide, valuing certain values such as politeness, solidarity, responsibility, and caring, aiming for the novices to become good students. However, those activities may represent an extra burden to already busy medical students. These activities may also become an oppressive force when novices are not completely aligned with the moral code of the student organisation. Most of the novices end up as members of the student organisation, but the ones who do not comply experience the medical course as outsiders. The outsiders cannot access certain academic and non-academic activities organised by the student organisation.

Conclusion

Seniors through the student organisation have a strong influence on the moral development of novices. They also have the power to decide how novices will engage with certain professional practices during the medical course.

WAS THERE AN IMPACT ON THE WORK QUALITY OF NEWLY QUALIFIED INTERNS WHO HAD ONLINE STUDIES DURING THE COVID-19 PANDEMIC? - A QUALITATIVE STUDY

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[1]Medicine & Health Sciences, Jeffrey Cheah School of Medicine & Health Sciences, [2]School of Pharmacy, Monash University Malaysia, Malaysia

Background and Aims

The 2020-2021 global COVID-19 pandemic led to a complete shutdown in all sectors except for those related to essential facilities and medical services. All students reverted to the online approach to continue with their studies. However, the medical program is largely hands-on in the clinical years and students are expected to master basic skills within an authentic health care facility.

Thus, all stakeholders were concerned on how the online mode affected clinical students who were in their final 2 years of the program.

This research aims to collect some information on the performance of these affected students who started their internship in 2021 and 2022.

Methods

This qualitative study was approved by Monash University Human Research Ethics Committee and funded by an educational grant from Monash University Malaysia. Convenient sampling with snow balling was used to recruit the participants. The online interview was conducted using a semi structured questionnaire. Ten doctors who were involved with the training of interns in five different public hospitals in Malaysia were interviewed in 2022. The hour-long interview was recorded, transcribed verbatim and thematically analysed using the NVivo software. The team of five researchers transcribed the first two interviews and reached a consensus for the codes.

Subsequent interviews were conducted with an aim for the saturation of themes.

Results

The participants (Male = 6, Female = 4) were from five different public hospitals. They held positions as medical officers, specialists and consultants. They were from different specialties (General Medicine [n = 4], General Surgery [n=2], Orthopaedic [n=1], Paediatrics [n=2] and Psychiatry [n=1]).

Their clinical experience ranged from 3 to 30 years, and all had worked with interns in 2022.

There were some challenges with skills competency, but they were not concerned as these can improve with practice over time. Most agree that the work quality of interns has been on the decline in the last 10 years.

There was no negative impact from the interns who had minimal or no hands-on training as students in 2020-2021. All agreed that there were no issues with the theoretical knowledge when compared with interns from the pre-pandemic era. They commented that medicine is a lifelong career, and the interns can improve with regular practice over time. However, there was variable work quality observed in the interns' professional behaviour, communication and handover skills and planning of their future career goals. The participants attributed this to the personality of the individual intern, rather than from the lack of hands-on activities during the pandemic.

Conclusion

This small qualitative study showed that there was no significant negative impact on the work quality of newly qualified interns whose studies were conducted wholly online during the COVID-19 pandemic.

The work quality had been on the decline even before the pandemic and was attributed to the individual's personality. Therefore, it would be appropriate to conduct a further study looking into this issue from the interns' perspectives and explore ways to improve the observed deficiencies.

ENHANCING TEACHING AND LEARNING OF EVIDENCE BASED PRACTICE VIA GAME-BASED LEARNING

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[1]Curtin Singapore, Singapore, [2]Library, [4]Centre of Learning Environment & Assessment Development, [5] Health & Social Sciences Singapore Institute of Technology, Singapore, [3]St Luke's Eldercare Ltd, Singapore

Background and Aims

The current undergraduate nursing programs have persisted in the traditional blended and didactic teaching of nursing research and Evidence Based Practice (EBP). Nursing graduates are expected to be actively engaged in evidence utilisation upon return to clinical practice. EBP game-based learning can augment the teaching-learning of EBP to promote active engagement and gameful experiences to the nursing students to prepare them as informed knowledge generators and future-ready graduates in clinical practice.

The aim of this study is to describe the development and evaluation of EBP game-based learning to evaluate student satisfaction, level of engagement, and overall achievement of the learning outcomes via the gamification of EBP teaching and learning.

Methods

A pilot study using a randomised controlled trial design was conducted on the Year 3 nursing students enrolled in the EBP module. 54 participants were randomised into the intervention group and control group. The intervention group attended the usual didactic teaching and completed the EBP game-based learning. The control group only attended the usual didactic teaching. Both groups completed the module and teaching survey, and the intervention group completed the game-based learning module learning outcomes survey.

Results

There were high overall satisfaction scores found for the module and teaching and learning of EBP for both groups [intervention group (86.4%-95.5%); control group (86.6%-93.3%)]. There was no significance difference (p=0.658) found in the satisfaction scores between the intervention and control groups. Both the intervention and control groups demonstrated positive perception on the teaching and learning of EBP with following five themes: 1) Systematic Approach to learning EBP; 2) Achieving Learning Outcomes; 3) Appreciating the guidance; and 4) Scaffolding to thesis; and 5) Seeking Clarity. The intervention group had a high level of engagement with the game-based learning (mean 3.6-4.3; standard deviation (0.6-0.8); $p<0.001$). Four themes emerged on the level of engagement: 1) Applied learning; 2) Clear understanding of the EBP concepts/process; 3) Level of engagement; and 4) Interactivity and Enhancing User Experience and Interface. There was no significance difference found on the continuous assessments scores ($p = 0.507$ and 0.461) between intervention and control groups.

Conclusion

EBP game-based learning can be leveraged to enhance active engagement and motivates a positive learning experience in evidence utilisation and preparing future work ready graduates.

MONDAY 22 MAY 2023, 10.45AM

VIRTUAL ROOM 3, HYBRID CONFERENCE

SHORT COMMUNICATIONS 3

Online Learning from Pandemic to Post COVID Era: Adaptations of Medical Undergraduates
Thilanka Seneviratne, Sri Lanka

Dissecting Feedback Utilisation through Exploring Sociocultural Influence in Undergraduate Clinical Students
Anyta Pinasthika, Indonesia

Comparison of the Effectiveness of Simultaneous Online/Offline Educations for Residents and Nurses in Intensive Care Units
Yun Jung Jung, Republic of Korea

A Novel Online Micro-Learning Tool: Perceptions of Just-A-Minute Optometry Clinical Pearls Among Eye Care Professionals
Ruby Kala Prakasam, India

Facilitators and Barriers to the Regular Use of Self-Reflection in Public Health Higher Education - A Mixed Methods Approach from the Students' and Teachers' Perspectives
Raymond Lim Boon Tar, Singapore

Engaging First-Year MBCHB Students in Learning Pre-Clinical Biomedical Science Using Simulation Teaching
Wong Wai-Tat, Hong Kong S.A.R.

Effectiveness of Cognitive Simulation in Emergency Medical Technician (EMT)'S Patient Assessment
Ibrahim Hamzah, Singapore

Video Simulation to Enhance Communication Skills Interactions for Medical Students
David Mathew, Singapore

Assessment of Phantom-Based Needling Training in Improving the Performance of Ultrasound Guided Transverse Abdominis Plane Block by Anaesthesia Residents - A Pre and Post-Intervention Study
Santhosh A, India

ONLINE LEARNING FROM PANDEMIC TO POST COVID-19 ERA: ADAPTATIONS OF MEDICAL UNDERGRADUATES

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Background and Aims

Medical undergraduates in the Faculty of Medicine, University of Peradeniya in their third, fourth and fifth years were invited to participate. Questionnaires were distributed via the google forms, after the initial 3-month period of online learning during pandemic (IPP) and at the end of the pandemic (PPP) separately. Descriptive statistical analysis was performed to compare the responses between the IPP and PPP.

Methods

Medical undergraduates in the Faculty of Medicine, University of Peradeniya in their third, fourth and fifth years were invited to participate. Questionnaires were distributed via the google forms, after the initial 3-month period of online learning during pandemic (IPP) and at the end of the pandemic (PPP) separately. Descriptive statistical analysis was performed to compare the responses between the IPP and PPP.

Results

448(IPP) and 270(PPP) responses were received separately. Regarding readiness for online learning, nearly 75% of students had enough knowledge and skills to manage software-related online learning (during both periods) 52.9% and 58.9% of students had a study plan during IPP and PPP respectively. Their expectation for learning performance has increased from 53.5% to 64.8% and time management from 29.2% to 41.9%. Distractions from other online activities have reduced (44.9% to 32.5%).

Students' subject matter understanding when learning via zoom sessions (73.2%, 73.7%) and recorded lectures (85.3%, 88.5%) were similar during both IPP and PPP. 62.5%(IPP) and 55.9%(PPP)students mentioned that it is easier to interact with the lecturer during live-sessions. 55.6%(IPP) and 56.3%(PPP) mentioned that they have the motivation to ask questions during zoom sessions while still nearly one third remains undecided. More students think recorded lectures are useful than the lectures delivered at lecture halls (51.1% to 62.2%). Whereas 58.7%(IPP) and 53.3%(PPP) mentioned that lack of group discussions is a major drawback. Significantly, students' readiness to do the end-semester-exams have been increased (from 13.8% to 43%). Regarding recorded lectures as a permanent change in curriculum 40.4% (IPP) and 50% (PPP) expressed their willingness while zoom SGD discussions as a permanent change was agreed upon with 43.15%(IPP) to 47.4%(PPP). 69.3% of the students preferred recorded lectures over live zoom sessions (30.7%).

They mention that the recorded lectures are beneficial as they can revisit lecture recordings whenever needed.

Frequent internet disturbances have increased (8.5%(IPP) to 18.5%(PPP)). 20.7%(IPP) and 28.5% (PPP) mentioned that they are unable to stay connected till the end of the session. Also, more students face electricity failures (28.1%, 44.0%). But, they have managed to reduce background noises at home (40.6%, 27.5%). Breaks in between teaching sessions (20.3%). Measures to reduce distractions due to internet surfing (21.3%) Time management (30.4%) and physical activity (15.2%) were mentioned as improvements needed.

Conclusion

Students have experienced online teaching and learning methods during and after the pandemic with several challenges. They have managed to solve several personal challenges but electricity failure and frequent internet disturbances remained the same. Recorded lectures were appreciated as a beneficial effect of online teaching. They have adapted to take final semester examinations with online learning. But only half of the students liked to have online lectures as a permanent change in the curriculum.

DISSECTING FEEDBACK UTILISATION THROUGH EXPLORING SOCIOCULTURAL INFLUENCE IN UNDERGRADUATE CLINICAL STUDENTS

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Background and Aims

Effective feedback has become even more critical in clinical education, as feedback comes in many forms, contents, providers, and opportunities to improve students' performance. This could only be achieved by considering various sociocultural factors and acknowledging students' active role in utilising feedback. Multiple studies have shown how students perceive feedback in the Indonesian context, but there were no reports on how clinical students use feedback. This study explores how students use feedback in undergraduate clinical settings in Indonesia.

Methods

This is a qualitative phenomenology study involving medical students on their clinical clerkships, clinical teachers, and clinical rotation coordinators at the Faculty of Medicine, Universitas Indonesia. Respondents were selected through a maximum variation sampling approach. A total of seven focus groups and four in-depth interviews were conducted, and data saturation was reached. A study on clinical rotation curriculum documents was conducted as triangulation. The thematic analysis approach was used in data analysis.

Results

Students use feedback by identifying, receiving, and acting on feedback. Performance was used to identify feedback, as students identify feedback as inputs after a performance. Receiving feedback involves a process of emotional reaction, the reflection of feedback content, and the reflection of performance, also influenced by student and teacher factors. Feedback might be accepted, rejected, remembered, or forgotten. Accepted feedback could be acted upon by students. The user feedback process was influenced by sociocultural factors, such as modified learning opportunities driven by the pandemic, the learning environment (including the relationship between students and supervisors, culture, clinical rotation, faculty regulations, and curriculum), supervision, and evaluation of the learning process. Feedback-seeking behaviour was found to be limited due to cultural factors.

Conclusion

This study provides insights into how students use feedback in a clinical setting influenced by sociocultural factors, which must be considered in feedback provision and the development of feedback culture in the faculty to optimise feedback for improving students' performance.

COMPARISON OF THE EFFECTIVENESS OF SIMULTANEOUS ONLINE/OFFLINE EDUCATIONS FOR RESIDENTS AND NURSES IN INTENSIVE CARE UNITS

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Background and Aims

During the COVID-19 pandemic, existing offline education was often replaced by online education while avoiding face-to-face. Concerns have also been raised that online education will be less effective than offline education. Therefore, this study was conducted to find out whether there is a difference in effectiveness of online education compared to offline education.

Methods

In October 2020, intensive care education (subject: sepsis management, pain/agitation management, airway management, basic and advanced modes of mechanical ventilation) were conducted for a total of 102 residents and nurses in intensive care units. Online education and offline education were conducted at the same time, and each person chose the method of education they wanted. Before and after each education, a questionnaire was prepared, and 34 people online and 30 people offline who answered the questionnaire more than three times in a row out of a total of five times were analysed. Before and after education, changes in perception of online education, changes in confidence, and changes in knowledge improvement were compared for each group.

Results

It was found that people who positively recognised online education chose online education, and as the number of online educations increased, positive perceptions increased. Those who chose offline education had little change in their perception of online education. Both online and offline showed a tendency to improve confidence as the number of education increased, and there was no significant difference according to the online/offline education method. Both online and offline showed a tendency to improve knowledge according to the subject of the education

as the number of education increased, and there was no significant difference according to the online/offline education method.

Conclusion

As online education was activated due to the COVID-19 pandemic, concerns have also been raised that it would be less effective than offline education. However, as a result of conducting online/offline simultaneous education for residents and nurses in intensive care units, online education also showed a positive effect as much as offline education in terms of confidence and knowledge improvement, and there was no significant difference according to the education method. Therefore, online education can be actively used depending on the future situation.

A NOVEL ONLINE MICRO-LEARNING TOOL: PERCEPTIONS OF JUST-A-MINUTE OPTOMETRY CLINICAL PEARLS AMONG EYE CARE PROFESSIONALS

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Background and Aims

The complex formats of teaching or learning methods often discourage learners from actively executing the learnings. Hence, we realize a need to develop a micro-learning tool that breaks down complex information into simple and easy-to-grasp formats, helps in avoiding mental fatigue and promotes knowledge retention1(-3). The present study aimed at assessing the usefulness of a micro-learning tool, the Just-A-Minute (JAM) Optometry Clinical pearls among Optometry and Ophthalmology groups.

Methods

An online survey was conducted among the recipients of JAM-Optometry pearls (L V Prasad Eye Institute (LVPEI) email database) comprising practicing optometry and ophthalmology, and trainee groups. These clinical pearls were the clinical experiences shared by practicing ophthalmologists and optometrists at LVPEI. Each clinical pearl was carrying a small piece of clinical information in a specific easy-to-grasp format. The generation and validation of these pearls involved robust planning and collaboration between the in-house optometry faculty and the education and communications department of LVPEI. The variables assessed include simplicity of its content, grasping speed, knowledge gain, retention of knowledge, and practice applicability. The participants' educational qualifications, type of practice, and years of practice were the grouping variables.

Results

Among 161 total participants, 69% were ophthalmologists and 29% were optometrists. The majority were from private practice (43%) and institutional practices (32%). Most of the participants felt that the JAM format was easy (99%) to grasp the content within a minute time (88%). They felt JAM-Optometry pearls have 'always' enhanced clinical knowledge (72%), and application into clinical practice (55%), and it helped in the retention of knowledge (84%) gained from JAM pearls. The Chi-square test for the responses on practice applicability showed a significant difference among educational qualifications ($p<0.001$) and among practice groups ($p<0.03$), and the ophthalmologists and private practice groups scored high.

Conclusion

The JAM-Optometry clinical pearl was found to be an easy-to-grasp micro-learning tool beneficial in both ophthalmology and optometry practice. Its unique Just-A-Minute format promotes the retention of clinical knowledge and application into practice. JAM-clinical pearls as a tele-education tool support continuing optometry education across the globe.

FACILITATORS AND BARRIERS TO THE REGULAR USE OF SELF-REFLECTION IN PUBLIC HEALTH HIGHER EDUCATION - A MIXED METHODS APPROACH FROM THE STUDENTS' AND TEACHERS' PERSPECTIVES

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Background and Aims

Despite the wide implementation of self-reflection in higher education, the body of literature has predominantly focused on the clinical health sciences rather than public health. The objective of this study was to (i) evaluate the correlates as well as to explore the motivating factors and barriers of engaging in regular self-reflection among students, and (ii) assess the perceptions as well as to explore the facilitators and barriers to the regular use of self-reflection as a pedagogical tool by teachers in public health higher education.

Methods

We used the mixed methods approach (explanatory sequential design), consisting of a cross-sectional survey (quantitative phase) followed by in-depth interviews (qualitative phase) to collect data from the students' and teachers' perspectives.

Results

For the students, quantitative findings revealed being a regular reflector was positively associated with being more motivated to learn when one applied self-reflection (adjusted prevalence ratio, aPR 1.60, 95% CI 1.17-2.20), the perception of being more prepared for a public health career in the future (aPR 1.28, 95% CI 1.02-1.60), as well as being given enough opportunities to carry out self-reflection in the public health modules (aPR 1.24, 95% CI 1.05-1.45). Qualitative findings revealed most students started their self-reflection mainly due to extrinsic factors such as teacher influence, indicating that they are key agents in promoting self-reflection. Students expressed that it would be important to cultivate intrinsic motivation to sustain their practice of self-reflection along the learning journey such as for the development of career-related professional skills. Environmental influences were also important to promote continual reflection among students such as the availability of ample opportunities. Prominent barriers to address included imbalanced power relationships between teacher and student as well as the perception that self-reflection was too cumbersome and time consuming.

For the teachers, quantitative findings revealed there was a significantly greater proportion of regular users who knew how to incorporate self-reflection elements in their modules than their counterparts. Qualitative findings revealed that a recurring reason for using self-reflection in teaching was to better understand students, given the online classroom environment during COVID-19. Teachers expressed the need for continued presence of facilitators to sustain the regular use of reflection such as institutional support and perceived positive impacts on students by teachers. Several barriers on the regular use of reflection in teaching such as the lack of peer sharing as well as prioritisation of other contents to teach were highlighted.

Conclusion

At the student level, peer ambassadors or champions could be appointed to modify common negative perceptions on performing self-reflection. Similarly, at the teacher level, faculty learning communities could be set up for like-minded educators to advocate on the importance of reflection and to serve as a valuable resource for peers to learn new pedagogical skills from, and to share meaningful instructional practice in a safe space. Moreover, at the institutional level, universities play a significant role by providing teachers and students the necessary space, time, and guidance to engage in critical reflection as well as the appropriate institutional mechanisms to voice concerns and enact change.

ENGAGING FIRST-YEAR MBCHB STUDENTS IN LEARNING PRE-CLINICAL BIOMEDICAL SCIENCE USING SIMULATION TEACHING

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Background and Aims

Year one students struggle to memorise the hard facts in physiology and anatomy and recognise the relevance to clinical medicine. To narrow the gap between the teaching of clinical medicine and basic biomedical science, we produced a simulation teaching using actual equipment and high-fidelity simulators to illustrate the crucial anatomical and physiological concepts.

Methods

Those important anatomical and physiological concepts included cardiac output and blood pressure in the cardiovascular system, upper airway anatomy and breathing mechanics in the respiratory system, and the difference in core and shell body temperature. Some of them were illustrated using pathophysiological findings generated from the simulators and the effects on the deranged physiology after the therapeutic intervention delivered by real clinical equipment. Others were demonstrated by using student volunteers' own physiological parameters displayed through the correct monitoring equipment.

Results

Two hundred and thirty-nine students participated in the small group interactive demonstrations and simulation teaching sessions. Two hundred and sixteen (91.3%) and two hundred and nineteen students (91.6%) rated the simulation teaching and the demonstration as "much better than expected" and "better than expected" in terms of knowledge gain, respectively, in a 5-point Likert scale. Two hundred and thirty-one students (96.7%) agreed that the two-hour new simulation based interactive teaching deepened their interest in biomedical science.

Conclusion

Preclinical medical students liked the teaching connecting basic biomedical science and clinical medicine in the format of small group interactive simulation teaching. The connection teaching deepened students' interest in the physiology and anatomy in their preclinical curriculum.

EFFECTIVENESS OF COGNITIVE SIMULATION IN EMERGENCY MEDICAL TECHNICIAN (EMT)'S PATIENT ASSESSMENT

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Background and Aims

The SAF Medical Training Institute (SMTI) currently trains medical officers, paramedics, and non-medical personnel on a range of lifesaving core skills, centred around our medic protocols. The short duration of the Emergency Medical Technician (EMT) Course meant that there was a need for accelerated learning of our medical vocationalists, and a need to train competent and confident paramedics who can execute their medical skills. The unique composition of our learners with varying educational profiles meant that there was a need for a revision tool that allows learners to engage in self-paced and self-directed learning.

The introduction of cognitive simulation (named Project Isabel) therefore serves as a mechanism to facilitate the preparation process that aids learners in translating the theoretical lessons to their hands-on practice. Project Isabel (Interactive Scenario Application Based E-Learning) is targeted at rehearsing procedures without the usage of a practical scenario or wider simulation suite, and shortens learning curve when it is coupled with simulation efforts subsequently. This exposes our learners to decision making skills in various scenarios which can be accessed prior to, during and after their planned lesson time. Isolating their decision-making skill from the practical lessons would allow learners to hone their analytical thinking skills, through mentally running through the procedural skills with such a cognitive scenario.

The aim of this study is therefore, to examine the role of Cognitive Simulation in influencing EMT's patient assessment, in a military setting.

Methods

The study would be a mixed method between-subject study, with comparison between two batches of participants in two consecutive runs of EMT Course in SMTI. Learners in the first group would have undergone lessons without the addition of cognitive simulation scenarios provided. Learners in the second group would have access to these scenarios for the entire duration of the course. Theory and Practical Test Results would be analysed, to evaluate the effectiveness of cognitive simulation in knowledge retention and practice of patient assessment skill sets. A one-way analysis of variance (ANOVA) will be used to analyse differences in the means of practical tests scores between the groups for normally distributed data. For data which does not follow a normal distribution, the kruskal wallis test will be used to analyse the differences in the means between the groups. A qualitative questionnaire on learner's perceived confidence levels with the usage of cognitive simulation application would also be administered to learners. A deductive analysis will be conducted.

Results

The results are currently being analysed.

Conclusion

The results of this study are expected to shed light on the effectiveness of cognitive simulation in a military EMT setting. Understanding the effectiveness of the cognitive simulation technique on our EMT course would facilitate future explorations into using such for our medical officers, or for military institutions in other contexts. Medical institutions could also explore the feasibility of using such techniques as an assessment tool.

VIDEO SIMULATION TO ENHANCE COMMUNICATION SKILLS INTERACTIONS FOR MEDICAL STUDENTS

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Background and Aims

Communication skills in medicine comprise a wide skill set including information gathering, building relationships and demonstrating empathy. Good communication enhances patient empowerment, therefore increasing healthy behaviours amongst patients in the acute and longer term settings. Medical students at the Lee Kong Chian (LKC) School of Medicine are typically introduced to basic communication skills in the first two years of study and patient-doctor communication in clinical encounters from their third year of medical studies. This is performed in the form of an interaction with a simulated patient under timed conditions during a Clinical Communications workshop. During the debrief, students are asked to reflect on the learning points and the faculty provides general pointers for effective communication.

As the third-year students have just embarked on their clinical training, the intensity of emotions during such simulated encounters are often down-played. This allows the students to learn in a controlled environment, yet they may not appreciate the intensity of such communication episodes in reality.

Hence, we embarked on a new initiative to show a demonstration video of how a doctor handled a clinical encounter where the situation was similar to the scenario for the students, but the intensity of the emotion was greater. The video was screened during the debrief session at the end of the workshop in November 2022 during which the faculty encouraged the students to reflect on the encounter.

Methods

The students undertook the communication skills stations with simulated patients during the Clinical Communications workshop in November 2022. After the session, they provided feedback on the workshop as part of the usual feedback process on learning activities on campus. Quantitative and qualitative feedback on the utility of the learning materials, including the demonstration video shown during the debrief was collated and reviewed.

Results

Feedback was obtained from the LKC Year 3 student batch via a routine survey conducted at the end of the module. Within the survey, they were asked to rate whether the video was helpful to their learning. 94.5% (155/164) of students answered this question, with a mean grading of 4.35/5 (where 0 was not helpful and 5 being very helpful). Significant themes which emerged in the qualitative feedback from the students' perspective were greater awareness of reality, appreciation of the expectations during clinical communications and improved insight of their learning needs, resulting in suggestions for contextualised frameworks for challenging encounters and more demonstration videos. In addition to learning from the positive demonstration on the video, students highlighted that they found the guided discussion on the communication mistakes made in the video to be helpful.

Conclusion

The inclusion of the demonstration video with guided discussion during the debrief for the Clinical Communications teaching session was helpful to the learning of the students. It also provided useful insight for both the students and the faculty on the learning needs and spurred the development of new learning materials to enhance the learning of clinical communications, especially for challenging encounters.

ASSESSMENT OF PHANTOM-BASED NEEDLING TRAINING IN IMPROVING THE PERFORMANCE OF ULTRASOUND-GUIDED TRANSVERSE ABDOMINIS PLANE BLOCK BY ANAESTHESIA RESIDENTS - A PRE AND POST-INTERVENTION STUDY

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Background and Aims

The skill of a resident in the field of Anaesthesiology is vital in performing any regional technique and needs proper coordination of various modalities like the ease of use of USG, needle handling, and sonoanatomy acquisition. Implementation of the training of residents in a phantom model paves way for overcoming these shortcomings. This study was conducted to assess the performance of the residents and the effect of training on a phantom model.

Methods

This was a pre and post-interventional study. 15 residents who had completed 6 months in Anaesthesiology and were new to USG-guided TAP blocks were recruited. Lectures were given during pre-training and the residents were asked to perform on the surgical patients. After training in the phantom model for a period of 1 week, the residents were asked to perform the block on patients. The total duration of performance of the block, needle attempts, visibility, performance, and confidence scores of the residents were measured pre and post-training.

Results

The number of needle attempts, the needle visibility scores, the performance scores, and the confidence scores had shown a significant improvement after training compared to pre-training ($p<0.001$).

Conclusion

Training in the phantom model had helped the residents in performing better in USG-guided TAP blocks than learning through conventional training. This will further help the residents in gaining confidence in performing the UGRA technique, thereby reducing the block failure rates and ultimately better compliance for the patients.

MONDAY 22ND MAY 2023, 10.45AM

VIRTUAL ROOM 4, HYBRID CONFERENCE

SHORT COMMUNICATIONS 4

STUDENT PARTNERSHIP IN MEDICAL CURRICULUM DESIGN: EVALUATING STUDENT PERCEPTIONS REGARDING RELEVANCE AND PREFERRED MODE OF DELIVERY OF THE FOUNDATIONAL SCIENCES

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Background and Aims

Medical education broadly consists of the foundational sciences such as physiology, anatomy and microbiology and the clinical sciences such as internal medicine, surgery and general practice. The foundational sciences form

a solid base on which clinical reasoning, principles of management and research constructs are built; however, trying to find the optimal formula for how and when to teach the foundational sciences within a medical program remains elusive. Our current 5-year curriculum teaches foundational sciences alongside core clinical skills using a systems-based approach in the Early Years (Year 1 and 2) while the clinical years do not formally integrate foundational sciences within the designated curriculum though they are discussed opportunistically in a range of teaching sessions. Acknowledging our students as key stakeholders and ideally partners in the medical education process, we sought to understand their perceptions of the relevance of the foundational sciences to the practice of medicine, as well as their opinions on the most effective means to incorporate foundational sciences within their program.

Methods

Data was collected from students from Year 2 through to recent graduates using an anonymous online questionnaire.

Results

112 responses were obtained with fairly even distribution across year levels. 96.4% agreed that basic sciences are key to success in the clinical years, 99.1% agreed they help understand disease processes, 94.6% agreed they contribute to improved clinical reasoning, 91.1% agreed they help improve treatment and management decisions and 90% agreed that a competent physician must have a strong foundation in the basic sciences; 74% disagreed that basic sciences were not relevant to their future practice. Of interest, we sought student opinion of the depth to which they would prefer to learn the basic sciences - the majority (56.3%) selected intermediate depth, with 37.5% opting for the bare basics and 6.3% preferring to go very in depth. With regard to the overall mode of integrating basic and clinical sciences, the majority (47.3%) preferred a partially integrated curriculum with basic and clinical sciences integrated all through the 5-year program but with an emphasis on basic sciences in the first and 2 years and an emphasis on clinical in the later years; 25% preferred to retain the current curriculum and 24.1% preferred equal emphasis on basic and clinical sciences over all 5 years. With reference to effectiveness of various educators, 92.8% of students felt practicing clinicians were effective, while 52.9% felt that biomedical scientists were effective in teaching the basic science content.

Conclusion

Overall, our students appear to appreciate the value of basic sciences to their future careers and would prefer a high degree of integration of the basic and clinical sciences throughout their medical school. While student opinion alone cannot be the sole factor in designing a medical curriculum, seeking to understand student preferences and perceptions can provide the foundation to a successful partnership between faculty and students to create a maximally effective and well received teaching program.

ASSESSMENT METHODS INTEGRATING BASIC SCIENCE AND CLINICAL SCIENCE FOR ACTIVE LEARNING OF OPHTHALMOLOGY TRAINEES: A NOVEL APPROACH

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Background and Aims

An assessment method is defined as the philosophical or pedagogical approach to assessing. Assessment tools are used for different assessment methods and are more specific. An important step in the evaluation process of the trainee is to simultaneously optimise assessment for learning and assessment for decision making about learner progress. We propose a holistic approach for programmatic assessment in action, which includes novel methods for integrating active learning of basic science and clinical science by targeting the different levels of Miller's pyramid.

Methods

A retrospective study was conducted with 148 ophthalmology trainees from a tertiary academic eye institute, from Dec 2020 to June 2021. The study included 62 male and 86 female students, with a mean age of 27 years. The

assessment is divided into direct and indirect methods. In direct methods, the assessment is based on a single topic for 2 groups with 2 trainees in each group. All the trainees received the topics 1 week prior to the assessment process. The trainees were instructed to analyse & submit the basic science and clinical science of each topic with 5 assessment tools. Each group submitted basic sciences in the form of clinical pearls, clinical features of the condition in the form of attention to retention (A2R) videos, investigations and treatment along with recent advances in the topic in the form of U & I videos, summarising and organising the facts and ideas in the form of multiple-choice questions (MCQ's), mind map. The submissions were shared between the groups randomly for peer evaluation. Each group gave feedback on each other's work based on the criteria of each tool provided by the instructor. In an indirect method, subject analysis based on the trainee curriculum was done by the faculty.

Results

The performances of the experimental users were significantly better and the trend was analogous in both peer evaluation and faculty evaluation without significant difference was identified between the groups. The trainees were more accurate in discriminating satisfactory from unsatisfactory performances (80% versus 65% correct) and yielded more correctly identified unsatisfactory performances (95% versus 45% correct), but were less accurate in identifying satisfactory performances (70% versus 90% correct). The amount of feedback from peers and faculty were good in quality and comparable. Advantages cited for this assessment include being engaging while incentivising better performance in clinics.

Conclusion

In summary, all activities in the assessment programme conducted during a given period of the training programme should present meaningful and traceable data points of learner performance which are maximally connected to the learning programme and reinforce desirable learning behaviours.

EFFECTIVENESS OF AVATAR-BASED LEARNING IN DEVELOPING SOCIO EMOTIONAL COMPETENCIES AMONG HEALTHCARE STUDENTS: A SYSTEMATIC REVIEW

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Background and Aims

Lessons transited to virtual platforms at a much faster pace due to COVID-19. Concerns regarding the dearth of social interactions and socioemotional competence reduction hence arose. There are limited reviews on the topic of social and emotional learning for healthcare students. This review aims to synthesise evidence to evaluate the impact of avatar-based learning on the socioemotional competence among healthcare students.

Methods

Experimental studies on avatar-based learning interventions that examined social emotional competencies based on Collaborative for Academic, Social, and Emotional Learning were included. Published studies were identified through searching of ten electronic databases. Duplicates were removed and articles were filtered using the inclusion and exclusion criteria. Reference lists and relevant reviews were screened for additional studies. Only studies conducted in English from 2000 to 2021 were included. Two reviewers screened, appraised and extracted data independently. The Cochrane data-collection form was pilot-tested and used to extract relevant data. The Mixed Method Appraisal Tool was used to assess methodological quality of included studies. Narrative synthesis of the relevant studies was conducted.

Results

Avatar-based simulations have increased attitudinal social emotional competencies outcomes in healthcare students in these four areas: Empathy and compassion, interprofessional teamwork, patient communication and emotional management. This learning has conferred valuable foundational socioemotional competencies knowledge for novice students.

Conclusion

Avatar-based learning was found to be effective in developing social emotional competencies based on self-reported findings. More rigorous studies with validated tools are required to provide more evidence, particularly in allied health disciplines. Such learning may further enhance students' resilience to workplace adversities and readiness for practice, especially during pandemics.

PROFESSIONALISM EDUCATION FOR MEDICAL STUDENTS THROUGH SYNCHRONOUS DISTANCE LEARNING WITH MOODLE-BASED ESCAPE ROOM

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Background and Aims

Due to the COVID-19 pandemic, many institutions have used online-based education. Some education systems use asynchronous tools such as Learning Management System (LMS), others use synchronous tools such as web conference systems, especially for teaching skills and attitudes, including professionalism. Since both have advantages and disadvantages, a combination of them would be important for effective education.

Methods

The authors made an online-based Escape Room (ER) with Moodle LMS and used it for teaching team communication; that is, students solve asynchronous ER contents with synchronous discussion on Zoom. The objective of the study is to clarify the possibility of educational ER for teaching professionalism through distance learning. There were three stages in ER: (1) exploring the virtual room and solving two riddles, (2) solving another four puzzles related to CPR, (3) gathering all the clues and escaping from the room. The authors tried to include interactive puzzles with H5P that are related to skills. H5P is a free and open source tool for producing interactive contents, such as 360 virtual tour and quizzes with images and videos. Students' achievement results from Moodle log and their comments from the questionnaires were used for program evaluation.

Results

There were 29 groups, and each had three to four students. While five groups were able to solve the riddle completely, one group could not even reach stage two. The difficulty of the riddles seemed to be appropriate from Moodle log data and questionnaires. Some students turned off the camera and solved the riddles individually; they shared only the answers. Others turned on the camera and shared the screen; they solved the puzzles and riddles with live discussions. Some groups could not complete the ER. The communication style of students might affect the achievement level. Although it is hard to teach skills and attitude only with asynchronous distance learning, it would be possible to provide interactive content; for example, by having the students choose the correct tempo for chest compressions by sound. Of course, it will be more effective to use face-to-face simulations to check psychomotor skills. It may be possible to make the hybrid style ER in the post pandemic world, such as using both simulation-based tasks and LMS based riddles. Although the design, development and implementation of the ER will be complicated, the hybrid style ER might be useful to make ER more attractive and to collect a variety of data to assess students.

Conclusion

In the future, it will be possible to provide an integrated learning experience with a more appropriate difficulty level by accumulating Moodle log data and student recognition data. ER would be useful for engaging student communication and discussion even in the online synchronous class.

INTRODUCING HALO - THE DIGITAL (R)EVOLUTION IN MEDICAL TEACHING

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Background and Aims

Histology is a branch of anatomy that focuses on understanding the microanatomy of cells, tissues, and organs. Learning histology has been an integral part of medical education for centuries. Traditionally, histology is taught with the help of microscopic observation of fixed tissues in a laboratory setting. Nevertheless, the limited availability of resources and time has significantly impacted the student who wishes to revisit the slides. Hence, a student-friendly approach is needed to make learning enjoyable. Here, we developed a more advanced digital tool to study histology anywhere without needing a sophisticated laboratory setting.

Methods

We created a dedicated webpage, integrating the histology images and relevant teaching materials under the banner of NUS Anatomy, the NUS - HALO (Human Anatomy Learning resOurce). The webpage carries state-of-the-art high-resolution histology images that look real. The images are arranged systematically for easy reference. Further, we incorporated relevant teaching materials associated with the slides to enhance learning. A detailed description accompanying each slide to highlight important histological landmarks and clinical relevance helps the students orient and understand the histological slide.

Results

The user-friendliness of this webpage is well-received by the students and the entire medical community.

Conclusion

In conclusion, this e-resource will reshape traditional microscope-based teaching with a modern digitised histology learning platform. Furthermore, these digital platforms of histology learning can be extended to other medical subjects.

IMMUNISATION DURING THE COVID-19 PANDEMIC OF MEDICAL STUDENTS; BOOSTED THE BODY BOOSTED HEART

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Background and Aims

The emergence of COVID-19 disease is a global crisis that is a pandemic and creates tremendous impacts beyond health. The medical students are the first prioritised due to high-risk exposure and could be burnout with emotional exhaustion during this period. This study focuses on the impact of the pandemic on student well-being from vaccine immunisation and mental health of burnout which is related to wellness. This study aimed to evaluate the impact of student well-being during the COVID-19 pandemic in the COVID-19 vaccination program and the mental health of burnout in medical students.

Methods

An observational study observed the COVID-19 vaccination program and mental health using the questionnaire on burnout of the medical students in the 2021 academic year.

Results

A total of 130 medical students in the 4th - 6th years were included in the study. Almost all of the medical students, which was 99.2% received the COVID-19 vaccination. 50% of the medical students received a two-dose regimen of Sinvovac COVID-19 vaccination, and 95% of the sixth-year medical students received this regimen. 27% of the medical students received a mixing regimen of the first dose of AstraZeneca followed by the Pfizer vaccine. The rest 20% and 3% received a two-dose regimen of AstraZeneca and Pfizer vaccines, respectively. There was only one 6th-year medical student who rejected the vaccination program due to concern about the adverse events. During the pandemic academic year, there were 9 medical students who received vaccination infected with SARS-CoV- 2 viruses that caused mild or asymptomatic COVID-19 disease. From mental health using the questionnaire of burnout. 47% of the medical students reported suffering from burnout with emotional exhaustion. Females were significantly associated with burnout of emotional exhaustion. The student support team provided assistance of care in mental health and wellness to medical students who reported burnout problems.

Conclusion

Student well-being is important for medical students both physically and emotional. COVID-19 vaccination is warranted for immunisation to decrease disease severity. Burnout during the COVID-19 pandemic impacts emotional exhaustion which needs mental health support for wellness which guides how to implement the wellness initiation for ameliorating burnout.

Take home message:

Students' well-being is important. In the pandemic of COVID-19, body and heart immunisation is warranted.

ENGAGING NUTRITION STUDENTS WITH ONLINE-BASED LEARNING AND FLIPPED CLASSROOM METHODS: LESSON LEARNED FROM INDONESIA

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Background and Aims

21st-century requires the agility of higher education to embrace technology in learning activities. The reluctance to adopt technology in Indonesian higher education, including nutrition programs, is profound until the COVID-19 pandemic in 2020 struck and cause a fast and unintended shift from conventional to online-based learning. This change, however, needs many more innovation and development efforts to make sure the quality of learning processes is the same or even higher in comparison to conventional classes. Thus, in 2022, we implement flipped classroom approach in elaboration with online-based learning for nutrition students at a university in Indonesia. This article provides a lesson learned from the activities monitoring survey.

Methods

A remote flipped classroom method was implemented for the Principles of Nutrition Education course for the third-semester nutrition students in a university. The programs consisted of three activities, 1) self-learning through a learning management system (LMS), 2) a synchronous online meeting through a video conference application, and 3) students reflecting on their learning experience. Students' opinions on the online learning facilities, methods, and learning attitudes were monitored after the mid-term test. A four scales survey (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree) was done remotely with 15 questions for online facilities satisfaction, 13 questions for general implementation, 8 questions for online learning, and 10 questions for flipped classroom methods.

Results

A total of 77 (81%) students completed the questionnaires. From that number, 68.8% and 28.57% of students agreed and strongly agreed that the features of LMS (discussion forums, learning materials, gamification, quiz) helped them to study and interact. The implementation of online learning and flipped classrooms could be accepted by the students which were proven by 100% of them agreeing and strongly agreeing to the implementation of learning processes and the quality of materials provided. In addition, a total of 88.2% of students were satisfied with the flipped design, 85% agree and strongly agree with the positive situation built from the flipped classroom, and 97.4% said the methods encourage them to self-directed learning. Contrastingly, 20% of students perceived online methods had low interaction and 28.8% said that it was ineffective to nurture their learning motivation. While 66% of students believe that online could provide the same experiences as conventional methods, their preference to have in-class meetings was noted in a subtle amount.

Conclusion

The mid-term monitoring showed positive results of the quality and features provided in the LMS, in support of online learning. While most students agree and strongly agree on all key points to give them positive influences on learning experiences, it should be taken into account concern to have in-class interaction.

FACULTY TIED UP? PEER TEACHING IS AN EFFECTIVE ALTERNATIVE TO FACULTY TEACHING IN SUTURING SKILLS

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Background and Aims

Traditionally, suturing skills are taught by expert faculty. However, teaching procedural skills is time-consuming as it requires close supervision and small class sizes. Therefore, peer teaching could be a useful alternative. This study aims to assess how effective peer teaching is in teaching suturing skills, compared to faculty teaching.

Methods

A randomised controlled study was conducted on third-year medical students participating in a suturing workshop conducted by the Emergency Medicine Clinical Specialty Interest Group (EMed CSIG). Students were assigned by simple randomisation to either a faculty-taught or a peer-taught group.

Suturing assessments were carried out before and after the teaching session. For the assessment, each medical student was given a random identification number and videoed from the shoulder down as they demonstrated three standardised suture types. Two emergency physicians - blinded to the teaching group and time point of the assessment - assessed the suturing techniques via the validated Global Rating Scale, which comprises seven components which are scored between one to five for a maximum of 35 points. The individual component scores from both assessors were then compared, and if the scores differed by more than one point, the video was flagged up for reassessment by both assessors. After the reassessment, the mean score of both assessors was taken as the final rating.

Additionally, after the teaching session, medical students were asked to complete a questionnaire regarding their perception of peer teaching.

Results

Thirty-four third-year medical students were recruited and randomised in the study. A pre-workshop suturing test showed that the faculty-taught group achieved a mean score of 10.5 and the peer-taught group a mean of 9.6. The Wilcox test showed no statistically significant difference in the median between the two groups (p=0.72).

The post-test suturing test revealed a mean score of 24.5 for the faculty-taught group and 25.8 for the peer-taught group, with a mean difference of 1.2. The scores are normally distributed. A paired T-Test showed no statistically significant difference between the two groups (p=0.27).

A comparison of the scores pre/post suturing session showed an increase of 12.2 in the faculty-taught group and 14.5 in the peer-taught group, with a mean difference of 2.3. A paired sample T-test showed no statistically significant difference in improvement between the two groups (p=0.28).

Thematic analysis of the qualitative responses described several perceived positives of peer teaching, including positive interpersonal interactions, an appropriate level of difficulty, the ability of peer teachers to empathise with difficulties, more personalised teaching and good pacing. However, concerns were also raised, including concerns about the competency and experience of peer teachers.

Conclusion

This study shows that peer teaching can be an effective alternative to faculty teaching in imparting suturing skills. Being taught by peers or faculty members results in similar outcomes after the teaching session. Peer teaching was also generally well received by the students.

IMPLEMENTATION OF THE FINAL YEAR SURGICAL OSCE WITH NO PATIENT IN THE COVID-19 PANDEMIC UTILISING THE CONSOLIDATED FRAMEWORK FOR IMPLEMENTATION RESEARCH

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Background and Aims

The Objective Structured Clinical Examination (OSCE) has been widely used as an assessment tool for students' clinical competency. Commonly, OSCEs involve candidates rotating a circuit of stations involving real patients to simulate actual clinical scenarios. However, this traditional format was deemed inappropriate due to the fifth wave of the COVID-19 pandemic locally.

An OSCE for the graduation examination with no patient was conducted to allow medical students to graduate without delay. The Consolidated Framework for Implementation Research (CFIR) was utilised to construct a reliable exam.

Methods

CFIR is a pragmatic framework that includes five major domains - intervention characteristics, outer setting, inner setting, characteristics of individuals, and process. This provided a reliable construct for an up-to-stand OSCE without patients, from the design, and execution, to review.

The OSCE in our department was traditionally divided into four stations as a circuit. Vigorous resources have been spent on developing different models for the surgical stations to determine common conditions with typical findings that can be replicated with manikins. At the same time, actors were used for the orthopaedic stations. Models developed/utilised include a model with a parotid mass, a skin mass model, a breast examination model, and an abdominal examination model.

Trial

We underwent a trial for the stations involving the whole team of CET and three junior surgical trainees the week before the exam. Feedback was gathered to optimise the setup.

Results

The exam was conducted on 26th April 2022 smoothly without any major delay or issue. No major equipment failure occurred. This year no nurses were required for the examination due to the lack of actual patients. Among the 233 students who attended the exam, 219 (94.0%) passed on their first attempt and four (1.7%) passed in their pull-up session. Ten (4.3%) failed this examination and must join the remedial class and exam one month later. No complaint was received from the students or examiners, and no participants have contracted COVID-19 due to participation in this examination. A short questionnaire was distributed to our examiners based on the Dundee Ready Education Environment Measure (DREEM). There were 14 valid responses, four from orthopaedics and ten from surgery. Their graduation year ranged from 1982 to 2014, with almost all of them (13/14) having previous final year OSCE experience. All of them agreed that the exam was student-centred, and thirteen (92.9%) agreed that the assessment was fair. On the other hand, one examiner (7.1%) thought that the format was inappropriate, and another four remained neutral (28.5%). No examiner prefers the OSCE without patients.

Conclusion

With the Consolidated Framework for Implementation Research, a simulated-based OSCE is feasible without delay. With the success of this simulated-based OSCE and other benefits of using simulations in exams, it is likely simulations will be increasingly crucial for assessment.

MONDAY 22ND MAY 2023, 1.30PM

VIRTUAL ROOM 3, HYBRID CONFERENCE

SHORT COMMUNICATIONS 5

ENHANCING PROCEDURAL COMPETENCY OF JUNIOR DOCTORS THROUGH THE APPLICATION OF COGNITIVE APPRENTICESHIP

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Background and Aims

First introduced by Dr W.S Halsted, the three-tiered model of “See One, Do One, Teach One” remains a popular method to teach procedural skills. Though widely adopted over a century since its inception, many have pondered about the validity of this approach today and sought to augment this approach with modifications and technology. Cognitive apprenticeship elucidates the thought processes of both mentor and mentee via key strategies of modelling, coaching, scaffolding, articulation, reflection and exploration. We aimed to incorporate concepts of cognitive apprenticeship into the traditional approach to enhance procedural competency of junior doctors in performing the lumbar puncture (LP).

Methods

Junior doctors undergo a four-month paediatric rotation in their first post-graduate year. Before the implementation of the new training model, they undergo a 30-minute training session conducted by a senior doctor who is available to conduct the training. They observe an attempt by a more senior doctor (medical officer and above), and perform the procedure supervised and thereafter independently. The content taught during training, level of supervision accorded and the amount of feedback for the junior doctor can be highly variable.

With our initiative, junior doctors undergo an hour-long session, comprising a step-by-step walkthrough, a demonstration by an identified expert trainer, a hands-on session with neonatal, child and adult mannequins, and just-in-time feedback on their techniques. They are provided with reference cards which summarise the important details and provide a quick refresher before an attempt. They are rostered to observe at least two procedures with the expert trainer and to perform the procedure with feedback and supervision by the expert trainer. The level of support is gradually weaned off over time. They are subsequently encouraged to perform independent attempts with self-reflection and to engage the expert trainer to discuss and refine their techniques.

We evaluated the success rates of the first LP attempt performed independently by junior doctors and administered pre- and post-training questionnaires which assessed their self-perceived knowledge of the procedure and confidence in performing the procedure.

Results

17 junior doctors participated in the training initiative over 8 months. Participants reported marked improvement in their confidence to perform the procedure independently and to troubleshoot an unsuccessful attempt. Before implementation of the new training model, there was no apparent trend in first-pass success rates with huge fluctuations between 33% to 75%. This demonstrated that experience without deliberate and structured training does not correlate well with first-pass success rates. Post-implementation, we observed a consistent increase over the 4-month rotation in first-pass success rates, achieving near the end of their rotations a peak of 75% to 85%. Key challenges the team faced were the availability of an expert trainer and protected training time.

Conclusion

Our work demonstrated that a training model incorporating the strategies of cognitive apprenticeship is useful in the acquisition of procedural skills for junior doctors and can potentially yield better training and patient outcomes. It will be interesting to extend this training model to other clinical procedures and to assess its utility in a different target population such as residents and medical students.

HOW DOES VIDEO OF CLINICAL PRACTICE INFLUENCE LEARNING CONVERSATIONS IN POSTGRADUATE MEDICAL EDUCATION?

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Background and Aims

Studies of learning conversations in medical education have revealed shortcomings. They can be supervisor-driven, monologic, and may be unproductive owing to poor recall of events. Sometimes educators can provide intentionally vague feedback to avoid upsetting learners. To address these potential limitations, some educators have begun to use video of clinical practice for educational purposes. However, we could find no critical synthesis of such studies to inform our understanding about the influence of video on learning conversations. Therefore, we aimed to answer the question “How does video of clinical practice influence learning conversations in post-graduate medical education?”

Methods

MEDLINE, Embase, PsycINFO and ERIC databases were searched for articles from 1 Jan 2010 to 1 Jan 2022. Major inclusion criteria were: postgraduate medical learners and video of actual clinical practice that was used in a learning conversation. Qualitative data was then analysed using Braun and Clarke's thematic analysis.

Results

Nineteen articles were included in the study. Self-report data (mainly survey-based) revealed that learners can view video-assisted coaching both positively and negatively. The educational design of the video-based encounter was often poorly described. Our thematic analysis of the qualitative data resulted in four themes. Video was seen to influence learning conversations in the following ways: captures performance data that can be co-analysed; enables the learning conversation to take place in a different environment; changes the teaching approaches of educators; and may promote learner agency and voice.

Conclusion

This review suggests that video may positively influence learning conversations. The educational design associated with video-assisted coaching, particularly relating to how the footage is used before and during the conversation may be a key to how it impacts the tenor of the learning conversation. This link between design and effects, along with how video influences learning conversations requires further investigation.

THE CRITICAL ANALYSIS OF PERCEPTION & EFFECTIVENESS OF ONLINE ANATOMY LAB EXERCISE (LABEX) ON UNDERGRADUATE STUDENTS OF BPKIHS DURING COVID-19 PANDEMIC

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Background and Aims

Online Lab exercises (LABEX) were arranged as an alternative for physical LABEX during COVID-19 pandemic at BPKIHS. The present study was done to evaluate the students' perception and its effectiveness regarding the impact of pandemic in anatomy LABEX.

Methods

Non-interventional descriptive study was performed using semi-structured questionnaires to first year medical and dental undergraduate students of BPKIHS after IRC clearance. Basic questions regarding the students' means of study, their perception on Anatomy education during pandemic and reflective writing were collected. The effectiveness of LABEX was verified by MCQs (pre-test and post-test). Student's paired tests for analysis of effectiveness of LABEX and Thematic analysis for reflective writing were performed. The categorical variables were tested for association using Pearson's chi-square test and they were presented as frequencies and percentages. A $p<0.05$ was considered as statistically significant.

Results

The mean age was calculated as 20.84. The result of our study showed that there was no difference in perception of online anatomy LABEX by gender, stream or nationality. Except for questions regarding "inadequate interaction with teachers" had differences in perception gender wise. We found that, use of content video uploading prior to LABEX increases the effectiveness of online LABEX ($p<0.001$). The thematic analysis showed "accessibility of recorded class" as major strength and "less efficient of online LABEX" as major weakness of online LABEX.

Conclusion

The physical form of anatomy education is the best way of learning but online LABEX can be used as an alternative during a pandemic despite its numerous weaknesses.

IMPLEMENTING A MODIFIED TEAM-BASED LEARNING ACTIVITY IN GROSS ANATOMY PRACTICAL VIA ONLINE

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Background and Aims

The lockdown due to the COVID-19 pandemic interrupted the routine practice of face to face teaching and learning sessions. Therefore, teachers had to find alternative modes without compromising the programme's standards. The delivery of lectures, tutorials and group discussions was transformed to online mode quickly. However, practical sessions like gross anatomy dissections used to be done in the dissection room using human material/specimens were severely hampered. Therefore, research on alternative teaching and learning methods for conducting practical sessions are essential and highly valuable. In the current study, we explored how a gross anatomy practical session could be delivered online when students were away from the university.

Methods

A practical session on the osteology of the head and neck was conducted using principles of Team-Based Learning (TBL) and features of Peer Learning (PL) using both asynchronous and synchronous sessions via the faculty learning management system (LMS). However, some of the features of TBL and PL were modified to suit the distant online mode. Initially, students were instructed about the session through clear guidelines and a short video on how to learn osteology and Intended Learning Outcomes (ILOs) of the topic via LMS. Asynchronous sessions included individual learning and group work in producing an eight-minute video based on two clinical scenarios posted to the LMS three days after the introductory session. The synchronised sessions started by giving clear evaluation criteria and group allocation instructions. This session included video presentations followed by a Q and A session by students based on the topic and the video and evaluation of students' questions by two other groups. At the end of all video presentations, each group was requested to present the marks giving reasons. All group works were done using the existing eight dissection groups. Teachers' feedback was given as the last item of the synchronised session. The following day, students' feedback on the activity was collected using an online survey.

Results

Survey results among 66 students indicated that this activity helped to achieve learning outcomes (84.45%), stimulated self-learning skills (69.69%), analytical skills (84.45%) and 80.3% of students scored six or more than six on the scale of 1 to 10 for the overall satisfaction of the activity. In addition, 71.2% of students recommended similar activities in future. Other comments of students included that they learned new skills like creating videos, thinking skills and how to answer clinical-oriented questions. The main obstacle was interrupting the session due to poor signalling strengths. The commonest problem identified by the teachers was the mispronunciation of some medical terms students hadn't come across before.

Conclusion

This activity stimulated individual learning, peer learning, creative thinking and teamwork. Clear guidelines and structured ILOs are important for the success of TBL. Evaluating others' presentations during Q and A sessions and evaluating evaluators stimulated students' analysing skills. Our study shares valuable experience in conducting practical sessions on online mode using concepts of TBL and PL with modifications suitable to the distant mode.

COLLABORATIVE DESIGN THINKING IN MEDICAL EDUCATION - IMPLEMENTATION AND EVALUATIONS

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Background and Aims

Design thinking in instructional and curriculum design can enhance creativity in teaching and learning by taking an empathetic student centric approach, whilst balancing the teaching and learning possibilities with constraints of the department, faculty and institutions. The aim of the project was to conduct design thinking workshops to enhance collaborative design thinking across faculties; of medical educators with non-medical educators.

Methods

All teaching staff at the Chinese University of Hong Kong (CUHK) were invited by CLEAR by email to attend a face to face interactive collaborative design thinking workshop. Workshops of up to 3 hours duration were conducted from August 2021 to January 2022 using padlet and face to face modality. The workshops had an average of 15 participants arranged in 3-4 groups. The model of empathy, define, ideate, prototype and testing were used with group design activities and discussions. Groups conducted a series of design tasks and collaborated on a group members' 'real' educational problems from empathy to prototyping with an evaluation plan. A post workshop survey using quantitative and semi structured questions for evaluation of the workshops. Participant engagement and discussion content was noted on padlet and in facilitators field notes.

Results

63 colleagues across 8 different faculties included Professors (8%), Associate Professors (40%), Lecturers (41%) and supporting staff (11%). 27% were medical educators (ME) and across 12 different disciplines including Chinese medicine and nursing. Overall, 90% of the participants agreed that the workshop was relevant to their teaching needs. In qualitative analysis, 65% of medical educators valued group discussion across faculties in problem solving, brainstorming, innovating and approaching teaching challenges together. Overall, more than 77% showed interest in joining a design thinking community of practice (76% medical educators (ME) vs. 78% non-ME) and 90% wanted to receive updates in design thinking (88% ME vs.91% non-ME). Overall, about 71% further requested to conduct design thinking workshops specific to their departments' needs practice (82% ME vs. 67% non-ME) and 94% would recommend the workshop to colleagues (94% ME vs. 93% non-ME). Problems and ideas highlighted by ME and non-ME participants were similar and included student engagement, use of online and hybrid teaching to breadth. Prototype themes included tailoring of learning outcomes, enhancement of hidden curriculum, enhancement of experiential and use of case studies. The participants expressed a need for a more detailed course to help with their individual course design/redesign.

Conclusion

Design thinking can be useful in medical education for development of medical curriculum and interdisciplinary collaborative learning. There is a demand for design thinking both within medical education departments and across HE faculties. Medical educators valued discussion with other faculties and also felt the need to introduce design thinking to their specific departments. The experience gained from conducting these courses can be used to develop a longer tailored course to meet teachers' needs.

DEVELOPING EDUCATIONAL CASES FOR FACULTY DEVELOPMENT TO FOSTER ANTHROPOLOGICAL ASPECTS IN HEALTHCARE PROFESSIONALS: AN INITIAL SURVEY

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Background and Aims

Recognising patients' social psychological aspects becomes challenging in an ever-changing world. The 2016 revision of the medical core curriculum in Japan emphasised the importance of medical anthropology. Thus, medical students will learn and hopefully be able to care for each patient from the cultural anthropology and sociology viewpoints. These viewpoints, however, must be shared and supported in the clinical setting by faculty with little education in such a curriculum. Therefore, faculty development (FD) is necessary. Studying actual cases of non-Japanese visitor or resident patients who regularly visit clinics with various illnesses can serve as valuable sources for developing FD. By the end of 2021, the largest number of non-Japanese residents were Chinese, followed by Vietnamese, Koreans, Filipinos, and Brazilians.

Methods

A questionnaire was sent to 180 institutions including designated hospitals for the 2021 Olympics and health institutions in the top 20 prefectures where Chinese, Vietnamese, Korean, Filipino, and Brazilian residents each predominantly resided. The purpose was to qualitatively analyse the data to identify cultural issues faced by healthcare professionals and to explore valuable aspects to be used in developing FD cases. Cultural issues apparent and hidden in the cases, along with issues that might have emerged from the healthcare professionals' (and patients') beliefs, biases, and assumptions were examined. Follow-up questions or visits were scheduled to further clarify the issues.

Results

Responses were received from 29 institutions (74 cases). Cases included patients from Europe, Africa, and other areas. Language problems were apparent and managed with difficulty by interpreters (human and application) or by healthcare professionals, spending a great deal of time communicating, with occasional frustration. Differences in the concept of time were noted with some patients not coming at or missing the appointed time. Healthcare professionals urged patients to keep their appointments, but some did not care, making healthcare professionals feel frustrated or even disrespected in one case. Some healthcare professionals called the patients by phone. Regarding medication-related cases, a Hindu asked about beef products in the medicine, and a Muslim mentioned about fasting during Ramadan, both of which are apparently related to their culture. A patient who decided to stop taking medication was regarded as a problem, although a Japanese patient may do the same. Some patients visiting without the mandatory appointment were regarded as a problem. In one case, a patient who was not seen by a clinician felt discriminated against. This same situation may have occurred with a Japanese patient, but some assumptions and biases on the part of the patient or the healthcare professional may have existed in this case.

Conclusion

Understanding anthropological aspects is important for healthcare professionals in caring for culturally diverse patients whether of their own nationality or from abroad. Studies of actual cases in health institutions can reveal patients' cultural needs as well as the cultural beliefs, assumptions, and biases of both patients and healthcare professionals. Faculty Development using cases developed from the study can be valuable in fostering healthcare professionals capable of caring for their patients with cultural humility.

SLEEP DISORDERS SYMPTOM IN CLINICAL MEDICAL STUDENTS: THE RESULT OF EXCESSIVE WORKING HOURS

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Background and Aims

The teaching of clinical medical students combines practical learning, working with interdisciplinary professions and caring for patients at OPD / IPD / ward, which has an important goal to provide medical students perform practical procedures effectively. However, excessive working hours can affect the sleep and quality of life of medical students. Therefore, this study aims to survey the sleep disorders symptom in clinical medical students and to study factors related to sleep disorders symptom in medical students.

Methods

This study was descriptive research. The 165 clinical medical students in the network of Faculty of Medicine, Naresuan University (Tak, Phrae, Pichit), academic year 2022 were enrolled. The sleep disorders symptom checklist-17 (SDS-CL-17) questionnaire was used. Data were analysed by descriptive statistics; number, percentage and mean including inferential statistics such as Chi-square test and Independent T-test.

Results

A total of 136 respondents (82.42%), there were 12 medical students had the risk of insomnia (8.83%), 10 medical students had risk to obstructive sleep apnea (7.36%) and 5 medical students had risk to circadian rhythm disorder (3.68%). Factors related to insomnia including; BMI, working hours/day and working hours/week($p<0.05$). Factors related to obstructive sleep apnea including: sex, BMI, working hours/week and sleep hours/day ($p<0.05$). In addition, working hours/days of the risk groups and the non-risk groups for insomnia and obstructive sleep apnea were statistically differences ($p<0.05$).

Conclusion

This study demonstrates variables that were related to sleep disorders symptoms. Especially, the working hours/week had related to both insomnia and obstructive sleep apnea. These incidents can contribute to decline in educational performance of medical students. Along with, may be the working risk for patients and interdisciplinary profession. However, medical schools should set appropriate working hours for medical students. As well as, other variables that may relate to sleep disorders symptoms in medical students should be further studied.

TEAM COACHING TO BUILD TRUST AND PSYCHOLOGICAL SAFETY FOR TEAM FORMATION

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Background and Aims

Healthcare teams need to be honest, open and decisive with new teammates in the midst of a fast-paced, stressful environment. This doesn't happen in teams where trust and psychological safety are low. As part of a team-based learning pedagogy, we train students how to accelerate the formation of team trust through intentional activities that foster connection, vulnerability and psychological safety between members. From a place of enhanced trust, teams can communicate candidly and more comfortably address the conflict that is integral to critical thinking, managing uncertainty and creativity.

Methods

We conduct team coaching with first year teams to facilitate more efficient movement trough Tuckman's stages of team development. We run two exercises at critical time points to create the conditions for sharing vulnerably and enhancing belonging in teams. In the Artefact Share, students bring along an object with special meaning that inspires them. Students tell the story of their object as teammates listen for and share back the values and meaning making behind the sharing. The sharer reflects on the experience of being seen for her values. Through this personal narrative sharing, students better understand the historical experiences, beliefs and values that drive decision making and behaviours. With Signature Strengths, students complete an online strengths assessment and share their top strengths, how they apply it to their individual and team work, and how working from a strength reinforces their effectiveness, satisfaction and wellbeing. Teammates listen and reflect back how the strength comes through and creates a positive impact for the listener. The sharer considers what they have heard and communicates how hearing this further motivates them to continue to use their top strength more often and in new ways.

Results

Students are amazed at the instant change in the energy of the team after the Artefact Share and Signature Strengths exercises. Students feel connected to each other and can articulate how they feel more comfortable asking for help, sharing their stress and managing high self-expectations. Students often disclose aspects of their life they wanted to share but didn't, unsure whether teammates were interested or if they would be accepted. Students feel relief and a deeper sense of belonging, and understand each other's drivers and motivators. Students frequently report their preconception that trust must grow from organic interactions. They are pleasantly surprised that these crafted experiences build psychological safety. They leave the coaching more likely to engage in purposeful conversations to further deepen and reinforce this trust.

Conclusion

These two intentional practices that build psychological safety and trust in the teams forge immediate connection. Talking about values and strengths allows individuals to appreciate their own assets which enhances internal motivation and bolsters resilience. This offsets the brain's negativity bias, improves team resilience and facilitates the intimidating work of managing team conflict effectively. Students learn they can facilitate connection in future teams by inquiring about strengths and listening carefully to the response.

MULTI-YEAR COURSE EVALUATION ON STUDENT SATISFACTION WITH ONLINE LEARNING DURING COVID-19 PANDEMIC

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Background and Aims

The COVID-19 pandemic changes the many facets of human life including the education system. The Indonesian government, to anticipate the spread of the infection, changed the face-to-face learning system to distance learning. The new policy motivates educators to develop innovations in course delivery, learning resources, assessment methods, as well as information technology systems. These are necessary to assist in ensuring the smooth transition period, optimal learning experiences and attainment of learning outcomes. Our study aimed at understanding the changes that took place at a micro level (course level) and student perception regarding the transition and course delivery.

Methods

A multi-year evaluation was conducted for the Nutrition Project Implementation course from 2020 to 2021. Data were collected from 219 undergraduate students in a large nutrition school in Indonesia. The course itself is an advanced course designed for the senior grade students gearing for their final year and study completion. The course combines all cognitive, affective, and psychomotor aspects of learning. In a normal situation, students taking this course would need to participate in various activities including classical lecture, tutorial, field placement, and

student-led presentation. Data were collected through an online survey using a combination of four scales Likert survey instruments (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree) and open-ended questions. The same survey method and sets of questions were employed during the 3-year data collection period.

Results

All students taking the course between 2020 and 2022 completed the questionnaires. Overall, students regarded that despite the changes due to COVID-19 pandemic, the course delivery were able to meet the expected learning outcomes and cultivate their capability of managing a community nutrition project. On a scale of maximum 4.0 students expressed their steady satisfaction rate throughout the study period for the aspects of clarity of course objectives, instructors' effectiveness as well as assignments and assessment methods (average score of 3.42, 3.45, and 3.34 respectively). In terms of changes related to the distance learning policy, students expressed increased satisfaction throughout the year in these following aspects; classroom management, the use of learning aids, and study load management (average score of 3.25, 3.26, and 3.11 respectively). However, students identified several aspects of learning that needed to be improved such as course structure, interaction between students and instructor, communicating changes on study plan, and timely feedback. We have monitored the interim data every year and make corrective actions accordingly, thus, the rating increments are likely to reflect these changes.

Conclusion

The implementation of distance learning is quite effective and students generally regarded the learning experiences as satisfying. The difference in rating throughout the years provided measures on the effectiveness of our responses to the crisis. Further studies are required to develop a better emergency plan and response to change in education sectors.

MONDAY 22ND MAY 2023, 1.30PM

VIRTUAL ROOM 4, HYBRID CONFERENCE

SHORT COMMUNICATIONS 6

EARLY AND PERSISTENT COMPLETION OF UNITED STATES MEDICAL LICENSING EXAMINATION (USMLE) STEP 1 QUESTIONS PREDICTS EXAM PERFORMANCE

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Background and Aims

USMLE Step exams were established to provide a uniform evaluation system for registration in the United States. In partnership with the University of Queensland, MD students from the Ochsner Health System (New Orleans, LA) complete their first two years (phase 1) in Australia, before finishing phase 2 in the United States of America. UQ Ochsner MD students must attempt Step 1 prior to starting phase 2. A dedicated USMLE preparation course was established to support student's preparation for Step 1.

Aim: To evaluate students' performance in USMLE Step 1 in relation to completion of USMLE Step 1 style questions.

Methods

National Board of Medical Examiners (NBME) exams were used to identify readiness to take Step 1. Completion of USMLE Step 1 style questions were monitored through UWorld over a six-month period in the lead up to sitting USMLE Step 1.

Results

Formative and summative NBME exams significantly predicted USMLE Step 1 results. The number of Step 1 style practice questions completed prior to USMLE Step 1 significantly correlated with USMLE Step 1 results. Early and persistent engagement with practice questions is correlated with success, with numbers of questions answered correctly correlating even more strongly with exam performance.

Conclusion

Accurate assessment of a student's readiness to sit Step 1 is vital to ensure they pass this crucial exam. Early, consistent, and correct completion of Step 1 style questions are important factors associated with success in Step 1.

IMPACT OF COMMUNITY-BASED MEDICAL EDUCATION ON GRADUATE PERFORMANCE: A QUALITATIVE STUDY USING A CRITICAL INCIDENT TECHNIQUE

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Background and Aims

Community-Based Medical Education (CBE) is an educational strategy which provides opportunities to train students within a real-life environment. It allows students to learn about health issues within community settings and increases bonds between colleges and the communities they serve. Despite the large body of literature on CBE, few studies address the impact of learning within community settings on graduates' subsequent life and career paths. This study aims to explore the impact of community-based education on graduates' work performance and career paths in later life.

Methods

A self-administered critical incident questionnaire was given to a group of graduates from a community-based medical school. The target population was the graduates of the Faculty of Medicine in the University of Gezira who graduated between the years 1984-2021. Participants responded using audio recording or in writing and reported on 'critical incidents' they had experienced. Data was analysed using thematic data analysis to develop codes, categories and themes from the critical incident technique.

Results

Twenty-three critical incidents were reported from a total of 91 responses yielded from the recorded and written data. Most of the incidents take place in the Interdisciplinary Field Training, Research and Rural Development Programme, as well as in Rural Residency, Primary Health Care Centre Practice, and Family Medicine. From the reporting of the critical incidents, five themes were identified concerning the benefit of community-based education in learning at undergraduate level: leadership, care of patients, professionalism, personal development and belonging. Similarly, five themes demonstrating the impact of community-based education after graduation were also identified including improving patient care, improving health system practice, curriculum development, self-improvement skills, and family medicine practice.

Conclusion

Community-based education was shown to have a positive impact on students learning at undergraduate and postgraduate level. Community-based education is also associated with the development of essential skills required by medical doctors after graduation.

NOVEL TRAINING MODEL WITH ARTIFICIAL INTELLIGENCE-BASED FEEDBACK FOR ULTRASOUND-GUIDED PROCEDURES

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Background and Aims

Ultrasound-guided needle insertion is the gold standard of care for a variety of interventions including biopsies, vascular access and nerve blocks. Safe and accurate needle placement using ultrasound requires high levels of spatial reasoning and hand-eye coordination, which must be developed through intensive practice. Existing tools for training include handheld devices like Butterfly IQ or commercial phantoms like the Blue Phantom Regional Anaesthesia model, both of which fail to assess user technique, or virtual reality models which do not simulate haptic feedback. This project aims to 1) develop an effective, low-cost phantom model for unlimited practice, and 2) adopt deep learning techniques for real-time guidance and feedback on trainee performance.

Methods

Various phantom models were produced using household items and easily available chemicals. Over 30 mediums were tested, including combinations of agar, gelatin, konnyaku, metamucil, septanol and Smelleze. The final medium is a combination of agar and septanol, and common materials like metal wiring and rubber balloons are used to closely simulate neurovascular structures on ultrasound. Our deep learning algorithm is based on Detectron2, a platform using convolutional neural networks for automated image detection. The program was trained on over 500 labelled images of needle entry in different agar-based models, then tested on an independent set of over 2000 images.

Results

We have created an agar-based ultrasound phantom model that is high fidelity, inexpensive, replicable, and durable; each phantom costs merely $4 to produce and lasts over 2 months with refrigeration. The model's embedded targets enable practice for vascular access and peripheral nerve blockade, two common procedures in anaesthesia. Our deep learning algorithm was programmed for 1) labelling needle tip and needle body, 2) identification of neurovascular structures, 3) assessing the duration of needle tip visualisation and 4) computing of the taken for the needle to penetrate target structures. We attained a sensitivity and specificity exceeding 95% for the detection of needle tip, needle body, vessels and nerve bundles.

Model validation is currently being conducted by surveying amateur and expert user performance. Ultimately, our objective is to launch an app that increases accessibility to our training tool and allows for progress monitoring over time. To our knowledge, comparable and commercially available platforms that enable real-time feedback for ultrasound-guided procedures on physical phantom models do not exist.

Conclusion

We propose an agar-based phantom model for accessible, affordable and realistic simulations of ultrasound-guided procedures. Our deep learning model not only provides real-time visual feedback on the structures visualised, but also assesses user speed and accuracy, allowing for guided improvement over time.

IMPACT OF SIMULATION-BASED MANUAL SMALL INCISION CATARACT SURGERY (MSICS) TRAINING ON THE VISUAL AND SURGICAL OUTCOMES AMONGST OPHTHALMOLOGY TRAINEES IN A DEVELOPING COUNTRY

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Background and Aims

During the COVID-19 pandemic, cataract surgical training was impacted. A need was felt to look beyond the traditional wet lab training. Simulator-based training helped not only in the continuation of the training process but also improved it. This study compares two groups of trainees. Group 1 performed the manual small incision cataract surgery (MSICS) after wet-lab training whereas the other group received simulator training in addition to the wet-lab training. The simulator-based training was found to be useful in reducing the overall complication rate.

To assess the visual outcomes and complication rates of MSICS performed by Ophthalmology trainees receiving simulator training in addition to the traditional wet lab training.

Methods

This case control-based study included two sets of trainees, Group 1 (n=340) included trainees who underwent traditional wet lab training on animal eyes for 1- week whereas Group 2 (n= 676) included those who additionally received 1- week of simulator training.

Results

The mean number of surgeries performed by the trainees before joining the institute was 316 (± 632.2) and 186 (± 234.4) in group 1 and group 2 respectively (p=0.25). After joining the institute group1 did 340 and Group 2 did 676 MSICS. Posterior capsular rupture with vitreous loss was reported in 7.3% of group 1 and 6.5% of group 2 (p=0.6). Zonular dialysis was reported more commonly in group 1 (3.5%) than in group 2 (1.4%) (p=0.002). Wound-related complications were higher in group 1(12.06%) than in group 2 (1.33%) (p=0.00001). However, there was no difference in the final visual outcomes with both groups reporting 20/40 Best corrected visual acuity (BCVA) or better vision in approximately 90% of eyes (p=0.569).

Conclusion

Through this study, we came to an understanding that by providing simulator training, intraoperative complication rates have not only reduced but also strengthened the existing MSICS training.

NON-FORMAL MEDICAL EDUCATION GUIDE FOR MEDICAL STUDENTS

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Background and Aims

The ideal medical education produces qualified healthcare professionals who can provide socially accountable healthcare. The curricula, teaching and learning strategies, and assessment instruments used in medical schools are frequently insufficient for helping students build their competencies. To bridge this knowledge gap, medical students frequently plan educational events for their peers. Since its inception, the International Federation of Medical Students' Associations (IFMSA) has served as a platform for promoting such activities.

Assuring the quality of these activities is necessary for a beneficial impact on medical curricula. Hence, IFMSA developed a Competency-based Non-formal Medical Education (NFME) Toolkit. The toolkit also serves as a guide for medical students to engage educators in adopting a learner-centred approach to teaching.

Methods

IFMSA created a Working Group for developing the toolkit. The group worked on outlining learning objectives in terms of medical competencies, the teaching methodologies, the learning environment, and the assessment tools. Furthermore, the group also explored the development of holistic educational models encompassing sexual health, research education and medical ethics.

Results

The toolkit identified and elaborated 6 teaching methodologies, with multiple learning objectives, and 5 assessment methodologies concerning the different competencies. Additionally, three educational models were proposed, reflecting the basics of sexuality education, medical ethics, and research skills. The toolkit has been shared on the communication channels of the Standing Committee on Medical Education. The toolkit usage was assessed through an assessment form shared with National Member Organisations (NMOs), revealing that 88.9% of the NMOs found it helpful.

Conclusion

There is an educational gap between medical students' needs and the educational resources provided by medical schools in many cases. Meaningful Student Engagement in capacitating peers via non-formal educational activities plays an essential role in the development of the necessary competencies for future health workers. At the same time, it recommends competencies to educators to implement more student-centred learning.

THE ROLE OF WEARABLE TECHNOLOGY IN CORRELATING PHYSIOLOGICAL PARAMETERS AND PSYCHOSOCIAL STRESS

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Background and Aims

High levels of stress have a significant impact on physical health, mood and behaviour. In the current post-pandemic climate, academic pressures such as reduced clinical exposure, reported low rates of psychological preparedness and other stressors can potentially have adverse effects on learning outcomes for medical students. Fitness trackers are commonly used to monitor physiological parameters in our daily lives. This project aims to assess the prevalence of stress, anxiety and depression amongst medical students and determine if wearable technology can detect physiological parameters associated with these psychological morbidities.

Methods

Fourth year medical students from the National University of Singapore were screened by the DASS-21 questionnaire.

Participants were given Fitbit watches which monitored heart rate, sleep and activity over a duration of 7 days, during which they had to answer a questionnaire based on the Ecological Momentary Assessment of stressful events every 2 hours from 9am to 9pm.

Primary outcomes measured were amount of sedentary minutes, active minutes and calories burnt. A two-tiered t test with unequal variance was employed as a statistical test.

Results

Twenty-eight fourth year medical students aged twenty-two to twenty-five years old were selected after volunteering to participate in this project based on their DASS-21 questionnaire results, of which seven (25%) were depressed, seven (25%) were anxious and seven (25%) were stressed.

In the category of depression, there was no statistically significant difference in the primary outcomes for the medical students who screened positive for depression compared to those who screened negative. In the category of anxiety, participants who were anxious had fewer sedentary minutes compared to those who were not anxious (p=0.0223). There were no statistical differences in terms of active minutes and calories burnt. In the category of stress, participants who were stressed burned less calories compared to those who were not stressed (p=0.0344). There was no statistical difference in terms of active and sedentary minutes.

Conclusion

Widely accessible wearable fitness devices are capable of measuring physiological parameters that may suggest the presence of stress or anxiety. Further studies should be performed to evaluate more comprehensive wearable parameters.

SUBSTANTIAL IMPROVEMENT IN SELF-ASSESSMENT CONFIDENCE AND PROCEDURAL COMPETENCE LEVELS THROUGH CADAVERIC OPEN THORACOABDOMINAL SURGERY SIMULATION WORKSHOP FOR YOUNG SURGEONS

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Background and Aims

With the widespread use of endovascular therapy for treating aortic lesions, the number of open operations for the thoracoabdominal disease has decreased significantly. In this era of endovascular therapy dominance, the issue of fewer opportunities for vascular surgeons to learn and become familiar with open surgical techniques must be taken seriously. The fewer open thoracoabdominal surgeries they perform, the less confidence and procedural ability they have to perform the procedure.

Methods

The participants received a two-day cadaveric workshop on open thoracoabdominal aortic surgery that included both theoretical and practical simulations. Before and after the course, participants filled out a questionnaire to evaluate their procedural knowledge regarding the index for open thoracoabdominal aortic surgery. On a 5-point Likert scale, participants assessed their surgical confidence and procedural competence.

Results

Twenty-three participants completed the workshop and all assessments and feedback forms. Principal participant characteristics and levels are as follows: 59% are attending physicians, 26% are fellows or chief residents, and 15% are under-training residents; 67% are from level 3 academic medical centres, while 33% are from metropolitan and community hospitals. Over ninety-five percent of participants rarely attended an open thoracoabdominal aortic surgery. Consequently, the level of confidence and familiarity with open thoracoabdominal aortic surgery is low for 85% of respondents; the ability to outline the surgical steps for open thoracoabdominal aortic surgery is low for 59.5% of respondents; and the ability to identify the diaphragm crus and visceral vessels is also low (70.3). The educational impact of the workshop included significantly improved (p=0.001) learner intentions regarding disease familiarity, operative confidence, and self-perceived competence. The ability to outline the surgical steps for open thoracoabdominal aortic surgery is vastly improved (73.9%), and the ability to identify the diaphragm crus and visceral vessels is also vastly improved (87.0%); the confidence for performing open thoracoabdominal aortic surgery in an actual operating room is rising to 56.5%. On the assessments of procedure knowledge, the average score for five pre-tests was 35.54, and the average score for the same post-tests was 46.1. One hundred

percent of participants reported being extremely satisfied with the relevance and realism of this cadaver workshop on thoracoabdominal aortic surgery. Nearly every participant reported that this workshop offers him opportunities to grow in an increasingly challenging learning environment and that they would recommend the course to other trainees.

Conclusion

This cadaver workshop permits international teachers to collaborate in teaching and imparting knowledge of anatomy and surgical theory and skills and permits participants to conduct simulated surgical drills with silent teachers in a high-quality setting. After completing the course, clinical surgeons' confidence in the procedure and familiarity with the surgical procedures of thoracoabdominal aortic open surgery can be significantly enhanced. In addition, this course is believed to make students more willing to use open thoracoabdominal aorta when aortic stenting is not an option in the hopes of improving patients' prognoses. These findings strongly support the implementation of similar intensive simulation and surgical skills courses and their ongoing objective assessment of educational efficacy.

THE EFFICACY OF RUBRIC IN ENHANCING SELF-REGULATED LEARNING THROUGH SELF-ASSESSMENT

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Background and Aims

Self-regulated learning (SRL) is paramount in competency-based medical education to optimise the use of feedback from formative assessments for learning and improving performance, and is a vital life-long learning skill for healthcare professionals. An important element in SRL is self-assessment. Self-assessment allows learners to assess their progress in their learning towards self-established goals, reflect on the effectiveness of their strategy, and modify their behaviour to improve performance in competency-based medical education. Although a rubric with scaled score system and defined behavioural descriptors to provide clear performance standards as set goals may be a potential self-assessment tool to facilitate the development of SRL, the efficacy of such a rubric to support development of SRL skills in competency-based medical education remains unknown. In many studies involving self-assessment and SRL, the skill sets being investigated were not related to medical competencies, but included skills such as writing, oral presentation and management skills. Our study aims to address this gap by investigating the efficacy of self-assessment with rubrics to promote the development of SRL skill in newly graduated nurses learning to be competent in intravenous (IV) medication administration.

Methods

Our study comprised two phases. Each phase utilised a single-blinded randomised controlled trial design involving nurses who attended a routine IV Medication Administration programme as part of a learning programme for new staff in a hospital. The control group received an online training session on how to perform self-assessment. The intervention group received a rubric created based on the competency for administration of IV medication and online training session on using it to perform self-assessment. 21 participants were recruited in phase 1, which was conducted to determine the effect size for sample size calculation for the main study in phase 2. Only 32 participants were successfully recruited in phase 2, even though our phase 1 findings suggested that a total sample size of 63 participants was minimally required. All participants were required to answer The Motivated Strategies for Learning Questionnaire (MSLQ), which was designed to assess a person's motivational orientation and different learning strategies. Participants completed MSLQ three times across a duration of six months (0, 3, and 6 months). A higher mean score indicates a higher self-regulating learner and vice versa. Two-way repeated measures ANOVA was used to analyse the data.

Results

The overall mean scores in both the control and intervention groups generally improved overtime. Although mean scores were higher in the intervention group compared to control group, the difference in the mean scores between the control and intervention groups at any time point was not statistically significant at the 0.05 level.

Conclusion

Our findings indicate that self-assessment with rubrics is unable to be used as a standalone tool to promote the development of SRL skill. However, it can be used in conjunction with other learning strategies. Our sample size was smaller than intended, and further studies should be conducted using a larger and more representative sample.

HOW DOES GENDER INFLUENCE PREFERENCE FOR ONLINE OR IN-PERSON LEARNING OF CLINICAL REASONING?

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Background and Aims

Due to the COVID-19 pandemic many medical schools temporarily moved teaching from traditional in-person sessions to online video conferencing platforms. In the academic year 2021-22, COVID-19 restrictions in Malaysia resulted in teaching being delivered online at the start of the year, with a return to in-person later that year.

A survey was distributed to fourth-year medical students at Newcastle University Medicine Malaysia after they returned to in-person teaching. The data was analysed and showed some differing opinions about preference for online or in-person sessions based on gender.

Newcastle University Medicine Malaysia runs a nineteen-week module for fourth-year medical students called 'Clinical Decision Making' (CDM). Each week focuses on a different medical speciality and students work through asynchronous online learning and attend a seminar on Friday to consolidate their learning. Each seminar group comprises eleven students and one staff-facilitator and the groups remain the same throughout the module. The seminars are facilitated by a different student each week and the group discusses a number of complex clinical cases.

Methods

An online questionnaire was emailed to all fourth-year students after they had returned to in-person CDM sessions. The questionnaire included multiple-choice, ranking and preference questions and asked students their demographics, their preference for in-person or online sessions and the reasons for this preference. Students were provided with a consent form and they were given the choice to voluntarily complete the questionnaire.

Results

Sixty students completed the questionnaire, 18 (30%) students were male and 42 (70%) female. 71% of female students preferred in-person sessions to online sessions, whereas only 50% of male students preferred in-person sessions. 81% of female students found in-person teaching more enjoyable compared to online sessions, whereas only 56% of male students found in-person sessions more enjoyable ($p= 0.041$). 86% of female students found in-person sessions better for developing history-taking skills than online sessions, as compared to 56% of male students ($p=0.011$). 76% of female students found in-person teaching better for forming differentials than online sessions, as compared to 50% of male students ($p=0.046$).

Conclusion

Our analysis showed several statistically significant reasons female students preferred in-person sessions as compared to male students. Female students felt in-person sessions were better than online sessions for; enjoyment, developing history-taking skills and forming differential diagnoses. I think further analysis could be done in the future to determine the reasons female students feel in-person sessions are better for these reasons. This could also establish how to improve online sessions, so students enjoy them more and feel they are more beneficial for developing history-taking skills and forming differential diagnoses.

MONDAY 22ND MAY 2023, 3.15PM

VIRTUAL ROOM 4, HYBRID CONFERENCE

SHORT COMMUNICATIONS 7

Adoption of Problem-Based Learning in Medical Schools in Non-Western Countries
See Chai Carol Chan, United Kingdom

Game-Based Learning in Eye Health Education - The Developmental Challenges of E-Learning Games
Snigdha, India

Blended Learning in a Military Paramedic Setting
Mabel Low, Singapore

Organising E-Learning in Medical School During State Heightened Level of Readiness in Response to COVID-19 Pandemic
Baljinnyam Baatarpurev, Mongolia

Preliminary Findings from a Meta-Ethnographic Exploration of Contemporary Health Coaching and Its Competencies
Paul Victor Patinadan, Singapore

RealEyes: Incorporating Virtual Reality into Healthcare Education to Teach Professional Values and Behaviours
Matthew Whallett, United Kingdom

Applying Teammates Feedback System to Assess Interprofessional Collaboration Practice among Health Students
Thuy Khanh Linh Tran, Vietnam

Design and Development of a Formative Feedback App to Foster a Constructive Feedback Culture and a Growth Mindset in Clinical Training
Veena S Singaram, South Africa

Gender Discrepancies in Psychosocial Conditions, Sleep Quality, and Screen Time of Preclinical Medical Students: A Cross-Sectional Study During COVID-19 In Indonesia
Valerie Josephine Dirjayanto, United Kingdom

ADOPTION OF PROBLEM-BASED LEARNING IN MEDICAL SCHOOLS IN NON-WESTERN COUNTRIES

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Background and Aims

In recent decades, medical education practices developed in Western countries have been widely adopted in non-Western countries. One of the examples is problem-based learning (PBL), which was developed in North America in the 1960s. In PBL, students actively collaborate in small groups to identify learning objectives and acquire relevant knowledge based on authentic scenarios. Existing literature demonstrated benefits on students' knowledge application and improved teamwork and communication skills. However, it also showcased how PBL relies significantly on ingrained Western educational assumptions and cultural values. Despite students and teachers in non-Western countries struggling with the learning behaviours and facilitation methods required in PBL, this learning method is still widely implemented in many non-Western medical schools. Therefore, the authors conducted a systematic review to synthesize qualitative literature on students' and teachers' experiences of PBL.

Methods

The authors systematically searched PsycINFO, Medline and ERIC for peer-reviewed qualitative and mixed-methods articles that described students' and teachers' experiences of PBL in non-Western medical schools. 41 articles were assessed for quality using the Critical Appraisal Skills Program (CASP) checklist and synthesized using Noblit and Hare's meta-ethnography approach. The final synthesis represented over 5,400 participants from 18 countries.

Results

Our synthesis demonstrated that medical students and teachers in non-Western countries have varied experiences of PBL. Findings were categorised into three different constructs: Student Engagement, Tutor Skills, and Organisation and Planning.

1. Students engaged variably with PBL, considered knowledge to be better acquired from authoritative figures, and deemed PBL to be ineffective for assessment preparation. Student participation was also limited by linguistic challenges when they are not native English speakers.
2. Teachers were often unfamiliar with the underlying philosophical assumptions of PBL and struggled with the facilitation style needed. They were required to deconstruct their traditional, authoritative roles and adopt multi-dimensional ones, but many were not used to breaking down such barriers.
3. Different organisation and planning processes were needed when implementing and sustaining PBL systems. It was a resource-intensive process requiring considerable financial, logistical, and technological support. This could be even more challenging for non-Western medical schools who already face significant material and human resource shortages.

Conclusion

Although some of the challenges faced by non-Western students and teachers were similar to those encountered by their counterparts from Western backgrounds, PBL represented a significant paradigm shift for many non-Western educational cultures from a traditional teacher-centred approach to a student-centred learning method. Replicating PBL approaches from Western settings would be problematic due to educational, cultural, and healthcare differences. Given the significant adjustments and resource requirements needed to adopt PBL, medical education leaders and policymakers in non-Western countries should be cognisant of the fact that PBL does not "lift and shift" easily outside of the Western context, and should adjust their adoption strategies accordingly. This may include supporting medical students and teachers to "hybridise" PBL in a way that fits to their local context.

GAME-BASED LEARNING IN EYE HEALTH EDUCATION - THE DEVELOPMENTAL CHALLENGES OF E-LEARNING GAMES

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Background and Aims

Game-based education is the crafting of products and services by the application of new technology to theoretical learning. Digital educational games have the potential to support learning by improving conceptual and epistemological understanding, process skills and practices, strategic thinking, planning, communication, collaboration, decision making, and negotiation skills. In the immediate future, there are likely to be far more technology-driven/enhanced educational goods and services that can exponentially impact growth in this specialisation. At the Academy for Eye Care Education of L V Prasad Eye Institute, we are continuously investing time in learning the aspects of active learning processes. We had started to explore and gamify certain components of course curriculum with the help of expert instructors in this field a while back. This created a strong sense of interest in quite a few of the educators. The team was encouraged to undertake the development of e-learning games for 2 of our training programs.

The purpose is to demonstrate the developmental challenges encountered at various stages of game-based educational trainee-centred prototype development (e-learning games) for specific topics in the course curricula of Ophthalmic Nurse Assistants (ONA) and Vision Technicians (VT).

Methods

Structured focus-group discussions (FGD) were conducted involving all the stakeholders of game-development, the subject experts, and the technical experts. A total of 6 participants were present for each FGDs with their mean age 33 ± 5.24 years. The FGDs were designed to capture pre-designed discussion topics to cover four phases of game-prototype development. The phases were i) Ideation and team development, ii) Identifying the competencies and mapping these with cognition, iii) Concept to prototype development - a. Defining questions and data points; b. Accumulation of content, and iv) Prototype testing and game packaging. The FGDs were audio recorded, the descriptive data transcribed verbatim, and thematically analysed.

Results

The challenges differed in every phase of game development. Data on the strengths and weaknesses of game development were collected by participant recall. Participant understanding of e-learning games varied across the teams. Choosing appropriate topics for game development, identifying and mapping underlying cognition to exit competency, data generation, problematic translation of concepts into game building, the role of communication in maintaining team dynamics, and the mandate to seek early feedback from end-users, were some of the challenges encountered.

Conclusion

The process of developing e-learning games in the curricula for ONAs and VTs required excellent collaboration between the educators and technical experts. Given the variety of games available, a realistic selection of the pre-designed game platform may help prevent over engineering a game. In medical education, sophistication in digital gaming is best avoided in the interest of learning per se. The primacy of the players' attention when learning and the immense value of engendering team spirit - these two factors must continue to guide creators in gamification and game-based learning. The 'lessons learnt' in overcoming procedural challenges may be widely applied when developing game-based educational tools for eye health education.

BLENDED LEARNING IN A MILITARY PARAMEDIC SETTING

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Background and Aims

With the introduction of Blended Learning (BL) due to the COVID-19 situation, this study delves into the perceptions of BL amongst learners and trainers. It specifically shed light on the trainers' role in facilitating the lessons, learners' perceptions of the lessons, and consequently identify factors that should be addressed to improve the effectiveness of BL lessons. With unique diversity in the educational profile, this study would offer new insights into the potential instructional designs, and ideally inform future improvements and developments of BL in other paramedic or military settings.

Methods

In-depth interviews were conducted for a range of participants, including the teachers, and the learners and the support staff, until thematic saturation was reached. The perspectives of these groups of participants were garnered with the intent of understanding the viewpoints of multiple actors on blended learning.

Results

In our analysis, we identified four main themes influencing the perceptions of BL amongst learners and trainers, namely: (1) Suitability of Content (2) Context (3) Behavioural Factors, and (4) Resources in affecting the effectiveness of Blended Learning. Our analysis supports Bandura's Social Learning Theory (SLT) in that environment, personal and behavioural factors are all interlinked and affect learning. In our study, we identified that the interplay of multiple factors, including environment, cognitive and behavioural factors, allude to the success of learning.

The unique military context and the associated regimentation also meant that learners had to adhere strictly to the regulations set for the BL lessons. Since the learners in our military setting come from diverse educational backgrounds and have varying motivational levels, our study findings have shown how learners collaborated with each other to deepen their understanding on the subject matter at hand.

Conclusion

The perspectives from various vantage points allowed us to address learning and teaching needs that were representative of a military learning institution. The environmental, behavioural and cognitive factors should be taken into account in future design and development of medical BL lessons specifically for learners who come from varying educational and motivational levels.

ORGANISING E-LEARNING IN MEDICAL SCHOOL DURING STATE HEIGHTENED LEVEL OF READINESS IN RESPONSE TO COVID-19 PANDEMIC

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Background and Aims

In response to the global outbreak of COVID-19, the Government of Mongolia confirmed the state heightened level of readiness and made a decision to shift all levels of training has closed temporary. Regarding the Government resolution, Mongolian National University of Medical Sciences (MNUMS) started preparation of e-learning from 27 January, and started e-learning to all courses from 10 February 2020 to 15 June 2020 for the second term of the 2019-2020 academic year. E-learning contents and materials were uploaded to the Moodle system, and workshops and interactive sessions were provided using Google Classroom.

As of June 2020, more than 6 500 video contents and other materials of 600 courses have been created and uploaded to the e-learning system of MNUMS. More than 11 000 user information, 600 group addresses and 1891 classrooms were created for the Google Classroom.

Methods

Data were collected from the e-learning Moodle system and the Google Admin report section. Data were compiled using Microsoft Excel and processed using SPSS 25.0.

Results

Moodle LMS - http://elearning.mnums.edu.mn/
The e-learning system was accessed an average of 43.9 times by each user, with an average of 62.5 pages recall per day and spent an average of 10.2 minutes per page. The number of simultaneous users is 138.3 (SD = 67.6). Fifty-seven percent of all users accessed the e-learning system from personal computers, 42.6 percent used mobile phones, and 0.5 percent used tablets, respectively. Overall, 40.3 percent of all students accessed the system from urban areas and 59.7 percent from rural areas.

Google Classroom
During the above-mentioned time frame, the daily number of logins were 3240.0 (SD = 847.6) times, received emails were 20203.7 (SD = 5376.2), sent emails were 1920.9 (SD = 383.6), 592.1 (SD = 215.6) times of call made via Google Meet, and accessed to Google Classroom 178.0 (SD = 51.8) times, respectively. This means that one user sends 2 emails a day and makes online calls with the teacher once daily.

Teachers shared an average of 9055.7 (SD = 2901.4) files per day with students, while students shared 7783.3 (SD = 2222.9) files with each other.

Conclusion

Depending on the characteristics of the course, a variety of channels can be used to organise e-learning. The use of e-learning and technology by both students and teachers has increased during the implementation of non-pharmaceutical public health interventions due to COVID-19 pandemic.

PRELIMINARY FINDINGS FROM A META-ETHNOGRAPHIC EXPLORATION OF CONTEMPORARY HEALTH COACHING AND ITS COMPETENCIES

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Background and Aims

"Health coaching", the term as well as its practice, has gained popularity in the last decade both within extant literature and health delivery systems globally. As healthcare trends move towards patients becoming 'motivated', 'agentic', or 'empowered', the health coach is often positioned to be a pivotal and driving force towards this advent, especially within the sphere of chronic disease management. Health coaches are seen to work in areas of patient activation, patient education and engagement, shared decision-making as well as their support of patients through facilitating self-management techniques. Their primary focus is described as helping patients to identify goals, create plans to make changes, and then work towards the implementation of these changes. The UK & International Health Coaching Association expands this further, by positioning health coaching as "a client-led, collaborative process that aims to equip an individual to adapt positively to their internal and external environment to create a state of resilience through the pursuit of activities and lifestyle that cultivates their whole-health continuum". Current research has also enunciated the cost-effectiveness of health coaching, stating that it is an inexpensive and effective means in improving management of diabetes mellitus and other risk factors for cardiovascular disease, asthma, and chronic obstructive pulmonary disease. Scholarly observations of health coaching see multiple benefits the role is playing within acute and community care settings; however, despite efforts to establish certification processes for independent health coaches, a widely accepted programme is stubbornly absent. With this gap, what constitutes successful health coaching and, perhaps even more importantly, what the core competencies of a health coach should be, remains nebulous. This variation undoubtedly produces health coaches with differing patient interaction techniques, facilitation skill sets, vocational values, and even commonplace roles.

Methods

The current research work employs a rigorous meta-ethnographic method to ascertain the core competencies of health coaches as observed in contemporary literature. The meta-ethnographic method is an inductive, interpretative approach that allows for qualitative synthesis; reviewing and integrating primary research for deeper exploration and insight. A systematic search comprising of original qualitative research discussing the phenomenon of health/wellness coaching (either as a vocation, sub-specialty, or training programme) was conducted. The review was guided by the Preferred Reporting Items for Systematic Review and Meta-Analyses [PRISMA] and a qualitative adaptation of the PICO (Population, Interest, Context, Outcome) tool. Rigour, clarity, and quality of knowledge synthesis through meta-ethnographic methods was directed by the suggestions forwarded by Sattar et al. Seven major databases (MEDline, EMBASE, PUBMed, CINAHL, Web of Science Core, SCOPUS and PsychInfo) were searched employing a strategy developed by medical librarians.

Results

After the removal of duplicates, 14,290 articles were generated from the databases searched. A total of 49 articles were selected for full-text review. Of these 49 articles, 41 were excluded at this stage as either the study focus or research type did not manage to meet the inclusion criteria. One article was added from a hand-search by the authors. 9 articles are included in the final review, extraction and currently ongoing analysis procedure.

Conclusion

Future directions of health-coaching are discussed.

REALEYES: INCORPORATING VIRTUAL REALITY INTO HEALTHCARE EDUCATION TO TEACH PROFESSIONAL VALUES AND BEHAVIOURS

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Background and Aims

In recent years, teaching of professional values and behaviours has become increasingly recognised as an important pillar of medical education. Development of these skills in undergraduate education allows doctors to graduate with robust ethical principles.

We have identified 15 key themes from the 'professional values and behaviours' learning objectives in Outcomes for Graduates, published by the UK's General Medical Council:

- Professional development
- Time management
- Reflection
- Duty of candour
- Honesty
- Raising concerns
- Integrity
- Meeting fundamental needs of patients
- Risks posed to patients by doctor's health Impact of personal values, beliefs and biases
- Applying ethical reasoning to new situations
- Person-centred care and involvement of relatives, carers or other advocates
- Recognising personal limits
- Maintaining dignity
- Decision making, capacity and informed consent

Virtual reality (VR) technology uniquely allows almost complete immersion in a situation. As students become immersed in footage from the perspective of others, they have the opportunity to become insightful to their emotions of this experience.

RealEyes combines the immersive opportunities gained from using VR technology with structured reflection to meet the above learning objectives. RealEyes is a teaching programme which utilises immersive technology to give a shared learning experience that would otherwise be impossible to create in simulated or genuine clinical experience. This is combined with best practice debriefing to allow reflective learning for the students.

Methods

The RealEyes pilot runs over five hour-long sessions, accommodating up to eight medical student or foundation doctor participants, with a facilitator in each session.

Sessions consist of a basic format of a scenario followed by reflective discussion. The scenarios are pre-recorded 360° video footage watched by students wearing VR headsets produced by RiVR link. RiVR link allows all students to simultaneously share the same experience of the scenario from the viewpoint of the video protagonist.

During a debrief, students select a few discussion points to reflect upon as a group. Reflection using a structured template is encouraged.

Each scenario then has a second playthrough from the perspective of another individual, such as the patient, a colleague or a relative. Students reflect further upon new discussion points raised by the second perspective.

Results

The pilot project is predominantly a feasibility study. Therefore, the primary outcomes are functionality, realism and education environment. This will be judged through post-course evaluations utilising Likert scale items relating to both the general experience and scenario specific experience. This data will be predominantly quantitative. Further to this we hope to gather qualitative feedback through a semi-structured post-course focus group. Again, this will focus on the primary feasibility outcomes but will also start to explore the learning effectiveness. This data will be analysed using thematic analysis principles. Should the pilot prove successful, higher power comparative studies will be undertaken to demonstrate the educational effectiveness.

Conclusion

We believe RealEyes is an approach which brings a novel, immersive and engaging format to a subject area traditionally considered difficult to teach. We hope it could be adapted to suit a variety of learning outcomes and could potentially be implemented into a wide range of training pathways.

APPLYING TEAMMATES FEEDBACK SYSTEM TO ASSESS INTERPROFESSIONAL COLLABORATION PRACTICE AMONG HEALTH STUDENTS

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Background and Aims

Applying Teammates feedback system to assess the interprofessional collaboration practice by the ICAR tool among health students after completion of the Interprofessional Education module.

Methods

A cross-sectional study with retrospective data of 6.477 ICAR peer feedback results on the TEAMMATES system of 998 students completed Interprofessional Education module 1 in the year of 2020-2021. Healthcare students completed peer feedback assessment on the TEAMMATES system after sessions of week 2, 4 and 7 during the 8-week Interprofessional Education module. One - Way ANOVA and Post-hoc test was used to analyse the data.

Results

The component of interprofessional collaborator competency among health students have average scores ranging from 3.97 to 4.28. The team functioning is demonstrated best (4.28±0.75) and communication needs to be improved (3.97±0.74). The roles and responsibility in pharmacy students is 0.06 points lower than that of medical students ($p = 0.028$) and 0.1 points lower than physical therapy students ($p = 0.014$). The collaborative patient/client- family centred approach among pharmacy students was 0.09 points lower than that of 3 groups of medical, nursing and physical therapy students ($p < 0.001$). Team functioning among medical students is 0.06 points higher than pharmacy students ($p = 0.004$) and 0.07 points higher than nursing students ($p = 0.019$).

Conclusion

Most of the components of interprofessional collaborative competency is at the “competent” level or higher, the best is the team functioning and communication is closely to the “competent” level. Many components of the interprofessional collaborator competency between disciplines is significantly different after completing the module. The current study results partly prove the effectiveness of the Interprofessional Education module in developing and enhancing core competencies in interprofessional collaboration for health students.

DESIGN AND DEVELOPMENT OF A FORMATIVE FEEDBACK APP TO FOSTER A CONSTRUCTIVE FEEDBACK CULTURE AND A GROWTH MINDSET IN CLINICAL TRAINING

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Background and Aims

Feedback creates opportunities for students to self-direct their learning in response to an assessment of their performance that fosters lifelong learning, promotes good ethical practice, and improves patient outcomes. A shift in the feedback landscape from the trainer to the trainee is recommended to create an optimal feedback culture that facilitates feedback-seeking behaviour and uptake in a safe, constructive space that fosters a growth mindset. Further, multi-lingual clinical training environments could create tensions that hinder verbal, face-to-face feedback. Other barriers to feedback may be due to a lack of convenient digital feedback tools. This project reports on the design and development of a formative feedback application to facilitate feedback-seeking behaviour, self-assessment, bi-directional feedback, and feedback utility.

Methods

This project adopted a participatory action research model (plan, act, observe, reflect) and Agile methodology for software development of the App. Convenience sampling of registrars and trainers across four clinical specialties was used to pilot the App at the College of Health Sciences, University of Kwa-Zulu Natal. Online faculty development workshops were held to introduce the App and training related to fostering a constructive feedback culture.

Results

The App developed has three steps and three essential questions in the Menu items: what was done well, what can be improved, and action plans. Step one: Trainee initiates a feedback request by conducting a self-assessment of a self-selected learning goal/encounter (skill, EPA, procedure, case, etc.) and competency that they seek feedback for. Step two: Trainer or a peer receives the request and provides feedback. Step three: Trainee gives the trainer/peer feedback on the value of the feedback received and action plans developed. This novel App was well received, and users have reported that it was simple and easy to use. Beta testing has commenced in the disciplines of Paediatrics, Anaesthesia, Dermatology, Optometry and Dentistry.

Conclusion

Closing the feedback loop promotes a culture of life-long, self-regulated learning that fosters a growth mindset in medical trainees. Hence the formative mobile app is based on assessment for learning and not of learning. The dynamic influence of technology to improve the training of medical professionals will continue to flourish as the ultimate goal is to improve patient healthcare. Hence, developing mobile-based assessment tools is vital to prepare and train future generations of frontline healthcare workers.

GENDER DISCREPANCIES IN PSYCHOSOCIAL CONDITIONS, SLEEP QUALITY, AND SCREEN TIME OF PRECLINICAL MEDICAL STUDENTS: A CROSS-SECTIONAL STUDY DURING COVID-19 IN INDONESIA

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Background and Aims

COVID-19 brought about various effects towards medical education, particularly for mental health of the students. Discrepancies between the genders, which might coexist with differences in behaviour such as sleep and screen time, could provide basis for reorganising medical education. There had been no study exploring these differences within Indonesia.

This study was aimed to analyse the differences of psychosocial condition, sleep quality, and screen time between the sexes in Indonesian preclinical medical students during the pandemic.

Methods

A cross-sectional study was conducted, evaluating gender discrepancies in the general mental health as evaluated by General Health Questionnaire (GHQ-12), depression as measured by Patient Health Questionnaire (PHQ-9), sleep quality as evaluated by Pittsburgh Sleep Quality Index (PSQI), and screen time as analysed with the screen time questionnaire. Statistical analysis using Mann-Whitney U test was performed using IBM SPSS Statistics Version 24 for Mac.

Results

There were 1,023 preclinical medical students studying in medical faculties across Indonesia included in this study. Statistical analysis revealed that female medical students had higher prevalence in both depression (p=0.010) and sleep disturbances (p=0.000) during the current pandemic. With regards to screen time, although the discrepancies between total scores were not statistically significant (p=0.631), females were found to spend more time engaging with phones (p=0.004), while males preferred playing video games (p=0.000) and online games (p=0.000).

Conclusion

The results of this study thus provided insights to the current psychosocial conditions, sleep, and screen time duration of Indonesian medical students between the genders. These would be hopefully helpful in reshaping preclinical medical education in order to increase its quality and advocacy towards the mental wellbeing of the medical students.

TUESDAY 23RD MAY 2023, 9.00AM

VIRTUAL ROOM 2, HYBRID CONFERENCE

SHORT COMMUNICATIONS 8

DELIVERING AN UPSKILLING PROGRAM FOR JUNIOR NURSES AT THE URGENT CARE SETTING DURING PANDEMIC USING SMART GLASSES TECHNOLOGY

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Background and Aims

One of the strategies to solve the nursing manpower crunch is to upskill existing staff, expanding their roles to meet higher care demands. During the height of pandemic, senior nurses explored using technology to overcome the challenges in delivering training and education for junior nurses. The aim of this project is to evaluate the use of technology in facilitating an upskilling program among junior nurses in the urgent care setting.

Methods

Enrolled nurses (EN) were given learning materials on non-prescriptive medications to study before being tasked to dispense medications to patients at the fever tent while wearing smart glasses to enable remote supervision by a senior staff nurse (SSN). Besides giving instant feedback, SSN also assessed EN's competency by direct observation through the smart glasses system. Finally, ENs underwent a quiz to evaluate their learning outcomes. ENs also provided their feedback on the use of smart glasses and the overall program.

Results

Five ENs underwent the upskilling program and passed the quiz. They dispensed medications to 123 patients under SSN's remote supervision over a two-month period. Thirty-three percent of these patients were COVID-19 positive. On a scale of 1 to 10, ENs reported increased in confidence level to carry out medication dispensing task after the program (from 3.75 to 9). Feedback on using smart glasses to facilitate remote supervision was positive among the ENs.

Conclusion

The upskilling program empowered ENs to perform at the top of their licenses. Upskilled ENs can relieve some additional workload added upon SSNs during the pandemic. This program showed that a smart glasses system can facilitate effective remote supervision and competency assessment. Technology proved to be useful in closing the gap in nursing training and education especially in a high-risk setting such as an urgent care centre.

WHAT DID THE RESPIRATORY THERAPY INTERNS GAIN FROM SITUATED SIMULATION EXAM?

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Background and Aims

Situated simulation exam (SSE) is used for medical interns to prepare for clinical practice. However, it is not commonly used in other medical professions. Here, we present what the respiratory therapy interns gain from SSE by qualitative analysis.

Methods

Few days before SSE, debriefing training for instructors was performed. A standardised patient was selected and trained before SSE. SSE as the pre-test for respiratory therapy interns was held on July 12, 2022. After the 10-minute exam, a 5-minute debriefing was done. After the process was finished, the interns were asked to be interviewed if they agreed. A focused group interview was conducted by a researcher. Qualitative study was based on the interview.

Results

A total of 5 interns joined the SSE. All the interns agreed to be interviewed. The interview took 43 minutes. The qualitative study revealed that SSE can (1) improve the ability of communication with patients; (2) understand the importance of using patients' language to provide health education; (3) improve the ability of assessment for patients; and (4) discover the omissions, and prevent clinical negligence that affects patients' safety in the future. Moreover, the interns considered that SSE can develop adaptability to changes for clinical situations.

Conclusion

SSE can improve the competency of respiratory therapy interns. SSE can be used not only for the training of medical interns, but also for the training of other medical professions.

OUR BEST PRACTICES IN THE IMPLEMENTATION AND TRAINING OF EPIC AND NGEMR FOR JUNIOR MEDICAL PROFESSIONALS

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Background and Aims

Singapore's increasing aging population and complex health needs signify a need for leveraging IT programs for better health outcomes. With the new implementation of NGEMR/EPIC at the National University Hospital (NUH), it became essential to train junior doctors in the effective use of it, to prevent errors and streamline clinical workflow so that doctors could dedicate more time to patient care.

This study aims to explore the methods and challenges faced in the implementation and training of EPIC and EGEMR for medical professionals in the NUH Orthopaedics department and the key best practices that we have adopted to improve and develop future training curriculum for new junior medical professionals.

Methods

The first 2 batches of junior doctors (House Officers, Medical Officers) who rotated through our NUH Orthopaedic department, since the launch of NGEMR/EPIC in our tertiary institution in February 2022, were included in our study. The authors conducted instructional in-person lectures that consisted of a live showcase of departmental-related ways of EPIC usage. Immediately after the lecture, junior doctors were provided with the opportunity to practice through a simulated program of NGEMR/EPIC. Guidance was provided throughout the session and Qualitative feedback was sought immediately after, and at the end of their 4-month posting with the department..

Results

Qualitative themes of challenges included:

1. Usage of simulation training programmes were limited in utility due to the limited functions and workflows available which differ from departmental needs.
2. Limited retention of knowledge until actual utilisation on the job, and a steep learning curve with no reference when needed.
3. Orientation-wide junior doctor teaching of NGEMR/EPIC usage was overly generalised, and not specific to medical or surgical workflows.
4. Early teachings of personalisation tools (Smart phrase, order panels), which drastically improves efficiency and efficacy, were often neglected at the beginning.
5. As all possible workflow challenges would not practically be covered in a training session, coupled with the updates in the system that render new workflows necessary, multiple junior doctors would face similar roadblocks at differing times and approach the trainers individually.

Qualitative solutions that we adapted over time:

1. Screenshots of workflows within NGEMR/EPIC provided junior doctors with examples that they would otherwise not be able to visualise.
2. Provision of department-specific PowerPoint slides provided an easy mode of reference.
3. Department-level teachings greatly supplemented orientation teachings, by teaching more relevant workflows.
4. By teaching personalisation tools early in the course, the learning curve was made less steep by creating more time for junior doctors to adjust to the departmental workflow instead.

5. Bootstrapping - After teaching a junior a certain workflow, identifying and empowering designated juniors to teach others greatly reduced the repetitive need for the trainers to address similar situations to others.

Conclusion

As NGEMR/EPIC is rolled out across the rest of the institutions in Singapore, we hope that by sharing the early learnings from our experience, it would aid other departments in their smooth implementation of NGEMR/EPIC in the years to come.

ELECTIVE COURSE OF 6TH YEAR MEDICAL STUDENTS: SATISFACTION AND THE VALUE OF EXPERIMENTAL LEARNING

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Background and Aims

The Doctor of Medicine program, Faculty of Medicine, Naresuan University was requiring 6th year medical students to register for one elective course, which takes duration for 3 weeks. Medical students can choose to practice in any field of their interest. Therefore, this study aims to explore elective courses, levels of satisfaction and the value of experimental learning from elective courses of medical students.

Methods

A descriptive research, 55 clinical medical students in the network of Faculty of Medicine, Naresuan University (Tak, Phrae, Pichit), academic years 2022 were enrolled. The instruments were online questionnaires: satisfaction and the value of experimental learning form (Likert scale). Data were analysed by using descriptive statistics such as number, percentage and mean and inferential statistics, including Chi-square test and set the statistical significance at 0.05.

Results

A total of 55 respondents (100%), elective course was chosen by medical students. Top 3 medical subjects were Family medicine (36.36%), Internal medicine (18.18%) and Psychiatry (9.09%), respectively. The most practiced location was in hospitals (52.72%) and the teaching pattern was hand on (67.27%). Medical students were satisfied with the study in elective courses at a high level (3.69±1.30) and also had the value of experimental learning at a high level (3.84±1.18). In addition, the elective courses chosen by medical students and teaching pattern were statistically significant related with the value level of experimental learning ($p<0.05$).

Conclusion

The elective course was the course that gave an opportunity to medical students, who can choose a clinical field of study according to their interest to apply in the special study and the residency training programs in the future. As well as to increase knowledge in the areas that medical students were interested in. However, the results of satisfaction, teaching pattern and the value of experimental learning level can reflect the success of curriculum management that goal to promote effective academic achievement in medical students.

ASSESSMENT OF NURSING GRADUATE'S CORE COMPETENCIES

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Background and Aims

The main guide for the future nurse's core competence is to successfully educate the concept of the patient care in nursing. Nursing skills include the basic skill of required core competence for performing the duties of a nurse. The United States is a benchmark in the world for its nursing education system, and the University of Massachusetts, United States of America, developed the comprehensive competencies of a nurse specialist based on the reliability of the results of research on the core competencies of nurses from the International Council of Nurses (ICN) and Nursing Education Service provider such as schools and hospitals. The School of Nursing of the Mongolian National University of Medical Sciences (MNUMS) has started providing those skills to nursing students based on the comprehensive competency.

Concepts around nursing competencies are important for improving quality nursing, but are not yet fully implemented. The challenges remain, such as determining the nursing skills, creating the structure, completing the required level of competence for nursing specialists and teaching methods. Professional and student self-assessment is required for learning nursing skills and determining teaching methods. Even the smallest unit of assessment must cover a comprehensive set of knowledge, skills, and values that can be applied to medical practice 13.

The purpose of this research was to determine the graduates' self-evaluation to learn nursing skills and establish the teaching methods.

Methods

It is assessed by a CDIO cross-sectional research method. In the self-assessment questionnaire of the research, the Competency Inventory Scale developed by Hsiu-Chin and Huan-Sheng Lo was conducted based on 5 groups of 43 standard questionnaires to evaluate the results of the program (Core Competency). In the evaluation methodology of the program, the average indicator and the level of significance were evaluated by rating from "7=absolutely able to perform" to "1=not able to perform". Research data was analysed using descriptive and Pearson correlation methods, and processed by using SPSS 25 software.

Results

The general information about medical hierarchy and years of service was collected from 97 graduates with a bachelor's degree in nursing. Subgroup comprehensive competence, ethics and responsibility was 44.7±11.1, clinical skill subgroup average was 24.4.98±5.3, clinical knowledge subgroup average was 16.8±3.81, nursing subgroup average was 14.9±3.61, respectively. OBE is directly /strongly/ ($p<0.05$) correlated with the core competency of program learning outcome (PLO).

Conclusion

Nurses' competence's PLO level of self-evaluation is at moderate level (155±3.3). Ethics and responsibility (r=0.75) at average level, clinical knowledge (r=0.65) at average level, customer care (r=0.93) at a higher level and critical thinking for clinical skills (r=0.75) at average level for competence of nurses. These numbers show that it is necessary to improve the comprehensive competence of graduate students.

GOOD MEDICINE: TEACHING COMPASSION FOR OTHERS ALONGSIDE COMPASSION FOR SELF

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Background and Aims

Compassion is important to patients and their families, and patient outcomes improve under the care of compassionate providers. We ourselves aspire to be compassionate with our patients. Students and healthcare workers alike struggle to show the compassion they feel. Compassion is an innate capacity that can be taught, practiced and improved through direct observation and feedback. Growing skills in showing compassion benefits patients. In addition, compassion -- particularly self-compassion-- benefits healthcare workers: it enhances well-being, drives internal motivation and counters burnout. Developing greater self-compassion is one way to address the epidemic of healthcare worker burnout.

Methods

We developed a 2-part compassion syllabus to train first-year medical students in showing compassion. Firstly, students attend a workshop to learn and practice the 3-step process of compassion and the obstacles to & benefits of compassion. Polling shows that 80% of students tend to be more self-critical than self-compassionate. Students assert their beliefs that self-criticism drives performance, and share concerns that compassion takes too much time. We share research that self-compassion outperforms self-criticism for intrinsic motivation. Subsequently, students practice showing compassion in faculty-facilitated, small group simulations with a worried parent and an angry patient. In the simulations, students practiced both showing compassion for self and compassion for others, and faculty coached students through their tendency to self-criticize when struggling to learn a new skill. Faculty and students were empowered to call timeouts. Timeouts enabled faculty to coach students to emotionally regulate and connect with compassion for themselves and the patient.

Results

Course evaluations showed that students found this syllabus - particularly practicing the skills with directly observed feedback in very challenging and realistic scenarios -- to be a valuable training tool. Students cognitively understand compassion and the benefits, and even have the intention of demonstrating it. However, shifting from an intellectual understanding to application is challenging- especially when emotionally overwhelmed. Practicing in a safe space and ‘trying again’ after feedback lessened the power of this fear, and students reported feeling better prepared for managing the emotional aspects of patient care and more confident to show compassion. Students discovered offering genuine compassion makes patient interactions more efficient: they are better able to connect with patients, elicit vital information, share information in a way patients can absorb and make more effective care decisions. Simulated patients shared the positive impact compassion had on their experiences, and students found this feedback immensely motivating.

Conclusion

Structured teaching on compassion and compassion simulations with faculty coaches focusing on the skills of self and other compassion are an effective way for learners to feel more confident and less fearful of the emotional side of medicine. Most hospitals and schools list compassion as a value. With minimal resources we can train individuals to be able to show the compassion they innately have in them. It is good for patients and it is good for providers.

NEW WINE IN OLD BOTTLES: INTRODUCING STUDIO-BASED LEARNING FOR CADAVERIC DISSECTION IN PRECLINICAL MEDICAL EDUCATION

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Background and Aims

Under the prospect of utilising emerging technologies as alternatives, how to optimise cadaveric dissection in medical education has been widely discussed, especially highlighted by the limited contact hours in the COVID era. Our team identified studio-based learning (SBL) as a novel pedagogy with which to arrange a Cadaveric Dissection Workshop, to experiment with a pioneering approach in cadaveric dissection-based anatomy education.

Our aims are to (1) evaluate students' perceptions towards SBL; (2) appraise the impacts of SBL on anatomical learning; (3) produce a validated questionnaire tool for assessing (1) and (2); and (4) compare SBL with the existing pedagogy of problem-based learning (PBL).

Methods

Workshop participants were recruited and selected from the 2020 and 2021 cohorts of the Chinese University of Hong Kong's Year 2 Medical students, who were invited to complete a post-workshop questionnaire. A pool of 29 items was created. All items were compulsory, positively stated, and rated on a 5-point Likert scale.

Exploratory factor analysis (EFA) was first performed to establish the construct validity of the questionnaire. The minimum criteria for item inclusion was a primary factor loading of 0.4 or above without cross-loadings of 0.4 or above. Confirmatory factor analysis (CFA) was then performed to assess the reproducibility of the factor structure. Cronbach's alpha coefficients were also calculated to confirm scale reliability.

Results

A total of 51 students participated in the Workshop (N = 24 in 2020, N = 27 in 2021), and 50 (98.04%) completed the questionnaire.

Only 19 items were included in EFA. Both Bartlett's test of sphericity ($\chi 2 = 1138.542$, $p = < 0.001$) and Kaiser-Meyer-Olkin test (KMO = 0.72) were positive. Communalities of all items were above 0.5. Factors were extracted by the unweighted least squares method, and loadings were estimated using the orthogonal rotation Varimax. 4 factors were retained according to Kaiser criterion ($\lambda 1 = 4.079$, $\lambda 2 = 3.400$, $\lambda 3 = 2.263$, $\lambda 4 = 2.026$) and they represented a cumulative variance reaching 61.9%.

All measures of fit indices in CFA were positive and statistically significant (goodness-of-fit $\chi 2 = 80.168$, $p = 1.000$, root mean square error of approximation < 0.001, comparative fit index = 1.000, Tucker Lewis index = 1.071, relative fit index = 0.860).

The means of all items of each factor were above 4. Evaluation of this Workshop was done according to the 4 factors extracted. Students' perceptions towards SBL were positive, especially in optimising peer learning, enhancing motivation, and driving self-directed learning. Impact of SBL on anatomical learning was identified as reinforcing spatial understanding and clinical reasoning, increasing proficiency in anatomical knowledge application, and facilitating appraisal of pathologies on cadavers.

Compared to PBL, SBL is more suited for solving ambiguous and inductive problems. Regarding the similarities between the two pedagogies, there exists a strong potential for applying SBL in medical education.

Conclusion

To our knowledge, this is the first study to introduce SBL in medical education. We found promising potential for SBL in enhancing cadaveric dissection.

IS THE MODIFIED COHEN COMPARABLE TO THE ANGOFF METHOD FOR HIGH STAKES SUMMATIVE EXAMS IN YEARS 3 AND 4 OF THE GRADUATE ENTRY MD PROGRAM IN AUSTRALIA?

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Background and Aims

Summative examinations are an integral aspect of student evaluation. These must be standardised across the cohort, and ideally across multiple cohorts to assess for trends and areas of strength & weakness. The aim of this study is to evaluate the current model of summative exam standard setting and pass rates within the BCS (Basic & Clinical Sciences) domain for Multiple Choice (MCQ) & Short Answer (SAQ) for the University of Notre Dame Australia, School of Medicine Sydney (UNDA SoMS).

We compared two different standard setting methods, the Angoff method (which the School currently uses) and the Modified Cohen method for BCS component of the summative MCQ and SAQ examinations in the clinical years (Years 3 and 4) of the MD program. The Angoff method is time intensive, resource heavy and involves multiple clinicians dictating the difficulty of a question. It is validated for use in high stakes examination. The Modified Cohen method uses a formula (65% of the score of the student at 90th percentile) to determine pass rates.

This research is of interest to medical educators worldwide as replacement of the labour intensive Angoff method in favour of the modified Cohen method may free up significant resources to further improve the assessment or education process in other ways.

Methods

Data of pass and fail rates for six clinical stage cohorts in three consecutive years were analysed (n=358 for third year students, n=355 for fourth year students) using a Chi squared test to determine whether the proposed Modified Cohen method is appropriate to substitute the Angoff scale. We then determined the absolute number of students that failed the MCQ and SAQ components of the summative BCS examination.

Results

According to the Chi Squared analysis - there is a statistical difference between the Angoff and Modified Cohen scales. More students might pass under the Cohen scale and thus may not be appropriate for the high-stakes examination setting. However, the absolute number of students who fail when comparing the two methods is almost insignificant (between of 0-2 additional students per exam). Secondly, the students who fail the MCQ/SAQ typically only do so by a small margin, and they usually pass the BCS domain overall with inclusion of other summative assessments (e.g. presentations) held throughout the year.

Conclusion

This study indicates that the Modified Cohen method may allow more students to pass an examination as compared with the Angoff method and thus it may not be appropriate for high-stakes summative examinations. However, considering that the absolute numerical value of students who fail, it may be better for educators to consider the use of the Modified Cohen method and utilise the additional time and resources to implement other techniques to aid the students' learning. This could include implementing further teaching sessions or additional commercially available online resources for students to utilise for exam preparation.

ACADEMIC GOOD-TREATMENT SCALE: A SURVEY-BASED RESEARCH ABOUT THE EVIDENCE OF ITS VALIDITY AND RELIABILITY IN CHILEAN HEALTH STUDENTS

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Background and Aims

Scientific publications have discussed the presence of mistreatment in the training of health students for 40 years. And beyond the controversy generated, empirical evidence shows that it is a phenomenon present in the healthcare professionals' training of various degrees and countries of the world. However, little evidence proposes alternative behaviours: i.e., good treatment. In this context, the present study offers the Academic Good-Treatment Scale (EBTA), developed from a previous qualitative study, and evaluates its psychometric properties.

Methods

We surveyed 1009 students from five Chilean universities and twelve different healthcare grades. They answered the 40-item Academic Good Treatment Scale and a sociodemographic questionnaire. We carried out the survey after informed consent. In order to provide evidence of the validity of its measurements, we used a Confirmatory Factor Analysis, employing the weighted least squares estimation method adjusted for mean and variance. We assessed the reliability using McDonald's Omega coefficient. MPlus 8.6 was used for data analysis. This study was sponsored by FONDECYT Regular 1221913 grant.

Results

We proposed nine factors for good-treatment: Class agility, Openness to dialogue, Mastery of discipline, Contextualized teaching, Motivating participation, Teaching passion, Flexible planning, Concern for the student as a person, and Effective feedback. The Confirmatory Factor Analysis showed good fit indicators: CFI=0.959, TLI=0.955, RMSEA(CI 90%)=0.053(0.051-0.056), and SRMR=0.038. Its reliability ranged from ω=0.80 to ω=0.95.

Conclusion

The factorial proposal identified in theory agrees with the behaviour of the data in the sample studied, providing evidence of the validity of its measurement. Likewise, the reliability has a good performance in two factors and excellent in seven, evidencing adequate measurement precision. Thus, the evidence supports that EBTA is a proper tool for further research on academic good-treatment.

TUESDAY 23RD MAY 2023, 9.00AM

VIRTUAL ROOM 3, HYBRID CONFERENCE

SHORT COMMUNICATIONS 9

Unfolding the Ugly Truth in Nurturing Humanistic Physician
Anyta Pinasthika, Indonesia

Developing a Suite of Therapeutic Patient Education (TPE) Resources to Facilitate Healthcare Provider Service Competencies
Winnie Teo, Singapore

The Long Road: From Clinical Guidelines to Appropriate Therapeutic Plans
Amanda Chichester, United States of America

Innovating the Undergraduate Psychology Curriculum: Six Keys to Unlocking Excellence
Judith Gullifer, Australia

Partnership with Patients to Bring Reality into the Teaching of Professionalism
Weeming Lau, Malaysia

Evaluating the Effectiveness of Teaching Undergraduate Students How to Manage an In-Hospital Cardiac Arrest by Using a Web-Based Serious Game
Wai-Tat Wong, Hong Kong S.A.R.

A Pilot Study on Evaluation of Tele-Education for Healthcare Professionals on Managing Diabetes in Ramadan
Nur Kalimallah Khairil Anwar, Singapore

The Impact of Using Entrustable Professional Activities (EPAs) on the Instructors' Work
Chia-Hung Chen, Taiwan

Educational Value of the Virtual Dissection Table in Anatomical Education From Students' and Teachers' Perspectives
Jing Yan Seah, Singapore

UNFOLDING THE UGLY TRUTH IN NURTURING HUMANISTIC PHYSICIAN

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Background and Aims

The complexity of the healthcare system requires a medical institution to provide explicit teaching of professionalism through meaningful learning experiences and nurture future physicians' humanism. Teaching humanism and professionalism must be conducted longitudinally from preclinical to clinical years. However, nurturing professionalism in the clinical setting is predicted to be challenging due to the perplexing nature of the clinical learning environment. Therefore, this study explores stakeholders' perceptions (students, teachers, and faculty) regarding learning professionalism in clinical settings.

Methods

This study is a multicentre qualitative phenomenology study conducted in 3 medical institutions in Indonesia: Universitas Indonesia (Jakarta), Universitas Andalas (Padang, Sumatra), and Universitas Sebelas Maret (Solo, Java). Respondents were recruited with a purposive sampling method to explore their perception regarding learning professionalism in clinical settings. Data was collected through in-depth interviews and focus group discussions with stakeholders and analysed through thematic analysis.

Results

Some themes emerge from this study around teaching professionalism in a clinical setting, including principles, components, scope, strategies, and factors influencing teaching professionalism. Respondents defined humanism in medicine as treating another person as a human being, and teaching professionalism is a character-building process through nurturing humanistic values. This study revealed that various factors in learning climate interact with how clinical students learn professionalism. Factors that shape a learning climate include curriculum, relationships, facilities, the rhythm of clinical work, personal and professional development of students, and the existence of a hidden curriculum. This study reveals the ugly truth about how hidden curricula and negative role models exist and become an antithesis of professional development. Hence, there is a need to find a strategy to address the hidden curriculum and a negative role model when designing a curriculum to nurture professional and humanistic physicians.

Conclusion

Developing Professionalism in clinical settings requires meaningful learning experiences and a supportive learning climate that needs to be shaped to nurture professional and humanistic physicians.

DEVELOPING A SUITE OF THERAPEUTIC PATIENT EDUCATION (TPE) RESOURCES TO FACILITATE HEALTHCARE PROVIDER SERVICE COMPETENCIES

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Background and Aims

The expectations of patient involvement within today's health ecosystem are rapidly changing, with care plans becoming increasingly tailored to the uniqueness of patient life courses. In order to realize the full benefit of this shifting paradigm, individuals and their families should actively and knowledgably participate in their care; bringing relevant skills and motivations to become behaviourally 'engaged' with regards to chronic conditions. A forerunner to this shift is the evolving definition of what might constitute patient education, which previously consisted mostly of the transfer of knowledge and biomedically-based advice. Patient passivity was observed as the norm, with no expectation for active participation or inquiry into diagnosis or treatment decisions.

Recent research has observed that this form of patient education has not always proven effective, and may even be counter-productive. With professional care service delivery evolving in tandem with patient-centered approaches, interactions now incorporate respect and responsiveness to patient preferences, needs and values, allowing them to guide clinical decisions. Where once there was a transfer of knowledge, there is now a co-creation of it. These elements have collectively been incorporated into what the World Health Organisation terms 'therapeutic' patient education (TPE); which encompasses organised activities inclusive of psychosocial support, designed to facilitate full patient awareness about their condition, care, institutional organisations and procedures, as well as health related behaviors. There is enunciated, a therapeutic effect above regular treatment interventions (e.g. pharmacological, physical therapy, etc.). Patients, their families and care providers are able to come together under TPE to understand and work through the disease conditions and treatments with the goal of maintaining and even improving quality of life. Self-management techniques, adaptation of treatment, as well as coping processes and skills are taught and exchanged within TPE, which can also reduce the cost of long-term care to both patients and society.

Methods

With its myriad benefits to multiple primary stakeholders, the query now becomes how TPE can be pedagogically formalised for healthcare providers as a supplement to their standing clinical competencies. There currently does not exist a standardised curriculum for the teaching and learning of TPE and its relevant components locally. The current research presents the conceptualisation, development, and dissemination of a suite of modularised TPE resources directed at introducing and guiding health care professionals in its conduct and practice.

Results

This suite includes i) an introductory primer which consolidates empirical evidence and presents employable patient interview techniques; ii) an e-learning module to facilitate learner access, and iii) a half day workshop and clinic where healthcare providers can develop their own TPE programmes or materials.

Conclusion

The barriers, facilitators, and lessons learned from the suite's chronological implementation are showcased and future directions and projects resultant from the suite discussed.

THE LONG ROAD: FROM CLINICAL GUIDELINES TO APPROPRIATE THERAPEUTIC PLANS

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Background and Aims

In the United States, the role of the pharmacist continues to evolve with increasing emphasis on direct-patient care. To achieve and maintain ACPE accreditation, US Doctor of Pharmacy (PharmD) programs must ensure that students demonstrate specific skills and knowledge standards and are ready to provide direct patient care in a variety of healthcare settings upon graduation. We have developed a multi-year high-fidelity human patient simulation (HPS) curriculum that emphasises application of knowledge while fostering a sense of professional identity.

Methods

As a component of the integrated practice labs, our HPS curriculum runs in alignment with existing standardised lab activities including OSCEs, interprofessional practice experience and drug information labs. A primary goal of the integrated practice lab, and all HPS labs, is for students to learn to locate, retrieve, and apply clinical practice guidelines (CPGs) from didactic coursework into a practical experience. Accordingly, each HPS lab requires the student to apply recently presented content in a realistic, patient-focused setting. To reinforce these goals, at the end of each HPS lab, students engage in a faculty-led debriefing that explores the motivations behind each clinical decision. This ensures students develop an in-depth understanding of the scientific basis or clinical evidence behind existing therapeutic recommendations.

We will present our simulation-based curriculum and demonstrate how it is mapped to ACPE standards.

Results

We will demonstrate how our HPS curriculum fulfills the ACPE guidelines for professional practice.

Conclusion

We believe our HPS lab curriculum emphasizes the importance of "analysis before application" and reinforces the importance of our students developing their own therapeutic plans.

INNOVATING THE UNDERGRADUATE PSYCHOLOGY CURRICULUM: SIX KEYS TO UNLOCKING EXCELLENCE

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Background and Aims

The key focus of the majority of students that enrol in a psychology degree is to become a psychologist. Registration as a psychologist in Australia can only occur when a student completes further postgraduate training. Current perceptions of the 3-year undergraduate psychology degree in Australia are that it offers a limited set of career options. Our challenge is to produce graduates who are job-ready. The number of undergraduate students enrolled in a psychology major vastly exceeds the number of students able to enrol in postgraduate psychology programs. In Australia, the 2019 Graduate Outcomes Survey (GOS) indicated that 9,424 students graduated with a Psychology undergraduate degree (which is 3.1% of the total of 299,343 graduates). As a field of education, psychology graduates had the lowest rate of full-time employment in 2019 (52.9%) but also had a high proportion of undergraduates proceeding to full-time study in 2019 (35%). These students were mainly enrolled in the Honours year (or alternative fourth years) in order to then potentially undertake a postgraduate psychology degree or commence a supervised practice registration pathway.

Interestingly, research conducted almost a decade ago found that the rate of progression of undergraduate students to enrol into postgraduate studies was quite low at around 8.4% (Crowe et al. 2012). At this point in time, we have no data on how many undergraduate students go on to further study in different discipline areas such as education, business, or HR, who may be 'lost' to the psychology profession. In this report, a vision for a program of psychology at Monash University will be presented. The School of Psychological Sciences will play a pivotal role in developing a psychology-focused undergraduate degree that will enable student's choice of multiple pathways to a range of different careers.

Methods

In order to achieve the aim of integrating work readiness into our undergraduate program the course structure was redeveloped in order to combine an accredited psychology major and a concurrent stream of applied psychology Units. The course has undergone a major redesign following the Flipcurric methodology (Scott, 2016). There are six 'keys' to 'flipping' the curriculum. In this approach: (1) have the 'right' (agreed, tested, comprehensively considered and validated) degree level outcomes. (2) map backwards to ensure these program level outcomes are picked up in all of the units of study during the degree in a scaffolded way ('right' mapping), (3) confirm that the assessment in each unit is valid and integrated (i.e. that it is 'right', fit for purpose), (4) establish what criteria and evidence different grades will be allocated ('right' grading), and (5) develop a process of inter-grader calibration ('right' calibration). Only after this is done, should learning program teams (6) set about ensuring that the learning methods and resources built into each unit of study are 'right' - that is fit-for-purpose.

Results

The outcome of change has been strengthened proficiency across all key stakeholders to identify, validate and develop relevant and desirable graduate capabilities, through strategies like utilisation of the Tertiary Education Quality and Standards Agency (TEQSA) higher education standards, the Australian Accreditation Council (APAC) accreditation standards, sector benchmarking and peer consensus, to inform the development of the revised curriculum and assure the fitness for purpose of assessment and its fitness of purpose.

Conclusion

The outcome of this major redevelopment project is the focus on the student experience, ensuring that all enrolling students have opportunities to plan for their professional careers from the first year.

PARTNERSHIP WITH PATIENTS TO BRING REALITY INTO THE TEACHING OF PROFESSIONALISM

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Background and Aims

Professionalism in clinical practice is increasingly important, as patients become progressively more tech-savvy. Gone were the days when doctors were considered the sole authority in patients' care where mistakes can be brought to the grave. Now, patients tend to share their experiences at the clinical settings via various social media platforms. Therefore, it is pertinent that students are trained and are mindful of Professionalism issues from the preclinical years so that they can scaffold and build on the initial foundation.

The aims of this project were to:

1. Create active learning sessions where students interact with the patients, tutors and their peers
2. Obtain perspectives on professionalism from students, tutors, simulated (SPs) and real patients (RPs).

Methods

This project involved year 1 medical undergraduate students (n=105) enrolled in the 2022 undergraduate medical programme.

Five interactive sessions were organised over the first three (3) weeks of semester 2. This consisted of:

i. Three hourly sessions were conducted on a weekly basis in small groups with seven (7) RPs. Each group consisted of 10-12 students and was facilitated by a tutor.

ii. An active learning online workshop that was attended by 91 students who interacted with four (4) RPs.

iii. A 90-minute face- to- face interactive session with SPs (n=6), where students had a dialogue with two different SPs.

At the completion of these sessions, an online evaluation form was emailed to the RPs, SPs, tutors and students. A reminder was sent to maximise the submissions.

Results

All RPs (n=7, 100%), SPs (n=6, 100%), tutors (n=5 /7, 71%) and students (n= 64/105, 61%) responded to the online evaluation.

When asked for 3 key words to describe professionalism, "care" was the most common word given by the SPs in contrast with "care and empathy" by the RPs, and this was also given by 6% and 22% of students for "care" and "empathy" respectively.

Most preferred the sessions to be conducted face-to-face rather than online (SP = 83%, RP = 100%, students = 97%). The reasons were - better eye contact and rapport building, quality dialogue, observation of patient's physical disability, accurate facial expression and body language, clarity of questions and answers, authenticity of real clinical settings, and elimination of internet-related issues. Most prepared for the sessions (SP = 50%, RP = 71%, Students = 98%, Tutors = 40%).

All SP and RP felt that the questions posed by the students were relevant.

All students perceived that they learnt about professionalism from the SPs, RPs and tutors, with 50% of the students commenting that they also learnt from themselves.

All students found the five interactive sessions had enhanced their personal and professional development. Most students preferred to have a minimum of three sessions, with one tutor commenting that one session would suffice as professionalism is a lifelong continuous process.

Conclusion

There was learning on professionalism for all stakeholders in the five sessions. The primary purpose was to introduce the concept of clinical professionalism to students, but the sessions also benefit the SPs, RPs and tutors.

EVALUATING THE EFFECTIVENESS OF TEACHING UNDERGRADUATE STUDENTS HOW TO MANAGE AN IN-HOSPITAL CARDIAC ARREST BY USING A WEB-BASED SERIOUS GAME

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Background and Aims

Serious games in medical education refer to games designed specifically for the serious purpose of providing education via an electronic platform. Students' acquisition of knowledge and skills was significantly better in teaching incorporated with serious games than in traditional teaching with or without digital education modalities (Gentry et al., 2019). More specifically, serious games focusing on cardiopulmonary resuscitation can enhance skills retention (Li et al., 2015). We have designed a serious game to teach in-hospital resuscitation (CPR game) during the Very BASIC course, a course in flipped classroom format designed to teach final-year medical students all the essential competencies in managing hospitalised patients to enrich the pre-class teaching (Gomersall et al., 2010; Gruber et al., 2007).

Methods

The serious game designed to teach in-hospital resuscitation (CPR game) comprises two scenarios: the VF/VT cardiac arrest and PEA/Asystole cardiac arrest. The CPR game is a web-based serious game allowing the participant to control the actions taken by healthcare team members in managing a patient from being discovered to be unconscious to the recovery of spontaneous circulation if the game is passed or death if failed.

All final-year medical students must go through the Very BASIC course at the beginning of the MED 6 curriculum. They are required to finish all the online pre-class e-learning activities in the Moodle Platform before attending the face-to-face small group teaching. Students' activities in the e-learning platform, including the data in completing the CPR game, will be retrieved. Modification of the e-learning platform will be required to capture all the data in completing the game.

Results

One hundred forty-two students attempted the Asystole/PEA arrest scenario, while one hundred seventy-seven students attempted the VF/VT arrest scenario. The overall success rate was low (17.5% in Asystole/PEA arrest and 4.86% in VF/VT arrest scenarios. There is no correlation between the student's performance in the game and the exam. The most common mistakes were skipping the regular rhythm check during resuscitation and injecting adrenaline inappropriately in Asystole/PEA arrest. Students usually could not succeed in the VF/VT scenarios because they failed to arrange advanced support before starting the chest compression and minimise the interruption of chest compression.

Conclusion

The overall success rate is too low and students may only be keen to attempt but not keen to pass the game. The serious game in teaching in-hospital resuscitation needs to be revised to engage the students to pass.

A PILOT STUDY ON EVALUATION OF TELE-EDUCATION FOR HEALTHCARE PROFESSIONALS ON MANAGING DIABETES IN RAMADAN

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Background and Aims

With the global pandemic situation, physical distancing necessitates ongoing healthcare professional education provided on a virtual platform to encourage continued learning and provide specialty updates on patient care in special circumstances.

As diabetes management during fasting remains a challenge to healthcare professionals, a focused education session is provided by the diabetes care team annually before the Ramadan fasting month to prepare healthcare teams in different settings.

This study aims to evaluate the effectiveness of healthcare education delivered via virtual platforms.

Methods

We enrolled healthcare professionals attending lectures on knowledge and healthcare professional practice on diabetes management in Ramadan in a single-centre study. This education session was previously administered as a face-to-face lecture in a group setting. Institutional ethics board exemption was sought and approved.

Electronic mail invitation to attend the education session and participate in the survey was disseminated before the session. A 10-minute anonymised voluntary online survey was administered before the session, at the point of registration up to the start of the lectures. Demographic data, knowledge on diabetes mellitus, knowledge on diabetes management during Ramadan, and past experience were collected.

The participants attended consecutive talks given by a specialist doctor and nurse on a virtual platform for a total of 1 hour.

The post-session survey was administered at the end of the session.

Results

There were 19 respondents to the pre-session survey.

Mean age was 33.8 years old. Seventy-nine percent were females. Fifty-three percent were Chinese, 21% Malays, and 5% Indians. All were nurses with varying experiences. Seventy-nine percent were practicing in inpatient settings, of which 36.8% were from medical wards. Seventy-nine percent responded that the proportion of Muslim patients managed is at 25% or less. Seventy-nine percent responded that the proportion of diabetes patients managed at 50% or less.

There were 47% of respondents who had no prior education on the topic delivered. Knowledge assessment revealed that 57.9% were unaware of the effects of fasting on glycaemic control and the risks of fasting in the elderly. Eighty-nine percent were aware of restrictions on food and oral fluid intake during fasting. However, 47.3% are unaware that Ramadan lasts 14 hours daily and there is restriction on medication intake during fasting. Eighty-nine percent would not counsel diabetes patients on fasting due to a lack of specific knowledge and have not encountered patients with complications during fasting.

Only 9 respondents answered the post-session survey. All the attendees were confident or more confident in managing diabetes patients during fasting month. They would like to be further supported by the diabetes care team, including dietitian.

Conclusion

This study suggests that tele-education using virtual platforms may be effective as a healthcare education delivery method for specialty updates. However, further studies with a larger sample size are needed.

THE IMPACT OF USING ENTRUSTABLE PROFESSIONAL ACTIVITIES (EPAS) ON THE INSTRUCTORS' WORK

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Background and Aims

Nowadays, Entrustable Professional Activities (EPAs) are used widely to evaluate the competence of trainees. The purpose of this study is to investigate the impact of using EPAs on the instructors' work.

Methods

EPAs were introduced to our department in July this year for the evaluation of the respiratory therapy interns. The training course for the respiratory therapy interns was 6 weeks. Four EPAs (including 2 for clinical skill, 1 for clinical management and 1 for teamwork) were evaluated for each intern. The assessment forms of EPAs should be filled out before the end of the training course by clinical instructors. After the training course, the instructors were asked to be interviewed if they agreed. The focused group interview was made by a researcher. The verbatim transcripts of the interview were used for qualitative analysis.

Results

There are 4 instructors (3 females and 1 male) involved in the work. All agreed to be interviewed. The interview took 39 minutes. The qualitative findings were listed in the following: (1) in order to understand the overall performance of students, the instructors need to spend more time to observe students' behaviours in clinical situations; (2) in order to observe the communication ability of the trainees, the original work arrangement needs to be changed. Moreover, the instructors considered that in order to keep the students' practice free from human interference, the teachers need to design observation methods thoughtfully.

Conclusion

In order to evaluate students by using EPAs, the instructors need to spend more time, change the original work arrangement and design observation methods thoughtfully. A well-developed EPAs training for teachers may improve the above situations.

EDUCATIONAL VALUE OF THE VIRTUAL DISSECTION TABLE IN ANATOMICAL EDUCATION FROM STUDENTS' AND TEACHERS' PERSPECTIVES

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Background and Aims

Cadaveric dissection has been an essential part of anatomy teaching in medical education for centuries. However, due to various constraints such as maintenance cost and availability of cadavers, modern technological applications like the virtual dissection tables (VDT) have been proposed as supplementary educational tools. Feedback on new teaching pedagogies is crucial in understanding students' and teachers' perceptions and its effectiveness in facilitating their learning and teaching of anatomy, so that appropriate adjustments can be implemented for future curriculum enhancement. In the recent implementation of the Anatomage table alongside prosections in the teaching of anatomy for first year medical students at the NUS Yong Loo Lin School of Medicine (NUS Medicine), this study aims to determine the learning effectiveness and usefulness of the VDT.

Methods

Participants of our study include first year medical students and faculty members of NUS Medicine. The VDT was used to teach musculoskeletal anatomy to students. Prior to an anatomy hall session using prosected specimens, the teacher demonstrated specimens on the VDT and projected it on the screen to students. This study was approved by the institutional review board (NUS-IRB-2022-584). An online questionnaire and focus group discussion were conducted after obtaining informed consent from participants. The online questionnaire consisted of five-point Likert scale and open-ended questions. The Qualtrics survey software was used to deliver the survey and generate descriptive statistics. Data were reported as mean, ± standard deviation (± SD). Responses from the focus group discussion were transcribed and thematically analysed.

Results

We evaluated the benefits and limitations of the VDT as a complement to prosection in the learning and teaching of anatomy. Implementation of the VDT in future curriculum enhancement and teaching of other body systems were also explored. In addition, we studied how the usage of the VDT enhanced the learning of anatomy in the following aspects: 1) identification of the anatomical structures, 2) appreciation of the structural relations and 3) engagement of students. In our presentation, we will share what we have learned about the learning effectiveness and usefulness of the VDT as a complement to prosections and its future role in the medical curriculum.

Conclusion

The VDT plays a valuable role in the learning and teaching of anatomy. It is a useful supplementary educational tool to traditional teaching modalities such as cadaveric dissections and the use of prosected specimens. Leveraging this novel teaching strategy will help today's students embrace learning approaches that meet the challenges of adapting to technology in medical education.

TUESDAY 23RD MAY 2023, 9.00AM

VIRTUAL ROOM 4, HYBRID CONFERENCE

SHORT COMMUNICATIONS 10

DO LECTURES HAVE A PLACE IN MODERN MEDICAL CURRICULUM?

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Background and Aims

Lectures remain a major component in medical education curriculum and higher education in general. The integration of modern technology, the shift from didactic to interactive, and the development of newer teaching strategies have sparked the evolution of traditional lectures, or may even lead to their exclusion from contemporary curriculum. The aim of this pilot study is to assess students' and academic staff's perceptions of the relevance of lectures in modern medical education.

Methods

Two independent surveys were deployed to two groups of participants anonymously: (1) First-and second-year medical students, and (2) academic staff at the National University of Singapore (NUS). The surveys contained 7 close-ended and 2 open-ended items. Close-ended items were positively-expressed statements where participants scored on a 5-point Likert scale.

Results

Responses from 44 students and 24 academic staff were recorded in this pilot study. Among the closed-ended statements, students rated that lectures "provide an overview of required knowledge" and "complement other teaching formats" the highest at 4.41±0.62 and 4.41±0.73 respectively, whereas academic staff rated that "classroom engagement during lectures improves teaching/learning" highest at 4.48±0.59. Most of the respondents from both groups agreed that "lectures should continue to be included in the current curriculum".

Qualitative analysis of open-ended items revealed several recurring themes. From the student responses, the most frequent themes were that lectures provided an opportunity to ask questions and clarify uncertainties (n=6) as well as defined scope of the syllabus (n=6), whereas that from academic staff responses were that lectures provided fundamental knowledge for the course (n=7). Regarding areas for improvement, students cited teaching material organisation and presentation (n=6) and use of technology and online platforms (n=5), whilst academic staff cited a need for more student interaction (n=7) and more student engagement (n=7).

There were several limitations of this pilot study including lack of distinction for the term lecture (synchronous or asynchronous, face-to-face or remote) and that other metrics such as assessment results or student feedback scores were not evaluated.

Conclusion

The general sentiment from students and academic staff alike in this study was positive towards lectures with an overall consensus that lectures should continue to be included in the current curriculum. The findings and themes identified from the current study contribute to the literature regarding the relevance and best practices of lectures in contemporary medical education curriculum and may be beneficial for future evidence-based curricular enhancements, especially in a post-pandemic world.

REFLECTING ON APPLICATION OF INNOVATIVE TEACHING MODELS IN CLINICAL PLACEMENTS: A PILOT STUDY WITH SENIOR-YEAR MEDICAL STUDENTS

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Background and Aims

Clinical placements teaching is challenging in terms of time constraints, lack of effective teaching model and consensus teaching approach. Bedside Inpatient Ward (BIW), General Practice Clinic (GPC) and Hospital Out-Patient Clinic (HOPC) teaching apply theoretical and simulated learnings into clinical practice. BIW teaching is limited by volume of patients and lack of diversity of conditions presented. GPC and HOPC can improve students' placement learning with the learner-centred approach being shown to facilitate deeper learning by demonstrating "seeing patients under supervision" to be a teaching model. This teaching model has engaged both supervisors and students in exercising the five domains of clinical reasoning (CR). However, this teaching model has not been consistently applied in clinical placement, hence, this pilot study is to survey the students' ranking of six different teaching models; explore the enablers and barriers of implementing the teaching model, which is ranked the most ideal by the students.

Methods

This pilot study involved twenty Australian year 4/5 and fifteen Chinese year 5/6/7 medical students with email questionnaires to rank teaching models before and after the placement plus written reflection from individual interviews. All participating students will have both email questionnaires and individual interviews. The six teaching models are mainly defined according to the way supervisors interact with students to ensure the delivery of the learning points during the consultations. Reflection data were collected from Australian students during their year 4/5 general practice placements in 2020-2022 and Chinese students during their 4-weeks exchange elective placements at HOPC and GPC in Australia and China in 2017-2019.

Results

The survey confirmed the most preferred teaching model as “seeing patients under supervision in a consultant’s chair with discussion” among the six teaching models. The reflection of this teaching model was qualitatively analysed in seven themes including the main theme of reflection on clinical reasoning learning based on the five domains of clinical reasoning learning, and six other themes of “Clinical Competency”, “Salient learning points”, “Feedback discussion with supervisor”, “Impact on OSCE exam preparation”, “Limitation from students’, patients’ and supervisors’ perspectives”, “Impact on your readiness to become an intern”. The enablers of this teaching model implementation lie in the main theme of clinical reasoning learning being perceived academically beneficial by all students, and the rest of the themes valued by all students to improve clinical competency and intern readiness. The barriers are longer consultation time and lack of dedicated supervisors. Improvement strategies include teaching-dedicated booking system and teaching-dedicated supervisor recruitment.

Conclusion

This pilot study demonstrates the academic benefits perceived by Australian and Chinese students through their reflection, in particular the innovative model of “See patients under supervision in consultant’s chair with discussion”. The innovative model embraces the concepts of “cognitive apprenticeship” and “transfer of learning” to improve CR learning, clinical competence and independent practice capability. The enablers and barriers of this teaching model implementation were discussed with suggestions that formal implementation into the placement curriculum is feasible with barrier-mitigation strategies. A large-scale study is required to explore more strategies to overcome the barriers for an internationally-recognised formal implementation.

BUILDING A COMMUNITY OF EDUCATORS: REPORTING AN EXPERIENCE TO ENHANCE AND SUSTAIN RESILIENCE AMONG HEALTHCARE EDUCATORS IN TIME OF PANDEMIC

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Background and Aims

A community of practice (COP) gathers people with a special interest in a topic to interact and learn together. In times of uncertainty during COVID-19 pandemic, healthcare professionals undergo constant distress in their daily routine. It is imperative to build a supportive network to sustain the momentum of learning to tide through this crucial period. Through the principle of collaborative learning, a COP may be in a great position to achieve that. To date, no local studies have examined the effect of COP for community learning in times of a pandemic. This paper seeks to report a local hospital’s experiences in adopting principles of COP to gather their allied health community of educators for collective learning on resilience.

Methods

Prior to COVID-19, COP for educators was run every quarter. During the pandemic, face-to-face interaction was discouraged and limitations were placed on group interaction. However, the need to support the community of educators was crucial and COP transcended to a virtual platform. A series of sessions was planned revolving around the theme of resilience. Personnel within the organisation were invited to share their expertise on building resilience.

Pre-session survey was conducted to scope the first session and post-survey was conducted at the end of every session to collate learning points and unaddressed questions; and to plan for subsequent sessions. Learning highlights from the sessions was consolidated and made available to participants. The first session focused on the concept of resilience and building awareness of it. Based on feedback collated, the second session encompasses the application of learnings from the first session. A third session involved a panel of three speakers, relating their personal experiences, for a more intimate interaction with participants via a virtual platform. Throughout all sessions, assigned moderators facilitated discussion between participants and speakers. A fourth session was added at the height of the pandemic to further consolidate learnings.

Results

A total of seventy feedback was collected from all four sessions. Based on the feedback, most of the participants prefer COP sessions to be organised via virtual platform. All participants stated that they are likely or most likely to attend a COP session via zoom if it is organised again. Notably all participants were able to state at least one learning point and some of them stated how it can be applied within work context. In the earlier two sessions, forty out of the fifty-one responses (78.4%) contributed questions that facilitated planning for the subsequent session.

Interestingly, some of the participants collated details of sharing from the session and made it available to all participants - this was self-initiated. Such actions reflected the principles of COP which emphasised on collective and interactive learning.

Conclusion

COP is a useful platform for learning. In this experience, it facilitates the understanding of resilience and application of learnings among a community of educators. This was achieved via an online platform. As with the principles of COP, it provides intangible values to self, community, and organisation throughout the process of learning together.

SIMULATION-BASED TEACHING IN MEDICAL PROGRAM IN A PRIVATE AND PUBLIC UNIVERSITY IN MALAYSIA

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Background and Aims

Simulation experience is based on learners practicing tasks in a life-like environment using model or virtual reality. Average retention of learning is estimated to be 75% when a learner practices by doing the task. Simulation practice involves the adult learners in the process, which gives the learner enriched experience. When the practice involves clinical problems aligned to the real-life experience, the process enhances engagement of the learner. Standardised or virtual patient embodies the character, performs the role, which is reliable in context and evidence and provides constructive feedback to the learners. A simulation template should be constructed based on mostly five primary objectives and maximum ten secondary objectives. Critical elements in a simulation involves patient safety, sequence of events related to actions which help to gain competencies related to learning objectives, time frame to initiate these actions and durations of each events.

Methods

Virtual simulation is a technology aiming to recreate life-like situations allowing students or doctors or nurses to acquire skills and competencies in a safe environment. To improve clinical reasoning and diagnostic skills, virtual environments were created in International Medical University clinical semesters with the aim to engage learners in authentic goal directed work activities. Apart from introduction of the patient's chief complaints, narratives and discussions on pathophysiology and investigation tools, support recall and appraisal by the learner to re-enact clinical practice settings. Scenario based learning in online platforms allowed the learner to associate between the presenting complaints and other information, while attending life-like emergency situations in manikins allowed learners to acquire learning processes regarding clinical reasoning and apply decision making principles.

The upgrading process for the Clinical Skills Centre (CSC) in UITM began in 2019. Prior to that, it was used sporadically by certain disciplines, such as Surgery, Obstetrics & Gynaecology and Emergency Medicine. Following upgradation, the centre was divided into four sections: focused skills station (FSS), simulation ward, (basic & advanced) life support and virtual reality. An Ultrasound training section and audio-visual suites were later added. In the directed-self learning sessions, students watch a video instruction of the procedure and attempt the skill on a mannequin. Focused skills stations are posts to learn skills such as venepuncture, setting up intravenous lines and wound suturing.

Results

The usage of the online platform as well as high fidelity simulations in manikins and feedback will be discussed in the presentation. In 2021, during the height of the pandemic, MOH training hospitals were off limits for the students. During this time, the focused skills stations had a total of 10,630 practices by 663 students, while 2052 practices were performed at the simulation ward, with real patients. The feedback by the students will be discussed in the presentation. In 2022, students are allowed back for clinical training in hospitals and various health clinics. Since then, the usage of the CSC has waned.

Conclusion

Online clinical scenario-based cases and high-fidelity manikin-based simulations help the students to rehearse the cases before attending ward-based teaching. The setting up of a clinical skill centre can successfully support clinical training during non-availability of clinical training centres due to a pandemic. However, students may still prefer real patient experience compared to simulation, when given the opportunity.

TEACHING AND LEARNING AS ADVENTURE

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Background and Aims

At this time in history, the COVID-19 pandemic continues to challenge us, healthcare provider burnout is high, and there are many events globally to be concerned about. In times of crisis, we tend to focus more on survival than innovation, yet it is essential that we invest in creative solutions to train new healthcare providers, while sustaining the ones we have.

Methods

I've recently had the privilege of being invited into the 3M National Teaching Fellowship, Canada's highest post-secondary teaching honour. In preparing my dossier for the Fellowship, I realized that for me teaching and learning are adventurous undertakings.

Results

As a learner, I'm at my best when I'm uncertain about a new topic, but I'm motivated to learn. As a teacher, I'm at my best when I'm a tad nervous about the topic, and thus motivated to be well prepared; and when I'm excited to try to share an important message with my learners, and thus motivated to make the message salient and relevant to the diversity of learners in the room.

Teachers and learners cannot fully enjoy the adventure of education if they are too concerned about maintaining order, or standardising teaching and learning approaches; just as a mountain climber cannot fully enjoy their hobby if they are paralysed by fear of falling. Adventures in the great outdoors involve risk, and are most meaningful when appropriate risks are accepted and mitigated. Teaching has different risks, but is nonetheless risky, and teachers are more likely to find the practice meaningful if they accept and embrace risk: like the risk of embarrassment, the

risk of encouraging student engagement but losing control, the risk of trying a novel technique and having it fail, or the risk of not being an expert (and no one can truly be an expert in teaching).

To acknowledge risks to our learners, we need to consider our current resilience rhetoric, and question whether our learners have equitable access to the luxury of resilience (time, money, social capital). As we acknowledge past wrongs and the value of diversity, we are diversifying the pool of healthcare trainees, but we are struggling to accommodate the diverse needs of these learners, in a system not setup to allow for the workforce to have limitations.

If we embrace the adventure of education, our classrooms should be places of intellectual challenge for both teacher and learner; places of engagement, diversity, and disruptive innovation; places where teachers and learners collaborate, and new ideas are generated. When our classrooms involve clinical environments, we need to provide support for busy clinicians, so that as they strive to meet the needs in a changing world, we find creative ways to save them time and make the teaching experience more meaningful.

Conclusion

An adventure mindset encourages us to accept a degree of risk and uncertainty. Making change involves risk, but not making changes that are required to sustain our healthcare workforce in a changing world, is perhaps a greater risk, and one that we cannot afford to take.

A MICROBIOME CARD GAME TO PROMOTE INTEREST AND AWARENESS AMONG MICROBIOLOGY AND NON-MICROBIOLOGY STUDENTS

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Background and Aims

Microbes are linked to infections, sickness, and death. Yet, this view is hardly complete: microbes are everywhere, part of everyday life and pre-requisites for our own good health and that of our planet's. Microbes are also recognized as crucial and versatile tools to address the UN Sustainability Development Goals; a veritable swiss-army knife that ought to be at everyone's disposal as we tackle some of the world's most complex problems from pandemics to climate change, sustainable foods to environmental remediation.

To appreciate the impact of microbes and maximize their utility, we need make connections with other disciplines, interests, and experiences in everyday life. This needs to happen at both the research and education fronts, with the latter involving the promotion of microbiology beyond the schools of medicine and sciences, to better engage students from all disciplines. This presents many challenges as students may neither have the interest nor confidence to even begin the journey. Consequently, tools that inspire curiosity while empowering self-directed learning are critical to engage learners coming from disparate disciplines.

Using the analogy of a fishing, the bait needs to look natural, attractive and innocuous. That rules out most textbooks, courses and lecturers as far as teaching microbiology is concerned - students know better than to fall for that. We are therefore in the early stages of developing a card game that looks commercially produced, is easy to pick up and fun to play, while not requiring any domain knowledge to enjoy and get good at. But bait must ultimately have both a hook and a line attached to it as well. As part of this talk, I will present some preliminary data on how undergraduate students have responded to the game, and their opinions about whether they have indeed become hooked on the subject.

Methods

In this pilot study, 40 undergraduate students from medicine, life sciences and psychology were asked to read through the game instructions before giving feedback on the instructions, and then played two rounds of the game, without supervision, before providing feedback on their experience. Feedback, both quantitative and qualitative, was collected using Qualtrics and observations by session facilitators were also recorded. Quantitative feedback

will be analyzed using descriptive statistics while qualitative data will be coded for semi-quantitative analysis or to look for specific constructive suggestions to improve game play/design.

Results

The feedback from participants is expected to inform changes to the game instructions, design and play while providing insights into level of enjoyment, engagement and identify preliminary learning gains.

Conclusion

Data from this pilot study will enable us to further refine the microbiome card game (mechanics, instruction, artwork) and to identify the salient learning outcomes that arise from unsupervised gameplay. The latter will help us to develop assessment tools for downstream work to quantify learning gains using pre- and post-play testing.

SCHOLARSHIP FOR TUITION FEES FOR NURSING STUDENTS IN MONGOLIA

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Background and Aims

The School of Nursing of MNUMS was established in 1929 as the oldest school in the field of health, under the name of the first nursing course, according to the decision of the People's Government. More than 11,000 nurses, midwives, junior doctors and other medical specialists have been continuously trained in Mongolia for 93 years. There is a need to reduce the shortage of nurses and provide real support based on needs.

Methods

Quantitative and qualitative research methods were used in the study with a single-moment descriptive design. In the context of the Mongolian government's decrees and decisions, the study of nursing specialist tuition scholarships and grants was conducted through document analysis within the framework of the nursing program of the University of Nursing.

Results

In Mongolia, as of 2021, about 3,100 students are studying "Nursing" in higher education institutions operating under the Nursing program. The GPA of Mongolian university students is 0-4.0, and the entrance exam score is 0-800. The 2020-2024 action program of the Government of Mongolia stipulates that "up to 100 personal scholarships will be awarded to nursing students in state-owned higher education institutions based on their academic success." Also, according to the Resolution No. 70 of 2020 of the Government of Mongolia, if the entrants to higher education diploma or bachelor's programs in nursing at state-owned higher education institutions have scored more than 501 points in the general entrance exam, 100 percent of the tuition fees for the first semester of the academic year will be paid for students with a GPA of 2.5-3.0. It was decided to cover 70% of the tuition fee in case of students with a GPA of 3.0 or higher, and 100% of the tuition fees in case of students with a GPA of 3.0 or higher. 1 billion 445 million (1,445,195,424) MNT was awarded to 383 students for 70% tuition fee scholarships and 1019 students for 100% scholarships for a total of 1402 students in the School of Nursing of MNUMS in the academic year 2020-2021. 1 billion 652 million (1,652,246,750) MNT was awarded to 198 students for 70 percent tuition fee scholarships, 1398 students for 100 percent scholarships, and a total of 1596 students at the School of Nursing of MNUMS in the academic year 2021-2022. The government of Mongolia has provided 3 billion 97 million (3,097,442,174) MNT in the form of tuition fee grants to 2998 students from 2020 to the School of Nursing of MNUMS. The average score of the general entrance exam of students admitted to nursing profession in 2020 was 450-480, and starting from 2021, after studying the needs of nursing professionals and requests for payment support from schools and students,

the general entrance exam score (from 501 above) will be changed to 450, and students studying in private schools (from state-owned schools) are also supported.

Conclusion

Continue to provide grants for nursing professional education implemented by the Government of Mongolia. There is a need to support the study and specialization of Nursing in foreign Universities.

GENERIC SKILLS ASSESSMENT FOR UNDERGRADUATE MEDICAL STUDENTS: TRANSLATION AND VALIDATION OF INDONESIAN VERSION

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Background and Aims

The current landscape of work is changing due to the rapid development of technology and globalization. Hence, the future employers also expect future workers to possess generic skills, which are defined as the core competencies that can be applied across disciplinary fields, to complement their hard skills to thrive in the competitive working environment. In medical education, the development of generic skills, including critical skills, teamwork, communication, leadership, and mental flexibility, has received considerable attention in medical education curricula worldwide. However, there are still very limited tools to assess these skills in the classroom. Groen, et. al. (2020) developed a tool to assess five domains of generic skills needed in the healthcare profession in English, including analytical thinking, communication, time management, teamwork, and professionalism. The aims of this study are to translate and validate the assessment tools developed by Groen, et. al. to suit the Indonesian context.

Methods

Ethical clearance from Research Ethics Committee in Atma Jaya Catholic University of Indonesia. We referred to the WHO's guideline for translating and validating an instrument, which consisted of five stages: 1) forward translation, 2) expert panel, 3) back translation, 4) pre-testing and cognitive interviews, and 5) the final version. To ensure the accuracy of the translated instrument, we added another four stages, including proofreading (prior to step 2), expert panel review after step 3 and 4, and pilot testing along with quantitative validation after step 5. NP, GA, ER, and DJJ were involved in the panel expert review using the Delphi approach. Professional translation service was used to do the forward and backward translation. Ten fourth-year students from Atma Jaya School of Medicine were involved in step 4; meanwhile, we piloted the translated instrument to other 35 fourth-year students from the same school and program. We conducted an internal reliability test using Cronbach's alpha and construct validity test including corrected total-item correlation and principal component analysis to validate the translated instrument quantitatively.

Results

In the translation stage, we developed the Indonesian version of the generic skills assessment tool that was considered valid by the expert panel, and the result from pre-testing and cognitive interviews with 10 respondents indicated that the self-assessment questions in this instrument were relatively easy to understand. Several concepts, such as questioning one's assumption and views, and suggesting intervention to improve group dynamics were relatively hard to understand but we could not find a better translation for it without changing its meaning. Hence, we went through with the current translation for the pilot testing phase. From the quantitative data analysis, the instrument was found to have high internal reliability (Cronbach's $\alpha = .955$) and corrected item-total analysis from all 33 items ranged from .345 to .757 (met the minimal r value). Factor analysis showed 6 domains that we labeled as analytical skills, teamwork, communication skills, perseverance, social judgement, and global abstraction skills.

Conclusion

The translated instrument can be used as a valid and reliable instrument to assess undergraduate medical student's generic skills.

TUESDAY 23RD MAY 2023, 10.45AM

VIRTUAL ROOM 3, HYBRID CONFERENCE

SHORT COMMUNICATIONS 11

SURVEY OF JUNIOR DOCTORS' ATTITUDES TOWARDS AND KNOWLEDGE OF GERIATRICS

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Background and Aims

To assess the attitudes and knowledge of junior medical doctors in the department of medicine towards geriatric medicine.

Methods

Surveys of 30 junior doctors during their Medicine rotation were administered an anonymous questionnaire on their knowledge of geriatric medicine and a 14-item geriatrics attitudes scale.

Results

53% of respondents were female. Mean age of respondents was 29.0 ± 2.8 years. 93% of respondents agreed that geriatrics is an important field. One-third agreed, disagreed or were neutral about having received sufficient exposure and training in geriatrics during their medicine rotation. 100% of respondents agreed that geriatric knowledge is applicable outside of their rotation.13% agreed and 37% disagreed that our healthcare system is able to cope with the aging population. The 14-item geriatrics attitudes scale showed good reliability (Cronbach's alpha = 0.81). The overall mean score was 3.55 which indicates overall positive attitudes towards older adults. Respondents were asked to rate their level of knowledge on eleven topics in geriatrics. The mean knowledge score was 6.19 with Cronbach's alpha = 0.97). Respondents reported the least confidence managing continence (mean score 4.93 ± 1.91), dementia (5.77 ± 1.89) and agitation (5.77 ± 2.00). Respondents had most confidence managing falls (7.07 ± 1.72), delirium (6.87 ± 1.78) and discharge planning (6.70 ± 1.78).

Conclusion

Junior medical doctors overall have positive attitudes towards older adults. Surveying junior doctors to find gaps in knowledge can help with tailoring teaching programmes and rotations to meet the need of equipping doctors to handle older adults and an ageing population.

ENGAGING STUDENTS TO CO-DESIGN AND DELIVER A PROGRAM TO SUPPORT THE DEVELOPMENT OF INTER-PROFESSIONAL PRACTICE

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Background and Aims

Preparedness of health graduates to engage in interprofessional practice (IPP), is essential to a patient-responsive, effective and efficient healthcare system. Whilst interprofessional education (IPE) is seen as foundational to IPP, best practice in its development and implementation in undergraduate programs remains ambiguous. Collaboration between medicine and paramedicine undergraduates are uncommon. The reasons are many but are centred around curriculum, time and space constraints. Blended learning may present a solution to these constraints and provide a neutral ground for students to engage with learning without the overlay of hierarchical power dynamics that may be present in work-based settings. Our project investigates the impact of a co-designed, blended IPE learning activity on the attitudes of medicine and paramedicine students towards interprofessional practice.

Methods

Three volunteer students partnered with faculty members to create and deliver a weeklong blended learning experience. This presentation describes the first part of a University of Notre Dame (School of Medicine) and University of Tasmania's (Faculty of Paramedicine) collaboration and engaging students as co-designers and facilitators to deliver a quality, research-informed blended IPE learning activity.

This is a mixed method, proof of concept pilot study that will focus on changes to medical and paramedics students' attitudes towards interprofessional practice. Participants were volunteer Year 2 medical students from the University of Notre Dame, Sydney and final year UTAS paramedic students.

Results

Data is currently being collected and analysed to measure whether there is a shift in attitudes towards interprofessional practice using validated scales and focus groups.

Conclusion

As essential stakeholders in IPE, students can be engaged as co-creators in planning and facilitation of IPE, developing skills in peer- teaching, building future capacity for skilled facilitator workforce and providing opportunity to experience collaborative leadership practices in interprofessional practice.

STUDENTS AS PEER-EDUCATORS IN MEDICAL EDUCATION

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Background and Aims

Peer-assisted learning (PAL) is a teaching strategy in which pupils help one another. This phrase describes educational exchanges through active participation of both sides and benefits both parties. It relates to various student activities intended to prepare students to work as instructors and trainers in non-formal medical education.

The IFMSA developed a Meaningful Student Engagement in Medical Education policy, adopted in 2019, as well as the numerous capacity-building activities relating to practice and the inclusion of PAL in the curriculum, demonstrating the organisation's long-standing advocacy for students to be welcomed as educators in medical education.

Methods

To collect the data, we reviewed IFMSAs Trainers database, Medical Education-related workshop database and all submitted activities were subjected to quantitative analysis.

Results

IFMSA established the foundation for its internal operations by creating training workshops, which have resulted in the recruitment of 309 trainers globally. In the past 3 years alone, 13 Training Medical Education Trainers workshops were held worldwide graduating 167 medical education trainers.

Aside from capacity-building, the National Member Organisations of IFMSA have conducted 32 projects revolving around peer education topics like peer mentorship, peer educator training, the online practice of PAL as part of non-formal medical education. These activities have achieved more than 80 percent of their success indicators and impacted over 2500 medical students. A comprehensive analysis of the impact of these training and activities will be presented at the conference.

Conclusion

There are several ways to include peer-to-peer learning into the medical field, including mentoring problem-based learning teams, instructing history-taking and physical examination, serving as a senior student consultant for junior students, and integrating a (elective) student-teaching rotation. Now that PAL has gained recognition as a highly effective component of non-formal medical education, our goal is to push for its inclusion in the core curriculum. Both the learner and the student-teacher benefit from PAL. The training and activities provided by IFMSA are meant to enhance participants' knowledge of the subjects and their soft skills as volunteers and student trainers. These practices will assist students in becoming competent educators and leaders in the future.

E-PRESCRIBING SIMULATOR: A TOOL FOR STUDENTS TO LEARN SAFE PRESCRIBING

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Background and Aims

Students need to learn the 5 rights (patient, drug, dose, route, timing) of safe prescribing. Lee Kong Chian School of Medicine built an ePrescribing simulator to train students to prescribe safely. ePrescribing Simulator: A Tool for Students to Learn Safe Prescribing.

Methods

The ePrescribing simulator, built in-house, is cloud-based and simulates an electronic prescribing system. The simulator is populated with a list of patients and their information: name, age, clinical conditions (e.g., DKA), drug allergy, weight, etc. For each patient the faculty inputs the medications and fluids into the simulator, which are the correct answers that the simulator uses to auto-mark the students' ePrescriptions. When the practicum starts, each final year student logins with an unique identity and selects the right patient who needs a prescription. Based on the patient's condition, students order the medications and fluids in the simulator. The simulator auto-marks students' ePrescriptions and feedback is given as a green tick for correct orders. Faculty reviews students' ePrescriptions "live" after each patient and focuses discussion on common and high impact errors.

Results

There were 117 students who prescribed medications for two patients with hyperkalaemia. Focusing on insulin, a high alert medication and cornerstone treatment for hyperkalaemia, the number of ePrescriptions that have 4, 3, 2 and 1 right is compared. There were 377 insulin ePrescriptions - stat, infusion (immediate and latter) for Patient 1. After faculty's feedback, students submit their ePrescriptions (n = 410) for Patient 2. Comparing number of right ePrescriptions for Patient 1 vs. 2: 4 right: 140 vs. 148, 3 right: 131 vs. 147, 2 right: 2 vs. 34, 1 right: 104 vs. 81. Chi-square analysis shows p-value < 0.001 i.e. number of right ePrescriptions is significantly higher for Patient 2.

Conclusion

The ePrescribing simulator allows deliberate repeated practice in a safe environment and provides feedback, factors that lead to rapid improvement in students' ePrescribing.

VALIDATION OF OSCE TEST ITEMS THAT MEDICAL STUDENTS SHOULD MASTER BEFORE CLINICAL CLERKSHIP: A MODIFIED DELPHI STUDY

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Background and Aims

In Japan, the OSCE (Objective Structured Clinical Examination) has been conducted at each medical school for medical students prior to clinical clerkship, so-called "pre-OSCE", under the auspices of the CATO (Common Achievement Tests Organisation) since 2005. With the revision of the Medical Practitioners Act in 2022, this examination is scheduled to become more formalised. Therefore, our research group has re-examined the validity

of this exam. Our research question was, “What should all medical students master before beginning their clinical clerkship that should be assessed in the OSCE?”.

Methods

We adopted the modified Delphi method in this study. We recruited thirty-two people as the expert panel. Their occupational categories were: physicians, nurses, pharmacists, rehabilitation therapists, medical social workers, medical students, medical office staff, and simulated patients. The initial list of items for medical students to learn was developed based on the current pre-OSCE items as well as the Japanese Model Core Curriculum for Medical Education and the Scottish Doctor’s 3 circle model. The panellists evaluated the necessity of the items on a 5-point Likert scale (5 absolutely necessary - 1 absolutely unnecessary) and occasionally made suggestions for new items. This study was conducted from December 2020 to March 2021.

Results

This modified Delphi method was conducted until the second round, and 11 test items were identified for which the percentage of “absolutely necessary” exceeded 50%. In addition, there were 17 items for which the combined percentage of “absolutely necessary” and “necessary” items exceeded 50%. Items related to physical examination accounted for the largest number in 5 of the 11 categories (8 out of 17 items). Other categories included medical interviewing, emergency management and treatment, basic clinical procedures, infection control, laboratory tests, clinical reasoning, medical records, and medical safety.

Conclusion

We have clarified what all medical students master before beginning their clinical clerkship that should be assessed in the OSCE. Although this study was conducted in the setting of undergraduate medical education in Japan, the results and processes of this study can be applied to other countries.

CLINICAL TEACHING AND ITS EFFECTS ON MEDICAL STUDENTS’ PERFORMANCE IN STUDENT CENTRED LEARNING ENVIRONMENT.

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Background and Aims

The core of medical education is effective clinical teaching, but maintaining it in hectic, pressured healthcare settings raises issues. Due to the different attitudes of teachers and clinical responsibilities, time devoted to medical student education is declining

Methods

A descriptive cross-sectional study was conducted between August 2021-August 2022. Self-administered, voluntary, anonymous questionnaires developed by the researchers were used, fifth year students completed professorial surgery appointments were included.

Results

A total of 182 patients [males=79,43.4%; females=103,56.6%] were included. Out of 175 students, the majority (n=65,35.7%) received a pass for the applied sciences stream exam. Regarding University Academic staff, most of the students (n=106,58.2%) agreed that they commended students’ contributions and answered the questions. Majority (n=116,63.7%) agreed that they got the opportunity to put their knowledge into practice. 100 (54.9%) students agreed that there is congruence between learning objectives and the actual content. Significantly 129 (70.9%) students agreed that they were taught clinical reasoning on patient encounters by non-university academic staff.

Consultants had the highest level of contribution to student teaching [mean=3.049, range (1-4); SD 0.998]. Highest level of confidence students had for procedures, was filling request forms [mean=4.133, range (1-5); SD 0.8907] and least level of confidence seen in for endotracheal tube intubation [mean=2.256, range (1-5); SD 0.9951].

Conclusion

Medical students receive good quality clinical education from both university academic staff and other teaching staff. Even though their confidence in performing skilled procedures needs further improvement, which needs to be addressed.

CURRICULUM REFORM AND TRAINEES' PERCEPTION OF THE PHARMACY EDUCATIONAL ENVIRONMENT

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Background and Aims

An undergraduate pharmacy curriculum reform was undertaken in 2014 to meet the future healthcare demands of the people in Singapore. The key areas of change included moving from a modular-based to an integrated, theme-based curriculum; introduction of Pharmacy Professional Skills Development modules; mandating final-year research project to hone problem-solving and evidence-based practice; and extending the Pre-employment Clinical Training (PECT) period in the final year of study. Understanding how such an educational reform affects the learners' perceptions of the learning environment is important for quality assurance. Little is known about how any change to the curriculum would affect the trainees' perceptions of the educational environment (EE). The primary aim of this study was to investigate how pharmacy trainees perceive their EE before and after curriculum reform. The secondary aim was to evaluate the strengths and areas for improvement of the EE in the new curriculum.

Methods

This was a non-experimental, cohort study using retrospectively collected national pharmacy trainees' survey. A modified version of the Dundee Ready Educational Environment Measure (mDREEM) was analysed to study the undergraduate pharmacy EE. The 50-item mDREEM utilises Likert-scale of 0 to 4 and has a maximum score of 200, with a full score indicating the ideal EE as perceived by a learner. Univariate analysis was used to compare the responses of trainees from the old and new curriculum.

Results

The sample comprised 523 (93.7%) responses from the old and 677 (94.6%) from the new curriculum. The global mean scores for mDREEM survey in the old and new curriculums were 150.4 and 156.2, respectively ($p<0.001$). These results indicate that there was an increase in satisfaction of the new EE. Under the new curriculum, the three items with the highest mean score are 'The preceptors were knowledgeable and competent at what they do' (mean= 3.61), 'The training required me to interact with patients/ customers/ health professionals/ administrators/ managers directly to complete the tasks assigned' (mean=3.53), 'The preceptors demonstrated professionalism at work and during training'(3.53). The three items with the lowest scoring include 'I felt that what I learned from school provided a good foundation for the rotation' (mean= 2.48); 'I was too tired to enjoy the training' (mean= 2.47); and 'My social life was good during the training' (mean= 2.24). In the new curriculum, the perceived EE varied across different pharmacy settings, and trainees rated their educational environment after graduation lower than that during their undergraduate training.

Conclusion

Perception of the quality of an EE is a composite measure of interpersonal relationship, organisational factors and personal goals in a space or context where learning is supposed to occur. An instrument like mDREEM will

allow pharmacy schools and regulatory bodies to understand and act on the perceived strengths and areas of improvement in a learning environment. Our study affirms the proposition that changes made to a curriculum are essentially changes in environments. We propose that any planning, execution, or evaluation of curriculum reform should be accompanied by studies of the environment where the curriculum is to take place.

CORRELATION BETWEEN SELF DIRECTED LEARNING READINESS AND STUDENTS ACHIEVEMENT INDEX OF THE FACULTY OF MEDICINE, UNIVERSITAS BAITURRAHMAH

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Background and Aims

One of the most influencing factors in achieving a satisfying score in an academic record is the student himself. It is in the form of readiness for them to learn independently. This situation is often called self-directed learning readiness. It is the level of readiness or the ability to learn independently. The vital role of self-directed learning formation oneself can be used to score the group of student's success in achieving their academic records. The aim of this study is to know the correlation between self-directed learning readiness and student achievement index in the Faculty of Medical Universitas Baiturrahmah.

Methods

This study was conducted in the Faculty of Medical Universitas Baiturrahmah's third semester from March to September 2020. This study belongs to unpaired comparative analytics by using a Cross-Sectional Study design. The study population is all the third-semester students of Universitas Baiturrahmah with 105 samples. The sample is taken randomly. The union varied data analysis shown in the frequency distributed table and bivariate analysis uses a Kruskal-Wallis test with the SPSS program.

Results

There is a correlation between self-directed learning readiness with student scores in the third-semester students of the Faculty of Medical Universitas Baiturrahmah, it is obtained the result of p=0,001 shows the most SDLR score is at the high level, acquired by 67 students (63.8%) and the most concern is from the very satisfying grade earned by the students, 78 students (74,3%). So it can be assumed that there is a significant relationship between SDLR and the student's academic achievement.

Conclusion

There is a significant correlation between Self Directed Learning Readiness and academic achievement of the third-semester students of the Faculty of Medical Universitas Baiturrahmah.

WHAT ARE THE BENEFITS OF REFLECTIVE FEEDBACK? - THE INSTRUCTORS' PERSPECTIVES

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Background and Aims

Feedback is very important for students' learning. Here, we investigated the benefits of reflective feedback from the perspectives of instructors.

Methods

Debriefing training for examiners was arranged before the situated simulation exam (SSE).

During the training, reflective feedback was taught in detail. SSE was scheduled for respiratory therapy interns on July 12, and August 10, 2022. SEE contained a 10-minute practice and a 5-minute debriefing. A senior medical educator supervised the process. At the same time, video recording of the full process was made. Within a few days after SSE, the senior medical educator arranged one-on-one instruction. During one-on-one instruction, reflective feedback was discussed through watching examiners' own videos which were made from SSE. After one-on-one instruction, the examiners were asked to be interviewed if they agreed. The interview was made by a researcher. The verbatim transcripts of the interview were analysed for qualitative study.

Results

Six examiners (5 females and 1 male) joined the SSE. All agreed to be interviewed after one-on-one instruction. The qualitative study revealed that the benefits of reflective feedback were (1) helping students to integrate learning contents; (2) improving students' confidence for learning; and (3) guiding students to understand the logical thinking of clinical practice. Moreover, the examiners considered that reflective feedback was not to correct errors, but to instruct students how to solve the clinical problems.

Conclusion

Reflective feedback can integrate learning, improve confidence and understand logical thinking for students. Furthermore, it can instruct students how to solve clinical problems. The instructors should be trained in reflective feedback.

TUESDAY 23RD MAY 2023, 10.45AM

VIRTUAL ROOM 4, HYBRID CONFERENCE

SHORT COMMUNICATIONS 12

The Lived Experiences and Perceived Competency Needs of Home-Based Care Nurses: A Phenomenological Study
Khairul Dzakirin Bin Rusli, Singapore

Paediatric Cross-Sectional Imaging Feedback Given to Radiology Residents
Tang Phua Hwee, Singapore

Medical Students' Perception on Formative Assessment in the New Doctor of Medicine (MD) Curriculum
Teerapat Ungtrakul, Thailand

Undergraduate Medical Education to Enhance Communication Skills and Nurture Professionalism Utilising Virtual Reality
Junji Haruta, Japan

Implementation of a Web-Based Educational Intervention for Promoting Flipped Classroom Pedagogy: A Mixed-Methods Study
Punithalingam Youhasan, Sri Lanka

Effect of ABC Categorisation on the Cataract Surgery Performance of Ophthalmology Trainees During COVID-19
Vivek Singh, India

A Comparison between Instant Teaching Feedback & End of Posting Teaching Feedback
Kyaw Zaw, Singapore

Integration of Flipped Classroom, Virtual Patient, and Standardised Patient in Patient-Centered Learning and Teaching Approach
Gulshat Kemelova, Kazakhstan

Attitude, Ethics, and Communication (AETCOM) Training Model for Maxillofacial Prosthodontics Graduates in Long-Term Outpatient Care
Anbarasi K, India

THE LIVED EXPERIENCES AND PERCEIVED COMPETENCY NEEDS OF HOME-BASED CARE NURSES: A PHENOMENOLOGICAL STUDY

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Background and Aims

In Singapore, home-based care is expanding to meet the rising long-term care needs of patients in the community. Nurses who often perform home visits independently are expected to deliver a broader range of nursing care

including clinical assessments and decision-making. However, little is known regarding the lived experiences and competency needs of nurses in home-based care. The lack of understanding poses a challenge for nurse educators and managers to adequately support and equip nurses with the competencies required in home-based care. The aim of this study was to explore home-based care nurses' practice experiences in order to understand their competency and needs.

Methods

Descriptive phenomenology design was adopted. Individual interviews were conducted with 17 home-based care registered nurses from the public and private sector. Pre-action, in-action and on-action reflective diary approaches were adopted to guide the bracketing process and Colaizzi's seven-step analysis method was used for data analysis.

Results

The study identifies four themes, nine subthemes and three fundamental structures of the shared phenomenon. The themes include (1) full spectrum of patient care, (2) autonomy in nursing practice, (3) beliefs in person-centred care and (4) enhancing supportive systems. While the shared phenomenon revolves around (i) the transitioning experience, (ii) the autonomy of nursing care experience and (iii) the perspective of strengthening home-based care support systems.

Conclusion

The findings suggest that nurses experienced a steep transition into home-based care despite having past hospital-based setting experience. This is due to the broad range of nursing competencies performed in home-based care and the greater autonomy of nursing practice. The study also highlighted the need for nurses to have more opportunities to consolidate and develop their competence for home-based care through professional development programmes or exposure to practical attachments in home-based care.

PAEDIATRIC CROSS-SECTIONAL IMAGING FEEDBACK GIVEN TO RADIOLOGY RESIDENTS

Tang PH
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Background and Aims

With the requirement to minimise human interaction during the COVID-19 pandemic, feedback was given via WhatsApp rather than face-to-face by a single paediatric radiologist.

Retrospective review of the feedback given to radiology residents over a 6-month period pertaining to paediatric cross-sectional imaging such as CT and MRI were performed to identify areas of weakness for targeted education.

Methods

Radiology residents rotating into the Department of Diagnostic and Interventional Imaging in the year 2022 from January to June had feedback (free of patient identifiers) via WhatsApp, generated when a single paediatric radiologist signed out their CT and MRI reports. WhatsApp messages were retrospectively reviewed and categorised into type of cross-sectional imaging, body part and nature of feedback involved. The gender of the resident, year of residency training and whether the resident had cleared the FRCR examinations were captured. Signed informed consent from each resident was obtained to have the data presented.

Results

Ten residents took part in this project, of which 6 were male and 4 were female. There was 1 pre-residency individual, 3 in the 2nd year of residency, 5 in the 3rd year of residency and 1 in the 4th year of residency. Only the resident in the 4th year of residency had obtained FRCR.

Of the 91 feedback WhatsApp messages sent in the 6-month period, 69 were related to MRI and 22 to CT.

Of the feedback messages, 35 were related to the head, 23 to the torso and 33 to the musculoskeletal system.

Lack of recognition of abnormality accounted for the majority of feedback (71), followed by misinterpretation of findings (20).

Residents did not pick up the visible abnormality in 54 MRIs (18 heads, 9 torso, 27 musculoskeletal) and misinterpreted 15 MRIs (5 heads, 5 torsos, 5 musculoskeletal).

Residents did not pick up the visible abnormality in 16 CTs (9 heads, 7 torso, 1 musculoskeletal) and misinterpreted 5 CTs (3 heads, 2 torso).

54 of these feedbacks (42 MRIs, 12 CTs) had potential to change patient's management (18 related to head e.g. acute infarcts, venous sinus thrombosis, vascular malformation; 18 related to torso e.g. vessel stenosis, perianal fistula, cholecdochal cyst; 18 related to musculoskeletal system e.g. undisplaced fractures of the lower limb, torn meniscus, arthritis, cartilage defects), 13 were abnormalities that contributed to abnormalities already picked up by the resident and thus did not change management, 24 were incidental findings that did not change management (e.g. subcentimeter pineal cysts, Rathke cleft cyst, arachnoid cyst, small amount of subdural blood in posterior fossa post normal vaginal delivery, mucosal thickening in paranasal sinus, stable pericardial effusion, fatty filum).

Conclusion

Feedback to radiology residents overwhelmingly was due to residents missing a visible abnormality on paediatric cross-sectional imaging, predominantly MRI of the musculoskeletal system and MRI of the head. Paediatric cross-sectional curriculum is currently being modified to have greater emphasis in these areas.

MEDICAL STUDENTS' PERCEPTION ON FORMATIVE ASSESSMENT IN THE NEW DOCTOR OF MEDICINE (MD) CURRICULUM

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Background and Aims

Formative assessment (FA) is the process of evaluating student learning, weakness, and area of improvement. By supplying effective feedback, students can enhance their learning and achieve their performance. The new Doctor of Medicine curriculum, Princess Srisavangavadhana College of Medicine (PSCM), Thailand, was developed in 2020 and predominantly uses FA. The assessment program at PSCM consists of FA, which continuously assesses medical knowledge and clinical skills throughout the year. In contrast, the summative assessment will be performed at the end of the year. This study explores medical students' thoughts and concerns about FA, which could significantly contribute to improving FA.

Methods

We conducted a cross-sectional survey on the second and third-year PSCM medical students who had experience in taking FA in September 2022. They were invited to answer an online survey regarding their perceptions of the FA. The questionnaire, adapted from Lim et al., is composed of 4 parts: demographic data, students' perception of FA (SPFA)-which evaluates for congruence, authenticity, consultation, transparency, and accommodation characteristics (17-question set with 5 rating scale), students' preference concerning FA (11-question set with 5 rating scale), and open-ended questions that invite participants to share their opinion on the improvement of FA. Each question set was evaluated and validated by four medical education experts before performing the study.

Results

A total of 40 participants responded to the questionnaire (response rate of 67%), with 58% being third-year medical students. Respondents were primarily female (68%), and more than 80% of the participants were 18-20 years old.

The SPFA result indicates a positive perception of FA in all subscales (86% congruence, 82% authenticity, 78% consultation, 93% transparency, and 90% accommodation). There were no statistically significant differences in results between age, gender, and academic year.

Ultimately, more than 80% of participants agree that FA actively enhances their learning experiences, aids in self-assessment, and identifies areas of improvement. Thirty-four students (85%) agreed that FA helped prepare them for summative exams. However, there are mixed opinions on whether FA is stressful, time-consuming, and creates negative emotions upon receiving feedback on areas of weakness. Furthermore, there are areas of improvement proposed by participants, which include enhancing the constructive feedback process, the flexibility of the FA schedule, and role of medical students in FA design.

Conclusion

FA significantly improves medical students' academic achievements, and most positively perceive FA. However, there are some concerning aspects, such as FA creating additional stress and being time-consuming. Student participation in the design and implementation of FA could be employed for further improvement.

UNDERGRADUATE MEDICAL EDUCATION TO ENHANCE COMMUNICATION SKILLS AND NURTURE PROFESSIONALISM UTILISING VIRTUAL REALITY

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Background and Aims

Due to the COVID-19 pandemic, opportunities for medical students to directly participate and gain first-hand exposure in healthcare settings had been limited. Additionally, medical education has long struggled to verbalise and provide structured teaching for the "soft skills," namely communication skills and professionalism. In order to supplement these immersive learning opportunities, a multimodal virtual space using virtual reality (VR) technology was developed. We used these VR materials for medical students' Early Exposure Program with aims to enhance communication skills and nurture professionalism that are difficult to learn in class.

Methods

The faculty of Keio University School of Medicine supervised and developed the VR video educational materials. A video featuring communication between a physician and a family member for a patient nearing the end of life and a video of the home-based interprofessional team conference were chosen for first- and third-year medical students, respectively. As an educational method, students first experienced a VR video of a physician with poor communication skills from a family member's perspective, followed by a small group discussion. They then experienced an ideal example or commentary of the same video. Total of 108 first year students and 111 third year students participated in this mandatory curriculum. Two researchers conducted thematic analysis on the discussion results and comments, which were submitted by students as an assignment via learning management system.

Results

The response rate of the assignment was 97.3% for the first-year students and 89.2% for the third-year students. Both groups reported gaining the perspective of patient and patient family, especially through observing how physicians' verbal and non-verbal communication significantly impacted how they felt and how they received information. Many students reported feeling "anxious" and "confused" when healthcare professionals used medical jargon or demonstrated intimidating behaviour. The third-year students who watched the interprofessional conference reported gaining the perspective of a physician, especially through the physician's paternalistic behaviour, which led to an authority gradient and awkward atmosphere of the team. While the vast majority of students reported enjoying the realistic learning experience with the ability to look around and focus in the desired direction, a few negative comments included difficulty in taking notes and questioning if the same material could have been presented in the traditional 2D video style rather than VR. Additionally, five students experienced motion sickness with VR, with two students requiring to switch to the traditional 2D screen.

Conclusion

Embodied cognition, or "How the Body Shapes Knowledge," is the key to the development of the important, yet difficult to acquire "soft skills," such as communication skills and professionalism. Immersive and subjective learning experience with VR could be an effective medical education tool for teaching these skills for future healthcare professionals.

IMPLEMENTATION OF A WEB-BASED EDUCATIONAL INTERVENTION FOR PROMOTING FLIPPED CLASSROOM PEDAGOGY: A MIXED-METHODS STUDY

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Background and Aims

Flipped classroom pedagogy (FCP) is recognised as an effective and efficient teaching-learning method. However, nursing students and teachers may be hesitant to adopt FCP due to technophobia and time constraints linked to academic and clinical responsibilities. This necessitates the provision of promotional training for adopting FCP. However, there is a dearth of research regarding the FCP promotional programme for improving its efficacy in developing countries. Thus, this study aimed to examine the educational impact of a web-based education intervention, branded as the Flipped Classroom Navigator (FCN), for promoting FCP in nursing education in Sri Lanka.

Methods

This mixed-methods study employed pre-and post-training knowledge tests, the Instructional Materials Motivation Survey (IMMS), the Perceived Transfer of Learning Questionnaire survey, and collected students' and teachers' open-ended responses to evaluate the impact of the FCN. Fifty-five undergraduate nursing students and 15 university teachers participated in the study from two state universities in Sri Lanka. Repeated-measures ANOVA, t-tests, Levene's test of homogeneity, Cohen's d, and an inductive thematic approach, were employed in the data analysis.

Results

Post-training knowledge test scores were significantly higher than the pre-training knowledge test scores indicating knowledge gains regarding FCP. Participants were also highly motivated to learn in the FCN instructional materials. Participants exhibited positive attitudes towards FCN training with transfer of learning to their teaching-learning practice. The inductive thematic analysis identified the following themes: user experiences, FCN learning content, behaviour changes, and suggested improvements.

Conclusion

Overall, the FCN enhanced both students' and teachers' knowledge and understanding of FCP in undergraduate nursing education.

EFFECT OF ABC CATEGORISATION ON THE CATARACT SURGERY PERFORMANCE OF OPHTHALMOLOGY TRAINEES DURING COVID-19

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Background and Aims

During the COVID-19 lockdown, cataract surgical training was affected with few patients turning up for surgery. With this prospective study we aimed to understand the effectiveness of a novel technique of categorisation of the trainees before the actual surgical training to ensure equitable distribution of cases amongst the trainees during the lockdown.

Methods

The study involved prospective evaluation of the performance of the surgical skills of trainees. The trainees after joining the institute were categorised in 3 groups based on their knowledge, observational skills, and surgical skills in the wet lab. Group A included trainees who were comfortable with the manual small incision cataract surgery (MSICS) with little or no exposure of Phacoemulsification technique, B - limited experience with MSICS with little or no exposure of Phacoemulsification, C- little or no exposure with either of the surgery. All the trainees were subjected to an extended period of surgical training. The trainees from group B and C were given priority over the trainees with greater experience. The visual outcomes as well as complications of cataract surgeries performed by the trainees in the secondary centre's of L V Prasad eye institute, India over a period of one year were documented and subjected for further analysis.

Results

Fifteen trainees were included in the study (A- 5, B- 10, C- none). Group B performed 443 independent surgeries (mean - 44.3) during the initial training in the tertiary care centre before being sent to the secondary centre, whereas group A performed 115 surgeries (mean - 23). 4785 surgeries were performed by the trainees during their 1-year mandatory rotation to secondary centres (A-2260, B- 2525). MSICS was the most performed surgery in both the groups. However, Group B (69.26%) operated MSICS more frequently than Group A (63.58%, p=0.000032) whereas Phacoemulsification was more commonly performed by Group A (36.23%) than group B (30.57%, p=0.000033). Both the groups had comparable grades of cataract to operate on with patients with severe visual impairment (visual acuity less than 3/60) presenting equally in both the groups. (A-60.97%, B-57.38%, p=0.011). Group A (1.59%) had significantly lesser complications than Group B (4.6%, p=0.00001) and the majority of the complications in group B were noticed when the trainee performed an MSICS surgery (5.4%, p=0.0004). The final visual outcome after surgery was comparable in both groups with 77.61% in group A and 76.59% patients in group B achieving visual acuity of 6/12 or better.

Conclusion

Although categorisation helped in equitable distribution of the cases and lowering the complications with Phacoemulsification, there is still a lot of scope in MSICS performed by the trainees.

A COMPARISON BETWEEN INSTANT TEACHING FEEDBACK & END OF POSTING TEACHING FEEDBACK

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Background and Aims

The Yong Loo Lin School of Medicine collects teaching feedback for individual tutors at the end of every posting. Each student needs to provide feedback for 30 to 50 tutors depending on the size of the department. Since the feedback is collected at the end of the posting, students may have difficulty recalling tutors & teaching sessions.

The Department of Orthopaedic Surgery introduced a collection of “Instant Teaching Feedback” at the end of every teaching session to obtain specific, useful, and constructive feedback for tutors.

In this study, we will compare the “Instant Teaching Feedback” and “End of Posting Teaching Feedback”.

Methods

Same questionnaires in the school’s teaching feedback form are used for the instant teaching feedback. The questionnaires include didactive teaching score, interactive teaching score and qualitative feedback. The feedback is collected by using Microsoft form (MS form). A feedback link or QR code is sent to students via message or WhatsApp or E-mail at the end of each teaching session. Then the anonymized feedback report is extracted and sent to respective tutors for their perusal.

Results

Total of 288 scores were compared. Out of 288 teaching scores, 151 were from Year 3 medical students and 137 from Year 5 medical students.

The overall average “Instant Teaching Feedback” score is 4.7 (out of 5) compared to 4.5 for the “End of Posting Teaching Feedback”. P value is 1.17603E-11 (<0.05).

The Year 3 average “Instant Teaching Feedback” score is 4.7 compared to 4.5 for the “End of Posting Teaching Feedback”. P value is 4.90239E-07.

The Year 5 average “Instant Teaching Feedback” score is 4.7 compared to 4.5 for the “End of Posting Teaching Feedback”. P value is 5.48073E-06.

The “Instant Teaching Feedback” is collected immediately after a teaching session while it is still in students’ fresh memory. It allows students to provide more detailed and specific qualitative comments for tutors to improve their teaching style, pace of teaching, interaction with students and content etc.

On the other hand, the “End of Posting Teaching Feedback” is collected at the end of 4 or 6-week orthopaedic posting. Students might have difficulty recalling learning experience with a specific tutor. In addition, students need to provide feedback for 30 to 50 tutors. They may find it difficult to remember all tutors and teaching sessions.

Conclusion

In conclusion, the “Instant Teaching Feedback” allows tutors to have more specific and constructive feedback on their teaching. Tutors can improve their teaching style, content of teaching materials and interaction with students based on the feedback.

INTEGRATION OF FLIPPED CLASSROOM, VIRTUAL PATIENT, AND STANDARDISED PATIENT IN PATIENT-CENTERED LEARNING AND TEACHING APPROACH

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Background and Aims

The patient-centred learning approaches over the past 20 years need to be updated because the new generation of the young population has different skills, values, and attitudes, and teaching approaches must change accordingly. The current students expect advanced and digital learning methods. The Erasmus + European Union project "Promoting the Development of a 21st Century Doctor: Teaching Patient-Centred Communication Skills" (FOR21), aimed to change the strategy of medical education in curricula, methods, and tools for developing communicative competence and social responsibility in communication between a doctor and a patient, is currently being implemented at the universities of Kazakhstan and Uzbekistan. The patient-centred learning approach consists of a structured teaching and learning approach by studying a clinical case on the Open Labyrinth platform (virtual patient) in a flipped classroom, conducting a medical interview with a standardized patient, and providing constructive feedback after sessions. The study aims to analyse student feedback as a result of piloting a patient-centred learning and teaching approach using a flipped classroom integrated with virtual and standardized patients.

Methods

The materials of the study were the results of a survey for the senior students of the "General Medicine" specialty, who participated in piloting clinical cases of virtual and standardized patients, and were randomly selected with different abilities. The virtual patient in the Open labyrinth was used in outclass studies in accordance with a flipped classroom method.

Results

As a result of the survey, students noted a high level of self-training on the six topics. Active listening, critical thinking, and effective learning skills were demonstrated by 80%. They noted the strengths of the project and the closeness of the clinical case to real conditions. And 50% of the students noted that the "scenario case" and "university walls" do not allow them to fully demonstrate communication skills, as could be demonstrated in a clinic environment. More than 80% of students noted their mental stress degree as 7 points out of 10. Students also noted the following points: while working with cases they felt that cases helped them make decisions that a doctor would make in real life, helped to actively collect the information and to identify the patient's problem, thought about what information was needed to conduct a differentiated diagnosis; the complexity of the cases corresponded to their level of knowledge, questions that were risen in the cases helped to improve skills in diagnosing diseases, to prepare students for the differential diagnosis and to confirm the exact diagnosis of the patient based on their problems, and it was a valuable experience.

Conclusion

Thus, learning design influences the formation of learners' communicative competence through the integration of a patient-centred learning and teaching approach, a virtual patient, and a flipped classroom. New approaches in methodology and teaching based on digital technologies are becoming more attractive to modern students, therefore the learning process will contribute to a more in-depth study of advanced patient-centred medical interviewing skills.

ATTITUDE, ETHICS, AND COMMUNICATION (AETCOM) TRAINING MODEL FOR MAXILLOFACIAL PROSTHODONTICS GRADUATES IN LONG-TERM OUTPATIENT CARE

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Background and Aims

Background: Maxillofacial Prosthetics involve the rehabilitation of patients with defects or disabilities that were present when born or developed due to trauma or have had surgical removal of diseased tissues. Maxillofacial defects can affect oral and facial functions, personal appearance, and psychological well-being leading to poor quality of life. Maxillofacial prosthodontics is a branch of dentistry dealing with the restoration of esthetics and conserving maxillofacial functions and psychological wellness. The treatment process of an intraoral prosthesis is more sophisticated, requires months to fabricate, needs regular follow-up visits, and the wear and tear necessitate a new prosthesis once every five years.

Aim: To design and implement an attitude, ethics, and communication model for maxillofacial prosthodontics graduates and to measure the effectiveness using the Kirkpatrick training evaluation model.

Methods

A longitudinal interventional ATECOM (attitude, ethics, and communication) training module was designed for I and II-year maxillofacial prosthodontics graduates (n=12). The learning outcomes, module objectives, case scenarios, and patient care protocols were developed by the maxillofacial prosthesis unit chief and team members with inputs from education unit expertise in scenario development and program evaluation. SEGUE framework is used to teach and assess communication skills, case studies and objective structured clinical examination (OSCE) were used to teach and assess values and ethics respectively. Following the training of 4 months duration, each participant was assessed when they treated 2 patients with obturator for 8 months. The study was conducted between 2021 July and 2022 June. Pre-test and post-test were conducted using MCQ questionnaires before and one month after the training model. The educational effect of this training module was evaluated according to the first three levels of Kirkpatrick's model using two questionnaires and one checklist.

Results

The results of the first level Kirkpatrick evaluation indicated that 7 subjects (58%) who participated in the module stated that the quality of this training module was excellent. Eleven participants (929%) were completely satisfied with the training and assessment methods used. In all other domains of the questionnaire, more than 50% of participants declared that the quality was excellent.

The results of the second level Kirkpatrick's evaluation of the participants' learning revealed that there was a significant difference between the total scores, performance of the subjects, and use of training and assessment methods before and after the intervention ($p < 0.05$).

To measure the third level of Kirkpatrick's program evaluation method, we observed the participants' behaviour during the training and assessment period, the behaviour change across all of the dimensions was significant ($p \leq 0.05$)

Conclusion

Attitude, ethics, and communication (ATECOM) training for health professionals are in its initial stage in India. We designed and implemented this study module for graduate students to specifically train them in long-term treatment care to enhance the quality of life of patients. According to the results, the ATECOM training module effectively improved the participant's approach toward their patients and their clinical performance after the intervention.

TUESDAY 23RD MAY 2023, 9.00AM

VIRTUAL ROOM 5, HYBRID CONFERENCE

SHORT COMMUNICATIONS 13

DEVELOPING A CULTURAL INTEGRATION PROGRAMME TO FACILITATE WORKPLACE TRANSITION FOR NATIVE-BORN INTERNATIONAL MEDICAL GRADUATES IN SINGAPORE

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Background and Aims

Native-born international medical graduates (IMG) make up a growing proportion of the doctors starting work in Singapore each year. Despite being local, this group of doctors face unique challenges after training abroad due to differing healthcare workplace cultures which can affect how they relate to colleagues and

medical error. The existing literature on integrating IMG is focused on foreign-born IMG. Using the conceptual framework of connectivism, we developed a cultural integration programme aimed at facilitating workplace transition for native-born IMG starting their housemanship and seeked to evaluate its effectiveness.

Methods

A two-hour cultural integration programme was developed after needs analysis was done. Three sessions were conducted alongside the Ministry of Health Holdings (MOHH) post graduate year 1 (PGY1) briefing - with the first two held over zoom platform and the last session in person. Pre- and post-programme questionnaires were administered. Confidence levels in the domains of generic skills, practical tasks, soft skills and overall readiness for work were assessed using a 5-point Likert scale. Three clinical questions pertaining to efficiency and prioritisation, documentation and communication were included to assess their theoretical knowledge. Within group differences were analyzed using McNemar's test, Fisher's exact test and Wilcoxon signed-rank test whenever appropriate. This study has been granted exemption by the institutional review board.

Results

200 Australian and United Kingdom medical school graduates attended the programme. The median age was 26 years old (IQR: 3). Majority were Singaporean (97%) of whom 77(38%) had done prior clinical electives in Singapore. The top three learning goals participants identified were how to prepare for night calls (97.4%), how to write inter-department referrals and order radiological investigations (90.5%) and how to document appropriately (88.9%). There was statistically significant improvement in confidence levels post-programme across all domains of generic skills, practical skills and soft skills. Majority of the participants felt the course was helpful in meeting their learning goals with 88.5% rating 4 or more out of 5 (4= quite helpful, 5 = very helpful). In the qualitative feedback, a significant proportion requested for these learning goals to be covered in more depth if given more time. There was an increase in the level of readiness to start work (pre-course median 2(IQR: 2), post course median 3(IQR:1) $p<0.0001$).

Conclusion

Our cultural integration programme tailored to the needs of native-born IMG improved their confidence and readiness to embark on their housemanship. Further qualitative research would provide deeper understanding into the IMG house-officer experience to facilitate their integration into our healthcare system.

RESULT OF BLENDED LEARNING IN COMMUNICATION SKILLS LESSON AT MONGOLIAN NATIONAL UNIVERSITY OF MEDICAL SCIENCES

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Background and Aims

The use of open education and online learning is increasing day by day nowadays, therefore studying the access of students to online learning materials which are uploaded to online learning system and their learning results, is important to flourish online learning, harmonize it with classroom learning, and prosper flipped classroom in the future. Flipped classroom gives the opportunity for learners to be responsible for their learning, participate in the classroom more actively by studying the learning materials beforehand at home, ask questions in the classroom, and understand the lesson content more in depth.

Purpose: Study the result of blended learning, used in communication skills lesson in first graders at Mongolian National University of Medical Sciences.

Methods

A quantitative research questionnaire was used in the study. The pre-designed questionnaire consisted of 2 main parts, general information and learning result, which there were 16 questions with a combination of open-ended and close-ended questions.

Results

Total of 278 students from the first graders who studied Communication skills lesson at Mongolian National University of Medical Sciences, participated in the study. 41.7 percent of Communication skill lesson were taught online, and 58.3 percent were taught in classroom. 95 percent of the respondents repeatedly watched the audio, video, and PowerPoint slides uploaded online, and 83 percent agreed that the duration of audio, video, and PowerPoint slides uploaded online was appropriate, not rushed and was clear. 95.3 percent of the respondents answered that availability of course related materials online, made it easy for students to study from anywhere at any time. 90.5 percent answered that uploading learning materials online, facilitated their learning, 87.6 percent answered that it helped them to enhance their listening and writing skills, and 94.5 percent answered that it supported their self-learning.

83.3 percent of the respondents agreed that studying the lesson content before the class increased their interest in studying and improved their understanding, and 86.5 percent also agreed that it gave them the opportunity to ask questions in the class about the things they did not understand and gain confidence. Moreover, 87.6 percent answered that working in groups in the class, gave them the opportunity to learn from others, share experiences with other students and study even harder. Finally, 94.5 percent answered that they understood the importance of communication skills in a relationship with the family and friends.

Conclusion

The uploading all the materials related with the lesson to online, allowed students to study learning content at any time, regardless of time or space, and before coming to class. As a result of that, not only it facilitated student learning and promoted self-learning, but it also helped students to reinforce, discuss, and apply the knowledge acquired at home in the classroom with the support from the teacher. It clearly shows that using flipped classroom technique by harmonizing online learning with classroom learning, can reach the learning outcome.

EFFECTIVE FEEDBACK AND POSITIVE COMMUNICATION - BUILDING EDUCATIONAL ALLIANCE

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Background and Aims

Effective and constructive feedback drives successful learning and teaching in all disciplines. In higher education, much of the attention has been focused on feedback from educators to students, providing a link between actual performance and the intent of performance. However, feedback from students to educators plays an equally significant role in driving student learning.

Many university courses espouse a social constructivist approach to learning. All learners should be actively engaged, and take responsibility for their own learning, building knowledge within a social context. Providing feedback is therefore a learner responsibility in this student-centred approach.

In our postgraduate Medicine program, students are regarded as learning partners, and their feedback should be integral. Authentic student feedback provides the best window for understanding student experience. Well-implemented feedback systems can improve teacher effectiveness by up to 30%.

Despite the established importance of student voices, there are many challenges to obtaining meaningful, constructive, and timely feedback that can be directly translated into actions to improve teaching.

Currently there are existing feedback channels in the Medicine program for students to provide feedback via the institutional LMS (Blackboard)TM Discussion Board, or via email individually to different academic staff. However, these appear only partially successful. Existing channels miss the social context of constructivist learning. Students question the effectiveness of their feedback, frustrated and are unwilling to engage. Consistently low response rates, lack of specificity or overly critical and unprofessional responses meant that feedback is rarely helpful to the educators who eventually give up seeking feedback from students.

How do we engage students in providing effective and constructive feedback? Would seeking feedback within a more social and partnered context be effective?

Methods

We used Padlet as a platform for providing and responding to ongoing feedback in a second-year Medicine course. Padlet is effectively an online noticeboard that can house multiple posts, responses, and threads, and can do so anonymously.

Results

Padlet ran for the duration of the semester and collected 341 posts of collectively over 22,400 words. Most posts related to academic content - reading list recommendations, discussions on certain topics, latest understanding, and knowledge in a particular area. Student posts were often made during teaching sessions or shortly after a particular learning activity, and educators could respond to these quickly, sometimes in real-time. Educators could follow up points raised in feedback or actively seek specific feedback when introducing new contents or new learning activities. The ability to collect specific feedback results in continuous curriculum improvements during the course.

In addition to feedback Padlet also provides a platform for educators to model how to receive and respond to feedback professionally. Actively engaging and interacting with Padlet educators demonstrate their interest in students' feedback and their commitment in building a positive, respectful learning environment.

Conclusion

As a result, the collated student feedback helped to improve the Course structure and quality in a timely manner, shaped the culture and the relationship within the classroom and cultivated the development of professional identity. Indeed, a better educational alliance.

NON-BIASED QUALITY ASSESSMENT AND OBJECTIVITY OF OSCE STATIONS THROUGH EXAMINERS' BRIEFING, TRAINING AND STANDARDISATION

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Background and Aims

Objective Structured Clinical Examination (OSCE) is one of the assessment tools used for the pre-clinical students in the Universiti Malaya Medical Programme (UMMP) during their year one and two of MBBS degree. Students are trained in simulated or real clinical setting that covers the important clinical domains of history taking, physical examination, communication and clinical procedures, which will be later assessed through OSCE.

An OSCE marking rubric is created to deconstruct these procedures. Using the marking sheet, examiners will rate students' performances in the following two categories (domains): Category A: Student-Patient Interaction (primarily communication skills) and Category B: Clinical Skills. Although the existence of scoring sheet increases objectivity, subjectivity in scoring can still exist due to variability in knowledge, skills and of experience of assessment among the examiners. Therefore, to ensure fairness of the OSCE, an examiner training and standardization is introduced to enhance the rating skills between the examiners.

Methods

Examiner training on OSCE rating was performed by the faculty of medicine OSCE Coordinators. The examiner training consisted of briefing, practice of rating using three pre-recorded students' OSCE performances followed by discussion and consensus formation on learners' performance. Examiners then were arranged into specified groups to discuss the actual OSCE questions, in the presence of the Block Coordinator. Subsequently, they come to a consensus with regards to the passing and failing criterias of each OSCE station, performing standard setting and standardization of the feedback to students.

Results

Training and briefing of the examiners helped to ensure the standardization and objectivity of the OSCE examination for the students. This briefing also improves the examiner inter-rater reliability in scoring OSCE stations.

Conclusion

Implementation of objective assessments requires awareness and acceptability of good practices of assessments. In the context of the experiences described here, the training enhanced the awareness of best assessment practices, the fairness and acceptability of the assessment system. Steps in translating good assessment principles to practice will go a long way in enhancing the quality of assessment system and ensuring the measurement of outcomes valid and reliable.

EFFECT OF THE CURRICULUM OF ANAESTHESIOLOGY SKILLS ON CLINICAL ABILITY OF STUDENTS MAJORING IN ANAESTHESIOLOGY

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Background and Aims

To study the effect of Anesthesiology's courses on the training of anesthesiology students' clinical ability.

Methods

Undergraduate students of 2013 and 2014 who majored in anesthesiology were selected as the research subjects. The 'Anesthesiology Skills' course was offered for the students of 2014 (sub2014) for five consecutive semesters from their first year of university, and another course 'Settings and training methods' was consistent with those of 2013 (sub2013). The results of academic courses, including "three-stage" examination and national medical practitioner qualification examination of the subjects were compared to evaluate the training effect.

Results

The average scores of the four academic courses (Internal Medicine, Surgery, Clinical Anesthesiology and Critical Care Medicine) in sub2014 was higher than sub2013, and the differences were statistically significant ($P < 0.05$). There were statistically significant ($P < 0.05$) differences found as compared the average score of operation test in admission test before internship and comprehensive test before graduation for sub2014 and sub2013, which sub2014 were higher than sub2013. Besides this, the highest score, the lowest score, the average score and the passing rate of sub2014 were higher than sub2103, but the differences were not statistically significant ($P > 0.05$).

Conclusion

Anesthesiology's courses could improve the clinical ability of undergraduates majoring in anesthesiology.

MULTIPLE PERSPECTIVE EVALUATION ON THE IMPLEMENTATION OF MERDEKA BELAJAR - KAMPUS MERDEKA (INDEPENDENT LEARNING INDEPENDENT CAMPUS) PROGRAM IN NUTRITION SCHOOL IN INDONESIA

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Background and Aims

The medical and allied health professional education system in Indonesia is notoriously known as one heavily structured system, in which students are expected to follow through the predetermined set of curriculums with little opportunity to create their own learning pathway. In 2020, the Ministry of Education and Culture launched the Merdeka Belajar - Kampus Merdeka (Independent Learning - Independent Campus) program with the aim to give students independence to partake courses from other universities or gain learning experiences through interning with industries and related agencies. The idea is to leverage the graduate employability by reducing the gap between the acquired skills and those required by the job market. We evaluated a 2-year ILIC program implementation in a nutrition school in Indonesia from the perspective of students and lecturers.

Methods

Retrospective qualitative method with case study approach is applied using a total population sampling. Data were collected from 44 students through an online survey, 2 lecturers through several reflective practices, observation, and selected documents. Data were analyzed using thematic analysis; we categorized the aspect of the program analysis into implementation and evaluation.

Results

Five themes emerged for the first aspect; enabling factor, inhibiting factor, the new program paradox, learning resources, and curriculum adjustment. Whereas, for the second aspect, four themes are identified consisting of committed change agents, stakeholder involvement, learning outcomes attainment, and student satisfaction with the learning experiences. Within two years of implementation, there is a considerable increase in the number of students and external partners participating in the program; some were returning agencies or organizations from the previous term. However, critics regarding the concept persist on whether those participating in the program possess similar degree of nutrition competencies with those remaining in the regular system.

Conclusion

Several changes take place in the preparation and implementation of the ILIC program. Awareness of the changes needed to make could improve the future implementation of the program as well as address concerns related to the outcome of the program. The internal and external quality assurance system needs to be redeveloped in order to meet the need of the program.

KNOWLEDGE AND ATTITUDES TOWARD DEMENTIA CARE IN JUNIOR DOCTORS AND NURSES

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Background and Aims

Dementia is a prevalent condition in an ageing population. A significant proportion of hospital admissions involve older adults with dementia. Dementia care is complex as persons with dementia may exhibit various challenging behaviours when they are unwell or in unfamiliar environments. Dementia has been incorporated into the curriculum of undergraduate medical and nursing programmes. However, it is uncertain whether that foundation is adequate in enabling them to deliver competent care to hospitalised older adults with dementia.

Objective:

To assess the knowledge and attitudes toward dementia in junior doctors and nurses.

Methods

A cross sectional study was conducted with junior doctors and nurses in the geriatric ward to examine their knowledge and attitudes toward dementia. The Dementia Knowledge Assessment Scale (DKAS) and the Dementia Attitudes Scale (DAS) were used to assess knowledge and attitudes respectively. The DKAS consists of 25 items with a total score that ranges from 0 to 50. The DAS consists of 20 items scored using a 7-point Likert scale.

Results

28 (73%) of the 38 respondents are nurses. 36 (94%) respondents had previous experience with interacting with persons with dementia. 19 (50%) respondents did not have had formal training on dementia care previously. The median DKAS score is 21 (5 - 30) with higher scores in the domains of causes and characteristics and risks and health promotion, and lower scores in the domains of communication and behaviour and care considerations. The mean DAS score was 101 (SD = 16.3) with good internal consistency (Cronbach's α = 0.86), which is indicative of positive attitudes toward dementia. 29 (76%) respondents chose presentations or talks as one of their preferred modes of learning, and 27 (71%) respondents opted for e-learning on an online portal.

Conclusion

Most junior doctors and nurses have positive attitudes toward dementia. However, there is a discordance between their knowledge and attitudes, especially in the domains of communication and care considerations. Evaluating dementia knowledge in junior doctors and nurses can help us identify their knowledge gaps. This will enable us to refine existing teaching programmes to equip doctors and nurses with skills to better care for older adults with dementia in the hospital, especially tips of communicating and interacting with persons with dementia.

ELIMINATING FLAWED ITEMS FROM HIGH STAKES EXAMINATIONS

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Background and Aims

The use of "flawed" assessment items can affect the pass-fail results of students in High Stakes Examination. Elimination of such flawed questions does not affect or improve the performance of students with insufficient knowledge, but it can improve outcomes of the better performing students who may be unfairly penalised by the use of flawed items.

Methods

IDEAL is a non-profit collaborative consortium of medical schools sharing high quality assessments. The consortium core staff provide support to maintain the IDEAL database of quality questions and to screen high stake examinations for item writing flaws (ITF's).

Between 2017-2022, we screened 24 high stakes examination papers for ITF's. There were 576 flawed items amongst the 4800 items screened, with a flaw rate of 8-14%. Flawed questions were edited (n=264) to eliminate ITF's, while the remainder (302) were replaced by matching questions from the IDEAL Question bank.

Results

Flawed items may impose an unfair penalty on good students. The time pressures on academic staff to repeatedly provide new questions for ongoing assessments often results in poor quality questions that escape scrutiny. IDEAL is a large repository of quality questions and has empowered staff and members, not only to write good quality assessments but also to screen and eliminate flawed items. Flawed items may be edited by experienced item-writers so that they eliminate the flaws and retain the original crux of the content. The use of IDEAL's huge repository has made it easy to replace flawed items with matching, well written items from the database. We were successfully able to replace flawed items (100%) with good quality high performing items in all our examinations.

Conclusion

The use of IDEAL's huge repository has made it easy to replace flawed items with matching, well written items from the database. IDEAL a cost-effective solution to deliver a fair and robust high stakes examination. Large repositories of commercial entities that maintain High Quality Items can be expensive to most institutions. A collaborative non-profit organisation like IDEAL can provide an equally robust and cost-effective solution to the problem of Flawed Items in High Stake Examinations.

EXPLORING THE USE OF TEST ITEM FACILITY INDEX AS A NOVEL APPROACH IN SETTING THE MINIMUM PASSING LEVEL FOR MEDICAL BIOCHEMISTRY MODULE EXAMINATIONS

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Background and Aims

Criterion-referenced methods (Nedelsky, Angoff, and Ebel) are often employed in setting the minimum passing level (MPL) of multiple-choice question (MCQ) examinations. These methods estimate an a priori probability that a randomly selected minimally competent student (MCS) would answer an item correctly. However, such methods require high validity and reliability. Consequently, these methods may result in large and variable examination failure rates (EFR). Moreover, MPL-setting entails educators to put themselves in a MCS's shoes, something difficult to consistently apply. Arguably, these limitations stem from varying examination difficulty and the lack of objective, quantitative bases to justify MPLs set. Item analysis is conventionally performed to assess the quality of test items, and overall examination validity. However, it has not yet been investigated if using item analysis to evaluate whether set MPLs indeed translate to minimum cut-offs where MCSs will perform as expected. In this study, we explored using summed item facility indices (FI) as alternative pass-fail cut-offs to take test difficulty into account. We described EFR behaviour using both set MPLs and candidate summed FI-based cut-offs we posited would approximate MCS ability.

Methods

This descriptive study utilized medical biochemistry MCQ module examinations administered at the DLSMHSI-College of Medicine during academic years (AY) 2020-2021 and 2021-2022. For each examination, students were ranked according to performance, and item analysis statistics were obtained. Item FIs were summed, with the resultant value designated as the total FI contributed by the entire class (%contribution=100%). With every 1%-decrement starting at %contribution= 99% (i.e., bottom-99%) until %contribution=1% (i.e., bottom-1%), item FIs were retotaled. All summed FI values were plotted against %contribution, and the %contribution corresponding to the set MPL was identified. The EFR was then determined, first using the set MPL as the pass-fail cut-off, then using the summed FIs at %contribution=50% and %contribution=25% as alternative cut-offs. The rationale behind this is that it is possible for the MCS's performance to be on the cusp that separates the bottom 50% or 25% from the rest of the class. Lastly, the examination mean FI and mean discrimination index (DI) are described for reference.

Results

A total of 17 module examinations (8 from AY 2020-2021, 9 from AY 2021-2022) were included in this study. All MPLs were set via Nedelsky method. Most examinations (76.5%) had acceptable mean FIs, while only 52.9% had acceptable mean DIs. The %contributions corresponding to the set MPLs ranged from 16% to 99%, and varied inversely with mean FI (r=-0.7448, p=0.0006). EFRs at cut-offs corresponding to summed FIs at %contribution=50% (mean=21.2%, SD=2.5%) and %contribution=25% (mean=10.4%, SD=1.5%) were lower and fluctuated less compared to EFRs at MPL cut-offs (mean=26.7%, SD=18.2%).

Conclusion

In this study, we described a feasible and novel approach that uses summed FIs at %contribution=50% and %contribution=25% as pass-fail cut-offs in approximating MCS ability. This approach factors in difficulty level which we attribute to the less EFR variability demonstrated. However, we urge that this study be regarded hypothesis-generating at best, with the hope that it leads to investigating other potential methods that gauge MCS ability objectively.

SOCIAL PROGRAMMES

Lee Kong Chian Natural History Museum

Visit the Lee Kong Chian Natural History Museum and be enthralled by the myriad of colours and forms of plants and animals in 15 different thematic zones from plants and amphibians to mammals and dinosaurs.

Get your tickets at the registration counter during the Main Conference!

*Ticket is valid from 26th to 28th May 2023, from 10:00am to 6:00pm.

Centre for Healthcare Simulation Tour

Special arrangement has been made for APMEC participants to visit the Centre for Healthcare Simulation on 26th May 2023.

Hands-on activities are available.

Get your tickets at the registration counter during the Main Conference! Admission to the tour is via a valid ticket. (Limited number of tickets available)

Mindfulness Workshop

Join the Mindfulness Workshop With A/Prof Mabel Yap on Managing Stress with Mindfulness.

It is an experiential workshop to explore and learn about mindfulness-based techniques to meet stress and difficult emotions in daily life.

Date: 26th May 2023
Time: 1.00pm – 2.00pm
Venue: UCC Function Room 1, Level 1

Tai Chi Session

Join Adj Prof Lau Tang Ching in the exercise session to discover more about the Tai Chi for Health exercise.

Tai Chi's gentle and rhythmic movements can provide a calming and centering effect.

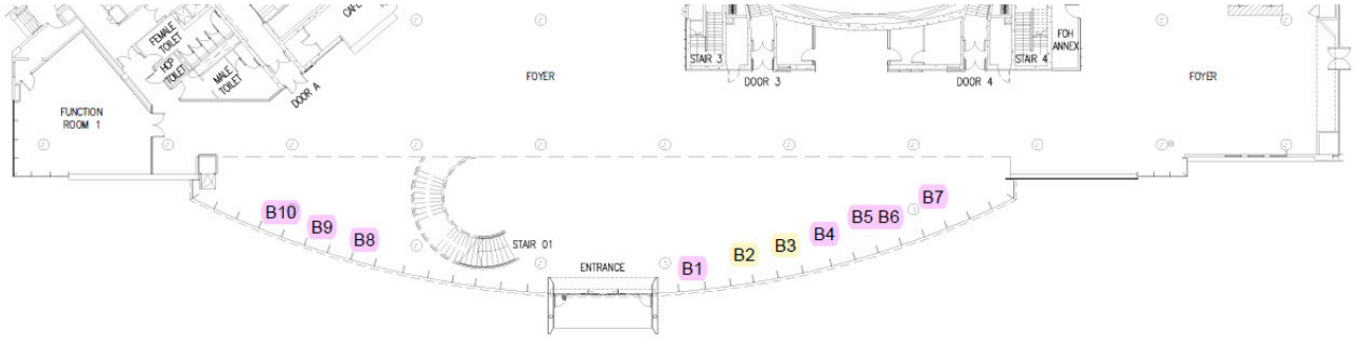
Date: 27th May 2023
Time: 12.30pm – 1.00pm
Venue: UCC Function Room 1, Level 1

Yoga Session (ONLINE)

The session will be on Mindful Yin Yoga with Breathwork.

Date: 26th and 27th May 2023
Time: 12.30pm – 1.00pm
Venue: Virtual Platform

TRADE EXHIBITION



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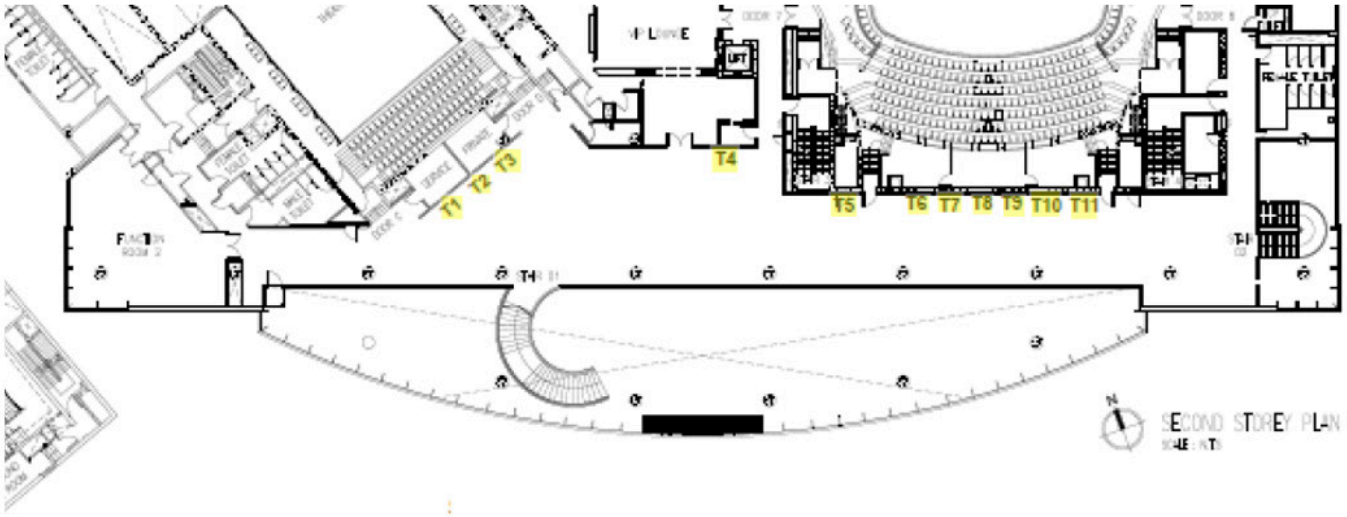

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Jeng-Wen **Chen**
Te-Chuan **Chen**
Chen Tsung-Ying
Cheng Wei-Chun
Chi Ya-Chen
Kan Chung-Dann
Liu Cheng-Heng
Liu Tzu-Hung
Tseng Chun-Yi
Tzeng Wen-Chii
Wu Jeng-Cheng
Yang Chih-Wei
Jen-Hung **Yang** (Henry)

THAILAND

Sasithon **Ajjimarangsi**
Atta **Ajjimarungsi**
Wachiraporn **Arunothong**
Paweena **Booncharoen**
Poraween **Boonma**
Sasimon **Borrirukwisitsak**
Nuttakul **Chaiinkum**
Piatip **Chaimoon**
Orawan **Chansanti**
Karnkamon **Charmarat**
Sarawadee **Chatchavan**
Suratee **Chobngam**
Warisa **Dejtaradon**
Sombat **Hatchaleelaha**
Decharat **Imjai**
Chawawat **Kangwanwongpaisan**
Patcharaporn **Khajornwattanakul**
Sopita **Khankaew**
Noosara **Klumsombut**
Thanongsak **Kongthong**
Kritanon **Kongwatmai**
Korsin **Laohavisudhi**
Passara **Malitong**
Sukritpath **Moksiri**
Orachat **Orapipatpong**
Pimonrat **Paopongpaiboon**
Ruangnipon **Porruan**
Phornphen **Prasanchaimontri**
Banjong **Preungprasob**
Pongtong **Puranitee**
Tipyapa **Rattanamanee**
Pattira **Rungruangsarn**
Anchalee **Saingam**
Noppawat **Samankatiwat**
Athip **Sangrungruang**
Panuwat **Sanguansak**
Kanyakorn **Siraprapapong**
Piyaporn **Sirijanchune**
Sirote **Srimahadthai**

Sorasich **Sunhadhirasakul**
Pantakarn **Supasedsiri**
Sirapop **Suwankomolku**
Penprang **Suwannapong**
Morakot **Suwanwanich**
Pornpawit **Thangseresuk**
Tidarat **Thodthankhun**
Worakanya **Thongnuch**
Chaiyakit **Udnan**
Teerapat **Ungtrakul**
Supasit **Viriyakorkitkul**
Damrong **Waealee**
Danai **Wangsaturaka**
Surintorn **Wongvilairat**
Nantikarn **Yingrattanasuk**

TIMOR LESTE

João **de Jesus Arcanjo**

UNITED ARAB EMIRATES

Sawsan **Abdel-Razig**
Mohamed Hassan Mohamed **Ali**
Thana Saif **Alyafei**
Elia **Del Rosario Usoles**
Steven **Green**
Michele **Kigozi**
Seema **Sheth**
Amira **Siyam**

UNITED KINGDOM

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Farzand **Ali**
Carol **Chan** See Chai
Valerie Josephine **Dirjayanto**
Will **Garnett**
Ronald M **Harden**
David **Hewitt**
Sindoora **Jayaprakash**
Patricia **Lilley**
Anne **Lloyd**
Mohammed Ahmed **Rashid**
Susie **Schofield**
Mairi **Scott**
Claire **Smith**
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Matthew **Whallett**

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Kathy **Chappell**
Amanda **Chichester**
Kimberly **Dahlman**
Bonny **Dickinson**
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Matt **Harris**
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Michael **Herr**
Julie **Hewett**
Eric **Holmboe**
Tao **Le**
Page **Morahan**
John **Norcini**
John **Ogunkeye**
Neil **Osheroff**
Wojciech **Pawlina**
Joyce **Price**
Subha **Ramani**
Lawrence **Sherman**
Stuart **Slavin**
Varna **Taranikanti**
Rashmi **Vyas**
Shiyao **Yuan**

VIETNAM

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Doan Thi Hang
Duong Thi Bich Thuan
Le **Giang Minh**
Son **Hoang**
Quynh **Huynh Thi Vu**
Giang Kim Bao
Duong **Le**
Bao **Le Khac**
Hoa **Le Thi My**
Hoa **Le Thu**
Tuan **Ly Huu**
Hoang Minh **Nguyen**
Huu Tu **Nguyen**
Nguyen Thi Lan Anh
Nguyen Thi-Mai Hoang
Nguyen Van Ba
Nguyen An Nghia
Tuan **Nguyen Anh**
Nguyen Duc Khanh
Phong **Nguyen Hoai**
Hanh **Nguyen Thi My**
Hong **Pham Thi Minh**
Nguyễn Thị Anh **Phương**
Ta Ba Thang
Tran Le Dinh Duy
Tran Ngoc Tuan
Tran Thuy Khanh Linh
Tuan **Tran**
Thang **Tran Cong**
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